Society for Affective Science

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Thematic Flash Talks
Friday, March 18, 2016
8:30 AM - 9:30 AM

Decision Science

THE NEW TECHNOLOGIES EMOTIONS SCALE (NTES): MEASURING EMOTIONS ELICITED BY SOFTWARE UPDATE WARNINGS

Ross W. Buck, Mohammad Khan, Michael Fagan
University of Connecticut

Descriptors: emotions, warning, decision

The importance of emotions on decisions is now acknowledged, and it is recognized that emotions can both enhance and undermine effective decision making. However, decision literature has typically defined emotions simply in term of positive and negative valence. But, closer consideration shows that a variety of positive, negative, individualistic, and prosocial emotions are actually involved in decisions. The present study explored emotions reported when pop-up warnings appear during computer use. Such warnings are intended to protect the user, but they are typically ignored, often with reports of annoyance. The NTES assessed emotions associated with receiving warnings of risks associated with failing to update software, both in relaxed online sessions (surfing the Web) and involving time and attention pressures (working on an important project under time pressure). We recruited 400 participants via Mechanical Turk (209 female, 190 male). Relaxed-Pressured or Pressured-Relaxed conditions, and 45 emotions, were presented in random order by Qualtrics survey software. Results revealed that with the difficult task, respondents reported significantly more feelings of being Distraught (.163), Anxious (.128), Nervous (.114), Suspicious (.108), etc.; and fewer feelings of Security (.078), Confidence (.024), etc. Males reported higher feelings on 21 emotions, including feeling Arrogant (.032), Lonely (.021), Respectful (.019), Cared For (.014), and Humiliated (.011). Figures are effect sizes (etas). Greater apparent emotional involvement on the part of males is noteworthy.

PREDECISIONAL COHERENCE SHIFTING REGULATES EMOTION IN MULTIATTRIBUTE DECISIONS

Stephanie M. Carpenter[1], J. Frank Yates[2], Stephanie D. Preston[2], Lydia Chen[2]
[1]University of Wisconsin-Madison, [2]University of Michigan

Descriptors: decision making, emotion regulation

Almost all real-life decisions entail attribute conflict; every serious choice alternative is better than its competitors on some attribute dimensions but worse on others. An important question is how people manage the conflict inherent in these types of difficult decisions. In predecisional coherence shifting, the decision maker gradually shifts the perceived desirability and importance of the conflicting attributes until one alternative is seen as dominant over its competitors, or nearly so, before a decision is made. Our research demonstrates that multiattribute decisions are aversive and that predecisional coherence shifting regulates emotional discomfort. Across four studies, inducing greater attribute conflict generated aversive emotions (Study 1; N = 247, $F(4, 242) = 2.78$, $p = .027$; high-vs-low conflict: $t(242) = 3.05$, $p = .003$) and skin conductance responses decreased in participants who coherence shifted (Study 2; N = 57, $F(2,54) = 3.19$, $p = .048$). Coherence shifting was also associated with emotion regulation tendencies ($r = .22$, $p = .023$), and diminished among decision makers depleted of regulatory resources (Study 3; N = 106, $F(2,103) = 3.26$, $p = .04$). Finally, greater attribute conflict induced decision makers to speed up the decision (Study 4; N =147, $t(144) = 2.15$, $p = .033$) in a manner suggesting that conflict motivates escape efforts. These data are the first to suggest that coherence shifting helps decision makers regulate aversive emotions generated by attribute conflict before a decision is made, and have important implications for the decision process.

DECISION-MAKING IN ORGAN DONATION: AN EXPERIMENTAL STUDY OF DISGUST AND HEALTH ANXIETY

Nathan S. Consedine, Alysha Simonsen
University of Auckland

Descriptors: disgust, decision-making, organ donation

Despite high rates of donor registration, there is a worldwide shortage of organs. Making matters more complex is the fact that the decision to donate is often made by family following accidents. Given the physical realities of donation and the fact that decisions are needed during times of shock, it is not surprising that emotional responses are implicated in decisions. However, prior work has been cross-sectional, leading to difficulties in interpretation and in ascertaining which specific emotions are causally relevant. In this study, 99 participants completed baseline measures before being randomized to disgust, health anxiety or control conditions and rating the odds of donating in scenarios in which the morality of the prospective recipient was systematically varied. As expected, analysis showed donation likelihood was lower for proxy versus self donations ($p < .01$) and was lower for less likeable ($p < .01$) or more accountable recipients ($p < .01$); an interaction suggested the effects of accountability were only relevant among more likeable recipients ($p < .01$). Persons with more negative attitudes gave lower ratings ($p < .01$) and their ratings were more impacted by experimental manipulations ($p < .01$) and recipient characteristics. While cross-sectional data implicate emotions in the decision to register, this is the first experimental study to test the role of specific emotions. In addition to demonstrating that disgust and health anxiety can be discriminantly elicited in decision-making research, the study offers preliminary targets for intervention.

TO EXPLORE OR EXPLOIT? YOUR AMYGDALA WILL DECIDE

Vincent D. Costa[1], Olga Dal Monte[2], Elisabeth A. Murray[1], Bruno B. Averbeck[1]
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Descriptors: amygdala, dopamine, reinforcement learning

Traditional views of amygdala emphasize its role in learning the motivational significance of stimuli to coordinate emotional responses. The contribution of the amygdala to reinforcement learning (RL) within the context of choice behavior is less clear, especially relative to other brain regions regarded as important for RL, such as the ventral striatum (VS). In the present study we tested the contribution of the amygdala and VS to RL, by comparing the choice behavior of rhesus macaques with bilateral excitotoxic lesions of the amygdala (n=4) or VS (n=3) to a group of intact controls (n=4), in a two-armed bandit task. We fit temporal difference RL models to the animals' choices, allowing us to quantify learning rates and how consistently the animals chose the higher value option (inverse temperature). Results indicated that the lesions had different effects on learning from reward receipt versus omission (Group x Feedback, $F(2,223)=18.2$, $p<.0001$). Monkeys with amygdala lesions, compared to controls, were less sensitive to positive feedback and showed increased sensitivity to reward omission. While learning deficits in animals with striatal lesions were solely due to decreased sensitivity to reward receipt. Both lesion groups chose the higher valued option less consistently than controls, and the amygdala group was less accurate than the striatal group (Group, $F(2,211)=70.6$, $p<.0001$). These results raise important questions about which neural circuits are critical for RL and suggests the amygdala plays a more important role in this process than the ventral striatum.

FUNDING: The work was funded by the NIMH DIRP.

BUILDING A BRAIN-BASED AND PROSPECTIVELY PREDICTIVE MODEL OF EMOTION REGULATION DECISIONS

Bruce P. Dore, Jochen Weber, Yaakov Stern, Kevin N. Ochsner
Columbia University

Descriptors: emotion regulation decision-making, brain-as-predictor

Deciding to regulate emotion is a fundamental means by which individuals can respond to environmental challenges, but little is known about the neural processes that support such decisions. We used fMRI to test whether brain responses to negative images can be used to prospectively predict emotion regulation choice behavior. We found 1) that activity within a priori regions of interest including the amygdala, ventrolateral prefrontal cortex (vlPFC), dorsolateral prefrontal cortex (dlPFC) and dorsomedial prefrontal cortex (dmPFC) predicted person-level number of choices to regulate, and 2) within-person expression of an a priori distributed brain pattern previously associated with implementing emotion regulation predicted choosing to regulate responses to particular stimuli, with a near 10% gain in predictive accuracy over models including only stimulus intensity and self-reports of emotion. These data demonstrate that brain responses associated with emotional reactivity and regulation can be used to prospectively predict who will choose to control emotion and for which stimuli they will choose to do so.

FUNDING: National Institute on Aging

NEURAL CORRELATES OF APPRECIATING ONE'S OPTIONS VERSUS CHOOSING BETWEEN THEM

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Descriptors: decision-making, evaluation, reward circuits

Our recent findings suggest that reward-related circuits that drive you into a store based on the window display may be somewhat independent from those circuits that signal how anxious you will feel choosing between items once inside. Those findings also hinted at the possibility that the positive affect associated with the former reward-related circuit (including ventral striatum [VS]) may reflect a relatively automatic reaction, prior to and perhaps separable from choice comparison driven by other components of the reward circuit (including medial orbitofrontal cortex [mOFC]). Here we test this hypothesis directly by manipulating an individual's goals when approaching a set of valuable items. Participants undergoing fMRI (N=30) were presented with sets of products and instructed to either evaluate how much they like the set or to choose which product they liked best. Liking ratings for choice sets were best predicted by the average subjective value of the items. VS activity reflected these liking ratings, moreso than the average or maximal value of the choice set. Importantly, VS reflected overall liking irrespective of whether the participant was prompted to evaluate the set or compare between the options. Furthermore, as expected, we found that mOFC was more active during choice comparison than evaluation of liking. These findings are consistent with the possibility that different neural circuits are involved in signaling the overall value of stimuli in the environment (perhaps reflexively) versus in directly comparing these stimuli in order to identify the best one.

INCIDENTAL AND INTEGRAL AFFECT IN JUDGMENT AND DECISION MAKING

Daniel Vastfjall, Paul Slovic
Decision Research

Descriptors: decision making, risk, judgment

Demonstrations have been made for two types of affect having an influence on judgment and decision making: incidental affect (affect unrelated to a judgment or decision such as a mood) and integral affect (affect that is part of the perceiver's internal representation of the option or target under consideration). So far, these two lines of research have seldom crossed so that empirical results concerning their combined effects is largely missing. To start filling this gap, we performed four experiments where positive and negative mood participants set prices (willingness to pay for consumer goods (study 1), willingness to invest in stocks (study 2), and willingness to help charitable causes (studies 3 and 4)) that were either affect-rich (i.e. high in integral affect) or affect-poor (i.e. low in integral affect). Incidental mood was induced using different induction methods (autobiographical recall, music, pictures) and in study 4 a so called misattribution manipulation (Schwarz & Clore, 1983) was used to make participants aware of their incidental feelings. Across the studies we find that incidental mood has a larger effect for affect-poor goods than for affect-rich good (significant interactions in all four studies). Further, telling participants that their mood may influence judgment only had an effect in affect-poor conditions. Together, these findings suggest that both incidental and integral affect influence judgment, -but in different ways. These findings have implications for normative claims about "affective rationality".

Emotion and Health

EMOTION SUPPRESSION AND EATING BEHAVIOR AMONG PARENT-ADOLESCENT DYADS

Rebecca A. Ferrer, Paige A. Green, April Oh, Erin Hennessey, Laura Dwyer
National Cancer Institute

Descriptors: emotion regulation, dyadic processes, eating behavior

In addition to being a largely ineffective strategy for regulating one's own emotion, emotion suppression creates stress for interaction partners (in previously unacquainted dyads). However, no research has examined the consequences of suppression in pre-existing close relationships. We examine the possibility that emotion suppression will predict unhealthy eating behaviors as a secondary emotion regulatory strategy among parent-adolescent dyads (N=3112), consistent with evidence that suppression facilitates unhealthy eating at the individual-level. Actor-partner interdependence models demonstrated that emotion suppression was associated with more eating when sad (B=0.21, p<.001) and anxious (B=0.21, p<.001); lower consumption of produce (B=-0.11, p=.009) and beneficial foods (B=-0.15, p=.025); and greater consumption of fast food (B=0.14, p<.001) and detrimental foods (B=0.36, p<.001). One's partner's emotion suppression was also independently associated with more eating when sad (B = 0.05, p=.010) and anxious (B=0.06, p=.002); lower consumption of produce (B=-0.12, p=.004) and beneficial foods (B=-0.16, p=.012); and greater consumption of fast food (B=0.07, p=.012) and detrimental foods (B=0.16, p=.031). Dyadic emotion regulatory processes have implications for eating behavior, with empirical support for linkages across all outcomes. Moreover, analyses suggest that emotion suppression has social implications for dietary behaviors of others within close relationships with a suppressor, consistent with the notion that emotion regulation is a transactional process.

EMOTION REGULATION AND POSITIVE AFFECT IN THE CONTEXT OF PAIN: RESILIENCY FOR PEDIATRIC CANCER PATIENTS

Brooke N. Jenkins, Ryan Roemer, Michelle A. Fortier
University of California, Irvine

Descriptors: pain, emotion regulation, positive affect

Pediatric cancer patients routinely undergo painful medical procedures invoking strong physiological stress responses. Resilience to this pain may be conferred through resources such as positive affect (PA) and emotion regulation strategies. This study measured trait PA in children with cancer (N= 64) and randomly assigned participants to one emotion regulation condition (distraction, reappraisal, or empathy). Children used their assigned strategy during an experimental pain induction procedure (the cold pressor task [CPT]) and provided saliva samples before, during, and 15 minutes after the CPT. Salivary alpha amylase (sAA) was used to assess physiological response. Individuals with higher levels of PA had an increase in sAA during the stressor with a return to baseline after completion of the stressor (i.e., a healthy stress response) while individuals with low PA continued to experience high arousal even after completion of the CPT ($b = -5.36$, $p < .001$). Children in the distraction ($b = -1.88$, $p = .001$) and reappraisal ($b = -1.52$, $p = .007$) groups had lower levels of sAA compared to the empathy group. Further, PA moderated the group effect such that individuals in the empathy group with low PA had sAA levels that continued to rise after completion of the stressor while children with high levels of PA had sAA levels that returned to baseline ($b = -1.52$, $p = .007$). Distraction and reappraisal may benefit the physiological stress response in pediatric cancer patients and PA may confer physiological resiliency in response to pain even during poor coping strategies.

DON'T WORRY, BE HAPPY: LONGITUDINAL CHANGES IN POSITIVE AFFECT PREDICT BEHAVIORAL HEALTH OUTCOMES

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University of North Carolina at Charlotte

Descriptors: positive affect, health behavior, development

Positive affect (PA) is associated with better health outcomes in correlational and cross-sectional studies, yet research has only recently considered how prospective trajectories of PA might influence behavioral health outcomes in later developmental stages. This study investigated if longitudinal changes in PA from adolescence to early adulthood predict later exercise and smoking behavior. Latent growth curve (LGC) modeling examined PA over four waves of the National Longitudinal Study of Adolescent Health (1994-2008). Participants (N=2923, 58% female, final age=28.56, SD=1.62) completed a single-item PA measure at each time point and reported their level of exercise and cigarette use in the final wave. Analyses revealed a significant mean for the intercept ($b=2.28$, $p<.001$) and slope ($b=.01$, $p<.001$), indicating that, on average, self-reported PA increased over the four waves. Using these parameters to predict behavioral outcomes, we found that higher levels of Wave I PA—as well as positive changes in PA over time—predicted increases in exercise (intercept: $b=1.95$, $p<.001$; slope: $b=17.69$, $p<.05$) and decreases in smoking behavior (intercept: $b=-4.07$, $p<.001$; slope: $b=-37.15$, $p<.05$). Findings indicate that self-reported PA increases while transitioning from adolescence to early adulthood and that early PA may have a positive longitudinal effect, increasing later engagement in health-enhancing behaviors. This study contributes to research examining the association of PA to salutary health outcomes with implications for PA health behavior interventions early in development.

Social Evaluation

PUTTING THE "SOCIAL" IN SOCIAL EVALUATION: POST-EVENT PROCESSING FOLLOWING SOCIAL-EVALUATIVE EVENTS

Gizem Altheimer, Heather L. Urry
Tufts University

Descriptors: post-event processing, social anxiety, social evaluation

Following a social evaluative 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 is called post-event processing (PEP), and has been theorized to contribute to the maintenance of social anxiety. Predictors of PEP can either be aspects of the person (e.g. dispositional tendencies) or aspects of the context (e.g. the nature of the event). In this study, we examined potential person- and context-focused predictors of PEP. Specifically, we exposed participants (n = 101) to a stressful evaluative task in the lab, and examined whether a social version of this task would predict higher levels of PEP compared to a nonsocial version, and whether this pattern would vary by levels of social anxiety. PEP was measured 24 hours and 7 days after the lab session. Looking at the trajectory of negative PEP over the week following the lab visit, we found that there was a significant time by event type by social anxiety interaction, $F (1, 72) = 3.60$, $p = .03$. Post-hoc analyses showed that those who were high in social anxiety engaged in consistently high levels of negative PEP over the week following the social event even though they experienced a significant decrease in negative PEP following the nonsocial event. Those who were low or medium in social anxiety showed the opposite pattern. These findings help identify person- and context-focused predictors of PEP, and potentially inform therapeutic approaches to PEP.

FUNDING: Tufts University Graduate Student Research Award, U.S. Army Natick Soldier Research, Development, and Engineering Center (NSRDEC)

FEAR IS ALL IN YOUR HEAD? RECOGNITION OF FEARFUL BODY EXPRESSIONS SURPASSES FACIAL EXPRESSIONS IN REAL LIFE, BUT NOT POSED STIMULI

Hillel Aviezer[1], Lior Abramson[1], Inbal Marom[1], Rotem Petranker[2]
[1]Hebrew University, [2]University of Toronto

Descriptors: Spontaneous expressions, facial expressions, body expressions

The vast majority of studies in emotion perception have utilized posed, lab created stimuli. These stimuli are highly standardized and well recognized, however, it is unknown if they resemble real-life emotional expressions. In the current study we examined real life intense expressions of fear and compared them to posed expressions from standardized sets. In order to better understand the source of the affective signal, we presented the emotional expressions in three modes: Face alone, Body alone, and Face + Body. Consistent results across two studies demonstrate an important difference between real-life and posed expressions. Real-life fearful faces were more poorly recognized than real-life faceless bodies, were well recognized. This pattern was not found with posed fearful faces and bodies which were both well and equally recognized. These findings highlight the ambiguity of real-life facial expressions and suggest a contextualizing role of the body in facial expression perception. The results also raise a cautionary note against the prevalent over-reliance on posed and artificial emotional stimuli.

NEGATIVITY AND INTENTIONALITY BIAS MORAL MEMORY RETRIEVAL

Chelsea A. Helion[1], Erik G. Helzer[2], David A. Pizarro[3]
[1]Columbia University, [2]Johns Hopkins University, [3]Cornell University

Descriptors: morality, autobiographical memory

Though preserving one's identity as a "good person" is an important goal, individuals often act in ways that are self-serving or cause harm to others. One reason that individuals maintain a positive moral identity following immoral behaviors may be because these events are less accessible in one's memory. These studies examine the perception of moral events through the structure of the moral dyad, which posits that moral situations are comprised of "agents" (those with the capacity to harm others) and "patients" (those who are harmed as a result the agent's actions). Across three studies, we find that one's role in a moral event leads to predictable biases in autobiographical memory. Study 1 provides evidence that individuals are better able to recall moral patient events than moral agent events. Studies 2 and 3 find that both event negativity and perceived intentionality impact memory recall for moral events, such that moral patient events are more negative and thus better recalled than moral agent events, but that this effect is moderated by agent intentionality. This research has important implications for the legal system, as we may be able to gain a better understanding of the discrepancies that underlie victim and perpetrator accounts of the same event.

FUNDING: 5F32HD081960 (NIH), T32HD055177 (NIH)

Interpersonal Emotion

PHYSIOLOGICAL ATTUNEMENT DURING EMPATHIC JUDGMENTS IN DEMENTIA PATIENTS

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Descriptors: compassion, physiology, depression

Caring for a loved one with dementia leads to poor mental health in some, but not all caregivers. Patients' emotional functioning likely plays an important role in determining these caregiver outcomes. We examined an aspect of emotional functioning, physiological attunement (the extent to which physiology tracks emotional judgments), in 112 participants (43 Alzheimer's Disease, 43 behavioral variant fronto-temporal dementia, 26 healthy controls). Participants watched a film of an actress experiencing a range of emotions and used a rating dial to indicate continuously how the actress was feeling. Throughout the film, participants' physiology (heart rate, skin conductance, and somatic activity) was recorded. Physiological attunement was computed as the average cross-correlation between second-by-second averages of each physiological measure and the emotion ratings. Greater physiological attunement in patients was associated with less depression in caregivers ($b=-.30$, $p<.05$), even after controlling for the patient's age, diagnosis, and task accuracy. Patient compassion (rated by caregivers) mediated the relationship between physiological attunement and caregiver depression (BCI -.25 to -.20). Results suggest that patients higher in physiological attunement convey greater compassion, which helps buffer caregivers from some of the difficulties and burden associated with caregiving.

FUNDING: National Institute on Mental Health Pre-doctoral Fellowship T32MH020006, National Institute on Aging, P01AG019724

EMPATHY IS AN EFFORTFUL CHOICE

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Descriptors: empathy, choice, motivation

Empathy—the ability to feel what others feel—is often considered a core human virtue, and some work suggests it is a so-called default response to others. Yet empathy appears to fail in many situations, leading some prominent scholars to challenge its utility for moral and social life. We suggest that empathy is not a default—instead, people typically choose to avoid empathy because it is effortful. We developed the empathy selection task, a repeated-trial free choice paradigm in which people can choose whether to empathize with or remain objective toward social targets (e.g., child refugees). Robustly across studies (total $N = 1035$), participants chose to avoid empathy (standardized mean difference in Hedges' $g = -.56$, $Z = -6.51$, $p < .001$). Across studies, participants perceived empathy as more effortful than objectivity (standardized mean difference in Hedges' $g = .62$, $Z = 8.70$, $p < .001$), and perceived effort predicted increased empathy avoidance ($r = -.18$, $p < .001$). Participants were equally likely to avoid empathy for negative states and positive states. These results qualify claims that empathy is a default, and that empathy limits are fixed constraints rather than motivated choices. When given the choice to feel empathy, people prefer not to.

FEELING ME, FEELING YOU: THE RELATION BETWEEN EMOTION DIFFERENTIATION AND EMPATHIC ACCURACY

Yasemin I. Erbas, Laura Sels, Eva Ceulemans, Peter Kuppens
KU Leuven

Descriptors: emotion differentiation, empathic accuracy

Does knowing your own emotions relate to knowing those of others? We argue that emotion differentiation, which is our ability to experience and label our own emotions in a differentiated and specific manner, is related to the ability to accurately perceive emotions in others. A high level of emotion differentiation implies that a person's introspective emotional knowledge is very differentiated and specific, enabling the individual to more adaptively respond to events and cope with the resulting emotions. Here we argue that individuals who are high in emotion differentiation may also be able to apply their enhanced emotional knowledge to the feeling states of other individuals, enabling them to make more accurate inferences about others' emotions. In an experience sampling study among 50 romantic couples, we tested the hypothesis that individuals with higher levels of emotion differentiation are characterized by higher levels of empathic accuracy (i.e., perceive others' emotions more accurately). In line with expectations, multilevel analyses showed that individuals who differentiate highly between their negative emotions are more able to accurately predict how pleasant or unpleasant their partners are feeling in daily life (males: $beta = 0.24$, $p = .01$; females: $beta = 0.19$, $p = .03$). This finding establishes a link between perceptions of our own and others' emotions, and provides evidence that the skills we use to understand our own emotions are also relevant for understanding how others feel.

PARTNER-EXPECTED AFFECT: HOW YOU FEEL NOW IS PREDICTED BY HOW YOUR PARTNER THOUGHT YOU FELT BEFORE

Laura Sels, Eva Ceulemans, Peter Kuppens
KU Leuven

Descriptors: partner-expected affect, interpersonal emotion modulation, interpersonal perception

Romantic partners can modulate each other's emotions in numerous ways. Here, building on findings from basic psychological research, we propose that how someone thinks their partner feels over time may influence that partner's actual feelings, called partner-expected affect. We evaluated this hypothesis on the basis of an experience sampling study in which 100 romantic partners (50 couples) reported on the level of valence and arousal of their own feelings and of the perceived feelings of their partners ten times a day throughout a week. In line with expectations, we found that how individuals were feeling at a particular moment was predicted by how their partner thought they felt at the previous moment (on top of how they felt at the previous moment and how their partner felt at the previous moment), at least when they had interacted with each other in between. This partner-expected affect was found for both valence, with $p = .01$, and arousal, with $p < .01$. The findings identify a novel subtle way in which people shape each other's feelings and pave the way to further examine the nature and boundary conditions of such partner-expected affect.

NAVIGATING THE GLOBAL WORKPLACE: CULTURAL DIFFERENCES IN EMOTIONAL VALUES AND BEHAVIORS

Yun Lucy Zhang, Jeanne Tsai
Stanford University

Descriptors: culture, workplace

How does culture influence affective processes in an increasingly global workplace? Study 1 investigates the emotional values of European Americans (EA, n=89), Asian Americans (AA, n=81), and Hong Kong Chinese (HKC, n=98) in the work domain. We find that EAs and AAs value high arousal positive emotions, like excitement, more than HKC; HKC value low arousal positive emotions, like calm, more than the other groups ($F(2, 236)=25.74$, $p=0.00$, $\eta2=.18$). Furthermore, EAs and AAs want to minimize negative emotions more than HKC ($F(2, 265)=70.40$, $p=0.00$, $\eta2=.25$). Study 2 investigates how culture influences emotional expressions in the workplace, and finds that while EAs (n=63) do not change their expressions of positive and negative emotions, AAs (n=52) adjust their emotions to match the culture of the company by using more positive and fewer negative words in response to an American (versus Chinese) company ($F(1, 113)=4.307$, $p=0.04$, $\eta2=.04$). Study 3 examines how European American and Hong Kong MBA's evaluate candidates with different emotional profiles (positive, moderate, or neutral); European American MBA's (n=51) rate the positive candidate as more competent ($F(1, 90)=13.718$, $p=.000$, $\eta2=.132$), warm ($F(1, 90)=7.298$, $p=.008$, $\eta2=.075$), and hard-working ($F(1, 90)=9.884$, $p=.002$, $\eta2=.099$) than the other candidates, while HKC (n=41) show less of a preference for the positive candidate. Together, these studies suggest that culture influences how we express ourselves and evaluate others in the workplace.

