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THE ILLUSION OF TRANSPARENCY AND PUBLIC SPEAKING:

A STUDY OF SOCIAL ANXIETY

BY

CHELSEA A. GLOTH

A THESIS SUBMITTED IN PARTIAL FULFILLMENT

OF THE REQUIREMENTS FOR THE DEGREE OF

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Abstract

The purpose of this study is to determine whether participants who are informed of a phenomenon termed “the illusion of transparency” (Gilovich, Savitsky & Medvec, 1998) give higher quality speeches, feel and appear less anxious while delivering the speech, and give longer speeches. Participants consisted of 543 students from a Midwestern university. First they completed the FNE (Watson & Friend, 1969), and 31 of those with the top quartile of scores returned to the lab to give a 3-minute speech. Participants in the illusion condition were informed about what the illusion of transparency is, while those in the reassured condition were told not to worry about their anxiety. Those in the control condition were given no instructions. Participants and observers rated the speeches on a number of items regarding anxiety and quality. Results were not consistent with previous research, and are discussed in terms of the current study.

Table of Contents

| | |
|-------------------------------|----|
| I. Introduction..... | 1 |
| Social Phobia..... | 1 |
| Relevance..... | 2 |
| Illusion of Transparency..... | 2 |
| Theory..... | 3 |
| Previous Research..... | 6 |
| Purpose..... | 8 |
| Hypotheses..... | 8 |
| II. Methods..... | 9 |
| Participants..... | 9 |
| Measures..... | 9 |
| Procedures..... | 11 |
| III. Results..... | 16 |
| Speakers' Self-Ratings..... | 16 |
| Observer Ratings..... | 18 |
| Speech Length..... | 19 |
| IV. Discussion..... | 20 |
| Summary..... | 20 |
| Implications..... | 23 |
| Limitations..... | 24 |
| Future Research..... | 25 |
| References | |
| Appendix | |

Chapter I

Introduction

Social Phobia

Many people enter social situations feeling extremely confident and in control of their behavior. At the other end of the spectrum, however, some people feel extremely anxious at the thought of entering a social situation. Social anxiety affects many people in a wide multiplicity of situations. Some people fear general interactions such as conversations, while others feel uncomfortable in more specific circumstances, such as public speaking. Social phobia (SP), a diagnosis described by the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV TR; American Psychiatric Association, 2000) is an anxiety disorder that resonates as a fear of social or performance situations that affects approximately 3 to 13% of the population. People with this disorder experience anxiety when confronted with their feared situation, and some may even avoid it altogether. In order to qualify for this diagnosis, the person must realize their fear of social situations is unreasonable, and they must undergo significant distress in regards to their level of functioning. To receive this diagnosis, one must be at least 18 years of age and the symptoms must have been present for at least 6 months. The fear cannot be due to a medical condition or substance, and no other medical condition that could be related to it should be present. This disorder can be specified as generalized, for people who fear most social situations and public performances, or circumscribed, for those who fear only specific situations.

Relevance

Almost everyone will be asked to give a speech at some point, whether it is for school, at a place of employment or a wedding, yet many have extreme anxiety about this task. Having the ability to give an effective speech in front of an audience and show no severe symptoms of anxiety is a skill some people possess, while others struggle. Currently, one common type of treatment for SP is cognitive behavioral therapy (CBT). This therapy uses an amalgamation of techniques to restructure clients' maladaptive cognitions and expose them to feared situations in a graduated manner (Turk, Heimberg & Magee, 2007). Therefore, research in the area of public speech anxiety is important for future treatment implications.

Illusion of Transparency

The phenomenon this study examines is termed the illusion of transparency. This concept refers to the idea that one's inner anxiety state can be discerned or sensed by an audience (Gilovich, Savitsky and Medvec, 1998). Gilovich, Savitsky and Medvec analyzed the illusion of transparency in several experiments (1998). In one study, they had participants partake in a lie game. Participants were asked to take turns voicing a statement about themselves. The experimenters informed one participant in each round of self-disclosure to tell a lie. All participants then attempted to identify the liar in each round. Analyses revealed that the liars anticipated that the other participants were able to identify them as the liars more than the other participants actually could. A second study analyzed the illusion of transparency among a disgust task (Gilovich, Savitsky and

Medvec, 1998). Participants were asked to taste test fifteen cups of liquid. They were told that five of the cups had an unpleasant taste and the other ten had a pleasant taste. They were asked to taste all of the drink concoctions and to try to keep a neutral facial expression for every drink. A video camera captured their facial expression for each drink. Similar to Study 1, this study also included participants overestimating their internal states being revealed to the audience who viewed their videos. They estimated that the observers watching the video tapes of their facial expressions would be able to identify when they were drinking the disgusting drinks more than the observers actually could. In both of these studies, the illusion of transparency existed, as participants believed that their facial expressions indicating lying and disgust would be observed by an audience more than they actually were.

Theory

Self-Awareness

People often shift their attention between focusing inwardly on themselves and outwardly toward other people. Self-consciousness is the term for this trait, whereas self-awareness is referred to when a person is currently in this state of having the self be the center of attention (Fenigstein, Scheier & Buss, 1975). Private self-awareness occurs when someone shifts their attention to their own thoughts and feelings, whereas public self-awareness occurs when someone focuses their attention on the self as a social object being viewed by others (Fenigstein et al., 1975). Although everyone engages in self-focused attention at various times, people with SP engage in this when they enter a feared

social situation because they fear being negatively evaluated by others (Clark & Wells, 1995). Mellings and Alden (2000) compared socially anxious and non-socially anxious college students by having them engage in a conversation task with a confederate and then rate their self-focused attention. Results found that participants who had high social anxiety scores tended to have higher scores of private self-awareness than the non-anxious group.

