Nicole Betz

Advisor: John Coley

Priming Essentialist Beliefs about Emotions alters Emotional Experiences Differently for Men and Women

How might our understanding of the world shape how we experience the world? The current research examines how holding a lay theory of emotion—emotional essentialism—influences how people experience emotion, and how they attempt to regulate their emotions.

Psychological essentialism is the belief that category members share an underlying, unobservable essence that gives rise to superficial properties and determines category membership. Within the literature, a set of beliefs have been linked to this idea of an underlying essence. Thus, essentializing emotions means ascribing to a set of beliefs about emotions, including the notions that emotions are naturally occurring categories, and emotional experiences are difficult to change. My previous work suggests that endorsement of essentialist beliefs about emotions predicts the use of maladaptive emotion regulation strategies, such as rumination or emotional suppression, that are generally ineffective at reducing negative affect and have been linked to mood disorders such as anxiety and depression.

In the current study, I extended this work by examining the influence of emotional essentialism on spontaneous emotion regulation strategies and emotional experiences in response to an in-lab negative event. By having participants read contrived scientific articles portraying emotions as either innate and biologically basic or psychologically constructed, I primed high and low levels of emotional essentialism. A third group of participants read an article about measuring emotions in the laboratory to serve as a control. This manipulation was validated in previous research. I then measured emotional reactions to a negative event by administering the Positive and Negative Affect Scale (PANAS) both before and after participants viewed a series of negative film clips. To determine the emotional reaction specifically derived from viewing the film clips, I computed the difference in positive and negative affect scores as measured by the PANAS across these two time points. I also measured the emotion regulation strategies that participants used by having participants complete variants of the Cognitive Emotion Regulation Questionnaire (CERQ) and the Difficulties in Emotion Regulation Scale (DERS) in which participants were directly asked about the regulation strategies that they used while watching the negative film clips. I found distinct effects of the essentialism manipulation on males and females. Specifically, males in the high essentialism condition experienced less negative affect than other participants, while females in the high essentialism condition experienced more negative affect and less positive affect than other participants. I also found that males in the high essentialism condition had more emotional clarity than males in other conditions. These results suggest that essentializing emotions may be beneficial for males, but detrimental for females. Broadly, these findings suggest that our lay theories of emotions have important implications for the way that we experience and regulate emotions in daily life, and that the effects of cognitions on emotions may be influenced by gender.

Susan Dalrymple

Advisor: Nancy Kim

Understanding Parents' Hindsight and Foresight Predictions of School Violence

Do parents reason differently about a student who has made reference to committing a future violent act if they are reasoning before learning the outcome versus after? Though adolescents' references to committing a future violent act are present prior to most school shootings, they have little predictive value. In fact, retrospective examinations of shooting events note that many non-violent adolescents often display traits and behaviors observed in those of school shooters before a shooting incident. Even so, in the sense-making process that follows school shooting events, we find ourselves asking if the event was foreseeable. Judgments about foreseeability are important because they are often tied to downstream judgments such as responsibility. The hindsight bias literature suggests that if we are able to make sense of information that precedes an outcome such as a school shooting (e.g., an adolescent's reference to committing a violent act), we are more likely to believe the outcome was foreseeable. If, however, information that precedes an event leads us to believe that an alternative outcome was more likely, we may believe that it was impossible to foresee such an event.

In this study, I asked whether parents make different judgments about the foreseeability of school shooting events if they are making this judgment before versus after they know the outcome. Additionally, I asked if it mattered whether they were told the outcome was violent or non-violent. Parents read about two adolescent male students and their references to committing specific future acts of school violence. They were either told that (1) each adolescent went on to commit the violent act, (2) each adolescent never committed the violent act, or (3) nothing about the eventual outcome. Each parent judged the perceived likelihood of a violent and a non-violent outcome (and, in the first two conditions, were instructed to ignore the outcome they had been told). They also rated how relevant each item of background information about the adolescent was in making their prediction. Parents who were told that the adolescent committed the violent act judged this outcome as more likely than parents not told about the eventual outcome, exhibiting hindsight bias. However, parents who were told about a non-violent outcome judged the likelihood of violence the same as the parents who were not told any outcome. Across conditions, parents did not differ regarding how relevant they found different types of background information in making this prediction. I discuss implications of this work for the hindsight bias and school shooting prevention literatures.