Emotion Regulation

A LAYPERSON-ORIENTED APPROACH TO EMOTION REGULATION

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KU Leuven - University of Leuven

Descriptors: emotion regulation, lay theories

Emotion regulation (ER) research has generally used models generated top-down by theorists, which means that we have little awareness of how laypeople understand this domain. In 3 studies, we investigated ER from a fully bottom-up perspective and compared this perspective to theory (Gross, 1998; Parkinson & Totterdell, 1999). First, we harvested real-life descriptions of ER strategies (N=103) and coded them for fit with top-down models. Second, laypeople (N=96) categorized these strategies, and we used this information in a cluster analysis to construct a layperson-oriented ER taxonomy. For positive emotion, the dendrogram indicated 2 clusters should be retained: The only clear distinction was between social and nonsocial strategies, and there was a lack of consensus between laypeople and theorists (50.8% agreement). For negative emotion, the dendrogram indicated 5 clusters should be retained: At the top level the layperson-oriented model distinguished between engagement and disengagement strategies, and further divided these groups into passive and active disengagement, and cognitive, situation, and other-focused engagement. Third, using a daily diary design, we examined whether people chose to use layperson-oriented strategies in their own lives (N=114). People chose layperson-oriented strategies more than theoretical strategies, $t(113)=7.05$,$p<.001$, and engagement more than disengagement strategies, $t(113)=7.39$,$p<.001$. Overall, our data deliver a novel bottom-up understanding of ER, helping to identify strengths and weaknesses in our current top-down conceptualization.

REGULATION OF ROMANTIC LOVE FEELINGS: PRECONCEPTIONS, STRATEGIES, AND FEASIBILITY

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[1]University of Missouri - St. Louis, [2]Erasmus University Rotterdam

Descriptors: romantic love, emotion regulation, event-related potentials

Love feelings can be more intense than desired (e.g., after a break-up) or less intense than desired (e.g., in long-term relationships). If only we could control our love feelings! We present the novel concept of love regulation, which entails decreasing and increasing love feelings using behavioral and cognitive strategies. We present the first two studies (n=32, n=40) on preconceptions about, strategies for, and the feasibility of love regulation. Questionnaire responses showed that people perceive love feelings as rather uncontrollable (mean=4.5 on a 9-point scale). Still, in four open questions people reported to use strategies such as cognitive reappraisal, distraction, avoidance, and undertaking (new) activities to cope with break-ups, to maintain long-term relationships, and to regulate love. Instructed up-regulation of love using reappraisal increased subjective feelings of attachment, $p=.012$, while down-regulation decreased subjective feelings of infatuation and attachment, both $ps<.001$. We used the late positive potential (LPP) amplitude as an objective index of regulation success. Instructed love up-regulation enhanced the LPP (300-425ms), $p=.015$, while down-regulation reduced the LPP (650-1000ms), $p=.020$. Thus, although people have the preconception that love feelings are uncontrollable, we show for the first time that intentional regulation of love feelings using reappraisal, and perhaps other strategies, is feasible. Love regulation will benefit individuals and society because it could enhance positive effects and reduce negative effects of romantic love.

COGNITIVE REAPPRAISAL IS MORE BENEFICIAL FOR PEOPLE FROM LOWER THAN FROM HIGHER SOCIOECONOMIC STATUS

Allison S. Troy[1], Brett Q. Ford[2], Iris B. Mauss[2]
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Descriptors: emotion regulation, socioeconomic status, depression

Emotion regulation is central to psychological health, and several emotion regulation strategies have been identified as beneficial (e.g., cognitive reappraisal, or reframing an emotional stimulus). However, new research and theorizing suggest the benefits of emotion regulation may depend on one's culture. We argue that one particularly important cultural moderator might be socioeconomic status (SES), because SES powerfully shapes people's ecology: lower SES affords less control over one's environment and thus, the ability to self-regulate should be especially important. Accordingly, effectively regulating one's emotions using reappraisal could be more beneficial for psychological health in lower (vs. higher) SES contexts. In three studies (Study 1 N=301; Study 2 N=68; Study 3 N=60), we tested whether SES moderates the link between cognitive reappraisal ability (CRA; measured with surveys and laboratory measures) and depression. A meta-analysis of the three studies revealed that CRA was associated with less depression for lower-SES (Mean Beta for self-reported CRA=-27; lab measures=-.34) but not higher-SES individuals (Mean Beta for self-reported CRA=-.10; lab measures=.16). These results support the idea that reducing negative emotion using cognitive reappraisal is not universally beneficial. Specifically, these results suggest that the health benefits of emotion regulation are moderated by the ecology within which it is used. While effective emotion regulation may be pivotal for people low in SES, it may be inconsequential or even maladaptive for those high in SES.

Thematic Flash Talks
Saturday, March 19, 2016
4:30 PM - 5:30 PM

Developmental Variation

ADOLESCENTS' DEPRESSION, DAILY SOCIAL EXPERIENCES, AND FUNCTION IN SOCIAL AND AFFECTIVE NEURAL CIRCUITRY: COMMON MECHANISMS REVEALED BY THE BFF FMRI PARADIGM

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Descriptors: affective neuroscience, depression, adolescent development

Adolescence is notable for both the emergence of depression, a disorder with disrupted reward processing, and changes in social functioning. We conducted functional magnetic resonance imaging (fMRI) with community adolescents using a novel, ecologically valid fMRI task in which 54 participants (83% female; age M = 16.35 years; 64% European American, 26% African American) viewed videos of their best friends displaying positive or neutral affect. Participants completed a 2-week experience sampling protocol of affect and social behavior. Data were analyzed in SPM8, AlphaSim was used to control for Type I error, and gPPI was conducted to examine circuit-level function. In response to best-friend's positive vs. neutral affect, adolescents exhibited response in the ventral striatum, dorsomedial prefrontal cortex (dmPFC), precuneus, and temporoparietal junction (TPJ). Lower dmPFC, precuneus, and TPJ response were associated with higher depressive symptoms (CES-D; Radloff, 1977), and in turn with lower time with peers, positive affect, and emotional closeness to peers. Adolescents with higher depressive symptoms exhibited stronger functional connectivity of nucleus accumbens with amygdala but weaker with dorsal striatum, TPJ, and ventrolateral PFC. This innovative fMRI social reward paradigm elicited response in social and reward circuitry, detected common individual differences in depressive symptoms and social experiences, and indicated associations of depression with altered self-regulation in social contexts or construal of pleasant stimuli as aversive.

FUNDING: Funded by the National Institutes of Health (NIDA, NIMH), and the Veterans Health Administration.

THE BRIGHTENING OF DARK APPRAISALS: AGING AND THE INTERPRETATION OF AMBIGUOUS SCENARIOS

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Descriptors: appraisal, aging, positivity

The way in which people interpret ambiguous scenarios has been very useful in understanding individual differences in emotional appraisals and their significant downstream psychological consequences. Insofar as later life is characterized by greater positivity in emotional experience and information processing preferences relative to earlier life, older adults may interpret ambiguous scenarios differently from younger adults. In the current study, we presented 32 older and 32 younger adults with a series of ambiguous scenarios and had them continue the stories. Older adults continued the scenarios with less negativity than younger adults, as measured by negative and positive emotion word use ($F(1, 62) = 7.22$, $p = .009$) and by the coded overall emotional valence of each interpretation ($F(1, 62) = 5.19$, $p = .026$). These results illuminate an interpretative approach by older adults that favors less negative endings and that supports broader age-related positivity. These findings uncover a new manifestation of age-related positivity in initial appraisals generated in response to ambiguity, indicating that older adults tend to create emotional meaning differently from the young.

FUNDING: This research was supported by the National Science Foundation, Grant SES-1536260, & by the National Institute on Aging, Grant R01-AG043533 to JAM.

DISSOCIABLE AGE EFFECTS FOR PREFRONTAL AND AMYGDALA RESPONSES TO AFFECTIVE AND SOCIAL CONTENT

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Descriptors: negative affect, development, amygdala

Social and affective experiences change dramatically across development. Prior work has linked such changes to differences in amygdala responses, yet it remains unclear whether such findings are driven more by sensitivity to social or affective content. To this end, 112 individuals ranging in age from 6-23 years viewed aversive and neutral social images while undergoing fMRI scanning. Children reported more negative affect and exhibited stronger amygdala responses to aversive and neutral social stimuli relative to adolescents and adults. Age was associated with reduced recruitment of ventromedial prefrontal cortex (vmPFC), a brain region that is important for contextualizing the motivational significance of stimuli, for both aversive and neutral social stimuli and these responses mediated the relationship between age and affective self-report. At the same time, vmPFC recruitment patterns changed across age – in childhood responses were greater for aversive than neutral stimuli whereas the opposite was true in adulthood. Valence-specific age effects were observed in dorsomedial prefrontal cortex, a brain region that supports mentalizing and emotion regulation, such that responses were stronger for neutral than aversive stimuli in childhood but stronger for aversive than neutral stimuli in adulthood. Together, these results suggest that prefrontal-amygdala circuitry show partially overlapping and partially distinct responses to affective and social content across development. These findings have implications for basic developmental models of socioaffective functioning.

FUNDING: This work was supported by the National Institutes of Health (R01 NICHD 0691780, F31 NIMH 94056).

Cultural Variation

THE NEURAL BASIS OF CULTURAL DIFFERENCES IN EMOTION PROCESSING: A BRAINMAP META-ANALYSIS

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Descriptors: emotion, meta-analysis, neural

Neurological differences in emotion processing due to culture has scarcely been explored. To elucidate these differences, we conducted three meta-analyses of the BrainMap database within the 'Emotion' behavioral domain: Native English speakers (Meta-analysis 1), only Native German speakers (Meta-analysis 2), and finally, only Native Chinese speakers (Meta-analysis 3). A total of 53 papers were included in our study. For the English meta-analysis, 34 papers were identified (753 subjects, 205 experiments, 144 conditions, and 1395 locations), while German meta-analysis yielded 14 papers (260 subjects, 43 experiments, 60 conditions, and 337 locations). Finally, the Chinese meta-analysis yielded a total of 5 papers (74 subjects, 15 experiments, 14 conditions, and 138 locations). Activation likelihood estimation (ALE) was performed on the resultant sets of coordinates for each meta-analysis to determine regions of convergence within emotional processing networks and resultant ALE maps were then qualitatively compared. English and German ALE maps showed the most convergence across a distributed network of regions including the amygdala, parahippocampus (BA28), anterior cingulate (BA24/32), inferior frontal gyrus (BA45/46), putamen, portions of the thalamus, and left insula (BA13), with the Chinese ALE map showing the most divergent (i.e., culture-specific) results (e.g., precuneus [BA7], inferior parietal lobule [BA39], right insula [BA13]). These results suggest that cultural differences may exist at the neurophysiological level in the processing of emotion.

WHERE DO MY EMOTIONS BELONG? THREE STUDIES ON THE EMOTIONAL ACCULTURATION OF IMMIGRANT MINORITIES

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Descriptors: emotional acculturation, emotional fit with culture

Patterns of emotions – how frequently and intensely people experience a range of emotions – differ systematically across cultures. Therefore, changes in cultural context (e.g., due to migration) may bring about changes in patterns of emotional experience – a process we coined emotional acculturation. In three studies, with Korean Americans (n = 47), Turkish Belgians (n = 144), and a representative sample of minority youth in Belgium (n = 1258), we investigated for similar types of situations to what extent minorities' patterns of emotion were similar to those that are typical for their respective majority group (European Americans, n = 44; Belgians, n = 83; Belgian youth, n = 980). Across studies, we found that immigrants' emotional fit with the majority culture was i) lower than the fit of majority members (e.g., Study 3: $F(4, 1587) = 13.407$, $p < .001$, eta-squared = .033); ii) predicted by indices of cultural exposure such as having social contact with majority members, both cross-sectionally and one year later (e.g., Study 3: path in cross-lagged model from contact t1 to emotional fit t2 = .110, $p < .05$); but iii) dissociated form their explicitly held attitudes towards adopting the values and traditions of the majority culture (e.g., Study 3: beta = .012 p = ns). Together, these studies provide first evidence for the existence of emotional acculturation, thereby suggesting that i) people's emotions are contingent upon the specific socio-cultural contexts in which they engage, and ii) there is plasticity in people's emotional lives beyond primary socialization.

EMOTIONAL COMPLEXITY: CLARIFYING DEFINITIONS AND CULTURAL CORRELATES

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Descriptors: emotional complexity, mixed emotions, interdependence

There is much debate about the notion of emotional complexity (EC). The debate concerns both the definition and the meaning of ostensible cultural differences in the construct. Some scholars have defined EC as the experience of positive and negative emotions together rather than as opposites, a phenomenon that seems more common in East Asia than North America. Others have defined EC as the experience of emotions in a differentiated manner, a definition that has yet to be explored cross-culturally. The present research explores the role of dialectical beliefs and interdependence in explaining cultural differences in EC according to both definitions. In Study 1, we examined the prevalence of mixed (positive-negative) emotions in English-language online texts from 10 countries varying in interdependence and dialecticism. In Studies 2-3, we examined reports of emotional experiences in six countries, comparing intra-individual associations between pleasant and unpleasant states, prevalence of mixed emotions, and emotional differentiation across and within-situations. Overall, interdependence accounted for more cross-cultural and individual variance in EC measures than did dialecticism. Moreover, emotional differentiation was associated with the experience of positive and negative emotions together rather than as opposites, but only when tested on the same level of analysis (i.e., within vs. across-situations).

FUNDING: This research was supported by the Insight grant from the Social Science and Humanities Research Council of Canada.

Psychopathology and Treatment

VOCAL EXPRESSION AND SCHIZOPHRENIA: LESS THAN MEETS THE EAR

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Descriptors: schizophrenia, vocal, computerized

Deficits in vocal expression are a hallmark of schizophrenia that are intractable to psychosocial and pharmacological interventions. Despite decades of research on them, their nature is poorly understood. This presentation will summarize data from a recent meta-analysis as well as from a recent large-scale study employing computerized vocal analysis of natural speech in patients with schizophrenia and nonpatient controls. With respect to the meta-analysis, clinical ratings suggest that the deficits are profound (i.e., three to five standard deviations). However, computerized measures found more benign and isolated abnormalities. For example, speech production was low (d = -.80; k = 13) whereas emphasis and intonation were relatively normal (d = -.36; k = 2). Importantly, no group difference approximated the magnitude of deficits seen using clinical ratings. In the second study, we examined archived speech samples from five separate studies, each employing different speaking tasks (patient N = 309; control N = 117). Interestingly, vocal measures varied considerably across studies (range of ΔR2's = .07 to .72) and, after controlling for this, there were no significant or statistically meaningful differences in vocal expression between patients and controls (all ΔR2's < .01). There appears to be a discrepancy between clinician ratings and objective measures in nonverbal expression in schizophrenia; exploration of which may bring insight into the true nonverbal deficits of the disorder. Speaking context may be key.

FUNDING: Funded by a grant to the primary authors by the National Institute of Mental Health (1R03MH092622)

WHEN CHILDREN BELIEVE EMOTIONS CANNOT CHANGE: CHILDREN'S ENTITY BELIEFS PREDICT GREATER DEPRESSION VIA LESS EFFECTIVE EMOTION REGULATION

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Descriptors: emotion beliefs, emotion regulation, psychological health

Although using effective forms of emotion regulation can reduce risk for depression, few investigations have addressed who is likely to employ emotion regulation in the first place. Regulating one's emotions should hinge on believing it is possible to control emotions. Thus, individuals who believe emotions are relatively uncontrollable (i.e., entity beliefs about emotions) should be less likely to use effective emotion regulation strategies (e.g., cognitive reappraisal), and may, in turn, be at greater risk for depression. We propose that this model may hold particular relevance in developing samples, as children's entity beliefs about emotions could carry prospective risk for their psychological health across childhood. We tested whether entity beliefs promote risk for depression via reduced use of reappraisal in two samples of children (Ns = 136, 232). Across both samples, children with stronger entity beliefs were less likely to use reappraisal (rs = -.17, -.19, respectively) which, in turn, predicted greater depression (rs = -.23 to -.36). This mediation held whether examining child-reported depression (Study 1 & 2) or parent-reported child depression (Study 2), and whether depression was assessed cross-sectionally (Study 1 & 2) or prospectively, 18 months later (Study 2). The present results highlight the importance of understanding key precursors to the emotion regulation process. Believing emotions are relatively uncontrollable can set children down a dangerous path as they miss opportunities to practice emotion regulation and improve their regulatory abilities.

THE EMOTION REGULATION FUNCTION OF NON-SUICIDAL SELF-INJURY IN DAILY LIFE OF PERSONS WITH A BORDERLINE PERSONALITY DISORDER

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KU Leuven - University of Leuven

Descriptors: borderline personality disorder, non-suicidal self-injury, daily life study

Approximately 50-80% of patients with borderline personality disorder (BPD) engage in non-suicidal self-injury (NSSI), which involves the deliberate and direct injury of their own body tissue without suicidal intent (Nock, 2009). Although it is still unclear why people engage in NSSI, studies using retrospective self-report or proxies of NSSI in the lab have shown that NSSI is often preceded by intense negative emotions and followed by a decrease in negative emotions/tension, suggesting an emotion regulation function of NSSI. To investigate this emotion regulation function of NSSI in a more ecologically valid way, we examined the temporal relationship between NSSI behavior and emotional experiences in daily life of persons with BPD. Using experience sampling methods, 30 BPD patients reported the occurrence of NSSI and the intensity of their emotions 10 times a day for 8 consecutive days. Results confirmed that high levels of stress, anxiety, depressed feelings and anger predicted a higher probability of engaging in NSSI in the next time interval (ps <.04). Surprisingly, results revealed that the occurrence of NSSI in a previous time interval predicted an increase in stress, depressive feelings and anger, and a decrease in relaxed feelings at the next time point (ps <.01), which is contrary to the emotion regulation hypothesis. Follow-up mediation analyses (ps <.01) suggested that cognitive factors (i.e. disappointment and a lack of trust in oneself) are crucial to understand the link between NSSI and subsequent emotions.

NEURAL REACTIVITY TO EMOTIONAL STIMULI PROSPECTIVELY PREDICTS THE IMPACT OF A NATURAL DISASTER ON PSYCHIATRIC SYMPTOMS IN CHILDREN

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Descriptors: developmental psychopathology, stress, event-related potentials

Natural disasters expose entire communities to stress, leading to increased risk of psychopathology. Yet, most individuals remain resilient, raising the need to identify factors that contribute to outcomes. In this prospective study, nine-year-old children (N = 260) in Long Island, NY viewed unpleasant and pleasant images while the late positive potential (LPP), an event-related potential (ERP) component reflecting sustained attention towards emotional stimuli, was measured. Following the assessment, Hurricane Sandy, the second costliest hurricane in the U.S., hit the region. Eight weeks after the hurricane, mothers reported on children's symptoms and hurricane-related stress, and symptoms were re-assessed 8 months after the hurricane. The LPP predicted both internalizing and externalizing symptoms after accounting for pre-hurricane symptomatology. Stress exposure moderated the effects of unpleasant, beta = .15, t = 2.71, p < .01, and pleasant LPP, beta = -.19, t = -2.85, p < .01, on externalizing symptoms. Among children exposed to higher levels of hurricane-related stress, enhanced neural reactivity to unpleasant images predicted greater externalizing symptoms after the disaster, while enhanced reactivity to pleasant images predicted lower symptoms. LPP and stress interactions continued to predict externalizing symptoms 8 months after the hurricane. Results indicate that heightened neural reactivity to unpleasant information predisposes children to psychiatric symptoms in response to stress, while enhanced processing of pleasant information may be a protective factor.

FUNDING: This work was supported by National Institute of Mental Health Grants RO1 MH069942 to Daniel N. Klein, and F31 MH09530701 to Autumn Kujawa.

NEURAL CORRELATES OF EMOTION REGULATION IN PTSD: SSRI TREATMENT MECHANISMS AND PREDICTORS OF CHANGE

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Descriptors: post-traumatic stress disorder, treatment prediction, neuroimaging

Post-traumatic stress disorder (PTSD) is a chronic, debilitating disorder, broadly characterized by deficits in emotion regulation. Selective serotonin reuptake inhibitors (SSRIs) are a first-line treatment for PTSD, however treatment mechanisms are unknown and individual response to treatment varies widely. Treatment with SSRIs might work by affecting neural regions implicated in emotion regulation, and initial deficits in these regions might predict treatment gain. To test these hypotheses, thirty-four U.S. military veterans - 17 with PTSD and 17 without PTSD - performed an emotion regulation task during functional magnetic resonance imaging and electroencephalographic recording at baseline and 12 weeks later. In the interim, participants with PTSD received treatment with SSRIs. Results showed that treatment increased activation in the left dorsolateral prefrontal cortex (-44, 18, 28; 1104 mm3; Z=3.77, p<0.05, corrected) and the supplementary motor area (4, 14, 70; 1624 mm3; Z=3.37, p<0.05, corrected). Moreover, controlling for baseline symptomatology, initial deficits in the right ventrolateral prefrontal cortex predicted greater treatment gain (46, 44, -10; 2152 mm3; Z=3.96, p<0.05, corrected). Ongoing work further suggests that increased attention toward negative pictures during emotion regulation at baseline as assessed using event-related potentials may also predict greater treatment outcome in PTSD (r = .90, p=.001), furthering the notion that greater initial aberration the neural substrates of emotion regulation might be associated with SSRI treatment gains.

FUNDING: This material is based upon work supported by the Department of Veterans Affairs, Veterans Health Administration, Office of Research and Development, Clinical Sciences Research and Development, and the Veterans Affairs Merit Review Program Award, awarded to K. Luan Phan. Annmarie MacNamara is supported by National Institute of Mental Health grant, K23 MH105553.

DIFFERENTIAL ELECTROPHYSIOLOGICAL RESPONSES RELATED TO BOTTOM-UP AND TOP-DOWN PROCESSING OF EMOTIONAL STIMULI IN GROUPS AT RISK FOR SCHIZOPHRENIA

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Descriptors: electrophysiological responses, affective reactivity, schizophrenia-risk

Extreme levels of social anhedonia (SocAnh) and perceptual aberrations/ magical ideation (PerMag) predict risk for schizophrenia-spectrum disorders and are associated with emotional deficits. For SocAnh, there is evidence of decreased positive affect and increased negative affect, as well as increased top-down avoidance of emotion. For PerMag, there is evidence of increased affective reactivity. Yet, the nature of any psychophysiological affective deficit, including the role of bottom-up/top-down processes, is unclear. An event-related potential sensitive to affective stimuli is the late positive potential (LPP). We examined the early and late portions of the LPP during passive emotional image viewing (to assess bottom-up processes) and during active emotion regulation (to assess top-down processes) in 3 groups: SocAnh (n=23), PerMag (n=18), and controls (n=19). The SocAnh group exhibited a decreased early LPP when viewing positive images but exhibited an increased early and late LPP when viewing negative images (ds>.2). Further, SocAnh exhibited a greater reduction in the LPP for negative images when told to use strategies to either increase or decrease negative emotion (d=.58). Similar to SocAnh, the PerMag group exhibited an increased LPP when viewing negative images (d=.29). In contrast to SocAnh, PerMag showed an increased LPP when viewing positive images (d=.46) but also an atypical decrease when up-regulating responses. Overall, these results suggest that SocAnh and PerMag are associated with both shared and unique bottom-up and top-down emotion processing deficits.

CAN CALM PREVENT THE STORM? FEASIBILITY AND EFFICACY OF THE LAUREL PROGRAM: A NEW INTERVENTION TO INCREASE HEALTHY POSITIVE AFFECT IN BIPOLAR I DISORDER

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Descriptors: bipolar disorder, positive affect, treatment

Bipolar I disorder (BD) is characterized by manic episodes, which often include the experience of intense high arousal positive emotions. Research suggests that people with BD may actively avoid feelings of positive affect as a strategy to stay healthy and avoid manic episodes, but this avoidance is associated with lower quality of life (Edge et al., 2013). Learning Affective Understanding for a Rich Emotional Life (LAUREL) is a novel psychosocial intervention for people with BD designed to increase low arousal positive affect while de-emphasizing high arousal states that might increase risk for mania. This nine-week group treatment incorporates empirically-based strategies from basic affective science, including emotion education, gratitude, savoring, self-compassion, and emotion regulation. In this open trial, adults with remitted BD (n=15) were enrolled into 1 of 3 groups. Participants completed pre-treatment and post-treatment assessments, including the Affect Valuation Index (Tsai & Knutson, 2001), the Emotion Regulation Questionnaire (Gross, 2003), and the Self-Compassion Scale (Neff, 2003). At the post-treatment assessment, participants (n=12) reported significantly reduced high arousal positive affect (p<0.05). Participants also reported a significant increase in reappraisal emotion regulation strategies (p<0.05) and self-compassion (p<0.05) at post-treatment. Though preliminary, these data demonstrate that an intervention using strategies from basic affective science is feasible and beneficial for adults with remitted BD.

Social Connection

DOPAMINE MEDIATES HUMAN MATERNAL BONDING: A BEHAVIORAL PET-FMRI STUDY

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Descriptors: social neuroscience, mr-pet imaging, social bonding

In rodents, the dopaminergic circuit is involved in social affiliation, and specifically in maternal-bonding. Individual-differences in mesolimbic-dopaminergic activity manifests as variability in bonding behaviors. In humans, a dopaminergic mechanism for social-affiliation has yet to be evaluated. We hypothesized that human maternal bonding will vary as a function of dopamine and oxytocin. We further hypothesized that the to find differences in activation and dopamine binding in the vmPFC, PCC, striatum and amygdala. To test our hypotheses, we applied for the first time simultaneous fMRI-PET imaging to mothers observing their infants. We simultaneously evaluated the BOLD responses and dopamine binding in mothers. Each mother was also tested for behavioral mother-infant-synchrony and plasma-oxytocin levels. Mothers who were more synchronous with their infants had higher plasma oxytocin levels and increased dopamine secretion in the striatum, vmPFC, PCC and amygdala. Plasma-oxytocin and central dopamine were highly correlated. This is the first study that functionally evaluates the dopaminergic system in humans' social setting. Moreover, the multi-disciplinary approach enhances our ability to interpret the neurochemical data in terms of bonding behavior. The study demonstrates for the first time that like rodents, human mothers respond to their infants with dopaminergic secretion that is tightly linked to oxytocin levels. These preliminary results provide initial proof of concept for the use of MR-PET to study human affiliation.