Cognitive Processing Model

Clark and Wells (1995) developed the cognitive processing model which explains why people with social anxiety engage in certain maladaptive behaviors and thoughts during feared social situations or performances. Their theory posits that socially anxious people enter a social situation and typically engage in assumptions such as excessively high standards of the self, unconditional beliefs about the self, or conditional beliefs about the self. People who utilize excessively high standards of the self believe that they need to have an outstanding performance and appear in a favorable manner in order to succeed. Others who engage in unconditional beliefs about the self typically experience maladaptive beliefs about themselves such as that they are not good enough to perform well, or they appear stupid and not competent. Finally, those who have conditional beliefs about the self have the belief that they must perform well to prevent others from rejecting them.

Based on these assumptions, one can see how socially anxious people enter the feared situation with a perception that it is dangerous. The cognitive processing model theorizes that highly socially anxious people believe that others are evaluating them in

the social situation because they think they are the center of attention and thus shift their own attention inward to themselves. This leads to an increase of self-awareness of physiological symptoms of anxiety such as increased heart rate, blushing, and trembling. Due to their increase in private self awareness, socially anxious people often engage in safety behaviors in order to attempt to decrease their anxiety. For example, someone who turns red during a public speech may wear a turtle neck to hide this somatic symptom. People with social anxiety often attribute success in a social situation to these safety behaviors rather than attributing it to the fact that the situation was not dangerous or their own competencies. This engagement in safety behaviors and the belief that these behaviors assisted them often maintains their use and the belief that social situations are dangerous (Clark & Wells, 1995).

Because socially anxious people are so concerned with their internal state, they often completely disregard paying attention to the audience, or engaging in public self awareness. This means that they often ignore facial expressions or audience feedback to their performance. Therefore, when the person is finished with the performance, instead of reflecting on the audience's behavior to gain cues of how well one did, instead, the person focuses on internal anxiety symptoms experienced during the situation (Clark & Wells, 1995).

Previous Research

Social Anxiety and Public Speaking

Many studies have analyzed social anxiety in the realm of public speaking. Often, however, studies analyze the difference between participant self-ratings of performance compared to observer ratings (Brown & Stopa, 2007). Rapee and Lim (1992) conducted a study in which individuals diagnosed with social phobia and a control group gave a speech and then rated their performance. Both participants and observers rated the speech. There was a significant difference between the social phobic condition and the control condition for how they rated their speech, revealing that people with social phobia rated their speech as worse than the observers did. As mentioned by Brown and Stopa (2007), in order to measure the illusion of transparency, one must have slightly different methodology. Instead of only measuring the participants' self-ratings of performance compared to observer ratings, one must compare the ratings of how well the participants believe they did in the eyes of the observer compared to the actual observer ratings.

Social Anxiety and Illusion of Transparency

Some studies have examined the relationship between social anxiety and the illusion of transparency in a variety of contexts. One study had participants rate themselves on three personality dimensions of anxiety, conscientiousness and friendliness (McEwan & Devins, 1983). Next, they had a peer who was a non-family member who had known them for at least one year rate the participants on the same traits. Participants were divided into four conditions of high anxious-high somatic, high anxious-low

somatic, low anxious-high somatic and low anxious-low somatic based on self-reports of their social anxiety and physiological anxiety symptoms such as perspiration, breathing difficulties and trembling . Results showed that participants in the high-anxious-high somatic group rated themselves as more anxious compared to the peer ratings. Mansell and Clark (1999) had half of their sample participate in a speech task. This task was rated by the participants and independent observers. Results showed that the high socially anxious participants rated their anxiety appearance significantly higher than the assessor's rating of their anxiety.

Illusion of Transparency and Public Speaking

Only one study has analyzed the illusion of transparency in a public speaking task among all of its participants (Savitsky & Gilovich, 2003). This study compared speech quality, anxiety, anticipated observer rating of speech quality and anticipated observer rating of anxiety among three conditions. The illusion of transparency educated condition included participants who were informed about the illusion of transparency prior to giving a three minute speech. A second condition, titled the reassured condition, was told to relax and not worry about giving the speech because psychologists have found that people should not worry about what others think. Finally, the control condition was given no specific instructions prior to giving the speech. Results showed that participants in the illusion of transparency condition rated their speech quality significantly higher than those in the reassured and control conditions. Participants in the informed condition also rated themselves as appearing more relaxed than those in the other conditions.

Based on observer ratings, participants in the informed condition appeared more relaxed than the other participants and also were rated as delivering higher quality speeches.

Purpose

The current study is a replication of the previously discussed study by Savitsky and Gilovich (2003). As discussed, most studies typically only analyze two primary variables (e.g. social anxiety and public speaking, social anxiety and the illusion of transparency, the illusion of transparency and public speaking). The current study replicated the Savitsky and Gilovich article (2003) by analyzing the illusion of transparency among participants completing a speech task. One notable difference, however, is that the current study included socially anxious college students, rather than college students not screened for anxiety, as did the original study.

Hypotheses

Three hypotheses exist for the current study. It is believed that participants informed of the illusion of transparency will have higher scores on overall speech quality compared to other conditions (i.e. reassured, control). It is also thought that participants in the informed condition will have higher scores of relaxed appearance compared to the other conditions (i.e. reassured, control). Participants in the informed condition are also expected to have longer speech times than those in the other conditions (i.e. reassured, control).