Katie Hoemann

Advisor: Lisa Feldman Barrett

Testing for 'False Positives' in Cross-Cultural Emotion Perception: Evidence from the Hadza

Previous research investigating cross-cultural perception of emotion (e.g., anger, disgust, fear, joy, sadness, surprise) has found support for universality (Ekman & Friesen, 1971). Several landmark studies employed an experimental paradigm in which participants hear a short scenario with an emotion word embedded (e.g., "Her child has died and she feels very sad"), and are then asked to select which subsequently presented facial configuration corresponds to the emotional context of the story. In 2010, this 'classic paradigm' was used to test and support universal perception of emotions in non-linguistic vocalizations, but with a few critical additions: participants were asked to repeat the emotional content of the story in their own words prior to proceeding with the task, and were presented with all trials for given emotion consecutively (i.e., in blocks) (Sauter, Eisner, Ekman, & Scott, 2010). To investigate whether these methodological changes lead to consensus regardless of universality, I employed the updated paradigm to test whether novel emotion concepts would be 'recognized' by a remote, indigenous cultural sample similar to those tested in previous studies. Participants from a hunting and foraging society, the Hadza of northern central Tanzania (n = 32, 13 female), were presented with scenarios and vocalizations for six emotion concepts borrowed from other cultural contexts (*gigil* – Philippines; *glückschmerz* – Germany; *greng jai* – Thailand; *itoshii* – Japan; *lajja* – India; *liget* – Ilongot of the Philippines). A series of one-tailed exact binomial tests revealed that Hadza participants selected the correct, target vocalization at a rate significantly above chance for three of the six novel emotions: *gigil* (p = .010), *itoshii* (p = .044), and *liget* (p = .036). Consistent with predictions, these results indicate that experimental characteristics can work together to facilitate 'correct' responses, producing apparent consensus around an emotion concept that is novel to a cultural context. Rather than assessing pre-existing emotion knowledge, the classic paradigm and its recent updates may create 'false positives' for the universality hypothesis by implicitly teaching associations between emotion concepts and perceptual stimuli. As not all novel emotion concepts achieved significance, however, this study also has important implications for transmission of conceptual content in terms of cultural fit (Richerson & Boyd, 2005).

Mason Jenkins

Advisor: Nancy Kim

Judgments in Structured Clinical Interviews: An Investigation of the Understanding-Normality Effect

Currently, the *Diagnostic and Statistical Manual of Mental Disorders* ([*DSM-5*]; 5th ed.; American Psychiatric Association [APA], 2013) is the prescribed model for how clinicians in the United States are asked to diagnose mental disorders. Recent findings suggest that the *DSM-5* (APA, 2013) and prior editions of the manual may not necessarily be of the highest clinical utility (i.e., usefulness) to experts in the field for all disorders. For example, practicing clinicians and lay people have been shown to be influenced by life-event context in diagnostic reasoning even though such factors are not included among the diagnostic criteria in the *DSM*. Ahn, Novick, and Kim (2003) and others found that life-event context, when serving as a causal explanation for disordered behavior, increased judgments of psychological health, a phenomenon known as the *understanding-normality effect*. Additional studies have found this effect in lay people and clinicians across a number of disorders.