FUNDING: NICHD

THE ROLE OF NEURAL RESPONSE TO SOCIAL REWARD IN THE RELATION BETWEEN EMOTIONAL CLOSENESS AND POSITIVE AFFECT DURING NATURALISTIC SOCIAL INTERACTIONS AMONG ADOLESCENTS

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Descriptors: emotional closeness, positive affect, social cognition

Flores & Berenbaum (2014) found that emotional closeness predicted less depressive symptoms the next day among people who desired closeness. Given that positive affect and reward play critical roles in depression (Forbes & Dahl, 2005), emotional closeness may have helped by upregulating positive affect. Examining the roles of brain regions (e.g., temporoparietal junction, TPJ) key to social cognition can elucidate mechanisms of how closeness may enhance positive affect. This study included a novel integration of measuring brain function and real-world experience by having 32 healthy adolescents participate in a two-week experience sampling protocol and a social reward fMRI task in which they received feedback about whether others mutually liked them based on photographs. They were called 28 times and asked their current level of positive affect, peak level of happiness over the past hour, and how close they felt with whom they were interacting. Emotional closeness was related to higher concurrent positive affect ($t(274)=8.5$, $p<.01$) and peak happiness a few hours later ($t(259)=3.0$, $p<.01$). Greater activation in rTPJ – a neural correlate of perspective-taking – in response to social reward moderated the prospective relation between emotional closeness and peak happiness a few hours later ($t(256)=2.6$, $p<.01$). Specifically, emotional closeness was positively related to peak happiness a few hours later at high but not low levels of rTPJ activation. This finding suggests that perspective-taking may be important to sustain an affective benefit from emotional closeness hours later.

FUNDING: Support for this work came from NIH grant R21 DA033612 (E Forbes, PI).

DON'T TELL ME HOW TO FEEL: STRATEGY-SPECIFIC EFFECTS OF OTHER-DIRECTED EMOTION REGULATION

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Descriptors: emotion regulation, relationships, social support

Emotion regulation research has focused on intrapersonal (self-directed) processes, rather than on the interpersonal (other-directed) processes of emotion regulation. Self-directed reappraisal has been associated with increased well-being (John & Gross, 2004). Social support research suggests overt attempts to change the emotions of others can undermine invisible support and lead to worse social support outcomes (Bolger et al., 2000). We compared the effects of receiving other-directed reappraisal (changing the perspective of another to change the impact of an emotion-eliciting event) with receiving a no-regulation control strategy, other-directed acceptance (accepting another's emotions without trying to change these emotions). Across two studies (N1=28, N2=221), we found that being the recipient of other-directed reappraisal led to increased feelings of invalidation (M1=3.44), compared to acceptance (M1=2.82, $t(27)=4.02$, $p=.00$). We also tested the effect of these strategies on a social outcome (liking). Consistent with prior research showing that people make more of an effort to change their emotions if they are lower in status (Anderson, Keltner, & John, 2003), we found an interaction between strategy and status on liking ($F2(1, 217)=4.65$, $p=.03$), such that reappraisal was associated with less liking when coming from someone of the same status (M2=3.77) than when coming from someone of higher status (M2=4.65). These findings illustrate that interpersonal regulation processes can have different implications than their intrapersonal counterparts.

EMOTIONAL CONTEXT SENSITIVITY IS ASSOCIATED WITH IDENTITY INTEGRATION AND COMMUNITY CONNECTEDNESS IN LESBIAN, GAY, AND BISEXUAL INDIVIDUALS

Ilana Seager, Amelia Aldao
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Descriptors: emotion regulation, diversity

Lesbian, gay, and bisexual (LGB) individuals are disproportionately affected by mental illness (Gilman et al., 2001). While numerous studies have highlighted aspects of identity and community connectedness as protective factors against mental illness in LGB individuals, few have considered the role of affect in facilitating this relationship (cf. Hatzenbuehler et al., 2009). One aspect of affective functioning that has received a great deal of attention in the past few years is emotional context sensitivity—the ability to experience different emotions (whether positive or negative) that are congruent with the situation at hand (Bonanno and Burton, 2013). Critically, context sensitivity has been conceptualized as a building block of emotion regulation flexibility—a process linked with adaptive functioning and good mental health (Kashdan and Rottenberg, 2010). We recruited 82 LGB adults (50 percent male; mean age: 30.9 years) online. Participants completed LGB identity and community connectedness measures and watched four film clips (two discriminatory, two affirming, counterbalanced). We ran several models predicting context sensitivity with film type and each identity and community variable. More integrated LGB identity and greater community connectedness were consistently associated with greater emotional context sensitivity (ps less than .004). These findings suggest that flexible responding to LGB-related emotional stimuli might constitute an important factor linking LGB identity and community connectedness with mental illness. Future work should test such mechanisms.

Smiling

PATIENTS' DUCHENNE SMILES DURING MARITAL INTERACTIONS ARE ASSOCIATED WITH GREATER SOCIOEMOTIONAL HEALTH IN SPOUSAL CAREGIVERS

Sandy J. Lwi[1], James J. Casey[1], Alice Verstaen[1], Dyan E. Connelly[1], Jennifer Merrilees[2], Robert Levenson[1]
[1]UC Berkeley, [2]UC San Francisco

Descriptors: neurodegenerative conditions, smiling, caregiving

Caregiving for a spouse with dementia can be a fulfilling experience, but for many caregivers it is associated with social, emotional, and physical health problems. To determine whether this vulnerability is reduced by the expression of positive emotion by patients, we examined 32 patients with behavioral variant frontotemporal dementia, 34 patients with Alzheimer's Disease, 18 healthy aging adults and their spousal caregivers. Couples discussed an area of marital conflict and emotional behaviors during the first 30 seconds of the discussion were coded using the Facial Affect Coding System. Positive emotion was operationalized as the average of the normalized intensity, duration, and frequency of Duchenne smiles (comprised of AU12 [lip corner raiser] and AU6 [cheek raiser, lid compressor]). Caregiver health outcomes were measured using socioemotional and physical health composite scores derived from the RAND Health Survey. Results (controlling for patients' cognitive status and diagnosis, and caregivers' gender and age) revealed that patients' Duchenne smiles were associated with better caregiver socioemotional health ($B = 5.08$, $SE(B) = 2.25$, $beta = .23$, $p = .03$) but not caregiver physical health ($B = 0.90$, $SE(B) = 1.80$, $beta = .06$, $p = .62$). Caregivers' Duchenne smiles, as well as patient and caregiver non-Duchenne smiles (AU12 only), were not associated with either caregiver health outcome. These results suggest that patient Duchenne smiles, which likely indicate preserved emotional connection between spouses, are associated with important aspects of caregiver health.

REWARD, AFFILIATIVE, AND DOMINANCE SMILES MODULATE THE EFFECTS OF SOCIAL EVALUATION

Jared D. Martin, Heather C. Abercrombie, Paula M. Niedenthal
University of Wisconsin at Madison

Descriptors: smiles, social-functionalism, stress

While of great scientific interest, research on the human smile is still inconclusive regarding: 1) The social meaning of smiles, 2) How to categorize smiles (Ekman, 1991; LaFrance, 2011; Ambadar, Cohn, & Reed, 2009). The social-functional account of the human smile proposed in the Simulation of Smiles Model (SIMS; Niedenthal et al., 2010) advances three physically and functionally distinct types of smile: Reward (reinforcement of behavior), Affiliative (establishment and maintenance of cooperative relationships), and Dominance (social hierarchy negotiation). We tested the social function of these smiles within a social-evaluative context (n = 90). We hypothesized that, in a social-evaluative situation, participants receiving Dominance smiles versus Reward smiles as feedback would exhibit more stress as indexed by cortisol, heart rate, subjective affect, and social perceptions. Results confirmed the predicted differences across all measures: (cortisol response difference, AUCG: $t(86) = -2.07$, $p < .042$; heart rate difference (speech – baseline): $t(87) = -2.43$, $p < .018$; Negative Affect: $t(84) = -2.71$, $p < .008$; social perception (competence): $t(87) = 1.85$, $p < .069$). Further, results indicate that while the Affiliative smile was seen as positive, complex interactions took place between physiology, perceptions of the self (internal affective state), and social perceptions. Together, the findings point to the strength of a social-functional account of human smiles and the need for further research to demonstrate the divergent functions of Reward and Affiliative smiles.

FACIAL EXPRESSIONS OF EMOTION TRACK EXPERIENCE AND THEORY OF MIND BRAIN NETWORKS: A SIMULTANEOUS FMRI AND ELECTROMYOGRAPHY (EMG) STUDY OF AFFECTIVE COMMUNICATION

Craig Williams, Yuan Chang Leong, Jamil Zaki
Stanford University

Descriptors: facial expression, social influence, neuroimaging

Audiences often enhance facial displays of emotion, but the source of this effect is contested. Heightened expression is traditionally thought to reflect intensified experience, but individuals may also increase their expressivity in social settings to enhance their emotional “readability.” We investigated the neural correlates of these two sources of facial expression. Ten pairs of close friends (N = 20) individually viewed and rated their emotional reactions to positive and neutral images while undergoing simultaneous fMRI and electromyography (EMG) acquisition at the zygomaticus site. At times, participants believed they were visible to friends via video feed (Camera ON) and were instructed to clearly convey their feelings via facial display. At other times, participants believed they were not visible (Camera OFF) and were instructed to react naturally. When participants viewed positive images, increased EMG predicted greater activity in regions related to motor control (primary and supplementary motor cortex) and emotion processing (orbitofrontal and anterior cingulate cortex, amygdala, insula, and ventral striatum) relative to neutral images (z’s > 4.00). However, when the camera was ON for positive image-viewing, EMG further predicted increased activity in theory of mind regions (superior temporal sulcus, temporal pole, and precuneous) versus when the camera was OFF (z’s > 3.20). In summary, we find that brain networks related to emotional experience and theory of mind each track facial expressivity, according to individuals’ communicative goals.

Poster Session A
Thursday, March 17, 2016

Poster Schedule

4:00 p.m.-5:00 p.m. .....Assemble your poster
5:00 p.m.-8:15 p.m. .....Poster viewing
6:45 p.m.-8:15 p.m. .....Author present
8:15 p.m.-9:15 p.m. .....Take down your poster

POSTER A-1

THE REPRESENTATION OF (AMBI)VALENCE IN FACIAL EXPRESSIONS

Oksana Itkes, Zohar Eviatar, Assaf Kron
University of Haifa

Descriptors: structure of valence, facial expressions, mixed emotions

The temporal dynamic of pleasure and displeasure elicited by ambivalent stimuli plays a part in revealing the architecture of the valence system across different levels of emotional response. Using the high temporal resolution of electromyography (EMG), we investigated whether pleasure- and displeasure-related facial muscles are activated simultaneously, serially or aggregate across trials. 60 participants viewed pleasant, unpleasant, neutral, and ambivalent pictures while the activation of zygomaticus major and corrugator supercilii muscles were recorded, using facial EMG. The results demonstrate above baseline activation of both zygomaticus major and corrugator supercilii in response to ambivalent stimuli, $F(1, 32000) = 53$, $p < .0001$, $F(1, 18000) = 32$, $p < .0001$. However, temporal dynamics analysis showed that pleasure and displeasure are activated exclusively and aggregate across trials in response to ambivalent stimuli. These results suggest that there is neither simultaneous or serial activation of zygomaticus and corrugator in response to the same pictorial stimulus but rather an exclusive activation of either zygomaticus or corrugator. The exclusive activation of either pleasure or displeasure in response to ambivalent stimuli supports a bipolar structure of valence in the facial expressions component of the emotional response.

FUNDING: This research was supported by the Ministry of Science, Technology & Space, Israel.

POSTER A-2

INFANT EMOTIONALITY AND MATERNAL CHRONIC PHYSIOLOGICAL STRESS PREDICT INFANT CHRONIC PHYSIOLOGICAL STRESS

Katie Kao[1], Charu T. Tuladhar[1], Jerrold S. Meyer[2], Amanda R. Tarullo[1]
[1]Boston University, [2]University of Massachusetts Amherst

Descriptors: infant emotionality, chronic physiological stress, temperament

Chronic stress has been linked to emotional dysregulation and to various health problems (Kim et al., 2013). Proximal factors influencing infant chronic physiological stress have not been established. The current study investigated the roles of infant emotionality and maternal chronic physiological stress in predicting infant chronic physiological stress. We collected hair cortisol from mothers and infants (N=95, M=12.15 months), a biomarker of chronic hypothalamic-pituitary-adrenocortical activity, and measured infant emotionality using two behavioral tasks (LabTAB; Goldsmith & Rothbart, 1999), the Toy-behind-the-Barrier and Puppet tasks, to assess anger and joy. Maternal and infant hair cortisol were positively correlated, $r(95)=.52, p<.001$. Infants with higher joy had lower hair cortisol, $r(95)=-.23, p=.024$; while infants with higher anger had higher hair cortisol, $r(95)=.20, p=.05$. Higher infant anger was also related to higher maternal hair cortisol, $r(95)=.22, p=.037$. Infant hair cortisol was regressed on maternal hair cortisol, infant joy and anger ($F(3,90)=14.00, p=<.001$). Both maternal hair cortisol ($\beta=.60, p<.001$) and infant joy ($\beta=-.21, p=.021$) predicted infant hair cortisol, while infant anger did not. When mothers had higher chronic physiological stress, infants had higher chronic physiological stress suggesting that chronic physiological stress may be intergenerationally transmitted. Infants with higher levels of joy had lower chronic physiological stress, suggesting that positive emotions may serve as a protective factor for regulation of the developing stress system.

POSTER A-3

PATIENTS' VISUAL SELF FOCUS PREDICTS CAREGIVERS' MENTAL ILLNESS

Alice Verstaen[1], Marcela C. Otero[1], Sandy J. Lwi[1], Virginia E. Sturm[2], Robert W. Levenson[1]
[1]University of California, Berkeley, [2]University of California, San Francisco

Descriptors: dementia, caregiving, mental illness

Care for a spouse with dementia can be extremely challenging. The associated burden has been linked to a number of mental health problems (especially mood disorders) in some but not all caregivers. One contributing factor may be the extent to which patients withdraw into their own world, thus reducing their social connection with the caregiver. We examined patient self-focus and caregiver mental health in 25 patients with neurodegenerative disease (13 frontotemporal dementia, 12 Alzheimer's) and 18 healthy controls and their spouses. Participants completed a visual attention task in which they were shown two photographs side by side, one of themselves and one of their spouse with minimal instructions (i.e., "look at the pictures"). Self-focus and other-focus were measured using an eye-tracking device and were operationalized as the proportion of time spent looking at the photograph of self or spouse respectively. Spousal mental illness was measured using the Symptom Checklist. Controlling for age and diagnosis, results indicated that greater proportion of time looking at self by participants was associated with greater depression ($F(6,36)=4.518$, $p=.040$) and phobic anxiety ($F(6,36)=4.721$, $p=.036$) in spouses. In contrast, time looking at the spouse was not associated with spousal mental health. We interpret this finding as consistent with the view that greater self focus is part of process of socioemotional change in patients that may be particularly difficult for caregivers, reducing spousal social support, and contributing to decline in caregiver mental health.

FUNDING: National Institute of Aging Grant 2P01AG019724-11 and 1R01AG041762-01A1 to Robert W. Levenson and National Science Foundation Grant DGE 1106400 to Alice Verstaen

POSTER A-4

USE YOUR WORDS: PILOT DATA ON THE EFFECTS OF A NOVEL EMOTION WORD-LEARNING TASK ON AFFECT DIFFERENTIATION ABILITIES

Lindsey M.. Matt, Sean Burridge, Karin G. Coifman
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Descriptors: differentiation, learning, intervention

Regulating one's emotions is an integral part of daily life and requires the coordination of emotional processes, including affect differentiation. The ability to differentiate is associated with increased emotion regulation and fewer maladaptive behaviors while under stress. There is little data, however, exploring the stability of differentiation and how it might be shaped by emotion learning. The current study examined negative affect (NA) differentiation before and after a novel emotion word-learning task. We hypothesized that individuals assigned to the emotion word-learning task would show improved NA differentiation post-task (vs. controls). Thirty-five participants (28 female, Mage=20.8 years, 74.3% Caucasian) rated a series of emotion words five times per day for sixteen days. On days 8 and 9, participants completed an online learning task that provided definitions of emotion or non-emotion words, on which they were later quizzed. Linear regression analyses in which post-task NA differentiation was the dependent variable indicated that the emotion condition was associated with improved NA differentiation ($B = -3.94$, $F(33) = 2.24$, $p = .029$) after controlling for baseline NA differentiation and distress; supporting our hypothesis. These results suggest that negative affect differentiation is malleable in adults in response to even brief exposure to learning. Given the benefits associated with differentiation, future work should seek to examine the stability of these changes and how they relate to emotion regulation, behavior, and symptoms of psychopathology.

FUNDING: Psi Chi

POSTER A-5

THE EMPATHY IMPULSE: A MULTINOMIAL MODEL OF EMPATHY FOR PAIN

Victoria L. Spring, C. Daryl Cameron, Andrew Todd
University of Iowa

Descriptors: empathy, process modeling, perspective-taking

Empathy—or the ability to feel what others feel—is widely considered fundamental to human morality. It is frequently characterized as having automatic and controlled components; however, past research has not quantitatively dissociated the component processes involved in empathy. Across two experiments, we use a sequential priming task in which participants judge the painfulness or non-painfulness of target experiences while ignoring the influence of painful and non-painful primes. We use multinomial modeling to distinguish between three processes: empathy for pain (Experience Sharing), executive control (Discrimination), and response bias (Guessing). We find that these distinct processes underpinning performance on the priming task. Experiment 1 (n = 108) reveals that Discrimination is reduced under a fast response deadline, but Experience Sharing and Guessing are not, Gsquared(2) = 4.10, p =. 129, w = .04. Experiment 2 (n = 102) reveals that Experience Sharing is stronger after an empathy-relevant perspective-taking manipulation, Gsquared(2) = .36, p = .836, w = .02. This approach models spontaneous empathy in a way that overcomes the limitations of self-report and formally distinguishes experience sharing from other processes involved in empathic experience.

FUNDING: University of Iowa Graduate and Professional Student Government research grant

POSTER A-6

POSITIVITY BIAS IN JUDGING IN-GROUP MEMBERS' EMOTIONS

Talya Lazerus[1], Zachary Ingbretsen[2], Ryan Stolier[3], Jonathan B. Freeman[3], Mina Cikara[2]
[1]Carnegie Mellon University, [2]Harvard University, [3]New York University

Descriptors: emotion, perception, groups

The project investigates how group membership impacts emotion perception of arbitrary in- and out-group members. In Study 1, 100 participants were randomized into two novel groups. Participants rated the arousal and valence of in- and out-group members' facial expressions (fear, happy, neutral) using an affect grid. Across all emotions, participants judged in-group members' expressions as more positive, $F(1, 99) = 7.15$, $p = .009$, and higher arousal, $F(1, 99) = 5.60$, $p = .02$, than out-group members' expressions. In Study 2, 92 participants, randomized into two novel groups, categorized fear and happy expressions as being either positive or negative using a mouse-tracking paradigm. Although participants accurately categorized in-group fear expressions, they were initially attracted to the positive label. Participants exhibited the most direct mouse trajectories for in-group members with happy expressions and the least direct for in-group members with fear expressions, $t(91) = 4.44$, $p < .0005$. Trajectories for in-group fear were less direct than out-group fear, $t(91) = 2.11$, $p = .038$, and out-group happy expressions, $t(91) = 3.39$, $p = .001$. Overall, people judged in-group faces as more positive, regardless of emotion, both in deliberate and implicit judgments, suggesting that emotion recognition of in-group members is positively biased at both implicit and explicit levels.

POSTER A-7

USING EVENT-RELATED POTENTIALS TO EVALUATE NEURAL MECHANISMS OF ATTENTIONAL CONTROL AND TREATMENT OUTCOME FOR EMOTIONAL DISORDERS: AN RDOC STUDY

Jonathan P. Stange[1], Annmarie MacNamara[2], Olga Barnas[2], K. Luan Phan[2], Heide Klumpp[2]
[1]University of Illinois at Chicago & Temple University, [2]University of Illinois at Chicago

Descriptors: affective disorders, event-related potential, attentional control

Neural and behavioral evidence suggests that individuals with affective disorders demonstrate heightened attention toward threatening stimuli. However, little is known about whether attention toward threat is related to outcome of psychosocial treatments for anxiety such as cognitive-behavioral therapy (CBT). The present study evaluated whether attention towards threat would be associated with reduced anxiety symptomatology following CBT, and whether improvements in attentional control might mediate this relationship. Twenty patients with elevated symptoms of social anxiety received 12 sessions of CBT. Prior to treatment, event-related potentials (the late positive potential) were recorded during a threat-processing task. Self-report measures of fear of negative evaluation (a cognitive bias common in social anxiety) and attentional control, at baseline and post-treatment. Individuals with greater LPPs for threatening targets experienced significantly greater improvements in fear of negative evaluation and attentional control following treatment ($ps < .05$). Furthermore, improvements in attentional control mediated the association between LPPs for threatening targets and improvements in fear of negative evaluation ($p < .05$). These results suggest that CBT may be particularly helpful for improving cognitive biases among individuals with greater initial threat processing. These findings also support the utility of integrating cognitive and negative valence systems across multiple units of analysis when evaluating predictors of treatment outcome.

FUNDING: This material is based on work supported by National Institute of Mental Health grant K23MH093679 to HK.

POSTER A-9

RIGHT WING AUTHORITARIANISM EXPLAINS DIFFERENCES IN THE VISUAL SEARCH OF FACES FROM DIFFERENT RACES

Amélie Bret, Brice Beffara, Martial Mermillod
University Grenoble Alpes

Descriptors: political conservatism, face perception

Our aim in this study was to determine how social beliefs and motives could influence automatic perception and behavior toward outgroup members. Dehumanization is defined as the consideration of out-group members as less human than in-group members. The aim of our study was to understand if out-group members are automatically considered as a threat (animalistic dehumanization) or as something closer to an object (mechanistic dehumanization).We focused on the difference between in-group and out-group face detection. Dehumanization is usually measured with the attribution of primary emotions (commonly shared by the in and out group) and secondary emotions (only attributed to the in-group). In order to provide an implicit measure of dehumanization, and determine whether it begins as an automatic process, we used a visual search task. Faces from different Caucasian and North African groups were displayed. A screen composed of neutral pictures was displayed to the participants and who were then asked to detect as fast and accurate as possible if a face was present on the screen. We identified a difference of face perception depending on the race of the face and the beliefs of the participants. Participants with a high score of right-wing authoritarianism showed slower reaction times to detect out-group vs. in-group faces. This suggests that out-group faces are less likely to catch attention among objects, compared to in-group faces. This study contributes to the investigation dehumanization as an automatic bias during perception.

POSTER A-10

PARENT PSYCHOPATHOLOGY INFLUENCES ADOLESCENCE AFFECTIVE REGULATION OF SENSORY EXPERIENCE

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[1]University of Wisconsin-Madison, [2]Arizona State University

Descriptors: sensory over-responsivity, family transmission, affective regulation

Reactions to sensory experiences are an overlooked component of affective regulation, despite the importance of bodily states on psychological processes. Yet across development, individuals with sensory over-responsivity (i.e., adverse reactions to typical sensations), are at greater risk for developing affective disorders. Thus, we examined the transmission of sensory over-responsivity and anxiety and depression from parents to adolescent offspring. Parents and their adolescent twins (n=505 families) completed items from the Adult Sensory Profile. We derived adolescent internalizing symptoms from anxiety and depression modules of the DISC. We derived parental affective diagnoses from the CIDI depression and anxiety modules. Structural equation models tested the relationship between parent sensory symptoms and affective diagnoses and adolescent sensory symptoms and internalizing behaviors, controlling for twin clustering in families. Parental depression was significantly related to adolescent sensory over-responsivity symptoms, over and above parental sensory over-responsivity symptoms (b=.26, p<.001 for mothers; b=.13, p=.004 for fathers). Most parents reported an age of onset that predated the birth of their twins, suggesting that parent affective diagnoses impact adolescent behavior rather than the reverse. Given the proposed relation between bodily states and affect regulation, children of parents with affective disorders may be at risk for internalizing problems partly via dysregulated reactivity to sensory experiences.

POSTER A-11

AMYGDALA-PCC CONNECTIVITY AS A MARKER FOR PSYCHOSOCIAL HEALTH: EVIDENCE FROM TWO COMMUNITY SAMPLES

Cecilia Westbrook, Cory Burghy, Sasha Somerfeldt, Lauren Gresham, Andrew Schoen, Stacey Schaefer, Jeanette Mumford, Rasmus Birn, Richard J. Davidson
University of Wisconsin-Madison

Descriptors: connectivity, wellbeing, amygdala

The amygdala and posterior cingulate cortex (PCC) are both important for emotion expression and memory. Although resting-state functional connectivity (rs-FC) between these regions has been implicated in psychosocial wellbeing, the direction of these effects is unclear, as some studies have found increased amygdala-PCC connectivity relates to stress and negative affect, while others find decreased connectivity to predict these outcomes. We assessed rs-FC and measures of psychosocial health in two independent samples (92 and 68 participants, respectively) with markedly different demographic profiles. In a predominantly-white young adult sample, we found that greater amygdala-PCC rs-FC was associated with less depression (log BDI II scores; beta=-0.72, t=-2.65, p<.01), less state anxiety (STAI, beta=-5.90, t =-2.67, p<.01), and greater Psychological Well-Being (PWB; beta=53.28, t=3.04, p<.01). In a more diverse, older sample, we replicated the relationship between amygdala-PCC rs-FC and PWB (beta=25.04, t=2.23, p<.05) and state anxiety (beta=-5.22, t=-2.04, p<.05), and found relations with both PANAS-gen negative (beta=-3.33, t=-2.29, p<.05) and positive affect (beta=4.53, t=2.20, p<.05). In this sample, rs-FC was also associated with dispositional positive emotionality (DPES) subscales including contentment (beta=1.00, t=3.04, t<.01) and pride (beta=0.82, t=3.11, t<.01). Our findings suggest that greater amygdala-PCC connectivity is associated with psychosocial health in nonclinical community samples, and more research is needed to elucidate its role in affective disorders.