Chapter II

Methods

Participants

The participants in this study consisted of 543 undergraduate students attending a Midwestern university. The only requirement for participation was that the participant was at least 18 years of age. All of the participants completed the Fear of Negative Evaluation (FNE; Watson & Friend, 1969) online and 31 of those participants took part in the second section of the study which included a video-taped speech task.

Measures

Fear of Negative Evaluation Scale

The FNE is a 30 item, true/false questionnaire (Appendix A). It assesses fear of negative evaluation by assessing things such as fear of making an unfavorable impression, fear of embarrassing oneself and whether or not one tries to please others. The FNE contains positively and negatively worded items such as “I am afraid that people will find fault with me” and “I am indifferent to the opinions others have of me.” The questionnaire is scored by summing the points for each item. If respondents signify a fear of negative evaluation for an item, they would get 1 point, but if they demonstrate no fear of negative evaluation, they would receive a 0 for that item. When all of the

items are totaled, the participant can have a score between 0 and 30, with 30 indicating a high level of fear of negative evaluation (Watson and Friend, 1969).

The FNE is frequently used as an assessment measure for social anxiety and has acceptable psychometric properties. Stopa and Clark (1993) conducted a video-taped conversation task with participants who had social phobia, those who did not have social phobia but reported anxiety, and non-patient participants used as controls. Before the conversation, participants were given several questionnaires, including the FNE. This study showed that the FNE was able to discriminate between those participants with SP and those who were anxious but did not qualify for SP. In addition to discriminative validity, the FNE also shows convergent validity with other scales of social anxiety such as the Social Interaction Anxiety Scale (SIAS), $r = .44$, (Heimberg, et al., 1992). In regards to reliability, the FNE has been shown to have a one month test-retest reliability coefficient of .78 (Watson & Friend, 1969).

Participant Form

The participants who began the speech task were requested to answer nine items on the Participant Form, after their speech had ended (Appendix B). This form was created from the original questions in the study being replicated (Savitsky & Gilovich, 2003). It included questions about the quality of the speech, the participant's anxiety before and during the speech task, and how expressive and effective the speech was. The items were rated based on a 7 point Likert scale from 1 (*very poor quality*) to 7 (*very high quality*) for speech quality items and 1 (*not at all*) to 7 (*very*) for anxiety items.

Participants rated these questions based on their own opinions and the anticipated observer ratings of these items.

Observer Form

Members of the research team completed the Observer Form (Appendix C). This form included six items about the participant's speech, including the effectiveness, expressiveness, and quality of the delivery, in terms of style and substance, and how relaxed the participant appeared. The items were based on the same Likert scale as the Participant Form, ranging from 1 (*very poor quality*) to 7 (*very high quality*) for speech quality items and 1 (*not at all*) to 7 (*very*) for anxiety items.

Procedure

Participant Procedure

All participants were recruited from a public Midwestern university. Students indicated agreement to participate through an online participant recruitment website, SONA-system, to gain extra credit in their psychology course. Participants completed the first part of the study by reading the informed consent (Appendix D) and completing the Fear of Negative Evaluation scale online. Scores were analyzed and those within the top 25 percentile of scores (scores above 21), were invited through email to participate in the second section of the study. Those who participated in the second portion of the study received additional extra credit. Students who returned for the second part of the study arrived at the lab individually and were given an informed consent sheet to read and sign (Appendix E). They were verbally informed that they would be giving a 3 minute speech

and would have 5 minutes to prepare. They also were informed that they were being video-taped during the speech preparation and speech task and that members of the research lab were sitting behind the one-way mirror watching, although in reality, no one was behind the mirror other than the experimenter. Prior to arriving at the lab participants were randomly assigned to one of three conditions. Condition 1 included participants who were informed about the illusion of transparency. Condition 2 included participants who were not informed of the illusion of transparency, but instead were reassured. Condition 3 was a control condition in which participants had no instructions. After signing the informed consent, participants in Conditions 1 and 2 were handed an instructions sheet and told to follow along while the experimenter read the instructions aloud. Those in Condition 1 (Transparency condition) were read the following instructions:

“I realize you might be anxious. It’s perfectly natural to be anxious when confronted with a public speaking task. Many people become anxious not only because they’re concerned about whether or not they’ll do well, but also because they believe they will appear nervous to those who are watching. They’re nervous about looking nervous. I think it might help you to know that research has found that audiences can’t pick up on your anxiety as well as you might expect. Psychologists have documented what is called an “illusion of transparency.” Those speaking feel that their nervousness is transparent, but in reality their feelings are not so apparent to observers. This happens because our own emotional experience can be

so strong, we are sure our emotions “leak out.” In fact, observers aren’t as good at picking up on a speaker’s emotional state as we tend to expect. So, while you might be so nervous you’re convinced that everyone can tell how nervous you are, in reality that’s very rarely the case. What’s inside of you typically manifests itself too subtly to be detected by others. With this in mind, you should just relax and try to do your best. Know that if you become nervous, you’ll probably be the only one to know.”

Those in Condition 2 (Reassured condition) were read the instructions:

“I realize you might be anxious. It’s perfectly natural to be anxious when confronted with a public speaking task. Many people become anxious not only because they’re concerned about whether or not they’ll do well, but also because they believe they will appear nervous to those who are watching. They’re nervous about looking nervous. I think it might help you to know that you shouldn’t worry much about what other people think. Psychologists have found that you don’t need to be concerned about other people’s impressions. This is hard to do because our own emotional experience of anxiety can be so strong, but past research has shown that we shouldn’t be worried about this. With this in mind, you should just relax and try to do your best. Know that if you become nervous, you probably shouldn’t worry about it.”

