

## Project Prospectus

One of the main reasons why anxiety is maintained is that people are often able to avoid the source of their anxiety. Someone with a phobia of snakes, for example, may say no to an invitation to hike out in the woods to decrease their risk of encountering a snake. Someone with claustrophobia may choose to take the stairs instead of the elevator. This avoidance over time often leads to more anxiety; the less the person is exposed to the feared object or context, the more anxious they become about it. With more exposure (e.g. exposure therapy), on the other hand, we often see decreases in anxiety.

Social phobia does not seem to fit this mold, however. While it is known that most people with social phobia try to avoid social situations, many social encounters are unavoidable in our day-to-day lives. Why is it, then, that people with social anxiety cannot seem to overcome their anxiety despite this constant exposure to social encounters?

Cognitive behavioral models of social anxiety (Clark & Wells, 1995; Rapee & Heimberg, 1997) provide explanations as to why this might happen. These models suggest that following a social event, socially anxious people may retrieve negative information about themselves and others during the situation, and brood over this negative material after the event has occurred. This process of engaging in a repetitive and detailed review of one's performance is called post-event processing (PEP).

To date, many studies have demonstrated that people who exhibit higher levels of clinical and non-clinical social anxiety engage in elevated levels of PEP, even after controlling for symptoms of depression (for a review, see Brozovich & Heimberg, 2008). Repeated PEP may alter memories of the event, and even exacerbate anxiety in future situations.

Many studies so far have taken a person-focused view at understanding PEP, investigating individual differences in tendencies to engage in PEP. However, not much is known about the characteristics of an *event* that might facilitate PEP. Since fear of negative evaluation is at the core of social anxiety, the few studies that have taken an event-focused perspective on understanding PEP have investigated evaluative situations. Many of these studies involve putting the participant in a stressful social situation in the lab and asking them to report on their level of PEP after the event. The most common social situations researchers use are asking the participant to interact with a confederate, or asking them to perform in front of others (e.g. give a speech). However, none of these experimental studies have tested the effect *nonsocial* stressors have on PEP, making it impossible to distinguish whether people engage in PEP after *any* evaluative event, or whether it occurs specifically following *social* evaluative events.

The purpose of the research I am proposing here is to understand what it is about stressful events that leads people to engage in PEP. Specifically, I aim to expose participants to an evaluative situation in the lab, only manipulating whether the evaluation is social in nature or not, and to determine whether this manipulation is predictive of PEP at two separate time points. To accomplish this, I will use a modified version of the Trier Social Stress Test (TSST; Kirschbaum, Pirke, & Hellhammer, 1993), which is a well-established tool for inducing stress

responses in a laboratory setting. This modified version of the TSST will involve doing serial subtractions that are quite difficult (e.g. count down from 2,104 by 13s), though participants will be told that the task is quite easy. When participants provide an incorrect response, they will be told they are wrong and instructed to start over from the top. Previous studies in our lab that have used this task have consistently found increased levels of anxiety, measured both physiologically and behaviorally.

During the initial lab session, participants will be asked to complete this task by entering their responses using the computer keyboard in front of them and will receive verbal and visual feedback about their performance. To test my hypotheses, I will manipulate the context of the verbal feedback. Specifically, participants will be randomly assigned to one of two feedback conditions: social or nonsocial. In the social version of the task, the experimenter will provide verbal feedback on mental arithmetic task performance (e.g., telling participants they are wrong and instructing them to start over). In the nonsocial version, the computer will provide verbal feedback on mental arithmetic performance. Participants will complete two rounds of the task such that it will last roughly 10 minutes in total. They will also complete questionnaires measuring their levels of social anxiety, depression, and other emotional characteristics. Twenty-four hours after the lab session and seven days after the lab session, participants will be asked to report on their PEP by completing a brief online follow-up survey measuring how often and repetitively they thought about their performance, the impressions they made, the feedback they received, and the level of anxiety they felt during the event.

I aim to recruit 100 participants for this experiment. While I will recruit most of these participants from the undergraduate participant pool of the psychology department (N = 60), I also aim to recruit participants from the community to diversify the sample and thus enhance the generalizability of the findings. To this end, I aim to recruit N = 40 participants from the community. These participants will be compensated with **\$15** for the hour-long lab session, and **\$5** in amazon.com gift cards for each online follow-up survey (**\$1,000 total**).

If successful, the proposed study would be the first to clearly demonstrate whether an evaluative event needs to be social in nature to trigger PEP, therefore advancing our understanding of PEP, a highly important construct in the study of social anxiety. Beyond their clinical implications, these findings may have important applications in educational settings, especially with the increasing popularity of the use of technology and online resources in teaching.

## References

- Brozovich, F. and Heimberg, R. G. (2008). An analysis of post-event processing in social anxiety disorder. *Clinical Psychology Review*, 28, 891–903.
- Clark, D. M. and Wells, A. (1995). A cognitive model of social phobia. In R.G. Heimberg, M.R. Liebowitz, D.A. Hope and F.R. Schneier (Eds.), *Social Phobia: diagnosis, assessment and treatment* (pp. 69–93). New York: Guilford Press.
- Kirschbaum, C., Pirke, K. M., & Hellhammer, D. H. (1993). The 'Trier Social Stress Test'—a tool for investigating psychobiological stress responses in a laboratory setting. *Neuropsychobiology*, 28(1-2), 76-81.
- Rapee, R. M. and Heimberg, R. G. (1997). A cognitive-behavioral model of anxiety in social phobia. *Behaviour Research and Therapy*, 35, 741–756.

**Itemized Budget**

<i>Expense</i>	<i>Details</i>	<i>Cost</i>
40 participants		
In-lab sessions	\$15 each	<b>\$600</b>
Online follow-up surveys	\$5 in amazon.com gift cards for each of 2 follow-ups	<b>\$400</b>
	<b>Total</b>	<b>\$1,000</b>