FUNDING: F30 MH106191 PI: Westbrook

POSTER A-12

A LINGUISTIC SIGNATURE OF PSYCHOLOGICAL DISTANCING IN EMOTION REGULATION

Erik C. Nook, Jessica L. Schleider, Leah H. Somerville
Harvard University

Descriptors: emotion regulation, language, distancing

We can cognitively "take a step back" to relax when distressed, but could merely shifting our language away from the here and now have the same effect? In two studies, we tested for bidirectional relations between distancing language and emotion regulation. In Study 1 (N=78), participants transcribed their thoughts while passively viewing or regulating their emotional responses to negative images. Regulation decreased negative affect [t(77)=7.60, p<.001] and spontaneously increased use of language implying social and temporal distance (reduced "I," reduced present-tense verbs, and increased past- and future-tense verbs; ps <.001-.02). Participants who showed stronger linguistic distancing when regulating were more successful emotion regulators. Study 2 (N=213) reversed this relation: does shifting one's language foster spontaneous emotion regulation? Participants wrote about negative images either as if they were physically close or physically far, using the word "I" or not using the word "I," or using the present tense or not using the present tense. All three forms of linguistic distancing (physical, social, and temporal) reduced self-reported negative affect [ts 2.77-7.24, ps <.001-.007]. Types of psychological distance also "bled" across conditions (e.g., participants used "I" and present-tense verbs less when distancing physically). The observed bidirectional impact of distancing language on emotion regulation supports theories that postulate a tight coupling between language and emotion and may be of interest to clinicians working to facilitate effective regulation.

POSTER A-13

DIMINISHED RESPIRATORY RESPONSE IS ASSOCIATED WITH PSYCHIATRIC SYMPTOMS IN SEMANTIC VARIANT PRIMARY PROGRESSIVE APHASIA

Alice Y. Hua[1], Sandy J. Lwi[1], James J. Casey[1], Alice Verstaen[1], Bruce L. Miller[2], Robert W. Levenson[1]
[1]Department of Psychology, University of California, Berkeley, [2]Memory and Aging Center, Department of Neurology, University of California, San Francisco

Descriptors: emotion, respiration, semantic variant primary progressive aphasia

Semantic variant primary progressive aphasia (svPPA) is a neurodegenerative disease that is primarily characterized by deficits in language comprehension. Although behavioral changes (e.g., disinhibition) are often reported in svPPA, few studies have utilized laboratory methods to investigate these changes. We assessed emotional reactivity in 30 patients with svPPA and 23 healthy controls. Participants viewed three film clips that elicit positive (amusement) and negative (disgust and sadness) emotion while emotional facial behavior and peripheral physiology were recorded. In addition, patients' caregivers completed the Neuropsychiatric Inventory, which assesses a range of psychiatric symptoms. Analyses (controlling for sex and age) revealed no differences between patients and controls in emotional facial behavior. However, whereas controls breathed more rapidly during the films, svPPA patients' breathing did not change (p< .05). Follow-up analyses revealed that the degree of diminished respiratory response in patients was unrelated to a measure of disease severity, but was related to greater psychiatric symptomatology (i.e., apathy, distress, and depression). These findings suggest that reduced respiratory responsivity to emotional stimuli may be useful in the diagnosis of svPPA, and provides an index of the degree of psychiatric disturbance in these patients.

POSTER A-14

EYE MOVEMENTS REVEAL ATTENTIONAL EFFECTS ON ASSOCIATIVE MEMORY WITH EMOTIONAL STIMULI AT RETRIEVAL

Rachel Weintraub, Elizabeth F. Chua
Brooklyn College and The Graduate Center, CUNY

Descriptors: emotion, memory, eye-tracking

Previous research has shown that attentional capture by emotional stimuli impacts encoding, but attentional capture at retrieval is less studied. We used eye tracking during a scene-face associative memory paradigm to examine the effects of attentional capture during encoding and retrieval of emotional scene-face pairs compared to neutral scene-face pairs. Participants (n=57) studied 48 emotional and 48 neutral scenes paired with faces. Participants first viewed a scene cue followed by a scene-face pair, in which a face was overlaid on the scene. During test, participants viewed a studied scene, followed by a 3 alternative forced choice recognition task, in which 3 faces were overlaid on the scene, and the task was to identify which face was originally paired with that scene. Our eye movement-based measure of attention was based on fixations made to the background scene during encoding and fixations made to the background scene during retrieval. At encoding, a 2x2 (stimulus type, accuracy) repeated measures ANOVA showed a main effect of stimulus type, such that participants made more fixations to emotional scenes than neutral scenes ($F(1, 56)=7.26$, $p<.01$). At retrieval, there was a significant interaction ($F(1, 56) =6.801$, $p<0.02$), such that participants made more fixations to emotional scenes than neutral scenes for hits ($t(56)=2.82$, $p<0.01$), but not misses. Together, these findings show an attentional capture by emotional stimuli at encoding, whereas there are memory-related differences in attention allocation at retrieval.

POSTER A-15

INDIVIDUALS WITH MAJOR DEPRESSIVE DISORDER EXPERIENCE REDUCED ANTICIPATORY AND CONSUMMATORY PLEASURE FOR ACTIVITIES IN DAILY LIFE

Haijing Wu[1], Jutta Mata[2], Daniella Furman[3], Anson J. Whitmer[4], Ian H. Gotlib[5], Renee J. Thompson[1]
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Descriptors: depression, reward, pleasure

Anhedonia, a core symptom of Major Depressive Disorder (MDD), has been broadly conceptualized as the inability to experience pleasure. Research on reward processing has highlighted the importance of distinguishing between two types of pleasure: anticipatory pleasure and consummatory pleasure, which are experienced when rewards are anticipated and consumed, respectively. Laboratory studies suggest that people with MDD experience lower levels of anticipatory and consummatory pleasure than do healthy controls, but it is unclear whether these findings generalize to daily functioning. To examine this question, adults with MDD (n = 41) and without psychopathology (CTL; n = 39) carried handheld electronic devices for one week and were prompted to complete a survey eight times each day. At each prompt, participants indicated what activity they were most looking forward to over the next couple of hours and rated the extent to which they thought the activity would be pleasant (anticipatory pleasure). At subsequent prompts, if they completed the named activity, they rated the extent to which the activity was pleasant (consummatory pleasure). Using multilevel modeling, we found that the MDD group reported lower anticipatory pleasure ($p < .01$) and consummatory pleasure ($p < .001$) than did the CTL group. We also examined levels of anticipatory and consummatory pleasure by type of activity as a function of MDD status. Results from this study are the first to provide evidence that individuals with MDD experience both attenuated anticipatory and consummatory pleasure for daily activities.

POSTER A-16

I KNOW WHAT IT MAKES ME FEEL: DISSOCIATING AFFECTIVE AND SEMANTIC VALENCE

Oksana Itkes, Rutie Kimchi, Assaf Kron
University of Haifa

Descriptors: structure of valence, facial expressions, habituation

This study examines the dissociation between two modes of valence: valence of the emotional response (affective valence) and the semantic knowledge about the valence of an event (semantic valence). Although emotion literature often assumes this distinction, the dissociation between affective valence and semantic valence is still an open question: do they represent distinct mental phenomenon that obey different laws? Can participants distinguish between the two and report about them separately? We used habituation as a manipulation that selectively influence affective and semantic valence. It is hypothesized that measures of affective valence will be attenuated with habituation while measures of semantic valence will not. Self-reports of feelings (feelings-focused), facial EMG and Heart rate were a priori selected to reflect affective valence. Self-reports of content of an image (semantic-focused), and affective Simon congruency effect were selected as semantic valence measures. 50 participants viewed affective images during habituation protocol. Results showed that measures of affective valence, i.e., feelings-focused self-reports, heart rate, and facial EMG activations, were all attenuated with habituation, while measures of semantic valence, i.e. semantic-focused self-reports and congruency effect of affective Simon, were not. In addition, the difference between the habituation effect of feelings-focused and semantic-focused self-reports was significant: $F (1, 48) = 14.63$, $p<.0001$, $eta=.234$. The results support dissociation between affective and semantic valence.

POSTER A-17

CULTIVATING WISDOM IN THE FACE OF CONFLICT: THE ROLES OF SELF-DISTANCING AND EMOTIONAL COMPLEXITY

Harrison Oakes, Igor Grossmann
University of Waterloo

Descriptors: wise reasoning, self-distancing, emotional complexity

How does one cultivate wisdom? Philosophers and behavioral scientists have proposed self-distancing as a key mechanism to developing wisdom, but only a handful of studies have examined how self-distancing impacts one's wise reasoning. Further, these studies are limited in scope because all have employed hypothetical instead of real scenarios. The current study (N = 458) addresses these limitations by providing the first test of how to cultivate wisdom in the face of real, emotionally intense interpersonal conflicts. We examined how a self-distancing (vs. self-immersing) perspective influences one's ability to reason wisely about a reinstated emotional interpersonal conflict (Schwarz, Kahneman, & Xu, 2009) and simultaneously tested the effects of emotional complexity on self-distancing in predicting wisdom. Self-distancing participants reported greater complexity of negative emotions, $F(1,456)$ 5.10, $p = .024$, and utilized more wise reasoning strategies than self-immersed participants, $F(1,451) = 4.99$, $p = .026$. The effect of perspective on wise reasoning was moderated by negative emotional complexity, $F(1,451) = 5.77$, $p = .017$. Self-distancing resulted in wiser reasoning than self-immersing among participants with a more complex representation of negative emotions, $B = .44$, $SE = .13$, $t(451) = 3.28$, $p = .001$, but not among participants with a simpler representation of negative emotions, $t < |1.00|$, ns. Together, the results suggest that self-distancing and emotional complexity are central for cultivating wisdom in the heat of the moment.

POSTER A-18

EVENT-RELATED POTENTIALS REVEAL DISTINCT SPATIOTEMPORAL DYNAMICS OF STEREOTYPE PROCESSING BETWEEN CONSERVATIVES AND LIBERALS

Adam K. Baker[1], Travis E. Baker[2], Mario Liotti[1], Genevieve Fuji-Johnson[1]
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Descriptors: social, electrophysiology, judgement

Recent research has begun to utilize event-related potentials (ERPs) to investigate social phenomena, such as stereotyping. Here, we continue this work by using electrophysiological and behavioral assays of pragmatic rule violations to identify neurocognitive differences between individuals identified as conservative or liberal. Our investigation revealed subjects (n=30) produced greater conflict related neural activity, as revealed by the N400 ERP, in response to gender stereotype word-pair incongruities (Female + Mechanic), compared to congruities (Male + Beer). To highlight automatic and controlled processing between groups, a short (150ms) and long (700ms) stimulus-onset asynchrony (SOA) was utilized. Our results revealed a significant 3 way interaction between Congruency x SOA x Group F(1, 28) = 4.55, p < .05, ?2 = .04. Post-hoc analysis indicated that in the 150ms SOA condition, the N400 amplitude for incongruent word pairs was significantly larger compared to congruent word pairs in both groups t(14) = 5.42, p<.001. Importantly, in the 700ms SOA condition, the N400 amplitude for congruent word-pairs contrast, for the N400 amplitude did not reach significance for liberal group t(14) = 1.82, p >.05, but did for the conservative group. These results indicate that for liberals, N400 amplitude between gender stereotype incongruities and congruities was greatly attenuated. Taken together, our results highlight important neurocognitive mechanisms of stereotyping processing, bolstering the utility of ERPs to investigate differential processing of social groups.

POSTER A-19

DAILY SELF-REPORTS OF INTEREST AND ENJOYMENT PREDICT REWARD LEARNING IN SCHIZOPHRENIA

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Descriptors: reward learning, ecological momentary assessment, schizophrenia

Schizophrenia has long been associated with diminished ability to use reward history to adaptively guide behavior. Importantly, deficits on reward learning tasks have also been linked, using structured clinical interviews, to core aspects of schizophrenia such as interest and enjoyment (i.e., negative symptoms). However, no work has examined the utility of such tasks in predicting more ecologically valid assessments of interest and enjoyment during daily activities. In the current study we collected data from 29 individuals with schizophrenia using a previously validated reward-learning task. We then related task performance to ambulatory assessments of interest and enjoyment with daily activities over the course of one week. Consistent with previous findings, we found that schizophrenia patients with the most severe deficits in interest and enjoyment, as reported by clinician interview, demonstrated robust impairments in their ability to learn reward contingencies (p<0.04). Further, we demonstrated that schizophrenia patients who reported lower levels of enjoyment and interest during daily activities reliably performed worse on our reward-learning task (p<0.005). Such findings highlight an important connection between reward learning task performance and assessments of motivational and emotional states. Moreover, these findings suggest the importance of linking laboratory-based paradigms to assessments of daily living.

POSTER A-20

TRAIT POSITIVE AFFECT IS A MEDIATOR OF EMOTION REGULATION AND NEGATIVE SYMPTOMS IN SCHIZOPHRENIA

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Descriptors: emotion regulation, schizophrenia, negative symptoms

Prior studies indicate that negative symptoms and poor functional outcome are associated with poor emotion regulation in people diagnosed with schizophrenia. However, it is unclear which variables mediate this association. The current study evaluated whether trait negative and positive affect mediate the association between negative symptoms and emotion regulation in schizophrenia. Participants included outpatients diagnosed with schizophrenia or schizoaffective disorder (SZ: n = 56) and demographically matched healthy controls (CN: n = 27). SZ and CN groups did not differ in self-reported use of reappraisal or suppression emotion regulation strategies. Use of reappraisal, trait positive affect, and severity of negative symptoms were all significantly correlated in schizophrenia patients. Additionally, mediation models indicated that trait positive affect fully mediated the association between severity of negative symptoms and reappraisal in schizophrenia. These findings suggest that trait positive affect should be a therapeutic target in psychosocial interventions aimed at treating negative symptoms via emotion regulation therapies in people diagnosed with schizophrenia.

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POSTER A-21

SHAME AND DISSOCIATION IN SURVIVORS OF HIGH AND LOW BETRAYAL TRAUMA

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Descriptors: shame, dissociation, trauma

What accounts for the association between shame and dissociation? One popular theory is that of “bypassed shame,” which posits that dissociation functions to interrupt shame. Using a sample of 127 female trauma survivors, we tested the theory of bypassed shame by experimentally manipulating state dissociation by way of a dissociation induction. We also examined the associations between exposure to betrayal trauma, shame, fear, and dissociation, using structural equation modeling. Results partially supported the bypassed shame theory. The hypothesis that higher baseline shame would predict larger increases in dissociation following the induction was supported with marginal significance (Beta = .20, p = .07). However, in contrast to bypassed shame theory, shame did not decrease, but rather increased following the dissociation induction (Beta = .69, p < .001), as did fear (Beta = .71, p < .001). In addition, we aimed to replicate prior research indicating traumatic events involving betrayal by someone close (high betrayal trauma), are uniquely related to both shame and dissociation compared to trauma involving lesser degrees of betrayal (low betrayal trauma). The hypothesis that high betrayal trauma would be related to higher baseline shame was supported (Beta = .22, p < .01). Low betrayal trauma was also found to relate to both baseline fear (Beta = .40, p < .001) and shame (Beta = .23, p < .05). The results raise the possibility that other explanations such as betrayal trauma theory may better account for the association between shame and dissociation in trauma survivors.

POSTER A-22

LINGERING ON JOY: SLOWNESS TO DISENGAGE ATTENTION FROM HAPPY FACES PREDICTS LOWER DEPRESSIVE SYMPTOMS A YEAR LATER

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Descriptors: attentional bias, depression, negative life events

An attentional bias for negative information is linked to risk for depression, particularly following negative life events. Less is known about whether an attentional bias for positive information (ABPI) might protect against depression in a context of negative life events and prior history of depression. To address this gap, we recruited 55 euthymic participants with (N = 25) and without (N = 30) a history of recurrent depression. We measured ABPI as delayed response-time to disengage from happy relative to neutral faces in a dot probe task. We measured negative life events every four months for a year and depressive symptoms at baseline and 12 months. Controlling for initial (baseline) depressive symptoms, we tested whether higher ABPI predicted lower 12-month depressive symptoms and whether this effect was moderated by number of negative life events and history of depression. Number of negative life events, p = .013, history of depression, p = .009, and initial depressive symptoms, p = .007, predicted higher 12-month depressive symptoms. As hypothesized, higher ABPI predicted lower 12-month depressive symptoms, p = .008. ABPI did not interact with the proposed moderators, all ps ≥ .138. The findings suggest that ABPI may help guard against worsening depressive symptoms, regardless of number of negative life events and history of depression. In particular, an unhurried disengagement of attention from joyful social information may be beneficial. Future research should test causality using attentional bias training.

POSTER A-23

BEHAVIORAL ACTIVATION, UNCINATE FASCICULUS INTEGRITY, AMYGDALA REACTIVITY, AND ALCOHOL USE IN YOUNG ADULTHOOD

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Descriptors: behavioral activation system, substance use, uncinate fasciculus

The transition from adolescence to young adulthood is often a time of increased alcohol use. One potential contributor to this, behavioral activation system sensitivity (BAS), has predicted alcohol use in adolescence and adulthood (Franken & Muris, 2006), but the neural correlates of this relation are unknown. The uncinate fasciculus (UF), a bidirectional white matter tract connecting the orbitofrontal cortex with the amygdala, may be integral to adaptive decision-making and motivational value associations (Von Der Heide et al., 2013). We hypothesized that UF integrity would be associated with BAS. We thus examined white matter integrity using fractional anisotropy (FA) in the UF in relation to self-reported BAS and alcohol use in a longitudinal sample assessed at 18 and 23 years (n = 65). At age 18, increased BAS Drive predicted less white matter integrity in the right UF at 23 years (lower FA; beta=3802.91, t=32.21, p=.01) and a trend towards higher frequency of alcohol use (beta=2.49, t=3.56, p=.06). To explore how FA related to BOLD measures, we examined amygdala activity during a passive picture-viewing fMRI task. Here, amygdala activity during the presentation of positive images was positively correlated with both increased FA in the right UF (beta=3462.83, t=161.29, p=.04) and alcohol use (beta=.25, t=4.67, p=.02). These findings support the use of BAS measures as an early indicator of later reward-related decision-making and risk-behaviors like drinking.

FUNDING: NIMH 5R01MH043454-26, PI: Dr. Richard Davidson

POSTER A-24

NEURAL REACTIVITY TO FEARFUL AND HAPPY FACES PREDICTS SOCIAL PROBLEMS AMONG CHILDREN WITH ANXIETY DISORDERS

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Descriptors: LPPs, anxiety, social problems

Anxiety and externalizing problems often co-occur (Kashdan et al., 2008). Although co-occurring externalizing problems has implications for conceptualizing, preventing, and treating anxiety, little is known about the mechanisms underlying such co-occurrence. Abnormal emotional reactivity may be one such mechanism (Zeman et al., 2006). The late positive potential (LPP), an event-related potential (ERP) component, is a neural marker of emotional reactivity that could help explain externalizing and social problems in anxiety. Participants were 40 youth with anxiety disorders (age 7-19 years). Youth completed an emotional face matching task while ERPs were recorded to measure LPP. The Child Behavior Checklist (Achenbach, 1991) was used to measure externalizing and social problems. We controlled for covariates including age, gender, depression, social anxiety and anxiety severity. Although the externalizing model was nonsignificant, the social problems one was (p = .004). Enhanced LPPs following fearful vs. neutral stimuli (B = .413, p = .047) and attenuated LPPs following happy vs. neutral stimuli (B = -.392, p = .033) predicted social problems. Of import, the latter accounted for the most variance in social problems of all variables (partial eta squared = .21). The co-occurrence of anxiety and social problems may partly be due to abnormal emotional reactivity to socio-emotional signals. It may be important to focus not only on hyperreactivity to threat but also on hyporeactivity to positive socio-emotional signals in preventions and treatments for pediatric anxiety.

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POSTER A-25

GOAL OVERVALUATION PREDICTS WILLINGNESS TO WORK FOR REWARDS IN BIPOLAR DISORDER

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Descriptors: reward valuation, decision-making, bipolar disorder

Heightened reward sensitivity predicts bipolar disorder (BD) onset and persists during remission. People with BD also report avoiding rewarding activities as a way to prevent mania; however, little research has examined reward decision-making in BD. We tested reward magnitude and reward valuation as predictors of willingness to work for rewards in bipolar I disorder. 47 euthymic adults with bipolar I disorder (per the SCID) completed the Effort-Expenditure for Rewards Task, a well-validated behavioral paradigm that assesses willingness to work harder for larger rewards, and the self-report Reward Responses Inventory developed to test goal overvaluation in BD. Generalized Estimating Equations were used to test how reward magnitude shaped the probability of selecting a hard task as a function of goal overvaluation and the interaction of reward magnitude and goal overvaluation. Nested models revealed that reward magnitude (beta = .85, p < .001) and goal overvaluation (r = .40, beta = .09, p < .01) significantly predicted greater likelihood of selecting the hard task, whereas the interaction of reward magnitude and goal overvaluation was not significant (beta = -.02). That is, reward valuation predicted an increased willingness to work for rewards in adults with bipolar I disorder, and this effect was not moderated by the magnitude of the rewards. These findings highlight the importance of simultaneously examining context (e.g., reward magnitude) and individual differences in reward responding (e.g., trait goal overvaluation) to understand reward-related decision-making in BD.

POSTER A-26

MOOD INDUCTION AND WORKING MEMORY PERFORMANCE

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Descriptors: worry, working-memory, anxiety

Anxiety has been shown to impair cognitive processes, specifically working memory (WM) performance (Vytal et al., 2012). There is evidence that worrisome thoughts associated with anxiety may consume WM, limiting resources for more goal-directed tasks (Stout et al., 2014). The current study examined the direct effect of verbal worry on WM performance. Twenty-nine undergraduate students completed a WM n-back task consisting of 4 conditions: 1-back, 2-back, 3-back, and view. Before each of the 4 runs, subjects completed a worry or non-worry thought induction, and were told to focus on the topic during the n-back task. We predicted that subjects would perform worse in the worry condition than in the thought condition on the low-load trials (1-back, 2-back), consistent with threat-of-shock literature (Vytal et al., 2012). Initial results revealed there was no main effect of induction on performance and response time across trial types (ps>.7), indicating subjects' WM performance was not affected by the mood manipulation. Further tests revealed that increased trait worry predicted increased performance in the thought condition for 2-back trials (p<.04). Worry and trait anxiety were not related to any other performance conditions (ps>0.1). Results may indicate that task-induced worry may not inhibit WM performance; increased trait-worry may improve performance when the task is moderately difficult and is not in the context of state-worry. Trait-worriers might expend additional effort to reduce the effects of state-worry. Additional data will be collected to clarify these findings.

POSTER A-27

AN INVESTIGATION OF ATTENTION BIASES TO EMOTIONAL FACES IN INDIVIDUALS WITH ADHD

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Descriptors: attention, emotion processing, ADHD

Individuals with Attention Deficit Hyperactivity Disorder (ADHD) experience difficulty concentrating on goal-oriented tasks and adapting to changing environments. While much research on ADHD has focused on emotion processing and attention deficits as independent factors underlying ADHD behaviors, less research has investigated the interaction between emotion processing and attention deficits. To examine attention capture biases in response to emotional stimuli in adolescents with ADHD, individuals with ADHD (n=25) and matched controls (n=53) completed an affective priming task where sad, angry, disgust, and neutral facial expressions were presented first as Primes (for 500ms) and then as Targets. Reaction time (RT) to identify the target's valence (positive or negative) was assessed as a function of the primes. A priming score was calculated by measuring the RT to the target face as a function of whether the prime was a neutral or target-congruent facial expression. Results reveal a significant group by emotion interaction, $F(3, 228) = 3.963$, $p < .01$, with ADHD participants demonstrating significantly more attention capture for happy expressions, $t(76) = 2.37$, $p < .01$, and significantly less attention capture for disgusted expressions, $t(76) = 2.33$, $p < .01$. Overall findings suggest that individuals with ADHD exhibit increased attention capture for approach-oriented emotions and decreased attention capture for withdrawal emotions, which may contribute to increased impulsivity and difficulties with goal pursuit.