Participants in Condition 3 (Control condition) were given no instructions. Next, participants in all three conditions were told that they would have 5 minutes to prepare a

speech on the topic of race relations at the university where this study took place. The experimenter then gave the participant blank scratch paper to make notes or write their speech and left the room to turn the video camera on. After five minutes had passed the experimenter re-entered the room along with a second experimenter who was blind to the condition of the participant. The participant was instructed to hang a laminated paper stop sign around their neck. They were told that they could either touch the stop sign or verbalize that they were finished with the speech prior to the 3 minutes if they wished to do so. The second experimenter sat in the corner of the room and watched the participant to see if they said “stop” or touched the stop sign so that they could end the task if necessary. After the 3 minutes had passed, or the participant escaped the task, the recording was turned off and the participant was asked to complete the Participant Form. After finishing the Participant Form, the student was informed of the purpose of the study and debriefed.

Observer Procedure

Prior to observers completing the Observer Form, they were given training on how to code the videos (Appendix F). Specific anchors for coding were adapted from research done in other studies (Beidel et al., 2010; Fydrich et al., 1998). The researcher showed members of the research team two practice videos and scored the participant on all items on the Observer Form, explaining why they were coded as they were. It should be noted that in the original study (Savitsky & Gilovich, 2003), observers were recruited from an undergraduate participant pool, rather than from the research team. Next, participants practiced on three videos until they reached an inter-rater reliability with

agreement considered as observers rating each item within 1 point of each other.

Halfway through the coding of the participant videos, a reliability check was conducted and agreement was reached.

Chapter III

Results

Speakers' Self-Ratings

Results were obtained from conducting one-way ANOVAs for the dependent variables of participant speech quality rating, anticipated quality rating, participant relaxed, relaxed appearance, and speech length. In order to conduct these ANOVAs, this study combined specific correlated variables into subscales in the same fashion as the replicated study (Savitsky & Gilovich, 2003). Table 1 reveals all of the means for the three conditions for each subscale analyzed. Because the participant items of quality rating, effectiveness and expressive were highly correlated (mean $r = .76$), they were combined into one participant speech quality subscale. As can be seen in Table 1, participants in the transparency informed ($M = 2.93$, $SD = 1.14$) and reassured ($M = 2.96$, $SD = 1.26$) conditions had higher ratings of their speech quality compared to the control condition ($M = 2.42$, $SD = 1.04$), but they were not significantly different, $F(2, 27) = .73$, *ns*.

The anticipated observer quality and anticipated observer expressive rating were highly correlated ($r = .86$) and thus were combined into a subscale of anticipated quality. Similar to the participant speech quality rating results, the anticipated quality results also revealed the informed ($M = 2.95$, $SD = 1.09$), and reassured ($M = 2.83$, $SD = 1.56$), conditions to have higher scores compared to the control condition ($M = 2.23$, $SD = 1.13$), although they were not significant, $F(2, 27) = 1.0$, *ns*.

The two items of participant relaxed before the speech and nervous during the speech (reverse coded) were also combined into one subscale of how relaxed they were due to their significant correlation ($r = .58$). Results of the ANOVA revealed no significant difference between conditions, $F(2, 27) = .56, ns$, even though the reassured condition ($M = 3.67, SD = 2.06$), had the highest scores followed by the control ($M = 3.14, SD = 1.55$), and informed ($M = 2.85, SD = 1.51$), conditions.

Finally, the item of anticipated anxious appearance was reverse coded so that higher numbers indicated more relaxation. Results showed that the reassured group ($M = 4.33, SD = 1.66$), anticipated appearing the most relaxed, followed by the informed ($M = 3.50, SD = 1.78$), and control ($M = 3.36, SD = 1.74$), conditions, but this difference was not statistically significant $F(2, 29) = .88, ns$.

Table 1

Mean ratings of speeches by speakers and observers and speech length

| Type of rating | Condition | | |
|------------------------|--------------------|---------------------|-------------------|
| | Informed (n=10) | Reassured (n=10) | Control (n=11) |
| Speaker's self-ratings | | | |
| Speech quality | 2.93 | 2.96 | 2.42 |
| Anticipated quality | 2.95 | 2.83 | 2.23 |
| How relaxed | 2.85 | 3.67 | 3.14 |

| | | | |
|---------------------|--------|-------|------|
| | | | 18 |
| Relaxed appearance | 3.50 | 4.33 | 3.36 |
| Observers' ratings | | | |
| Speech quality | 4.43 | 4.18 | 4.11 |
| Composed appearance | 4.39 | 4.18 | 3.99 |
| Speech length | 106.70 | 87.90 | |
| | 105.00 | | |

Observer Ratings

Similar to participant ratings, the observer ratings also combined items from the Observer Form into subscales, as reported in Savitsky and Gilovich (2003). Observer items expressiveness, effectiveness, speech quality in regards to style, and speech quality of substance were significantly correlated (mean $r = .53$) and thus were combined into an observer speech quality subscale. One-way ANOVA results indicated participants in the informed condition ($M = 4.43$, $SD = .70$) receiving higher quality scores than those in the reassured ($M = 4.18$, $SD = .63$) and control ($M = 4.11$, $SD = .59$) conditions, yet these differences were not significant, $F(2, 29) = .83$, *ns*.