In practice, many clinicians make diagnoses intuitively, but a growing minority also use more systematic approaches such as structured interviews (Aboraya, 2009). The Structured Clinical Interview for *DSM* Axis I Disorders (SCID-I [SCID]; First, Spitzer, Gibbon, & Williams, 2002), based on the *DSM* criteria, is frequently hailed as the gold standard of psychiatric diagnosis. It can also be used by non-clinicians (who are the focus of the current experiments) trained to use the SCID for participant inclusion in clinical research. Such structured interviews were designed to eliminate the influence of information outside the *DSM* criteria. However, it is not clear whether the understanding-normality effect is robust enough to occur even in the context of a structured interview such as the SCID.

Our three central questions were as follows. (1) Does the understanding-normality effect occur in the context of a realistic clinical diagnostic practice such as the SCID? (2) If not, then what particular element(s) of the SCID prevent the effect from occurring? (3) Do the findings from questions (1) and (2) generalize downstream to judgments about the need for treatment? To address these questions, we conducted two experiments.

In Experiment 1, we attempted to replicate the understanding-normality effect using four new vignettes created to resemble the nature of client responses given during the SCID or other such structured interviews. These were written in the first person and were longer and more conversational than previously tested vignettes. Causal information about the client's behavior significantly decreased judgments of psychological abnormality and perceived need for treatment compared to the vignettes containing no causal information. Given this successful replication, we used these new materials to test our three central questions.

In Experiment 2, the main study, we presented these materials to 160 lay participants in the context of the SCID to investigate whether the understanding-normality effect occurs in the realistic practice of a structured clinical interview. Vignettes were presented to participants in a 2 (condition: causal information, no causal information) x 2 (SCID assessor's questions: present, absent) x 2 (SCID symptom judgments: present, absent) between-subjects design. Causal

information about disordered behavior lowered ratings of abnormality significantly, and need for treatment marginally significantly. There were no interactions between causal information and either component of the SCID (i.e., assessor's questions; symptom judgments).

These results show that using the SCID does not appear to attenuate the understanding-normality effect in lay judgments. Additionally, judgments of the need for treatment appear to be marginally impacted by life-event explanations even in the context of a structured interview. Follow-up research to replicate Experiment 2 in practicing clinicians and implications of this research for the clinical utility of the *DSM* system are discussed.

Dylan Rose

Advisor: Peter Bex

Development and Evaluation of a Novel Peripheral Eye Movement Control Training Program

In the presented set of experiments, we simulated the process of the eye movement control system's adaptation to central vision loss occasioned by many types of retinal disease. We also examined the extent to which explicit performance feedback can improve outcomes associated with this process. This was achieved using a novel, peripheral eye movement control training paradigm for individuals with healthy vision.

Our method substantially improved subjects' fixational stability at sites in the visual periphery, regardless of orientation and eccentricity of the trained site relative to the center of vision. This benefit also appears to resist decay both over time and following significant shifts in trained site orientation and eccentricity.

These results open exciting new possibilities for the joint optimization of both eye movement control and functional vision in low-vision rehabilitation.

Yian Xu

Advisor: John Coley

Social Conflict and Essentialist Thinking about Social Categories

Psychological essentialism refers to the assumption that a fixed, innate underlying essence determines category membership and gives rise to observable features of an individual (Gelman, 2005). Previous evidence has shown that people hold essentialist beliefs about living kinds, as well as social categories, such as race, gender, and religion (Haslam et al., 2000). However, it was not clear whether perception of social environment might have an impact on essentialist thinking about social categories.

In the current study, we showed participants short videos highlighting group conflict in a particular social domain, and found that reminding people of religious conflict led them to perceive religious categories as more inheritably cohesive ($p=.019$). The same effect was marginally significant on racial categories ($p=.059$). In addition, essentialist ratings on social categories were reliably predicted by perception of group conflict in the same social domain, consistently in religion ($p=.03$), politics ($p=.01$), and sports ($p<.001$).

The results suggest that perception of social group conflict increases essentialist thinking about social categories. We expect to extend these results by examining whether different social conflict levels in China Mainland, Hong Kong, U.S and Northern Ireland indeed lead to different levels of essentialist thinking.