POSTER A-28

ELECTROPHYSIOLOGICAL EVIDENCE THAT ACQUIRED VALUE ENHANCES STIMULUS PROCESSING IN SUBSEQUENT ENCOUNTERS

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Descriptors: reward, acquired emotional value, event-related potentials

Seeing currency is pleasant because receiving it has been rewarding; seeing a parking-ticket in your windshield is unpleasant because receiving it has been punishing. We examined how previous experience with monetary incentives imparts emotional value on stimuli by assessing behavioral and electroencephalographic (EEG) responses in a novel paradigm. Thirty-seven undergraduates performed a learning task in which they used feedback to categorize emotionally neutral images as indicators of reward, punishment or neither (neutral-control). Subsequently, EEG was recorded while participants performed a cognitive task using the same images without feedback. Subjective ratings following the EEG task indicated that participants found the reward stimuli more arousing [$F(2,62)=3.66$, $p=.031$; $t(31)=-2.62$, $p=.040$] and pleasant [$F(2,62)=5.24$, $p=.0079$; $t(31)=-2.63$, $p=.040$] than the punishment stimuli. Furthermore, using event-related potentials, we found a larger frontocentral positive peak (P2) between 180 to 230 ms [$F(2,72)=3.45$, $p=.037$; $t(36)=2.70$, $p=.032$] and a larger anterior-frontal positive slow wave (Early Anterior Positivity) between 240 to 340 ms [$F(2,72)=3.40$, $p=.039$; $t(36)=2.67$, $p=.034$] for the reward vs. punishment stimuli. We also found a larger frontopolar negative going slow wave between 380 to 480 ms for the punishment vs. control stimuli [$F(2,72)=4.09$, $p=.021$; $t(36)=-2.64$, $p=.036$]. Together, results indicate that individuals attach emotional value to neutral stimuli associated with abstract incentives, which impacts how they are perceived in subsequent encounters.

POSTER A-29

STEP BY S-TEPS: CONSTRUCTING THE SOCIAL TEMPORAL EXPERIENCE OF PLEASURE SCALES (S-TEPS)

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Descriptors: social pleasure, anticipation, consummatory

Social anhedonia is associated with depression, anxiety, an increased risk of developing schizophrenia, poorer prognosis within schizophrenia, and lower levels of life satisfaction. However, prior research has pointed to the importance of distinguishing anticipatory from consummatory pleasure to better capture the nature of anhedonia. Of the scales assessing the experience of pleasure, only one measures individual differences in trait dispositions of anticipatory (ANT) and consummatory (CON) pleasure and it focuses on physical pleasure. The present study sought to develop and validate a self-report measure of anticipatory and consummatory experiences of social pleasure, named the Social Temporal Experience of Pleasure ScaleS (S-TEPS). We defined and developed items that to assess ANT and CON in the social realm. In Study 1, we administered the S-TEPS to 803 college students along with several other measures to assess convergent and discriminant validity. In Study 2, we assessed the temporal stability of the S-TEPS and obtained peer ratings as an additional measure of external validity. Results from factor analyses, reliability, and convergent and discriminant analyses indicate that that the S-TEPS both captures trait dispositions of anticipatory and consummatory social pleasure, and also provides distinct information about social pleasure across three social contexts (friends & general, family, and new acquaintances).

POSTER A-30

FEELING HANGRY: MISATTRIBUTING HUNGER AS EMOTION

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Descriptors: emotion experience, embodiment, misattribution theory

Psychological constructionism proposes that bodily changes (including homeostatic states: hunger) may become experienced as emotion when made meaning as such (Barrett, 2015; Lindquist, 2013). Thus, feeling "hangry" may occur when individuals conceptualize the negative arousal accompanying hunger as an emotion. The present study (N=236) used a misattribution framework to examine if hungry participants interpreted hunger as high arousal, negative emotions (e.g., anger) during a frustrating task more than those satiated. We manipulated participants' hunger state (via fasting) vs. satiation and accessibility to emotion concepts (anger vs. sadness vs. no emotion) via explicit priming, before measuring punitive behaviors and self-reported emotions during a frustrating task. Contrary to prior hypotheses (Bushman et al., 2014), hunger did not induce self-regulatory depletion: $t(199)=.59$, $p=.56$. With significant interactions between hunger x prime, hungry participants were more likely to report negative emotions [hate, stress, negativity: $F(1,223)=5.32$, $p=.006$; $F(1,225)=3.16$, $p=.044$; $F(1,225)=3.46$, $p=.033$], but only when they were unable to attribute feelings to a specific emotion. Results suggest that without explicit emotion priming, hungry individuals may implicitly attach bodily feelings to the context, interpreting hunger as high arousal, negative emotions. These findings are consistent with arousal misattribution theory and hint that feeling "hangry" may be the use of hunger as affective information, shifting how individuals make meaning of their own and others' behaviors.

POSTER A-31

THE EFFECT OF CONSCIOUS VERSUS NONCONSCIOUS AFFECT ON ECONOMIC DECISION MAKING

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Descriptors: affect, consciousness, decision making

Do conscious and nonconscious affective reactions to facial primes have different effects on behavior, depending on the relevance of that behavior? Facial EMG was recorded from 66 participants as they were subliminally (n = 32) or supraliminally (n = 34) presented with happy, neutral, or angry facial primes. They then reported on their current affective state and completed a trial of a decision-making task, in which they chose between a safe option (winning or losing a sum of money with 100% probability) and a risky option (winning or losing a sum of money with 50% probability). Gambles with high relevance had the highest monetary value, followed by medium relevance gambles and low relevance gambles. Results show that participants in the subliminal condition were significantly less likely to choose the risky option on decisions preceded by angry, compared to neutral, primes, but only on trials that involved a medium loss ($t(31) = -2.74$, $p = .010$) or (marginally) a low gain ($t(31) = -1.96$, $p = .059$). In the supraliminal condition, there was a marginally significant difference between low loss trials preceded by angry compared to happy primes ($t(33) = -1.96$, $p = .058$) and on medium loss trials preceded by neutral compared to happy primes ($t(33) = -1.95$, $p = .059$), such that they were more likely to choose the risky option on happy trials. There were no significant differences in self-reported affect between happy, neutral or angry trials, suggesting that affective reactions can influence behavior without being consciously experienced.

POSTER A-32

UNDERSTANDING RUMINATION: AN INTERACTION BETWEEN THE BEHAVIORAL INHIBITION SYSTEM AND EXECUTIVE CONTROL

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Descriptors: rumination, executive control, behavioral inhibition system

The tendency to engage in rumination is a robust predictor of psychopathology. Rumination is associated with an inability to disengage from negative emotions or thoughts. These disengagement difficulties may be due to a deficit in executive control. In addition to executive control deficits, increased sensitivity of the behavioral inhibition system may set the stage for increased rumination. Sensitivity of the behavioral inhibition system explains individual differences in the tendency to experience negative emotions and thoughts which may trigger rumination. The current study examined whether sensitivity of the behavioral inhibition system moderates the relation between executive control and brooding, a subtype of rumination. Sixty-six undergraduate students completed a flanker task to assess executive control as well as questionnaires assessing the behavioral inhibition system and brooding. As predicted, sensitivity of the behavioral inhibition system moderated the relation between deficits in executive control and rumination, F change $(1,61) = 6.83$, $p = .011$, R squared change = .06. Only individuals reporting a highly sensitive behavioral inhibition system displayed a positive association between deficits in executive control and brooding, beta = .27, $t(61) = 2.04$, $p = .045$. The results provide insight into individual differences that may contribute to the tendency to ruminate.

POSTER A-33

EXAMINING THE EFFECTS OF INTRANASAL OXYTOCIN ON NEGATIVE SYMPTOMS IN SCHIZOPHRENIA USING COMPUTER-BASED MEASURES OF EXPRESSIVITY

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Descriptors: schizophrenia, negative symptoms, oxytocin

Oxytocin has been linked to a range of prosocial behaviors – behaviors that are impaired in people with negative symptoms of schizophrenia. This suggests that oxytocin may play a role in severity of negative symptoms in schizophrenia. In support of this notion, peripheral blood oxytocin levels have been linked to clinician-rated negative symptom severity. These findings have prompted attempts at treating negative symptoms with oxytocin. Varying responses have been reported in the literature. The effect of oxytocin treatment on negative symptoms may be obscured by psychometric, reliability, and sensitivity issues associated with clinical rating scales. To address this, we employed objective computerized measures of facial and vocal expressivity in a 6-week randomized clinical trial evaluating the effects of intranasal oxytocin treatment in individuals with schizophrenia. The current study presents data from individuals with schizophrenia, who participated in a social role-play task prior to and following oxytocin (n = 10) or placebo (n = 15) treatment. Results indicate that oxytocin was associated with an increase in angry expression over the placebo condition $F(1,23) = 5.60$; $p = .03$. Otherwise, oxytocin was largely unrelated with changes in facial or vocal expressivity variables in either group. These findings suggest that oxytocin is not related to improvements in positive expressions, though it may be related to changes in negative affect expression.

FUNDING: Support for this research was provided by NIMH Grant 1P50 MH082999

POSTER A-34

MULTIMODAL INTEGRATION OF INTEROCEPTION AND EXTEROCEPTION IN THE HUMAN BRAIN

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Descriptors: interoception, multimodal integration, functional connecitvity

The brain utilizes information from the body and the environment to assess moment-to-moment needs and issue appropriate actions. Although it is known that exteroceptive senses converge at several brain regions, it remains unclear how interoceptive sensations integrate with these sensory modalities. Using stepwise functional connectivity analysis (Sepulcre et al., 2012) on resting state data (150 young adults, 75 females), we computed the degree of connectivity between the primary interoceptive cortex, i.e. dorsal posterior insula, and all voxels in the brain across 7 connectivity steps. The first step map revealed an interoceptive network including mid to posterior insula, anterior cingulate (ACC), supplementary motor area (SMA), somatosensory and motor cortices, amygdala and thalamus. Similar to visual, auditory and somatosensory networks, the interoceptive network bound first to multimodal processing regions (superior parietal lobule, parietal operculum, anterior insula, ACC and SMA), and at later steps to higher order processing regions (medial prefrontal cortex, dorsolateral prefrontal cortex, temporo-parietal junction and middle temporal gyrus). Moving beyond previous studies that show a static and isolated interoceptive network, these findings provide the first evidence that the interoceptive network is a feature of the functional connectome that relays interoceptive information to multimodal integration areas. This suggests the interoceptive network interacts with exteroceptive sensory and higher order association cortices to form a coherent perceptual experience.

POSTER A-35

IMPLICIT EMOTION REGULATION: EFFECTS OF PRIMING ON INTERPRETATION BIAS

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Descriptors: implicit, emotion, regulation

Implicit emotion regulation (ER) is an efficient cognitive process yet research primarily examines its explicit counterpart. Priming methods have successfully altered several cognitive processes to increase positive emotion. Adapting these methods to prime implicit ER revealed that reappraisal decreased physiological responding during stress. Still, it is unknown if reappraisal or other ER strategies can alter other behavioral outcomes. Hence, this study examined the effects of priming implicit reappraisal and suppression on interpretation bias. Sixty participants were implicitly primed to use either reappraisal or suppression with a sentence unscrambling task. A forced-choice sentence completion task assessed neutral, positive, or negative bias at baseline and post priming. ER questionnaires were also completed. There was a positive bias post-priming for reappraisal [Chi Square (3) = 23, $p < .001$] and suppression [Chi Square (2) = 6.70, $p = .04$], which was not present at baseline. For both conditions, paired sample t-tests confirmed a decrease in total negative responding from baseline to post-priming [$t(39)=4.68$, $p < .001$; $t(19)=2.99$, $p = .01$, respectively]. Still, suppression yielded higher neutral responses than reappraisal post-priming [$t(58)=-2.07$, $p = .04$]. These findings demonstrate that both reappraisal and suppression can be successfully primed. Surprisingly, suppression showed similar benefits as reappraisal on interpretation bias. Further research will investigate whether these effects hold for other outcome measures.

POSTER A-36

IS THERE AN AGE-RELATED POSITIVITY EFFECT IN SITUATION SELECTION? A META-ANALYSIS OF 9 STUDIES

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Descriptors: situation selection, aging, emotion regulation

Older adults seem to preferentially process positive over negative content when presented with emotional stimuli – a phenomenon termed the age-related positivity effect (Reed, Chan & Mikels, 2014). In our lab we recently conducted several studies to examine if this age-related positivity effect extended to selections of emotional stimuli by asking participants to freely select from a variety of emotional content. We found mixed effects of age in this situation selection paradigm, with some studies resulting in age similarities and others finding age differences in stimulus selections (Isaacowitz et al., 2014; Livingstone & Isaacowitz, 2015). We therefore used a meta-analytic approach to examine patterns across our samples. Across 11 samples, there was a significant age by valence interaction, but only when comparing neutral and negative selections, $Mr = .26$, $Z = 4.52$, $p < .001$. In general, older adults selected more neutral than negative information while younger adults more negative than neutral information. Furthermore, emotion regulation instructions, $Z = -2.12$, $p < .05$ and the availability of valence information, $Z = 3.59$, $p < .001$ were moderators of this effect. Separate meta-analyses examining negative/positive and positive/neutral comparisons showed no age by valence interactions. Broadly these findings suggest that, at least for selection behavior, positivity effects are driven by negative rather than positive stimuli. Neutral is also an important comparison condition for fully understanding age differences in preferences for emotional stimuli.

POSTER A-37

PSYCHOMETRIC PROPERTIES OF STARTLE RESPONSE MODULATION IN THREE TASKS FROM THE NIMH RDOC NEGATIVE VALENCE SYSTEM

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Descriptors: startle, facial EMG, stress

Psychophysiology tasks are poised to become a major contributor to the NIMH RDoC initiative. For these tasks to meaningfully contribute to the goals of RDoC, their psychometric properties must first be well understood. The current study provides a comprehensive evaluation of the temporal stability, internal consistency (i.e., split-half reliability), and effect size robustness and stability of three commonly used psychophysiology laboratory tasks within the RDoC Negative Valence System. Participants (N = 128) completed the No Shock, Predictable Shock, Unpredictable Shock (NPU) Task, Affective Picture Viewing Task, and Resting State Task at two study visits separated by one week. We examine startle response modulation as a physiological marker of affective processes in the NPU (shock vs. no shock) and Affective Picture Viewing Tasks (pleasant or unpleasant vs. neutral). We quantified startle with two commonly used quantification approaches as raw microvolt units and standardized t-score response. NPU Task startle potentiation displayed strong psychometric properties across all domains. Affective Picture Viewing Task startle modulation displayed moderate temporal stability to unpleasant pictures, but weak psychometric properties across all domains for pleasant pictures. The Resting State Task displayed strong psychometric properties for general startle reactivity. Quantification of startle responses in raw microvolt units led to consistently superior psychometric properties than standardized scores. Empirical recommendations for startle response quantification are discussed.

FUNDING: Funding was provided by grants to JTK from the National Science Foundation (DGE-0718123) and National Institute of Alcohol Abuse and Alcoholism (F31 AA022845) and to JJC from the National Institute of Drug Abuse (R01 DA033809).

POSTER A-38

REGIONAL CEREBRAL GLUCOSE METABOLISM IN THE INSULA DURING SOCIAL STRESS PREDICTS SUBSEQUENT INCREASES IN PULMONARY INFLAMMATION IN ASTHMA

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Descriptors: positron emission tomography, inflammation, stress

Although psychological stress contributes to the control, severity, and burden of asthma symptoms, the role of the brain in the pathophysiology and treatment of this disease is largely unknown. To examine the neural mechanisms which may regulate airway inflammation in asthma, we used [18F]fluoro-deoxyglucose positron emission tomography (FDG-PET) to identify neural circuits that are active during performance of a social stress task or a matched non-stressful control condition. Asthmatic subjects with high or low levels of chronic life stress (n = 15 per group) underwent both stress and control conditions. Fractional exhaled nitric oxide (FeNO) was collected at baseline, as well as hourly post-stress (and control), which provided a measure of airway inflammation. These data reveal that, in those with high levels of chronic stress, an acute stressor leads to elevated post-stress FeNO levels relative to those with low chronic stress. In addition, increased regional glucose metabolism in the insular cortex predicts overall FeNO levels. This region of the insula is nearly identical to a region we identified in a previous study where activation following challenge with inhaled allergen predicted the magnitude of increase in percentage of eosinophils in lung tissue 24h later. These data corroborate previous evidence indicating a role for the insula in the interaction of emotion and inflammation in asthma and may lead to novel targets for future treatment.

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POSTER A-39

NEURAL PROCESSING OF REWARD-RELATED IMAGES IN YOUNG CHILDREN: REGIONAL DIFFERENCES IN THE LATE POSITIVE POTENTIAL (LPP)

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Descriptors: reward processing, late positive potential, development

Affective images activate neural systems underlying approach motivation and can been used to examine processing of reward related stimuli. However, few studies have used affective images to examine approach motivation in young children and no work to date has explored processing of distinct reward categories. Nineteen children (6 males) between the ages of 6-9 (mean= 8.2 years) completed an affective picture-viewing task consisting of images collected from storybooks and photo databases while EEG was collected. Images were divided into 4 reward categories (social, achievement, play, and treats) and assessed in comparison to images from a neutral category via the late positive potential (LPP), an event-related potential (ERP) indexing affective processing. Children also rated each picture on valence and arousal. Examination of each reward category revealed a main effect of region, such that socially rewarding images were processed more strongly in the frontal region ($F(2,36)=5.10$, $p=.024$). A trend also emerged when comparing reward categories ($F(3,54)= 2.37$, $p=.097$), which was driven by a significantly larger LPP to Social compared to Treat images ($F(3,54)=3.18$, $p=.042$). Combined these findings suggest that neural patterns to approach based stimuli differ across distinct reward type categories. Moreover, these patterns highlights social images depicting relationships (i.e. friends or parent and child) as especially salient affective cues for children that may signify the developmental relevance of social relationships during early to middle childhood.

POSTER A-40

EMOTIONAL PROFILE OF SOCIAL AGENCY AND COMMUNION

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Descriptors: social cognition, emotion perception, social perception

Three studies investigate the relationship between agency and communion (also referred to as competence and warmth, the “Big Two”, and by a number of other labels) and perception of emotions. Agency and communion are two fundamental dimensions that structure perception and judgment of the self, other people, and social groups. While communion reflects the need for connection and positive relations with other people and comprises traits such as warm, compassionate, and honest, agency reflects the need to assert the self and to pursue own goals, comprising traits such as assertive, determined, and competent. Despite an extensive literature on these two dimensions, little attention has been devoted to their emotional correlates. In three studies participant view targets (faces and films) pretested to represent high vs low levels of agency and communion (and their combinations) and rate to what extent they also express emotions like anger, happiness, surprise, sadness, pride, shame, fear, disgust, hope etc. The results of the studies point to the different emotional profiles associated with agency and communion. For instance high agency targets are associated with higher anger, hope, pride and lower fear than low agency targets.

POSTER A-41

CORTICAL VOLUME, SURFACE AREA, AND THICKNESS IN REGIONS SUPPORTING EMOTION REGULATION ARE ASSOCIATED WITH SYMPTOMS OF AVOIDANCE IN THE ACUTE AFTERMATH OF A TRAUMATIC EVENT

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Descriptors: structural MRI, emotion regulation, trauma

Individuals who suffer from posttraumatic stress disorder (PTSD) have been shown to have various structural and functional differences in cortical regions associated with emotion regulation. However, little is known about the relationship between structural differences in these regions and posttraumatic stress symptoms assessed immediately following a traumatic event. Two separate studies collected structural MRI scans within three weeks of a traumatic injury: Total N=64 (N=28 from original study, N=36 from replication study). Cortical structural variables, including gray matter volume, surface area, and cortical thickness, were correlated with posttraumatic stress symptoms. The strongest relationships were observed for symptoms of avoidance of trauma-related cues. Increased avoidance at two to three weeks post-trauma was associated with decreased structural cortical volume, surface area, and thickness in networks that support emotion regulation and processing, including paralimbic regions (parahippocampal gyrus, paracentral lobule, precentral gyrus, posterior dorsal part of the cingulate gyrus, superior parietal, middle frontal sulcus, anterior transverse collateral sulcus (r's = -.330 to -.529). These findings indicate that individual variation in cortical structure in emotion processing regions are associated with symptoms of avoidance in the acute aftermath of a traumatic event.

POSTER A-42

FEAR DRIVES IMPULSIVITY: AN EMPIRICAL ANALYSIS OF THE BALLOON ANALOGUE RISK TASK (BART) ON FEARFUL-IMPULSIVE BEHAVIOR

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Descriptors: decision-making, impulsivity, trauma

Affective states and emotions during situations requiring decision-making directly affects the outcome of the task at hand. In their risk-as-feeling framework, Loewenstein et al. (2001) proposed that when feelings are incorporated as a factor of consequentialist thinking, anticipated emotions in the anticipated outcome directly affect subsequent outcomes. This present study examined the role of negative affect broadly, and fear in particular, in risk-taking in a high-fear sample (n=40), namely individuals with symptoms of posttraumatic stress. Risk-taking behavior was assessed via the Balloon Analogue Risk Task (BART) with concurrent physiological monitoring. In addition to punishments based on randomized balloon pops, we administered startling negative audio components when the balloon burst. Negative cognition and mood, r(38)=.372, p<.05, and hyperarousal, r(38)=.324, p<.05, endorsements on the PCL-5 were related to more risky behavior. Also, high trait fear was positively related to increased impulsivity, r(37)=.352, p<.05. We proposed that both trait and state negative mood and cognition may initiate the participants' pervasive fear during the task from the startling sound, and further examined the development of impulsive responses with continued exposure to the fear-eliciting stimulus, as well as the contribution of physiological arousal to impulsivity. Thus, we present that it is not impulsivity that drives BART scores, as is traditionally conceptualized, but rather the fear of punishment that catalyzes this chain of events.

POSTER A-43

ATTENTIONAL INFLEXIBILITY TO NEGATIVE STIMULI: CONTRIBUTIONS TO IMPULSIVITY AND EMOTION DYSREGULATION IN A FEMALE SAMPLE

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Descriptors: emotion dysregulation, impulsivity, attentional inflexibility

Emotion dysregulation (ED) reflects a lack of adaptive coping strategies to modulate the intensity or duration of negative emotional experiences. Studies have found a strong link between PTSD and ED, accompanied by elevated risk for substance abuse, self-harm, risky sexual behavior and revictimization, among other negative outcomes. ED is also related to impulsive behavior in survivors of PTSD, and in some studies has been found to fully mediated the relationship between impulsivity and PTSD symptoms, possibly functioning to modulate painful negative affect. The present study examined how ED, as measured by difficulty disengaging from negative emotional stimuli, may contribute to impulsivity in a community sample of 40 females. Participants completed a dot-probe paradigm to assess attentional flexibility in response to aversive images, and the Balloon Analogue Risk Task, which indexes impulsivity. Results indicated a significant association between childhood sexual abuse, PTSD symptoms of hyperarousal and negative cognition and mood, and impulsivity. Additionally, difficulty disengaging from negative stimuli was associated with greater impulsivity (r=.52, p=.003). Mediational analyses demonstrated that difficulty disengaging fully mediated the relationship between childhood sexual abuse and impulsivity. Results support the role of impulsivity as a maladaptive coping strategy for ED in the context of childhood trauma and PTSD.

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POSTER A-44

NEGATIVE MOOD AND DEPRESSION ENHANCE MEMORY FOR EMOTIONAL VIDEO CLIPS

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Descriptors: emotion, memory, depression

Studies examining whether negative mood, compared to positive and neutral mood, facilitates or inhibits memory for laboratory stimuli have yielded mixed results. At the same time, there is debate on whether depressive symptoms are related to better or worse memory for laboratory stimuli. The present study examined the relationship of current mood as well as the experience of depressive symptoms on memory for one of three video clips. Clips were used to induce positive, negative, or neutral mood in participants (N=161). Later, participants were assessed in their memory for the same clip they viewed during induction. People who viewed the negative clip remembered more details about their clip than those who viewed the positive and neutral clips F(2,158)=6.02, p=.003. Although mood ratings between groups didn't differ at baseline, negative mood (but not positive) after the video induction predicted greater accuracy in recalling details of the videos t(161)=2.28, p=.024. Finally, depressive symptoms were related to greater accuracy in memory for details in the negative and neutral (negative r=.407, p=.002; neutral r=.289, p=.036), but not the positive video clip. Results indicate that negative mood, both induced experimentally and occurring in conjunction with depressive symptoms, may enhance memory for laboratory stimuli. Findings can be better understood using the affect-as-information hypothesis, whereby negative mood increases focus on specific characteristics of the environment and positive mood broadens attention at the expense of environmental details.

POSTER A-45

MINDFULNESS MATTERS: THE MODERATING EFFECT OF MINDFULNESS ON COGNITIVE REAPPRAISAL AND SOCIAL ANXIETY

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Descriptors: social anxiety, cognitive reappraisal, mindfulness

Theoretically, better cognitive reappraisal (CR) should be associated with lower social anxiety. However, this relationship is inconsistent in the literature. Mindfulness may moderate this relationship. High mindfulness may allow for the use of CR abilities (a negative relationship between CR and social anxiety at high mindfulness), whereas low mindfulness may obscure this relationship (no relationship between CR and social anxiety at low mindfulness). Participants were adults with social anxiety disorder (SAD; N=123; 50% female; age M=32.7 years) who completed self-reports of social anxiety, CR, and mindfulness. Consistent with the extant literature, mindfulness was negatively related to social anxiety, beta = -0.25, $t(122) = -2.84$, $p < .01$, whereas CR was not associated with social anxiety, beta = -0.13, $t(122) = -1.42$, $p = .16$. Mindfulness also moderated the relationship between CR and social anxiety, beta = 1.65, $t(122) = 3.00$, $p < .01$, but not as hypothesized. At high mindfulness, there was no relationship between CR and social anxiety, $B = 1.22$, $t(122) = 0.89$, $p = .38$, whereas at low mindfulness, CR was negatively associated with social anxiety, $B = -4.00$, $t(122) = -3.03$, $p < .01$. Low CR combined with low mindfulness was associated with the highest levels of social anxiety. Therefore, mindfulness appears to confer benefits for those with SAD, whereas the positive effects of CR appear limited to those low in mindfulness. These results suggest that, compared to CR, mindfulness may play a more direct role in determining social anxiety severity among those with SAD.