The observer items of how relaxed the participant appeared before and during the speech were significantly correlated ($r = .46$) and were combined into a composed appearance subscale. Results of the ANOVA analysis revealed the informed condition

($M = 4.39$, $SD = .51$) appeared more relaxed than the reassured ($M = 4.18$, $SD = .85$) and control ($M = 3.99$, $SD = .71$) conditions, but these differences were not significant, $F(2, 29) = .86$, *ns*.

Speech Length

In addition to the specific items from the Participant Form and Observer Form regarding the anxiety of the speech givers and the quality of the speeches, the speech length was analyzed. Results revealed no significant difference between the groups, $F(2, 27) = .34$, *ns* even though the informed condition ($M = 106.70$, $SD = 55.72$) spoke longer than the control ($M = 105.00$, $SD = 55.94$) and reassured ($M = 87.90$, $SD = 57.71$) conditions.

Chapter IV

Discussion

Summary

Based on the results of the analyses conducted, all of the hypotheses were rejected, since no significant results were obtained. These results, however, may be explained. For the quality of the speech subscale and anticipated quality of speech subscale rated by the participants, the informed and reassured condition had slightly higher mean scores compared to the control group. This could be due to the fact that these two conditions received some instructions as to how to feel during their speeches, rather than no instructions. It is likely that these instructions allowed the participants to feel as though they had an idea as to the purpose of the study and how they would be evaluated, so that they could focus on the speech task at hand in regards to writing a good speech, and delivering it well, so that the observers rated it highly. The control group, however, was never given an indication as to what the purpose of the study was through any instruction, and therefore, may have been preoccupied during the 5 minutes of preparation time wondering about the purpose, and thus not focusing on writing as high of a quality speech.

In regards to the relaxed and anticipated relaxation subscale, the participants in the reassured condition had higher scores compared to the control and informed conditions. This may have been due to the specific words in the instructions the participants in the informed and reassured conditions were presented with prior to

preparing and giving the speech. Research has shown that anxious people have a tendency to process information selectively, meaning that they tend to identify and encode threatening words more often than people who have minimal anxiety (MacLeod, 1996).

When analyzing the specific wording of the informed condition, they were given anxiety provoking words and phrases such as “anxiety” and “nervous” eleven times in their instructions, compared to these words presented only seven times in the reassured condition. Also, the informed condition was told that “our emotional experience can be so strong, we are sure our emotions leak out,” whereas the reassured condition was given slightly less anxiety-inducing instructions such as “our emotional experience can be so strong, but past research has shown that you shouldn’t be worried about this.” The informed condition was also told that “if you become nervous, you’ll probably be the only one to know,” yet the reassured condition was told slightly different instructions to get their mind off of their anxiety such as, “if you become nervous, you probably shouldn’t worry about it.” Although no significant difference existed, the results of the statistical analyses showed that the reassured group felt slightly more relaxed compared to the other two conditions, with the informed condition feeling the least relaxed. This could have been due to the anxiety priming from the instructions the informed condition received. The reassured condition received instructions to ignore other people’s impressions, and participants in the control condition received no words priming their anxiety. The informed condition, however, was primed to be the “only one to notice” their own anxiety, and told that they may think their emotions “leak out” thus acting as a

primer to focus on their own anxiety state. This can be problematic because studies have shown that when people are told to suppress their anxiety, it often increases anxiety. Hofman et al. (2009) had participants conduct an impromptu speech task in which some participants were told to accept their anxiety, others were told to reappraise their anxiety related to the situation because the situation poses no real threat, similar to those in the current study's reassured group, and others were told to deliberately suppress their anxiety. Results showed that those who were told to suppress their anxiety had an increase in physiological anxiety symptoms, such as heart rate, compared to those in the other two conditions.

In regards to participant speech quality, the participants in the informed condition felt the most confident in how their speeches would be viewed by observers. Results showed that the observers also felt as though the informed condition gave the highest quality speeches. This is in line with the hypothesis that the observers would rate the informed group as giving higher quality speeches compared to the reassured and control groups, however, the results were not statistically significant.

Although the participant ratings indicated that those in the informed group felt the least relaxed of the three conditions, observer ratings showed otherwise. Observers believed that overall, participants in the informed condition appeared the most relaxed while delivering their speeches. Even though there was not a significant difference between the conditions for how relaxed they appeared to observers, the results were in line with the hypothesis that those in the informed condition would appear more relaxed.

The speech length also did not show statistically significant results, with the informed and control groups averaging longer speech lengths than the reassured condition. Out of the 31 participants, 8 spoke for the entire 3 minutes. Of these 8 participants, 3 were in the informed condition, 3 were in the control condition, and 2 were in the reassured condition. The average for the reassured condition may have been lower than the other two conditions because 1 participant in this condition refused to give the speech, even after preparing it for the full 5 minutes, thus lowering the average.

Implications

Implications for this study reveal that simply telling someone to relax and that other people will not sense their anxiety is not enough to alter their behavior. Cognitive behavioral therapy often includes skills training, exposure and restructuring cognitions in order to make changes, yet for this study, informing participants about the phenomenon of the illusion of transparency was not enough to make a significant difference in their anxiety and quality of speeches compared to the other conditions.

Compared to the replicated study (Savitsky & Gilovich, 2003), the current study had some analogous results. Similar to the findings in this study, the original study found no significant results for the participant relaxed index and anticipated quality index. The original study (Savitsky & Gilovich, 2003), however, had significant results for the participant quality index, $F(1, 65) = 4.47, p < .05$, anticipated relaxed index $F(1, 65) = 12.30, p < .001$, observer relaxed rating $F(1, 74) = 9.49, p < .01$ and observer quality rating, $F(1, 74) = 7.94, p < .01$, whereas the current study did not. The different findings in the current study could be due to several differences in methodology. The current

study had a much smaller sample size ($n=31$), compared to the original study ($n=77$). Also, the original study did not use a socially anxious sample, but instead used undergraduate students not assessed for social anxiety, whereas this study used a socially anxious sample which could have been affected by the anxiety priming in the instructions.