POSTER A-47

POSITIVE AFFECT SKILLS USE IN AN ONLINE POSITIVE AFFECT INTERVENTION FOR PEOPLE LIVING WITH HIV AND DEPRESSION

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Descriptors: positive affect, intervention, depression

Positive affect (PA) is associated with positive physical and psychological health outcomes in those experiencing health-related stress. Based upon findings that a PA skills intervention has beneficial effects on negative psychological states, we tested whether ORCHID, an online PA intervention, increased PA skill use and whether increased skill use was associated with decreased stress in people with HIV and depression. Twenty people living with HIV and elevated depressive symptoms were randomized into a daily emotion reporting control (N=11) or online PA skills intervention condition (N=9). All participants engaged in daily emotion reporting via Internet. Those in the intervention received information and home practice activities on eight PA skills (e.g. gratitude, mindfulness) over five weeks. Seventeen people completed postbaseline assessments after six weeks. Compared to controls, those in the intervention increased self-reported skill use, $\beta=0.46$, $t=2.42$, $p=0.03$, and PA, $\beta=.53$, $t(8)=3.52$, $p<.001$, and decreased perceived stress, $\beta =- .29$, $t(8)=-2.22$, $p=.04$. Skill use and PA mediated intervention effects on perceived stress. Results indicate online PA interventions can influence PA and skill use, potentially impacting disease progression and medical recommendation adherence for those with HIV and depression. Further research should aim for replication with a larger sample and longer follow up with additional physical health-related outcomes.

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POSTER A-49

HEART RATE VARIABILITY AND FALSE MEMORY

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Descriptors: false memory, vividness, heart rate variability

Heart rate variability (HRV), a measure of parasympathetic inhibitory influence on the heart via the vagal nerve (Levy, 1990), is considered an index of inhibitory activity of the frontal cortex (Ahern et al., 2001, Thayer et al., 2012), a region implicated in false recognition (Garoff-Eaton et al., 2007). Greater HRV has been associated with enhanced inhibitory control over memory retrieval (Gillie et al., 2014). Here, we examine the relation between HRV and the quantity and self-reported vividness of falsely recognized stimuli. Baseline electrocardiography (ECG) data were acquired from twenty-three participants before they studied negative, positive, or neutral images. After a 1-hour delay, participants performed a recognition memory test in which they distinguished studied from nonstudied images. For each image, participants made a one-step old-new and vividness recognition judgment (0="new" or a 1-4 vividness judgment for "old" stimuli). For each participant, the standard deviation of the inter-beat intervals (SDNN) from the ECG baseline data was calculated as a measure of HRV. These values were correlated with participants' memory performance. Results revealed a significant negative correlation between SDNN and the number of negative low-vividness false alarms (rated 1 or 2) ($r=-0.53$, $p=0.009$). No such correlation existed for positive or neutral memories. These data suggest lower HRV individuals are more liberal in endorsing negative memories or have poorer monitoring capacity in the face of emotional negative cues.

POSTER A-50

AGE DIFFERENCES IN THE INTERPRETATION OF SURPRISE FACIAL EXPRESSIONS

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Descriptors: facial expressions, aging, ambiguity

Surprise faces are ambiguous in terms of their valence and are thus useful tools in the assessment of interpretive biases both within and between developmental age groups. The present study examined whether older and younger adults differed in their interpretation of surprise faces. Based on age-related changes in the processing of emotional information, we predicted that older adults would rate the surprise faces as more positive in comparison to younger adults. We examined 31 older and 32 younger participants' evaluations of happy, angry, and surprised facial expressions while recording facial electromyographic (fEMG) activity. Results supported an age-related positivity effect in the interpretation of surprise faces. Specifically, older adults interpreted surprise faces more positively in comparison to their younger counterparts, $t(61) = -4.46$, $p < 0.001$, $d = 1.13$. We also found that the more negatively that younger adults interpreted all types of facial expressions, the greater their corrugator activity in response to the faces ($r = -.39$, $p = .029$). The absence of this relationship among older adults suggests that fEMG may not be a reliable indicator of interpretive biases for this age group. These data suggest that as we age, surprise faces are evaluated as conveying a more positive meaning. Thus the present study adds support for an age-related positivity effect in the interpretation of affectively ambiguous expressions.

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POSTER A-51

INTERACTION OF LIFESTYLE FACTORS WITH PERFORMANCE OF EMOTION TRAINING TASKS IN MOBILE APPS

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Descriptors: emotion stroop test, facial expression recognition

Lifestyle and demographic factors such as age, gender, education, health condition, physical and cognitive activity, and social relationships can associate with differences in performance of emotional tasks. We analyzed the effects of more than 100 factors collected from two mobile apps with millions of users (Fit Brains Trainer by Rosetta Stone and Brain Health Lifestyle® Assessment) on the performance of two emotion tasks: emotional stroop (ES), and facial expression recognition (ER). Age has a large negative effect on ES reaction time (RT) and accuracy, and some negative effect on ER RT but not on accuracy. Higher education level is associated with better performance in ES, but has limited effect on ER. For other life factors, lower performance in ER is associated with health issues such as stroke, heart attack and diabetes, and better performance is associated with a cognitively stimulated lifestyle (i.e. a career based heavily on problem solving, and texting while driving). For ER, lower performance is associated with certain health issues such as neurosurgery, diabetes and high cholesterol; interestingly, it is also associated with positive social factors such as a great childhood, loving partnership, and practice of yoga; higher performance in ER is associated with some negative factors such as dysfunctional childhood, drug addiction issues, loneliness, chronic fatigue, and some positive motivation factors such as the desire to take care of one's own well-being. Deeper analysis of this data can provide further understanding about how lifestyle factors affect performance.

FUNDING: MITACS

POSTER A-52

MINDFULNESS AND THE LATE POSITIVE POTENTIAL: DIFFERENCES IN STATE AND TRAIT EFFECTS

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Descriptors: mindfulness, LPP

Mindfulness has shown potential as an effective emotion regulation strategy and as a basis for treatment of multiple psychological disorders. In a previous event-related potential (ERP) study, trait mindfulness was linked with reduced neural activity to affective stimuli, as measured by the late positive potential (LPP). Building on this result, we sought to understand how state and trait mindfulness would differentially affect the late positive potential (LPP). Participants (n = 134) first viewed affective images passively while ERP data was recorded. After being instructed to adopt a mindful perspective, participants then viewed an equivalent set of images. We hypothesized that the LPP would be reduced in the mindful condition compared to the passive condition for high arousal images. Contrary to our hypothesis, the LPP was increased in the mindfulness condition across image categories ($F(1, 121) = 22.89$, $p < .001$), suggesting that state mindfulness increases motivated attention to stimuli. Trait mindfulness also predicted change in LPP from pre to post induction (Beta = .182, $t(119) = 2.18$, $p < .05$). Results are mixed, however, such that measures of this construct share a nuanced relationship with change in LPP amplitude after entering into a mindful state. Taken together, we propose that state and trait mindfulness act through different neural mechanisms in their impact on emotional processing, an important finding for utilizing mindfulness in future research and clinical settings.

POSTER A-53

COMPLEX INFLUENCES OF ANTERIOR TEMPORAL DEGENERATION ON HOPELESSNESS AND DYSPHORIA

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Descriptors: hopelessness, neuroanatomy, frontotemporal

Neurodegenerative disease patients provide a lesion model that elucidates the underlying structural anatomy of affective symptoms, an elusive target in psychiatric patients. Patients have diverse emotional responses to their own disease, impending disability, and death, that can stereotypically correspond to specific alterations in structural anatomy. 74 patients with behavioral variant frontotemporal dementia underwent voxel-based structural MRI volumetrics and were classified into 3 anatomic subgroups using principal component analysis (7 isolated right temporal [SAN], 39 temporofrontal [SN], and 28 subcortical [SUB]). Along with 35 healthy older controls they self-reported depressive symptoms on the Geriatric Depression Scale (GDS), which was divided into 5 previously published subscales including dysphoria and hopelessness. SAS Proc GLMs, controlling for group differences in sex and education, showed that though SN and SUB patients had clinically elevated levels of hopelessness (SN: M=21.8(29.9), SUB: 22.3(32.9); $p<0.05$) and dysphoria (20.2(21.5), $p<0.001$, 17.1(22.1); $p<0.01$), SAN patients had minimal symptoms (7.1(12.2), 14.2(20.0); p=ns). Even within a single syndrome, anatomically-defined subgroups have highly distinct affective responses to their illness. Specifically, patients with disproportionate, isolated damage to right anterior medial/lateral temporal structures fail to experience the symptoms of hopelessness and dysphoria common to others with the same syndrome. Anterior temporal structures may play a key role in semantically complex affective evaluations.

POSTER A-54

REAPPRAISAL CHOICE IN RESPONSE TO MODERATE INTENSITY NEGATIVE STIMULI PREDICTS RISKY BEHAVIOR ON THE BART

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Descriptors: reappraisal, choice, risk

Assessing "risky" situation involves cognitive evaluation of the potential benefits and pitfalls of engaging in a risky behavior. Greater self-reported reappraisal use has been shown to predict risk (Panno et al., 2013). The relation between reappraisal choice in response to negative content and risk proclivity has however, not been tested. Forty-nine participants completed a version of the emotion regulation choice (ERC) task in which they viewed negative pictures of low, moderate, and high intensity, and chose to either distract or reappraise in response to each photo to make themselves feel less negative. Participants also completed a risk assessment Balloon Analog Risk Task (BART) in which the participant's inclination to pump the simulated balloon reflected their likelihood to participate in risky behavior. Reappraisal choice proportion was calculated for each intensity level of the ERC task and used to predict BART task performance. Repeated measure ANOVA results reveal a significant interaction between reappraise choice proportion by intensity and risky behavior on the BART ($F(1,47)=5.062$, $p<.05$). Interestingly, greater reappraisal choice proportion moderate-intensity negative stimuli ($\beta=.436$, $p<.05$), yet neither low or high intensity stimuli predicted greater risk. Findings highlight the importance of emotional intensity and cognitive effort when evaluating the role of reappraisal choice in understanding risk proclivity.

POSTER A-55

THE INFLUENCE OF EMOTIONAL STIMULI ON INHIBITORY CONTROL IN CHILDREN AND ADULTS: DEVELOPMENTAL DIFFERENCES AND CONTINUITIES

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Descriptors: inhibitory control, development, emotion processing

Inhibitory control (IC) is the ability to stop dominant responses (Best & Miller, 2010). The presence of emotion makes it difficult for children and adults to exercise IC (Lagattuta et al., 2011). Recent work shows that emotion may only disrupt IC when individuals must process the stimuli, not when emotion is present but irrelevant (Kramer et al., 2015). We provide a further test of the impact of emotion as focal (performance dependent on processing emotion) versus peripheral (performance not dependent on processing emotion) on IC. Four- to 10-year-olds and adults (projected N=180) played opposite games (e.g., say "up" to a down arrow and vice versa): (1) up-down (emotion absent), (2) leaf-basket (emotion absent), (3) happy-sad (emotion as focal), (4) up-down [happy-sad] (emotion as peripheral), (5) up-down [leaf-basket] (emotion absent, neutral peripheral stimuli). The current dataset includes 32 children (M=7.81 years) and 20 adults (M=22.13 years). A 2 (age) x 5 (task) repeated measures mixed MANOVA on errors and response times resulted in main effects of age and task, qualified by an Age x Task interaction (Fs>2.66, ps<.034). Adults exhibited better IC than children (ps<.002). Across age, focal emotional stimuli disrupted IC performance (ps<.002). The IC performance of children, but not adults, was disrupted by peripheral emotional stimuli. Non-emotional peripheral information had no effect on performance. This study shows that emotion affects cognitive processes differently across age and adds to the growing literature on emotion-cognition interactions (Pessoa, 2013).

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POSTER A-56

RIGHT TEMPORAL LOBE VOLUME MEDIATES COMPLICATED GRIEF IN MIXED NEURODEGENERATIVE AND DEPRESSED POPULATIONS

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Descriptors: complicated grief, voxel-based morphometry, temporal lobes

Complicated grief refers to the inability to resolve feelings of loss. While there is a large body of literature on the neural substrates of dysphoric symptoms, few studies have examined complicated grief, and typically studies are not designed to identify structural anatomic correlates due to small volumetric variance in psychiatric patients. To better visualize structure-function relationships, we examined 45 neurodegenerative, depressed, and healthy subjects [12 behavioral variant frontotemporal dementia , 6 semantic variant primary progressive aphasia, 12 Alzheimer's disease, 7 depressed, and 8 healthy older adults]. Dysphoria was assessed using the negative affect subscale of the Positive Affect Negative Affect Schedule and complicated grief was assessed using the Inventory for Complicated Grief-Revised. Grey matter correlates of symptoms were analyzed using voxel-based morphometry with age, sex, severity, scantype and total intracranial volume as covariates. Groups were equally likely to show dysphoria and grief. Dysphoria was associated with reduced bilateral medial temporal (L: T=6.2; R: T=5.9) and left ventromedial frontal volume (T=5.7), whereas complicated grief was associated with right inferolateral temporal gyrus volume (T=5.0; all results pFWE<0.05). Dysphoria was related to multiple bilateral medial and lateral temporal structures, but complicated grief was associated more discretely with a R inferolateral temporal region involved in cognitive consideration of internal emotional states, potentially reducing full integration and reconceptualization of loss.

POSTER A-57

THE EFFECTS OF CO-OCCURRING DYSMENORRHEA AND DEPRESSION ON PREFRONTAL BRAIN ACTIVITY

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Descriptors: pain, dysmenorrhea, EEG

While depression and dysmenorrhea are known to co-occur, they may be associated with distinct prefrontal (PFC) cortical activity. Previous research has identified an association between depression and left PFC abnormalities, and pain has been associated with right PFC. Yet, these patterns of brain activity have not been studied in individuals with co-occurring depression and pain. It is unknown whether depression and pain have distinct or additive effects on brain activity. In this preliminary analysis (n = 36), we examined spectral analysis of resting state electroencephalography (EEG) activity in women with varying levels of menstrual pain. Four periods of resting state activity with eyes closed and four periods with eyes open were recorded while EEG data were collected. Depression was associated with decreased relative frontal alpha activity ($p < 0.05$), and was also increased lateralized left alpha activity in parietal cortical regions ($p=0.015$). Dysmenorrhea was associated with decreased relative frontal alpha as well, but was associated with increased lateralized right alpha activity. Further, the interaction between depression and dysmenorrhea showed that women who have high co-occurring depression and menstrual pain have the most amount of bilateral prefrontal activity, providing evidence that pain and depression have both distinct and additive effects. These findings add to the limited knowledge regarding neural mechanisms that moderate the relation between sensory systems and psychological state.

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POSTER A-58

"I'M SURE I WILL NOT WIN THE BIG TEDDY BEAR": CHILDREN'S AND ADULTS' REASONING ABOUT HOW EXPECTATIONS SHAPE EMOTIONS

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Descriptors: emotion understanding, development, social cognition

We examine 4- to 10-year-olds' and adults' (anticipated N = 180) recognition that expectations shape emotions. Individuals respond to six scenarios (3 trial types) involving three characters with different expectations about the same uncontrollable event. For instance, one character thinks she will win a big prize (high expectation), another thinks she will lose (low expectation), and the last thinks about something else (no expectations). Participants forecast characters' emotions on a 7-point pictorial scale from very bad to very good. Next, participants predict how characters feel after hearing the three outcomes: high expectation met, high expectation attenuated, and low expectation met. The current dataset (N = 69) includes 23 younger children (M = 6.15 years), 23 older children (M = 9.06), and 23 adults (M = 22.21). We conducted a 3 (age) x 3 (trial type) x 3 (outcome) x 3 (character) repeated measures ANOVA. This resulted in an Outcome x Character x Age interaction ($F = 3.97$, $p < .001$). Results reveal that once outcomes occur, there are age-related increases in predicting that low-expectation characters would feel the same or better than those who held high or no expectations. Children have the most difficulty appreciating the emotional benefits of low expectations when the outcome is positive. Preliminary results provide several new insights into children's and adults' reasoning about connections between mind and emotion as well as between past and future. It can also inform interventions aimed at improving children's emotional wellbeing by managing expectations.

FUNDING: This research was funded by the Predoctoral Training Consortium in Affective Science from the National Institute of Mental Health to Karen Hjortsvang (#201302291)

POSTER A-59

NO PAIN NO GAIN? AN LPP STUDY OF CUMULATIVE EFFECTS OF MINDFULNESS AND DISTRACTION ON AFFECTIVE REACTIONS

Helen Uusberg, Andero Uusberg, Teri Talpsep, Marika Paaver
University of Tartu

Descriptors: mindfulness, distraction, the late positive potential

Current study investigated the immediate effects of mindfulness and distraction on the dynamics of affective responding. The Late Positive Potential (LPP) was used to observe emotional reactions of meditation-naïve participants (n = 37) to neutral and unpleasant images presented three times with open monitoring mindfulness, distraction, or attentive viewing instructions; and once without them (re-exposure). Repeated measures ANOVA revealed a significant three-way interaction between valence, repetition and condition ($F = 2.60$, $p < .05$). Distraction diminished both negative and neutral LPPs already from the first encounter. However, it lead to a strong resurgence of affective LPP effect during re-exposure and failed to attenuate the fast emotional sensitivity reflected in early LPP. Mindfulness increased affective LPP amplification for the first stimulus repetition, but removed it across subsequent ones. Importantly, for images with mindfulness history affective reactions remained absent during re-exposure. A comparison with attentive viewing control condition suggested that this pattern of emotional adaptation benefited both from engagement with emotional content as well as nonjudgmental awareness. Current findings support the notion that disengagement oriented emotion regulation strategies are mostly effective in the short term while the benefits of engagement oriented strategies become evident gradually but are more sustained. They also suggest that a brief mindfulness induction can reduce automatic emotional responding even without prior meditation experience.

POSTER A-60

APPROACH MOTIVATION AS WELL AS POSITIVE VALENCE ACCELERATE SUBJECTIVE TIME

Andero Uusberg[1,2], Richard Naar[2], Maria Tamm[2], Kairi Kreegipuu[2]
[1]Stanford University, [2]Tartu University

Descriptors: affective time distortion

It's unclear what makes emotions capable of distorting subjective time. As valence and arousal fall short of explaining existing findings, additional affective dimensions, such as the motivational tendency to approach or avoid, need to be considered. 39 females (age = 22.6 +/- 3.5) completed a modified Monetary Incentive Delay task. In different blocks, they could win or lose nominal amounts of chocolate or be left with no change. The amount accumulated by the end of experiment (M = 100 g) was given to the participants as real chocolate. Perceptually homogenous and affectively neutral circles broken at different angels denoted the possible ("may win", "may lose", "neutral") and actual ("won", "didn't win", "lost", "didn't lose") outcomes on each trial. These stimuli doubled as targets for a temporal bisection task also presented on each trial. Participants needed to decide if each signal presented for either 200, 320, 440, 560, 680, or 800 ms was closer to the previously learned 200 or 800 ms standard duration. Perceived duration estimates were derived psychometrically for each signal type. Circles denoting "won" (approach-motivated positive) and "may win" (approach-motivated neutral) and to a lesser extent "didn't lose" (avoidance-motivated positive) were estimated to last significantly longer than the "neutral" signal (indicating accelerated subjective time; $F(4.7, 177.2) = 11.35$, $p < .001$). This pattern is consistent with assuming that motivational direction and affective valence have additive effects on emotional time distortions.

FUNDING: Estonian Research Council

POSTER A-61

THE INFLUENCE OF REAPPRAISAL AND EXPRESSIVE SUPPRESSION ON MEMORY OF AN AMUSING EMOTIONAL EVENT

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University of Manchester, University of Warsaw, University of Neuchâtel

Descriptors: emotion regulation, reappraisal and expressive suppression, memory

Studies on emotion regulation (ER) often focus on negative affect. Therefore, the main motivation for this research was an attempt to investigate cognitive consequences (i.e. memory performance) of controlling positive emotions. In the two studies participants (N=104 and 69 respectively) were asked to watch an amusing video while being randomly assigned to one of the two ER conditions: reappraisal vs. expressive suppression, or to the control group. Shortly after, they took part in an unexpected verbal memory test. In the first online experiment watching the film significantly increased participants' amusement and the change was the biggest for the control group. The declared level of expressed emotions in the suppressing group was significantly lower compared to the control condition. Emotion regulation had no influence on memory performance. In the second in-lab experiment participants were more amused while watching the film compared to the starting point. Both reappraisal and suppression resulted in lower levels of declared emotion expression. The influence of emotion regulation on memory reached a tendency toward significance ($F(2, 66) = 2.42$; $p = .097$) and further analyses revealed that only suppression but not reappraisal impaired memory for the emotional event compared to the control group ($p = .095$). The results are consistent with previous findings and show that suppression may have a potential to impair memory for an emotional event also when positive emotions are regulated. Cultural differences and study design may, however, play a role in studies on ER.

POSTER A-62

LINGUISTIC COMPARISON OF ALEXITHYMIA AND EMOTION DIFFERENTIATION

Emily R. Edwards[1,2], Sindhuja Shivaji[2], Anna Micek[2], Peggilee Wupperman[2]
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Descriptors: alexithymia, emotion differentiation, language

Alexithymia and poor emotion differentiation are associated with related forms of emotional and behavioral dysregulation, thereby contributing to strikingly similar clinical presentations. However, recent research suggests these emotion-processing difficulties may stem from disparate underlying processes. To further evaluate this hypothesis, alexithymia and emotion differentiation were compared and contrasted in the context of emotion linguistic patterns. Linguistic Inquiry Word Count was used to evaluate autobiographical essays from 96 participants for language regarding positive and negative emotions. Additional measures also assessed self-reported intensity of emotions associated with reported experiences, alexithymic trait severity, and emotion-differentiation ability. Participants with more severe alexithymia reported greater intensity of negative affect across essays. However, these elevations were not reflected in use of emotional language; alexithymia was only associated with less use of positive emotion words in essays describing positive life events. Alternatively, persons with poor emotion-differentiation ability reported greater intensity of situation-consistent affect across essays and, consistently, used more negative emotion words in essays of negative life events. Results provide additional evidence to suggest alexithymia and emotion differentiation stem from disparate underlying processes. Implications on psychological interventions for such populations are discussed.

POSTER A-63

THE IMPACT OF MERE EXPERIENCES OF EMPATHIC EMOTION ON SELF-PERCEPTIONS OF PROSOCIALITY

Hillary C. Devlin, Brian D. Bink, Margaret S. Clark
Yale University

Descriptors: emotion, empathy, self-perceptions

The present study investigated if merely being an observer of another's emotion expression can influence the observer's self-perceptions. A sample of 305 adults (46.9% female; 74.1% Caucasian) were assigned randomly to view one of three film clips in which an actor expressed either happiness, sadness, or no emotion, and all participants then reported on their own emotional responses and rated themselves on a number of traits. As a group, participants assigned to observe another's sadness reacted consistently with an emotion-congruent response (i.e., sadness) and subsequently rated themselves as more prosocial than did those who observed another's happiness. As a group, participants who observed another's happiness did not consistently react with emotion-congruent responses of happiness, suggesting that feeling empathy towards a happy (as compared to sad) target may be more difficult. Yet, within the happy condition, to the extent to which participants did respond with greater happiness and less sadness, they rated themselves as more prosocial. All results held when controlling for trait levels of empathic concern at baseline. Overall, the findings suggest that merely observing another person's emotion expression, and experiencing empathic emotion in response, can influence self-perceptions of our own prosociality.

FUNDING: This research was funded by Yale University.

POSTER A-64

AN EXPERIMENTAL TEST OF PERCEIVED UTILITY OF APPRECIATION IN DEPRESSION

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Descriptors: emotional utility, appreciation, depression

A burgeoning area of literature demonstrates the importance of gratitude experience in well-being and psychopathology. However, the importance of other gratitude facets is unknown. The present research examined the causal role of the perceived usefulness of appreciation (conceptually identical to gratitude) in depressive symptoms. In a between-subjects study of 173 undergraduate students, participants were induced to increase their experience of appreciation or their perceived usefulness of appreciation. Self-reported perceptions of emotional utility, felt affect, and depression scores (from semi-structured interviews) were obtained at baseline and at post-induction session. Results revealed a main effect for time such that all participants had decreases in depressive symptoms over time ($F(1,134)=39.37$, $p<.01$, eta-squared=.23). Importantly, there was a significant condition x time interaction ($F(1,134)=7.23$, $p<.01$, eta-squared=.05), such that individuals in the appreciation-utility condition had significantly lower levels of post-induction depression than did those in the appreciation-experience condition ($t(134)=2.10$, $p<.05$). A test of moderated-mediation models indicated that perceived utility of appreciation scores (post-induction) mediated the link between condition and depression (post-induction), and that the perceived utility of induction was most helpful for those low in trait appreciation (95 percent CI: .05-.46). Overall, results suggest that increasing the perceived usefulness of gratitude/appreciation may decrease susceptibility to depression.

POSTER A-66

PATIENT SOCIOEMOTIONAL FUNCTIONING PREDICTS NEGATIVE OUTCOMES IN DEMENTIA CAREGIVERS

Marcela C. Otero, Robert W. Levenson
University of California, Berkeley

Descriptors: caregiving, dementia, socioemotional functioning

Dementia caregiving is associated with a variety of negative outcomes including poor caregiver mental and physical health and low relationship satisfaction. Prior research has linked these negative caregiver outcomes to patients' cognitive and psychiatric symptoms. However, few studies have examined the link between patients' socioemotional functioning and caregiver outcomes. We examined how patients' socioemotional functioning was related to caregiver marital satisfaction, physical health, and psychopathology in a sample of 103 caregivers of dementia patients (with a wide range of diagnoses). Measures included: (a) patient socioemotional functioning (Caregiver Assessment of Socioemotional Functioning), (b) patient cognitive functioning (Mini-Mental State Exam), (c) patient psychiatric symptomatology (Neuropsychiatric Inventory), (d) caregiver marital satisfaction (Locke-Wallace Marital Adjustment Test), (e) caregiver physical health (Medical Outcomes Study Health Survey), and (f) caregiver psychopathology (Symptom Checklist-90-Revised). Results indicated that poor patient socioemotional functioning predicted lower levels of caregiver marital satisfaction ($beta= -.45$, $p < .001$) and physical health ($beta= -.25$, $p <.05$), and greater caregiver psychopathology ($beta= .41$, $p < .001$), above and beyond patient cognitive functioning and psychiatric symptoms. These findings suggest that low levels of socioemotional functioning in patients make important and unique contributions to negative caregiver outcomes.