Limitations

Several limitations exist for the current study. The participants were screened using the FNE only rather than conducting a full battery of assessment measures. The participants may not have paid full attention to the questions if they were in a hurry, and some may have not answered honestly, thus indicating that some of the participants may have not truly been socially anxious.

Also, participants answered the items about their performance on the Participant Form based on a 7-point Likert scale. These items, however, were not specifically defined with anchoring points for all of the items, so the participants' interpretations of what each number represented could have been completely subjective.

Much research in psychology is conducted on college students since they are a very obtainable sample, yet this could be problematic. Although many college students may be socially anxious, many severely socially anxious people may avoid going to college since it requires social interaction. Therefore, this sample could be less representative of a socially anxious sample than people in the general population who have been diagnosed with SP.

The topic of the speech also could have been problematic. Many students reported that they did not have very much information to discuss in regards to race relations. The original study that this was replicated (Savitsky & Gilovich, 2003) may have been conducted at a much more diverse university, and thus students from this Midwestern, mostly Caucasian school, may have had difficulties with the topic, which could have influenced the length of their speeches.

Future Research

Future research could implement several changes to the current study to improve its quality. A non-college sample that has been screened for social anxiety with a number of assessment tools would be helpful to try to generalize the results to a more clinically relevant sample.

The topic of the speech could also be altered. The topic of race relations was used in this study since it is a replication. Future studies, however, could incorporate a topic that is easier to discuss, or allow participants to choose from a few different topics in order to eliminate a potential confounding variable of the participants simply not having enough information to discuss for the full 3 minutes.

Future studies are important in the area of social anxiety and public speaking. Public speaking is a common fear, and additional research could help to find variables that ameliorate the anxiety symptoms during this feared task.

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Appendix A

Fear of Negative Evaluation Scale (Watson & Friend, 1969)

Carefully read each of the 30 statements listed below. Decide whether each statement is true or false as it pertains to you personally. If you are unsure which is the better answer, decide which one is slightly more applicable to how you are feeling at the moment and answer accordingly. Try to answer based on your first reaction to the statement. Don't spend too long on any one item.

1. I rarely worry about seeming foolish to others.
 - a. True
 - b. False
2. I worry about what people will think of me even when I know it doesn't make any difference.
 - a. True
 - b. False
3. I become tense and jittery if I know someone is sizing me up.
 - a. True
 - b. False
4. I am unconcerned even if I know people are forming an unfavorable impression of me.
 - a. True
 - b. False

5. I feel very upset when I commit some social error.
 - a. True
 - b. False
6. The opinions that important people have of me cause me little concern.
 - a. True
 - b. False
7. I am often afraid that I may look ridiculous or make a fool of myself.
 - a. True
 - b. False
8. I react very little when other people disapprove of me.
 - a. True
 - b. False
9. I am frequently afraid of other people noticing my shortcomings.
 - a. True
 - b. False
10. The disapproval of others would have little effect on me.
 - a. True
 - b. False
11. If someone is evaluating me I tend to expect the worst.
 - a. True
 - b. False

12. I rarely worry about what kind of impression I am making on someone.
- a. True
 - b. False
13. I am afraid that others will not approve of me.
- a. True
 - b. False
14. I am afraid that people will find fault with me.
- a. True
 - b. False
15. Other people's opinions of me do not bother me.
- a. True
 - b. False
16. I am not necessarily upset if I do not please someone.
- a. True
 - b. False
17. When I am talking to someone, I worry about what they may be thinking about me.
- a. True
 - b. False
18. I feel that you can't help making social errors sometimes, so why worry about it.
- a. True
 - b. False

19. I am usually worried about what kind of impression I make.
- a. True
 - b. False
20. I worry a lot about what my superiors think of me.
- a. True
 - b. False
21. If I know someone is judging me, it has little effect on me.
- a. True
 - b. False
22. I worry that others will think I am not worthwhile.
- a. True
 - b. False
23. I worry very little about what others may think of me.
- a. True
 - b. False
24. Sometimes I think I am too concerned with what other people think of me.
- a. True
 - b. False
25. I often worry that I will say or do the wrong things.
- a. True
 - b. False

26. I am often indifferent to the opinions others have of me.

- a. True
- b. False

27. I am usually confident that others will have a favorable impression of me.

- a. True
- b. False

28. I often worry that people who are important to me won't think very much of me.

- a. True
- b. False

29. I brood about the opinions my friends have about me.

- a. True
- b. False

30. I become tense and jittery if I know I am being judged by my superiors.

- a. True
- b. False

Appendix B

Please fill out the questions below by indicating the degree to which you felt anxious or nervous based on the speech task you just completed on a scale from

1 (not at all) to 7 (very).