POSTER A-67

GREATER VISUAL ATTENTION TO HUMAN FACES IN ALZHEIMER'S DISEASE

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Descriptors: visual attention, dementia, social processes

Alzheimer's disease (AD) is characterized by profound loss of cognitive functioning, however, some areas of socioemotional functioning are relatively preserved (Sturm et. al., 2013). Given preserved socioemotional functioning, it is important to determine whether AD patients have greater interest in social stimuli such as human faces. We examined visual attention in 19 AD patients, 14 frontotemporal dementia (FTD) patients, and 22 neurologically healthy controls. Participants were asked to view photographs comprised of two people interacting with one another and an inanimate object (lamp or stacked paper) in the background. Using an eye-tracking device, visual attention to faces was computed by averaging the total number of fixations on and the percent of time looking at the faces divided by the total amount of time spent looking anywhere on the slide. Results indicated a main effect of diagnosis, $F (2,47) = 4.88$, $p <.05$, with AD patients showing significantly more visual attention to faces compared to healthy controls, even after controlling for age and disease severity, $Mdiff= 1.32$, $p = <.01$. Linear trend analysis indicated a linear relationship between diagnosis and visual attention to faces, $F (2,52) = 9.42$, $p <.005$, with AD patients showing the most attention to faces, followed by FTD patients and healthy controls. No differences were found in attention to the non-social stimuli. Findings indicate that AD patients spend more time looking at faces than controls, suggesting a heightened interest in social information.

POSTER A-68

NEURAL CORRELATES OF SENSORY AMPLIFICATION IN WOMEN WITH DYSMENORRHEA

Kelly L. Polnaszek1, Rebecca L. Silton1, Katlyn Dillane3, Steven Harte2, Tu Frank3, Hellman Kevin3
1Loyola University Chicago, 2University of Michigan, 3NorthShore University HealthSystem/University of Chicago

Descriptors: pain, EEG, dysmenorrhea

Women with increased pain sensitivity in dysmenorrhea also experience co-occurring somatic symptoms that may be related to somatosensory amplification. We hypothesize that sensory amplification and exacerbation of visceral pain may be associated with abnormal neural function in association cortices (i.e., somatasenory, auditory, and visual cortices). Thus, we evaluated whether sensory amplification moderates painful and non-painful somatic complaint in women with increased pain sensitivity. Women with dysmenorrhea (n = 23) and healthy controls (n = 10) participated in a passive viewing task that involved watching a rapidly alternating annular checkerboard at 5 different levels of brightness while electroencephalography (EEG) was recorded. After each 20- second trial at each level of brightness, participants were asked to rate the unpleasantness of the visual stimulus. Results showed that increasing brightness during the task was associated with increased evoked EEG activity in occipital cortex and decreased activity in parietal cortex, particularly in women with sensory amplification (p =.02). Thus, a widespreadattention control network may contribute to suppressing visual unpleasantness. Advancing basic scientific knowledge about regional brain networks implicated in pain is critical to developing effective treatment for pain conditions.

FUNDING: This research was supported by NICHD HD081709, NIDDK DK100368, and NorthShore University HealthSystem

POSTER A-69

WHY DID YOU DO THAT? BECAUSE I THOUGHT IT WOULD WORK! THE ROLE OF PERCEIVED EFFECTIVENESS IN ADOLESCENTS' USE OF EMOTION REGULATION STRATEGIES

Karena M. Moran, Amy L. Gentzler, Boglarka K. Vizy, Katy L. DeLong
West Virginia University

Descriptors: emotion regulation, perceived effectiveness, adolescence

Emotions can be dysfunctional and require regulation (Gross, 1998). Strategies of emotion regulation (ER) are considered adaptive or maladaptive based on their relation with positive and negative outcomes (e.g., psychopathology, well-being; Aldao & Nolen-Hoeksema, 2012; Gentzler et al., 2013). Research has found factors that may contribute to youth's use of ER strategies (e.g., temperament; Calkins & Hill, 2007), but one factor that has received little attention is perceived effectiveness (PE) of the strategy. Adolescents who perceive a strategy as effective (i.e., will either increase positive affect or decrease negative affect) are expected to use that strategy more often. Self-reported use of adaptive and maladaptive strategies for both positive (e.g., savoring vs. dampening) and negative (e.g., reappraisal vs. suppression) emotions were collected from 142 adolescents (M=15.32, SD=.91; 39% female). Measures of PE were also collected for each strategy type. All measures of strategy use were significantly correlated with PE of the respective strategies (r=.29-.51, ps<.002). Four hierarchical linear regression models controlling for age and gender indicated that in all cases, individuals who reported higher levels of PE for adaptive and maladaptive strategies with positive and negative emotions were more likely to use those strategies (betas=.27-.51, ps<.003). Thus, PE is an important predictor in ER strategy use. Although preliminary, this study suggests that targeting adolescents' views of PE may be a beneficial addition to interventions to promote effective ER.

FUNDING: West Virginia University Program to Stimulate Competitive Research

Poster Session B
Friday, March 18, 2016

Poster Schedule

12:00 noon-1:00 p.m. .....Assemble your poster
1:00 p.m.-7:00 p.m. .....Poster viewing
5:30 p.m.-7:00 p.m. .....Author present
7:00 p.m.-8:00 p.m. ..... Take down your poster

POSTER B-1

SPONTANEOUS SELF-REPORTED EMOTION REGULATION STRATEGIES IN BORDERLINE PERSONALITY DISORDER

Alexander R. Daros, Sayed Mustafa Turabi, Anthony C. Ruocco
University of Toronto

Descriptors: emotion regulation strategies, borderline personality disorder, mood induction

Borderline personality disorder (BPD) is characterized by pervasive difficulties in emotion regulation (ER). The selection of appropriate ER strategies may be problematic in BPD, related to the perceived intensity or emotional reactivity towards stimuli. In the present study, participants watched four videos (one neutral, three negatively valenced) and reported on their mood, emotions, and use of ER strategies for each video. Preliminary data are presented from 22 individuals with BPD and 22 healthy controls (HC). Results demonstrated that individuals with BPD spontaneously endorsed using more ER strategies than HC during negative films, including both more maladaptive and adaptive strategies (ts > 3.66, ps < .001). Between-group differences for the neutral video did not reach statistical significance when controlling for multiple comparisons (ts < 2.72, ps > .01). Use of more ER strategies and maladaptive ER strategies was correlated with higher negative mood induced by the video (rs > .65; ps < .001) and greater self-reported difficulty controlling emotions during the induction (rs > .64; ps < .001). These findings also converged with self-report measures indicating higher endorsements of maladaptive ER strategies for the BPD compared to HC group. These results highlight a "shotgun" approach to ER in BPD compared to HC, suggesting an indiscriminate selection of ER strategies that may be associated with the intensity of induced mood states.

POSTER B-2

MEASURING AND PREDICTING PEOPLE'S BELIEFS REGARDING THE WISDOM (AND FOLLY) OF EXPRESSING EMOTIONS

Aleena C. Hay, Margaret S. Clark
Yale University

Descriptors: emotion expression, beliefs, social emotion regulation

Emotion expression can help forge social bonds and initiate interpersonal emotion regulation, yet also can reveal vulnerabilities and invite exploitation. We predict that there are measurable and systematic differences in people's beliefs about the wisdom (and folly) of expressing emotion that are associated with interpersonal trust. To test this prediction, we developed measures of these beliefs and administered our scales with the revised Experiences in Close Relationships Scale in two studies. Each study had 302 participants and the second study was a direct replication of the first. Across both studies high avoidance and anxiety attachment scores predicted lower judgments that emotion expression is helpful and higher judgments that it is harmful. Women did not score differently than men on beliefs about expressing emotion, challenging gender stereotypes. Judgments about happiness were similar to judgments of sadness and anxiety suggesting that beliefs about expressing all three emotions are similarly influenced by interpersonal trust.

POSTER B-3

UNIVERSALITY IN ANGER-ELICITING APPRAISALS

Weiqiang Qian, Craig A. Smith
Vanderbilt University

Descriptors: emotion generation, appraisal theory, universality

Specific patterns of appraisal are tightly linked to the experience of specific emotions, but whether such patterns are universally related to these emotions has been subject to considerable debate. To address this issue, latent profile analysis (LPA) was applied to a sample of 321 subjects with high anger ratings, selected from 1700 subjects aggregated across 18 studies. This dataset is assumed to widely sample the range of situations that produce anger. Using appraisal ratings as observed variables, LPA outlines the latent groups of appraisal patterns that generate anger under the observed conditions. The best model selected based on model fit indices yields three classes of pattern: self-accountable, other-accountable, and a pattern with no obvious accountability appraisals. Since the self-accountable class appraisals conceptually overlap with shame and guilt appraisals, the other two classes are of key interest in answering the universality question for anger generation. Anger and frustration were included as predictors for classification to understand the sources of classifications. We found the odds ratio of being classified into the no-accountability anger class versus the other-accountable class is significantly smaller than 1 (.477, p=.02) for every unit increase in anger rating. Thus, the no-accountability appraisal profile for anger, used by some scholars to argue against accountability appraisals being necessary to induce anger, is simply unable to produce strong anger. The universality of appraisal-emotion relationship is largely supported, at least for anger.

POSTER B-4

DEPRESSIVE SYMPTOMS ARE ASSOCIATED WITH WITHDRAWAL FROM COGNITIVELY CHALLENGING TASKS

Tanya Tran, Emma Ayukawa, Melissa Milanovic, Christopher R. Bowie
Queen's University

Descriptors: depression, cognitive load, functioning

Cognitive impairments predict impaired functioning in depression. Individuals who perform poorly or disengage from cognitive tasks have greater risk of depression, low excitement seeking, and impaired reward sensitivity. Research on the predictors of withdrawal from cognitively challenging tasks in depression will inform efforts at prevention and disability reduction. This study aimed to determine if depression severity is associated with withdrawal from cognitive challenges, and whether this in turn is related to functioning. 235 undergraduates completed self-reports of quality of life and depressive symptoms and a cognitive test battery including Paced Auditory Serial Addition Task (PASAT). This working memory task asks participants to serially add numbers presented one at a time. We used two parametric levels of difficulty in the PASAT: numbers presented every 2.4 s (low cognitive load) and every 1.6 s (high cognitive load). We measured cognitive disengagement as the number of consecutively skipped items. We observed an interaction such that compared to those with non-significant depressive symptoms, those with depression skipped more items as a function of the cognitive load of the task (p<.001). Increases in consecutively skipped items from the easy to the hard task predicted more impairment in everyday functioning (p=.004). Youth with depression are more likely to withdraw from a cognitive test as the task difficulty increases. Task disengagement in depressed youth may represent avoidance of cognitive challenge and thus contribute to impaired functioning.

POSTER B-5

EMOTIONAL AWARENESS AND REGULATION PREDICTORS OF EMPATHIC ACCURACY

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Descriptors: empathic accuracy, emotion regulation, emotional awareness

Empathic accuracy (or how accurately a person perceives another's emotions) has important implications for how individuals navigate their social world. Extant work has begun to address factors that may predict individual differences in empathic accuracy, largely targeting global personality or demographic characteristics. In the current study, we examine the role of emotion-related traits and processes in predicting empathic accuracy. Specifically, we focus on judges' trait-level emotional awareness (attention to and clarity of emotion) and emotion regulation (habitual use of suppression and reappraisal). Undergraduates (n=106) watched videos of targets playing a frustrating game and made continuous ratings of how positively or negatively they believed the target was feeling. To assess empathic accuracy, these ratings were compared to self-reports of emotional experience during the task made by targets in the video. As expected, attention to emotion predicted higher empathic accuracy, Beta = .15, $p < .01$. However, clarity (Beta = .03, $p = .67$) and suppression (Beta = .01, $p = .83$) did not predict accuracy. Reappraisal showed the expected link to higher accuracy for White perceivers, Beta = .11, $p = .03$, but reappraisal predicted marginally lower accuracy among Asian-Americans, Beta = -.17, $p = .06$. This finding suggests there may be cultural variation in the impact of emotion regulation on perception of others' emotions. Overall, this study highlights the importance of individual differences in attention to and regulation of one's own emotions for interpersonal sensitivity.

POSTER B-6

FEAR PROCESSING MEDIATES THE RELATIONSHIP BETWEEN HYPERACTIVE SYMPTOMS AND EMOTION REGULATION IN YOUNG CHILDREN WITH ADHD

Chaia M. Flegenheimer, Claudia I. Lugo-Candelas, Elizabeth Harvey, Jennifer M. McDermott
UMass Amherst

Descriptors: ADHD, fear-processing, emotion regulation

Individuals with Attention Deficit Hyperactivity Disorder (ADHD) show deficits in emotion regulation and processing of threat-related emotions. However, few studies have explored both neural indices of processing threat-related emotions and emotion regulation skills in individuals with ADHD, and none have done so in pre-school age children. Forty-eight children (32 male) between the ages of 4-7 years old (M=6.04 SE= 0.118) were categorized into those with (N=19) and without (N=29) ADHD hyperactive symptoms using a clinical diagnostic interview. Neural reactivity to emotion faces was measured using event-related potentials (ERPs) with a focus on the face-specific N170 component. Parents completed the Emotion Regulation Checklist to assess children's emotion regulation skills. Results indicate that reduced N170 reactivity to fear faces, compared to other threat-related emotions, mediated the relation between hyperactive symptoms and emotion regulation skills. Specifically, ADHD symptoms were a significant predictor of reduced fear reactivity (b= 0.417 SE =0.157 p=0.011), and reduced fear reactivity was a significant predictor of emotion regulation (b=-0.038 SE=0.013 p=0.006). ADHD symptoms no longer predicted emotion regulation when fear reactivity was accounted for (b=-0.024 SE=0.015 p=0.114), supporting a mediation model. These findings highlight fear as a unique category of threat-related emotion for young children with ADHD, and suggest that a fear-processing deficit may contribute to emotion regulation difficulties among children with ADHD.

POSTER B-7

I CHOOSE YOU: EMOTION REGULATION GOALS GUIDE STRATEGY SELECTION DURING A SOCIAL INTERACTION

Lameese Eldesouky, Tammy English
Washington University in St. Louis

Descriptors: emotion regulation, goals, social interaction

Emotion regulation strategies can have important affective and social consequences, but it is unknown why people use the strategies they do. To address this issue, we examined the role of emotion regulation goals in strategy selection. Drawing on functionalist theories that argue strategies should be used when they are most helpful, we hypothesized that reappraisal would be associated with goals that have emotional experience as the primary outcome (i.e., emotional goals), while suppression would be associated with pursuing goals where the primary outcome is beyond just emotional experience (i.e., instrumental goals). Participants (N = 103) were randomly assigned to pursue a hedonic goal (reduce negative emotion), impression management goal (avoid a bad impression), or no specific goal during a discussion with a confederate. Afterwards, they rated their suppression and reappraisal use during the discussion. A planned contrast revealed that reappraisal was used relatively more than suppression when pursuing a hedonic goal compared to when pursuing an impression management goal or no specific goal, $t(100)= 2.03$, $p < .05$. Further, regression analyses showed that individuals were more successful in reducing their experience of negative emotion when they relied on reappraisal more than suppression (beta = -.22, $p < .05$). These findings suggest that goals may guide emotion regulation strategy selection, such that individuals will show preferences for specific strategies when they are functional.

POSTER B-8

LANGUAGE AND EMOTION: NONSENSE LABELS INFLUENCE PERCEPTION OF NOVEL EMOTION CATEGORIES

Cameron M. Doyle, Jin Kang, Kristen A. Lindquist
University of North Carolina at Chapel Hill

Descriptors: language, concept acquisition, perception

Language shapes emotion perception, perhaps because words help adults acquire and use emotion concepts to make meaning of others' facial actions. We thus assessed whether language supports the formation of novel emotion concepts (N=89). During an initial "learning phase," participants in a verbal condition associated two novel "alien" facial actions with nonsense emotion labels; control participants made perceptual judgments of the faces in the absence of labels. Next, in the "target phase," all participants studied alien faces depicting slightly different facial actions. Finally, during the "test phase," participants identified which face they saw during the target phase (the actual target face v. the learned face v. a 50-50 morph of the two). Participants in the verbal condition were biased to choose a face similar to that seen during the learning phase, whereas control participants were unbiased in their perceptions of the target faces. Labeling facial actions facilitates the formation of perceptual categories for emotion, which influence perceptions of subsequently viewed faces.

POSTER B-9

STATE ANXIETY CARRIED OVER FROM PRIOR THREAT INCREASES LPP AMPLITUDE DURING AN INSTRUCTED EMOTION REGULATION TASK

Walker S. Pedersen, Christine L. Larson
University of Wisconsin-Milwaukee

Descriptors: misattribution of arousal, emotion-cognition interactions, state anxiety

Emotion regulation has important consequences for mental health (Saxena et al., 2011) and is dependent on executive function (Eisenberg et al., 2011). Because state anxiety disrupts executive function (Robinson et al., 2013), we tested whether state anxiety disrupts emotion regulation by having participants complete an instructed emotion regulation task while under threat of unpredictable shock and while safe from shock (n = 53). We used the late positive potential (LPP) component of the event related potential to measure emotion regulation success. We predicted that LPP responses to negatively-valenced images would be modulated by participants' attempts to increase and decrease their emotions when safe, but not while under threat of shock. Our manipulation check revealed an order effect such that, for participants who completed the threat of shock condition first, self-reported state anxiety carried over into the subsequent safe condition. We also found that although instructions to regulate affected participants self-reported emotions, instructions to regulate had no effect on LPP amplitude regardless of threat condition. Instead we found that participants who received the threat condition prior to safe had greater LPP responses to all images in the safe condition, $t(25) = 3.47$, $p = .002$. We posit that the carry-over of anxiety resulted in misattribution of arousal and potentiation of neural responses to the images in the safe condition. Thus, our results imply that physiological arousal and cognition combine to influence the basic neural response to emotional stimuli.

POSTER B-10

EMOTIONAL REACTIVITY AND SLEEP DISRUPTION IN DEMENTIA CAREGIVERS: THE ROLE OF EMOTION REGULATION

James J. Casey[1], Chien-Ming Yang[2], Jennifer Merrilees[3], Robert W. Levenson[1]
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Descriptors: emotional reactivity, emotion regulation, sleep

Highly emotional people are prone to sleep difficulties. These difficulties can be problematic for spouses who care for dementia patients, adding to the negative health effects associated with caregiving. We examined the role that emotion regulation plays in moderating the relationship between emotional reactivity and sleep in dementia caregivers. 29 spousal caregivers of dementia patients (primarily frontotemporal dementia) completed the Emotion Regulation Questionnaire (ERQ) and participated in a laboratory assessment of emotional functioning. As part of the assessment, they viewed a two-minute film that elicits negative emotion (anger, fear, and disgust) while peripheral nervous system activity was recorded. For one week following the laboratory session, caregivers wore an actigraphy wristwatch to provide an objective measure of sleep difficulty (i.e., the time awake between falling asleep and final wakening in the morning). High emotional reactivity to the film (as indicated by a composite of six physiological measures) was associated with greater sleep disruption (beta = .34, $p<.05$). This relationship was moderated by both the Reappraisal and Suppression subscales of the ERQ (Reappraisal*Reactivity: beta = -.46, $p<.05$; Suppression*Reactivity: beta = -.62, $p<.01$) such that greater emotion regulation attenuated the relationship between emotional reactivity and sleep difficulty. These results suggest that both emotion regulation strategies may be useful for helping highly emotionally reactive caregivers to sleep better.

POSTER B-11

INFANT AFFECTIVE DEVELOPMENT: IMPLICATIONS OF PRENATAL DEPRESSION AND 6 MONTH FAMILY ENVIRONMENT

Kristin N. Dowe, Alexandra A. Devine, Lyndsey J. Clayton, Elizabeth M. Planalp, H. Hill Goldsmith
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Descriptors: emotion regulation, infancy

Maternal stress in infancy is linked to elevated cortisol in children at 4.5 years, which in turn is related to children's affective regulation (Essex et al., 2002). We asked whether stress experienced prenatally is associated with later infant behavior? We examined maternal depression and the family environment both prenatally and during infancy, and infant affective regulation at 6 months of age (n=36 in a continuing study). Mothers reported on the family environment (e.g. family expressiveness, financial conflict) and maternal depression on four occasions. Infant-mother dyads participated in the Still Face Paradigm, a face-to-face interaction measuring infant reactions to distress, during which we coded infant rhythmic self-soothing and gaze aversion, two behaviors infants use to regulate negative affect. Family anger expression and maternal depression predicted infant affective development in different ways. Maternal prenatal depression was unrelated to 6 month anger expression. Higher prenatal depression led to fewer infant self-soothing behaviors at 6 months ($r=-.42$, $p<.01$), and infant self-soothing was related to higher concurrent maternal anger control ($r=.48$, $p<.01$) and lower concurrent maternal anger expression ($r=-.38$, $p<.05$) at 6 months. Mothers exhibiting prenatal depression may pass on ineffectual regulatory abilities to their infants, or alternatively mothers who express more anger may not properly demonstrate affect regulation; thus, infants do not effectively regulate their own behavior during distress.

POSTER B-12

ACCURACY IN PERCEIVING EMOTION REGULATION STRATEGIES

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Descriptors: emotion regulation, aging

The ability to accurately detect partners' emotion regulation patterns can facilitate interactions and help maintain close relationships. As individuals accumulate more experience regulating their own emotions and observing others' regulation efforts, they may become more accurate judges. The present study tests the hypothesis that older adults are more accurate in detecting their partner's use of specific emotion regulation strategies, and examines whether accuracy predicts relationship satisfaction. Heterosexual married couples (N=104) aged 20 to 89 completed scales assessing their own and their partner's use of emotion regulation strategies, as well as their relationship satisfaction. Accuracy was calculated as the difference between one person's report of their partner's emotion regulation and their partner's report of their own emotion regulation. The Actor-Partner Interdependence Model was used to analyze the data. As expected, younger adults were more inaccurate for reappraisal (actor effect = -.025, $p=.056$); however, there were no age differences for situation selection or suppression. Greater inaccuracy for reappraisal and situation selection predicted lower relationship satisfaction (actor effects = -0.52, $p=.041$ and -0.60, $p=.005$, respectively); suppression inaccuracy did not predict relationship satisfaction. Although this study was only cross-sectional, these results suggest individuals may develop expertise in judging emotion regulation patterns as they age, resulting in stronger social connections later in life.

POSTER B-13

HEALTHY ADULTS WITH LOWEST LEVELS OF COOPERATION ARE MORE COOPERATIVE AFTER HEART RATE VARIABILITY BIOFEEDBACK

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Descriptors: heart rate variability biofeedback, cooperation

The polyvagal theory posits that autonomic flexibility is a physiological basis of pro-social behaviors. Recent works confirmed the association between these two variables. However, it is difficult to determine whether autonomic flexibility influences pro-social behaviors, or if pro-social tendencies impact on autonomic flexibility, or both. We wanted to test the first hypothesis according to which autonomic flexibility influences pro-social choices. We manipulated the high frequency heart rate variability (HF-HRV) of healthy adults by HF-HRV biofeedback. It is established that HF-HRV is a marker of autonomic flexibility and that it can be increased by biofeedback exercise. 24 participants completed a hawk-dove game where they had to choose either a cooperative or competitive option for money. They completed the game across 3 sessions: before biofeedback (baseline), after real biofeedback, and after sham biofeedback (order randomized in a within-subject design). We computed a score of cooperation evolution between after and before biofeedback (real and sham). Regression analysis showed a significant interaction between biofeedback condition (real vs. sham) and cooperation baseline. In the real condition, cooperation evolution was significantly and negatively associated with cooperation baseline. Participants with lower baseline cooperation level were more cooperative after real but not after sham biofeedback training. These preliminary results suggest that HF-HRV biofeedback can increase cooperation level for lower cooperative individuals, and support the first hypothesis.

FUNDING: This work was funded by the Institut Universitaire de France (Paris) and the Pôle Grenoble Cognition (Grenoble).

POSTER B-14

THE INFLUENCE OF SOCIAL STRESS ON EMOTION PERCEPTION

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Descriptors: theory of mind, social stress, emotional perception

Theory of Mind (ToM), the ability to accurately determine others' emotional states, may be affected by Challenge and Threat stress states by (1) limiting access to cognitive resources necessary for emotional reading or (2) priming recognition of similar affective states. The current investigation seeks to explore the relation between ToM and stress states in a sample of healthy women (N=53; Age M=27.5) who completed the Trier Social Stress Task (TSST) where they were assigned to either positive (Challenge) or negative (Threat) social feedback condition. Immediately after, participants assessed task demands and internal resources. Following the TSST, participants completed a behavioral index of ToM – Reading the Mind in the Eyes – where participants viewed photographs of eyes displaying various expressions and matched each set with the affective state expressed. We examined the relation between stress state and overall ToM accuracy; ToM accuracy of positively and negatively valenced affective states, and the mediating role of post-stress resource-demand ratio (R:D). We observed an indirect relation between feedback condition and positively valenced ToM accuracy through its relation to post-stress appraisals (b=.26, SE=.14, 95% CI=.0307, .5702). Specifically, participants in the Challenge condition reported greater R:D, which was associated with greater ToM accuracy for positively valenced affective states. Findings suggest that experiencing a challenging stressful state may transiently increase individuals' ability to perceive positive emotional expression.