1. The overall quality of my speech was...

1 2 3 4 5 6 7

(very poor quality)

(very high quality)

2. My speech was effective.

1 2 3 4 5 6 7

(not at all)

(very)

3. I was expressive.

1 2 3 4 5 6 7

(not at all)

(very)

4. I was relaxed before I delivered my speech.

1 2 3 4 5 6 7

(not at all)

(very)

5. I was nervous during my speech.

1 2 3 4 5 6 7

(not at all)

(very)

6. If an observer rated my speech on its overall quality, they would give it the following score:

1 2 3 4 5 6 7

(very poor quality)

(very high quality)

7. If an observer rated my speech, they would rate how expressive I was with the following score:

1 2 3 4 5 6 7

(not at all)

(very)

8. If an observer rated my speech, they would rate how anxious I appeared with the following score:

1 2 3 4 5 6 7

(not at all)

(very)

9. I have had a discussion or given a speech that lasted about 3 minutes on the topic of race relations prior to today's activity:

Yes

No

Appendix C

Observer Form

1. The participant was relaxed before delivering the speech.

| | | | | | | |
|--------------|---|---|---|---|---|--------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| (not at all) | | | | | | (very) |

2. The participant was composed during the speech.

| | | | | | | |
|--------------|---|---|---|---|---|--------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| (not at all) | | | | | | (very) |

3. The participant was expressive (words seemed to represent the meaning/feeling they wanted to convey).

| | | | | | | |
|--------------|---|---|---|---|---|--------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| (not at all) | | | | | | (very) |

4. The speech was effective (persuaded the audience of what he/she said).

| | | | | | | |
|--------------|---|---|---|---|---|--------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| (not at all) | | | | | | (very) |

5. The overall quality of the speech (based on the speaker's style) was...

| | | | | | | |
|---------------------|---|---|---|---|---|---------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| (very poor quality) | | | | | | (very high quality) |

6. The overall quality of the speech (based on the substance of the speech) was...

| | | | | | | |
|---------------------|---|---|---|---|---|---------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| (very poor quality) | | | | | | (very high quality) |

Appendix D

Online Informed Consent (Part 1)

You are requested to participate in research that will be conducted by Chelsea Gloth and supervised by Principal Investigator, Dr. Barry Ries, on social interactions. This survey should take about 3 to 5 minutes to complete. Participation is voluntary and responses will be kept confidential. However, whenever one works with email/the internet there is always the risk of compromising privacy and/or confidentiality. Despite this possibility, the risks to your physical, emotional, social, professional, or financial well-being are considered to be 'less than minimal'.

You have the option to not respond to any questions that you choose. Participation or nonparticipation will not impact your relationship with Minnesota State University, Mankato. Submission of the completed survey will be interpreted as your informed consent to participate and that you affirm that you are at least 18 years of age.

If you have any questions about the research, please contact Chelsea Gloth via email at chelsea.gloth@mnsu.edu or Dr. Ries at barry.ries@mnsu.edu. If you have questions about the treatment of human subjects, contact the IRB Administrator at 507-389-2321.

If you would like more information about the specific privacy and confidentiality risks posed by online surveys, please contact the Minnesota State University, Mankato Information and Technology Services Help Desk (507-389-6654) and ask to speak to the Information Security Manager.

Appendix E

Informed Consent (Part 2)

You are invited to participate in a research study that will examine students' social interactions. You are being invited to participate because of your status as a student attending Minnesota State University- Mankato.

This study is being conducted by Chelsea Gloth, a graduate student attending Minnesota State University- Mankato, under the supervision of Dr. Barry Ries.

Background Information

The purpose of this study is to investigate students' social interactions. All data collected will be used solely for this purpose.

Procedures

If you agree to participate, we will ask you to prepare and give a 3 minute speech on the topic of race relations at Minnesota State University- Mankato and fill out a brief questionnaire about your performance on the task. The speech will also be video-recorded and viewed by members of Dr. Ries' research team. Additionally, members of Dr. Ries' research team will be watching your speech. You may quit the speech (even before it begins) or discontinue filling out the survey at any time without penalty. This study will take about 15 minutes of your time.

Risks and Benefits of being in the Study

There is minimal risk for your participation in this study. Your participation is voluntary and you have the right to withdraw from the study at any time without negative consequences. You also have the right to refuse any particular steps of the study without completely withdrawing from the study. Possible benefits include gaining a greater understanding of psychological research and advancing information about social interactions.

Compensation

Some psychology professors offer extra credit in some of their courses for participation in research studies.

Confidentiality

The records of this study will be kept private. In any sort of report we might publish, we will not include any information that will make it possible to identify you. Research records and video DVDs will be stored securely and only researchers under the direct supervision of Dr. Barry Ries will have access to the records. The video DVDs will be stored for 3 years. After this time, they will be destroyed by breakage.

Voluntary Nature of the Study

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relationships with Minnesota State University, any of its

affiliates or the research team. If you decide to participate, you are free to withdraw at any time without affecting those relationships.

Contacts and Questions

The researcher conducting this study is Chelsea Gloth. If you have any questions, **you are encouraged** to contact her at Minnesota State University, Armstrong Hall 23, 507-389-2724 (Psychology Department Office) or by email at chelsea.gloth@mnsu.edu. To contact Barry Ries, the supervisor of this study, call 507-389-5825 or email him at barry.ries@mnsu.edu.

If you have any questions or concerns regarding the treatment of human subjects and would like to talk to someone other than the researchers, **you are encouraged** to contact Terrance Flaherty from the Office of Graduate Studies and Research at 507-389-2321 via phone or at terrance.flaherty@mnsu.edu via email.

By signing below, I am consenting to participate and I affirm that I am at least 18 years of age.

Print Name _____

Signature of Participant _____

Date: _____

Signature of Researcher _____

Date: _____

Appendix F

Video Coding Anchors

(Adapted from Beidel et al., 2010; Fydrich et al., 1998)

Question 1. The participant was relaxed before delivering the speech.

1 Severe anxiety

Clearly uncomfortable, overt signs of anxiety (hand wringing, sweating, flushing, turning, fidgeting); unable to write

2-3 Moderate anxiety

Uncomfortable, but able to write; Many overt signs of anxiety (flushing, hand wringing, fidgeting).

4 Mild anxiety

Some symptoms of anxiety such as fidgeting, flushing, hand wringing.

5-6 Not at all anxious

No overt signs of anxiety, able to write without fidgeting, flushing, hand wringing.

7 Animated

Appeared to enjoy writing; no overt signs of anxiety (no flushing, fidgeting, hand wringing); smiled during task.

Question 2. The participant was composed during the speech.

1 Severe anxiety

Clearly uncomfortable, overt signs of anxiety (hand wringing, sweating, flushing, turning, fidgeting, unable to speak at all).

2-3 Moderate anxiety

Uncomfortable, but able to speak; stuttering, stammering, word finding difficulty. Some other over signs of anxiety (flushing, hand wringing, fidgeting).

4 Mild anxiety

Some symptoms of anxiety such as fidgeting, flushing; mild stammering or word finding difficulty; able to clearly speak in a reasonable manner.

5-6 Not at all anxious

No overt signs of anxiety, able to present well.

7 Animated

Spontaneous expression of emotions, very engaging, clearly comfortable and in control, effective presentation, no overt signs of anxiety.

Question 3. The participant was expressive (words seemed to represent the meaning/feeling they wanted to convey).

1 Unexpressive

Participant completely avoids looking at imaginary audience or stares continually; Speaks in a flat, monotonous voice; low volume, mumbles, or speaks overly loudly or has intrusive tone (harsh or unpleasant voice quality)

2-3 Poor expressiveness

Participant avoids looking at imaginary audience or stares for majority of time; disruptive to performance; Demonstrates no warmth, enthusiasm or interest in verbal expression; volume somewhat low and speech somewhat unclear; speaks a little bit too loudly, or tone is somewhat intrusive or sarcastic

4 Expressive

Participant frequently avoids looking at imaginary audience or stares; Gaze pattern is mildly disruptive to performance; Shows some warmth in verbal expression but at most times sounds unenthusiastic or uninterested; speaks in appropriate volume, has clear voice quality, and does not have an intrusive or sarcastic tone

5-6 Mostly expressive

Participant occasionally avoids looking at the imaginary audience or tends to look too much (stares); Shows moderate warmth but inconsistent enthusiasm or interest; can also be too gushy (seems fake or forced)

7 Very expressive

Participant looks at imaginary audience during speech, (but does not stare) shifts focus during pauses and speech; Warm and enthusiastic in verbal expression without sounding condescending or gushy.

Question 4.

The speech was effective (persuaded the audience of what he/she said).

1 Not effective at all

Extremely awkward, barely speaks if at all.

2-3 Minimally effective

Moderately awkward, presents topic but with few words; speech is clearly disjointed and difficult to follow, does little to keep the speech going.

4 Moderately effective

Mild awkwardness, able to present topic; only some parts of speech appear disjointed, some degree of fluidity, and moderate effort to keep speech going; may be somewhat inappropriate.

5-6 effective

No awkwardness, clearly able to communicate; presents topics and points clearly, appropriate effort to maintain presentation, no inappropriateness.

7 Very effective

Good interpersonal skill, speech is engaging, self discloses, uses appropriate transitioning, enjoys speech.

Question 5. The overall quality of the speech (based on the speaker's style) was...

1 Bad style (Extreme discomfort)

Complete rigidity of arms, legs or whole body; Constant movements or fidgeting with hands, hair or clothing; Extremely stiff face or constant facial tics; Frequent nervous throat clearing, swallowing, or stuttering; Frequent inappropriate giggling or laughing; Look of extreme discomfort and desire to flee situation shown by 2 or more pauses; Does not pay attention to the speech task most of the time.

2-3 Poor style

Rigidity or fidgeting for majority of time; Difficulty standing still is somewhat disruptive to performance; Stiff face or frequent facial tics; Some nervous throat clearing or swallowing; Some inappropriate giggling or laughing; Shows signs of discomfort by frequently looking around; More than 1 pause in speech.

4 Fair style

No rigidity. Slight movement of legs, fidgeting, throat clearing, or swallowing; Shows only brief periods of discomfort; Focuses on the speech task most of the time; No pauses in the speech.

5-6 Good style

No rigidity, nervous throat clearing, or swallowing; Minimal fidgeting that is not disruptive to performance; No notable signs of discomfort; Remains focused on the task throughout the entire speech; At times may appear relaxed and at ease (smiling or gesturing).

7 Great style (Comfortable)

Relaxed body posture and natural body movement; Laughs and smiles, shows effective gesturing (to be distinguished from fidgeting); Focuses on the task all the time, does not appear uncomfortable at all, but at ease in the situation.

Question 6.

The overall quality of the speech (based on the substance of the speech) was...

1 Very poor quality

Participant was off topic the entire speech; Speech was unclear and did not make sense for the assigned topic; Used no examples to support points

2-3 Poor quality

Participant was off topic for most of speech; Speech was unclear and did not make sense; Used no examples to support points

4 Moderate quality

Participant remained on topic for half of speech; Some of the speech was clear; Used at least 1 example to support point

5-6 Good quality

Participant remained on topic throughout most of the speech; Most sentences were clear; Used few examples to support point

7 High quality

Participant remained on topic throughout the entire speech; Sentences made sense; Used several examples to support point