POSTER B-15

PEER SOCIAL SUPPORT MODERATES THE LINK BETWEEN NEGATIVE FAMILY RELATIONS AND PSYCHOSOCIAL ADJUSTMENT IN LESBIAN, GAY, AND BISEXUAL YOUTH

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Descriptors: family conflict, peer support, psychosocial adjustment

Lesbian, gay, and bisexual (LGB) individuals report more interpersonal conflict with family members (Ryan et al., 2010), which compromises mental health (Lewis et al., 2003). Often, LGB youth seek support from peers if they lack support from their family (Goldfried & Goldfried, 2001). Positive peer relationships can promote environments in which youth can become well-adjusted (Laursen, & Collins, 2009). However, little is known about what specific aspects of LGB youths' adjustment peers influence most. Hypotheses: We predicted that peer support would moderate the link between family conflict and psychological wellbeing; such that those who report more peer support would show lower levels of depression and anxiety. Method: N = 62 (27 females) LGB individuals (ages 17-27, M = 21.34, SE = 0.37) completed the Scope and Prevalence Anti-LGB Family Victimization scale, Interpersonal Relationship Inventory, Beck Anxiety Inventory, and Beck Depression Inventory. Results: Peer support moderated the link between family victimization and negative family LGB-related attitudes with depression (R2 = 0.41, beta = -0.26, SE = 0.06, 95% CI = [-0.25, -0.02] and (beta = 0.21, SE = 0.09, 95% CI = [0.001, 0.34]; respectively). Peer support moderated the link between negative family attitudes and anxiety (R2 = 0.33, beta = 0.26, SE = 0.15, 95% CI = [0.02, 0.58]. Discussion: Positive peer support helped to weaken the association between negative familial experiences and psychopathology. These findings suggest that positive peer relationships may provide a positive impact on LGB youths' well-being.

POSTER B-16

A LIGHT IN THE DARKNESS, WHEN IT MATTERS: DIFFERENTIATING HOPE FROM OPTIMISM

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Descriptors: hope, optimism, appraisals

This work examines how hope and optimism differently shape perception of future events. Many researchers use hope and optimism interchangeably (e.g., Winterich & Haws, 2011; Bruininks & Malle, 2006), but others argue that hope serves a vital and unique function in helping people cope with difficult situations (Lazarus, 1999). Using Averil and colleagues' (1990) rules of hope, we tested the hypothesis that hope, relative to optimism, promotes greater perceptions of uncertainty, importance, effort, and moral relevance. In addition, we made the novel hypothesis that hope may promote action about the future because it reduces psychological distance relative to optimism. Participants (421 total, 232 female; Mage = 19) were brought into the lab and randomly assigned to spend 5 minutes describing an event about which they felt either hopeful or optimistic. Consistent with predictions, participants who wrote about a hoped-for event reported less certainty, $t(418) = -2.64$, $p < .01$, more fear, $t(418) = 2.38$, $p = .02$, more importance $t(418) = 3.89$, $p < .01$, more effort $t(418) = 4.58$, $p < .01$ and more morality $t(418) = 3.03$, $p < .01$ about their event relative to those who wrote about optimistic events. Furthermore, consistent with the prediction that hope might make the future seem "closer," analyses using the Linguistic Inquiry and Word Count program (Pennebaker, Booth, & Francis, 2007) revealed that hoped-for events were described using more present tense, $t(418) = 2.70$, $p < .01$ and fewer abstract words, $t(418) = -2.81$, $p < .01$. Implications for goal-pursuit are discussed.

POSTER B-17

HETEROGENEITY OF LONG-HISTORY MIGRATION PREDICTS EMOTION RECOGNITION ACCURACY

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Descriptors: historical heterogeneity, emotion recognition, culture

Recent work (Rychlowska et al., 2015) demonstrated the value of a relatively new cultural dimension, historical heterogeneity, in predicting cultural differences in the endorsement of emotion expression norms. Historical heterogeneity describes the number of source countries that have contributed to a country's present-day population over the last 500 years. People in cultures originating from a large number of source countries may have historically benefited from clearer emotional expressivity, since they lacked a common language and social norms. We therefore hypothesized that individuals from heterogeneous cultures would produce facial expressions that are easier to recognize by people from other cultures. By re-analyzing cross-cultural emotion recognition data from 90 papers and 77 cultures, we demonstrate that emotion expressions of people from heterogeneous cultures are more easily recognized by observers from other cultures than are the expressions produced in homogeneous cultures, b = 0.145, SE = 0.060, t(184.59) = 2.43, p = .02 (Wood, Rychlowska, & Niedenthal, in press). This work reveals the present-day behavioral consequences of long-term historical migration patterns.

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POSTER B-18

IS BEING AVERAGE A BAD THING? NEURAL RESPONSIVENESS TO SOCIAL COMPARISON FEEDBACK AND IMPLICATIONS FOR HIGH SELF-CONSCIOUS INDIVIDUALS

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Descriptors: social comparison, self-consciousness, FRN

Individuals high in public self-consciousness (PbSC) are more likely to follow societal norms and seek peer approval. Public SC has been linked to social anxiety, indicating a connection between PbSC and state affect that may be important for accurate social comparison. Currently, little is known about neural responsiveness to social comparison feedback on cognitive control tasks or whether feedback processing differs for high PbSC individuals. The feedback-related negativity (FRN) was assessed in 37 young adults (male = 19) in a modified flanker task. Feedback was provided every 7 trials indicating "worse than," "same as," or "better than" peer performance and was predetermined and performance-independent. Participants completed the Self-Consciousness Scale to assess PbSC. A main effect emerged for the FRN across feedback type ($F(2,72)=4.589$, $p=.013$) such that a larger FRN response was found for "worse than" compared to "same as" and "better than" feedback (p's <.05). A marginal interaction emerged between feedback type and PbSC ($F(2,70)=2.867$, $p=.064$) such that high PbSC individuals responded strongly to both "worse than" and "same as" feedback, reflecting negative evaluation of average performance. High PbSC individuals also showed lower accuracy ($t(35)=-1.967$, $p=.061$) possibly reflecting stress or anxiety from social comparison. Overall, results reveal that: 1) the FRN is sensitive to social comparison on a cognitive control task and 2) individuals high in PbSC have altered sensitivity to feedback processing and lowered cognitive control in peer comparison environments.

POSTER B-19

REWARD REACTIVITY AS A NEURAL PREDICTOR OF COGNITIVE-BEHAVIORAL THERAPY RESPONSE IN ADULTS WITH ANXIETY AND DEPRESSION

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Descriptors: reward, event-related potentials, CBT

Cognitive behavior therapy (CBT) is the gold-standard psychotherapy for the treatment of anxiety and depression. Knowing which patients are likely to benefit from CBT could increase response rates and decrease costs. One potential predictor of CBT response is reactivity to rewards. Reward reactivity can be measured at the neural level using the reward positivity, an event-related potential (ERP) component. Previous studies have found that higher depressive and anxious symptoms are associated with a smaller positivity to rewards. No studies have examined whether the reward positivity predicts CBT response in anxious and depressed adults. In the current study, adults (age 18-47) with anxiety disorders (n = 31) and comorbid anxiety and depression (CAD; n = 22) completed a guessing reward task in which ERPs were recorded. Participants completed twelve weeks of CBT and pre and post symptom measures. Controlling for depressive symptoms at pre-treatment, the reward positivity was negatively related to depressive symptoms at post-treatment for individuals with CAD, $t(19) = 2.73$, $p = .01$, Cohen's $d = 1.25$. Specifically, less reward reactivity at baseline predicted fewer depressive symptoms following CBT. The reward positivity did not predict pre-to-post anxiety symptom change following CBT. The current findings suggest that CBT may be most beneficial in reducing depressive symptoms for individuals with CAD who exhibit decreased reactivity to rewards. CBT may decrease depressive symptoms in individuals with CAD by regaining activation in areas of the brain implicated in reward.

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POSTER B-20

LATERAL PREFRONTAL FUNCTION PREVENTS EMOTIONALLY BIASED FIRST IMPRESSIONS

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Descriptors: lateral prefrontal cortex, TMS, emotion misattribution

The ubiquity of emotional events in everyday life makes important the extraordinary human capacity of correctly attributing their emotional responses to a particular event when approaching situations or people unrelated to the source of emotion. However, the neural mechanisms causally contributing to such successful emotion regulation remain elusive. Here, we tested whether function of the lateral prefrontal cortex (LPFC) promotes the capacity of overriding prior emotional information when evaluating novel social stimuli. We temporarily altered function of LPFC and a control region (somatosensory cortex) in 27 individuals by administering an inhibitory transcranial magnetic stimulation (TMS) protocol (continuous theta-burst). Participants were briefly exposed to happy and fearful faces, which were followed by novel neutral faces presented several seconds later. They were asked to evaluate these novel neutral faces for their likeability. We found that while the fleeting emotional faces did not influence evaluations of novel neutral faces in the control condition, following LPFC inhibition participants' ratings of novel people became significantly biased by the previously processed emotion (TMS region*valence interaction: $p = .012$). Remarkably, these biased first impressions formed during TMS-induced LPFC inhibition were still detectable outside of the laboratory 3 days after the TMS session ($p = .036$). These findings indicate that the LPFC serves an important emotion-regulatory function in preventing incidental emotional stimuli from automatically guiding behavior.

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POSTER B-21

UTILIZING MOBILE TECHNOLOGY TO ASSESS NEGATIVE SYMPTOMS IN DAILY LIFE

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Descriptors: schizophrenia, ecological momentary assessment, negative symptoms

While negative symptoms are a distinct clinical feature of schizophrenia, conceptual and methodological problems with current instruments can make assessment challenging. In addition, it is thought that current assessments may be influenced by impairments in memory and not reflective of actual daily life functioning outside of the laboratory. The present study sought to investigate the feasibility and validity of assessing negative symptoms using an ecological momentary assessment approach (EMA). Participants with schizophrenia (N=33) completed electronic questionnaires on a cellular phone five times a day for one week. Compliance rates were good (76.1%) and reported experience completing the questionnaires was generally positive. Hierarchical linear modeling analyses revealed that clinician rated ($p<0.03$) and self-report measures ($p<0.001$) of negative symptoms were significantly related to negative symptoms assessed via EMA. However, working memory moderated the relationship between EMA and traditional assessments of negative symptoms ($p<0.01$) suggesting that traditional measures may be problematic in individuals with impaired cognitive functioning. These initial findings demonstrate the feasibility in assessing symptoms utilizing mobile technology and points to possible advantages of ambulatory assessments in individuals with cognitive impairments.

POSTER B-22

AFFILIATIVE USE OF THE BARED TEETH DISPLAY IN RHESUS MONKEYS

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Descriptors: facial expression, primate, context

The specific function of facial behaviors relative to affective experience is widely debated. The Bared Teeth display (BT) or "fear grimace" is consistently reported to be an "emotion expression" in monkeys. While the BT is used in contexts of conflict and in the presence of threatening objects (supporting the hypothesis that it expresses "fear"), it is also observed in non-fear related contexts. Social network studies of rhesus macaques (Macaca mulatta) have revealed that the BT is a unidirectional signal about dominance relationships, communicating immediate submission in conflict contexts and long-term subordination in peaceful (i.e., non-conflict) contexts. In the present study, we documented the BT in clearly affiliative mating contexts (mBT), accompanied by affiliation such as lip-smacking, jaw thrusting, consort behavior, and sex mounting. BT signaling interactions were recorded with event sampling 4 hours/week for 4 months. Of the 191 BTs observed during this period, 13 were mBTs, 100% given from males to females, whereas only 2 (1.1%) of non-mBTs were male-to-female. Ad libitium sampling of 2 additional groups documented 34 instances of "flirtatious" BTs from 7 males and 145 BTs with sex mounting from 11 males. Of all observed BTs in flirtatious or sex mount contexts respectively, 86.5% and 56.1% were given by alpha or beta males, suggesting that mBTs are not communicating subordination. These data suggest that the BT is a flexible social signal and is not an expression of fear given the heterogeneity of the contexts in which it occurs.

POSTER B-23

PUPILLARY REACTIVITY TO NEGATIVE STIMULI PROSPECTIVELY PREDICTS RECURRENCE OF MAJOR DEPRESSIVE DISORDER IN WOMEN

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Descriptors: pupil, depression, biomarker

A rapidly growing body of research highlights the role of dysregulated physiological reactivity to negative stimuli as a potential biological marker of depression risk, with reports of both increased as well as diminished reactivity in response to negative stimuli among participants with depression. In this study, we examined whether pupil dilation to emotional stimuli prospectively predicts new MDD onsets among women with a previous history of MDD. Participants were 57 women with a past history of MDD recruited from the community. Pupil dilation was recorded while women viewed angry, happy, and sad faces. Follow-up assessment occurred 24 months after the initial appointment. We found that hypo and hyper pupillary reactivity to angry facial stimuli, relative to moderate reactivity, predicted a shorter time to MDD recurrence. These findings were maintained when we statistically controlled for current depressive and anxiety symptoms at baseline and when women diagnosed with any current anxiety disorders were excluded from the analyses, suggesting that pupil dilation to angry faces contributes unique risk for MDD recurrence. These findings suggest that physiological reactivity to angry stimuli measured via pupil dilation could serve as a potential biomarker of depression recurrence among women with previous history of MDD.

FUNDING: This project was supported by National Institute of Child Health and Human Development grant HD057066 awarded to B. E. Gibb.

POSTER B-24

EMOTIONAL DISCLOSURE AND EXPERIENCE IN SOCIAL ANHEDONIA

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Descriptors: social anhedonia, emotion expression, negative affect

Extreme levels of social anhedonia (SocAnh) predict increased risk for schizophrenia-spectrum disorders and are associated with deficits in emotion. In SocAnh, there is evidence of increased trait negative affect and providing less emotional content when explicitly asked to describe positive events. However, previous research has only utilized tasks that involved explicit instructions regarding content and have not involved a free writing paradigm, which can be considered a more naturalistic, pure measure of expressivity. To address this methodological issue, the current study involved three groups who participated in a 6-minute free-writing task [SocAnh group, N=59; Perceptual aberration/magical ideation (PerMag) group who is also at increased risk for psychosis, N=73; control group (N=82)]. A measure of mood was collected before and after the writing task and a word analysis was performed using an open source version of the LIWC. Although the groups did not differ in the total words used, there was a Group X Emotional Words Used interaction ($p < .01$). Post hoc tests indicated the SocAnh group used significantly more negative words and less positive words than the control group, both $ps < .05$. The PerMag group fell in between the other groups. Also, the free writing period had differential effects on negative mood across groups ($p < .01$). Specifically, there was a significantly greater increase of sadness in the SocAnh group compared to the other groups, both $ps < .05$. The results have implications on emotional disclosure and self-reported emotional experience in SocAnh.

POSTER B-25

LAUGHTER AND AMUSEMENT'S BUFFERING EFFECT ON STRESS: AN EXPERIMENTAL DESIGN

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Descriptors: amusement, laughter, stress

The purpose of the present study was to observe the distinct stress buffering effects of sole laughter, sole amusement, and co-occurring laughter and amusement. A total of 136 undergraduate students at Vanderbilt University (60% female) participated in the experiment. The study employed a 2x2 between-subjects design, with each participant viewing either an amusing or boring video (video type) and given instructions to act either amused or bored (instruction type). Participants took a baseline emotions questionnaire, watched the designated video and behaved in accordance to the designated instructions, participated in a stressor task, and took a final emotions questionnaire. Results showed that participants in the co-occurring amusement and laughter condition had significantly less negative affect post-stressor than those who did not experience amusement or laughter ($t(56) = 2.37$; $p < 0.05$). Results of a 2x2 ANCOVA with baseline amusement scores as a covariate indicated that there was a significant main effect of instruction type on amusement ($F(1,130) = 6.57$; $p < 0.05$) and on positive affect scores ($F(1,126) = 7.72$; $p < 0.01$); those who laughed, regardless of video type, had more positive affect and amusement than those who did not. The findings suggest that amusement should be expressed, rather than suppressed, in order to truly experience amusement and positive affect after a stressor. Most importantly, the present study suggests that laughter and amusement have to co-occur in order to buffer against the negative affect associated with stress.

POSTER B-26

AGE RELATED AGGRESSION AND DEROGATION IN GRANDMOTHERS ON BEHALF OF THEIR GRANDCHILDREN

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Descriptors: aggression, derogation

The Grandmothering Hypothesis argues that the benefit of menopause is that women would invest more in their existing children and grandchildren rather than produce more offspring. This investment includes aggression on behalf of their children and grandchildren. There are two features of grandmothers that make them unique from mothers. First, there are less potential costs to grandmothers for engaging in both direct and indirect aggression than there are for mothers, because gran maternal investment is not as life sustaining as maternal investment. Second, grandmothers may be less certain that their grandchildren are genetically related to them compared to mothers. Grandmothers can be certain that their daughter's children are their genetic offspring. However, if the grandchildren are her son's offspring, there is less certainty. 400 female participants completed a questionnaire measuring their likelihood of derogation given certain scenarios. Grandmother derogated more aggressively than mothers. They also derogated more aggressively on behalf of daughter's children.

POSTER B-27

EMOTION RECOGNITION AND PROBLEM BEHAVIORS IN CHILDHOOD: WHICH COMES FIRST?

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Descriptors: emotion, behaviors, development

Associations between children's emotion recognition and problem behaviors (hyperactivity, internalizing behaviors, and externalizing behaviors) are well documented. Less understood are the developmental linkages between these constructs over time, particularly as children move through elementary school. To assess these linkages, 60 children were tested in 1st and 3rd grade. In 1st grade, children completed a measure of emotion recognition involving static, posed facial expressions of emotion (Schultz et al., 2004); a similar measure using dynamic facial expressions of emotion was administered in 3rd grade (Castro et al., in press). At both time points, problem behaviors were assessed by teacher reports. Associations across grades were analyzed using cross-lagged path models in Amos 22.0. Children's receptive language skill was included as a 1st grade covariate. The three models demonstrated adequate fit to the data. Results revealed that hyperactivity and internalizing behaviors in 1st grade predicted lower emotion recognition skill in 3rd grade (Betas = -.27 & -.25, ps = .037 & .066, respectively). In addition, greater emotion recognition in 1st grade predicted lower levels of internalizing behaviors in 3rd grade (Beta = -.32, p = .004). Externalizing behavior paths were nonsignificant. Together, these findings suggest that hyperactivity and internalizing behaviors have a negative impact on the development of children's emotion recognition skill, whereas emotion recognition skill appears to reduce internalizing behaviors over time.

FUNDING: National Science Foundation

POSTER B-28

TEMPORAL STABILITY OF UPDATING EMOTIONAL CONTENT IN WORKING MEMORY

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Descriptors: updating, emotion, working memory

The ability to efficiently process emotional cues is essential for navigating any social environment. One mechanism that may mediate this important task is updating, an executive process that monitors incoming information for relevance and replaces no-longer relevant items in working memory with newer, more relevant information. Biases in updating emotional content have been investigated in special populations, but to date, there has been no research on whether these biases comprise individual differences that are stable across time. To investigate individual differences in emotion updating, participants (N = 107) were administered an emotion n-back task at two experimental time-points approximately 6 months apart. The emotion n-back task presents a series of facial expressions (happy, sad, neutral, angry, fearful) to which the participant indicates whether the currently presented expression was the same or different from the expression presented two faces earlier. Repeated measures ANOVAs were conducted with time, emotion, and trial type; trait negative and positive affect was included as a covariate. Results indicate consistent reaction time and accuracy performance across time. Test-retest reliability analyses revealed that updating biases were consistent between Time 1 and Time 2 across all conditions and emotions, apart from sadness ($F(4,800)=2.302$, $p<.05$). These results suggest that performance on the emotion n-back task captures stable individual differences as well as biases that may occur as a function of mood.

POSTER B-29

PARIETAL EEG ASYMMETRY AND DEPRESSIVE SYMPTOMATOLOGY IN MIDDLE CHILDHOOD

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Descriptors: EEG, depression, FRN

Patterns of parietal electroencephalography (EEG) have been implicated as a neural marker of risk for depressive symptomatology; however, studies report conflicting results regarding whether risk is driven by greater right versus left EEG activation (Shankman et al., 2011). The current study examined parietal asymmetry and depressive symptomatology during middle childhood, as well as the feedback related negativity (FRN), an event-related potential (ERP) linked to depression and negative emotionality in adults (Lackner et al., 2014; Santesso et al., 2012). Sixty-two children aged 5 to 9 (M=7.5 years) completed resting EEG and a modified flanker task with feedback. Parietal asymmetry was calculated by subtracting the natural log of P3 from P4 to create groups representing greater right versus greater left activity. A difference score was computed between negative and positive feedback to assess reactivity to negative performance feedback via the FRN. Parents reported on the sadness and anxious/depressed scales from the Child Behavior Questionnaire and the Child Behavior Checklist, respectively. Results showed that children with right parietal asymmetry displayed significantly higher levels of sadness ($F(1,60=8.267$, $p=.006$) and anxious/depressed scores ($F(1,60=4.464$, $p=.039$) compared to children with left parietal asymmetry. This group also showed larger frontal FRNs at trend level ($F(1,59=2.964$, $p=.090$). Combined, these results provide support for right parietal EEG as a risk marker for behavioral and neural measures of depressive symptomatology in middle childhood.

POSTER B-30

EMOTION REGULATION AND FEEDBACK PROCESSING IN YOUNG CHILDREN WITH ADHD

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Descriptors: emotion regulation, ADHD, feedback processing

Research suggests that emotion regulation and feedback processing may both be impaired in children with ADHD, yet no studies have examined neural markers of these processes during frustrating tasks. A group of 4-7 year-old children with (n=21) and without (n=27) ADHD completed a modified Affective Posner task (Pérez-Edgar & Fox, 2005) consisting of 4 blocks: baseline, frustration, suppression, and recovery. In the frustration and suppression blocks negative affect was induced by false negative feedback indicating loss of points. During suppression, children were asked to hide their emotions. To assess reactivity to reward, the feedback-related negativity (FRN) was assessed for positive feedback. A significant block x group interaction emerged at the parietal region, ($p=.03$). Children with ADHD demonstrated a smaller FRN during baseline than typically developing (TD) peers ($p=.01$). Additionally, TD children exhibited attenuated FRNs for frustration and suppression, compared to baseline ($p's<.03$), and for frustration compared to suppression ($p=.04$). In contrast, children with ADHD did not significantly modulate their neural reactivity across blocks. In sum, emotional context impacted positive feedback processing for children with and without ADHD differently as children with ADHD did not modify neural processing during a frustrating task eliciting negative affect compared to TD peers. This pattern suggests that impairments in modifying allocation of cognitive resources may be related to emotion regulation difficulties noted in children with ADHD.

POSTER B-31

ANXIETY INTERACTS WITH CARDIAC TIMING TO SHAPE CONDITIONED FEAR

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Descriptors: anxiety, cardiac timing, fear conditioning

Signals from the body influence emotion, and emotion can guide learning and memory. To further understand the dynamic relationship between anxiety, physiology, cognition and emotion, we investigate the influence of visceral afferent signals on conditioned learning, specifically, how the heart can guide learning and memory of conditioned fear. In N=40 participants, a fear conditioning and extinction paradigm time-locked conditioned stimuli (CS) to different phases of the cardiac cycle: either at cardiac systole, when baroreceptors signal cardiovascular arousal to the brain, or at diastole, in between heartbeats, when baroreceptors are quiescent. During extinction learning, the contingencies between stimuli (CS+ and CS-) in relation to heart remained constant (N=20), or switched (N=20). Three main effects prevailed. Firstly, fear response was enhanced for stimuli at systole, to the extent that bodily expression of conditioned learning was disrupted, with enhanced GSR signal to CS- at systole, while at diastole the CS- and CS+ were differentiated. Secondly, the selective heightened fear signal at systole was driven by individuals with high trait anxiety. Thirdly, memory for CS+ and CS-, irrespective of initial cardiac time-locking, was disrupted when contingencies switched during extinction learning. Representation of a stimulus may thus be guided by external features but also internal context (i.e. cardiac "signature"). Together, these results highlight the embodiment of learning and memory, and point to an interoceptive channel through which fear is heightened in anxiety

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POSTER B-32

VISUAL SEARCH OF EMOTIONAL FACES IN SCHIZOPHRENIA: EYE-MOVEMENTS REVEAL COMPONENT PROCESSES ASSOCIATED WITH IMPAIRMENT

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Descriptors: emotion, perception, schizophrenia

Prior research indicates that individuals with schizophrenia (SZ) have deficits in facial affect processing. However, the mechanisms responsible for these deficits are unclear. In the current study, an emotional visual search paradigm was administered while eye-movements were recorded to determine whether deficits reflect abnormalities in preattentive parallel search, early selective orienting of top-down attention, and processing efficiency. Outpatients with SZ (n = 30) and healthy controls (CN: n = 20) completed a search task where arrays of one emotional target face (happy, angry, sad) and 6 neutral faces were presented. Participants decided whether the array contained one discrepant face or not. Results indicated that in both CN and SZ target happy faces were responded to more quickly, fixated earlier, and judged as different faster following initial fixation. Findings indicate that CN and SZ have a happiness processing advantage that is characterized by earlier orienting and more efficient detection. In both groups, detection responses occurred after having fixated on the target, suggesting that detection of angry, happy, and sad expressions is post-attentional, not pre-attentional. A Group X Emotion interaction was present for decision time after fixation, ($F(1, 59) = 3.68$, $p < 0.05$), which reflected significantly slower decision-time for sad relative to angry faces in SZ ($p < 0.05$), but not CN. These findings suggest that SZ have poor decision-efficiency, allocating a greater amount of resources to the target after it has been subjected to overt attention.

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POSTER B-34

EMOTION PROCESSING BIASES IN WORKING MEMORY MAY CONTRIBUTE TO INHIBITORY DYSFUNCTION

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Descriptors: inhibitory control, working memory, emotion

Inhibitory Control is important for voluntarily regulating attention and behavior. Individuals who have low inhibitory control may act impulsively and find it hard to inhibit certain actions or behaviors which could lead to negative consequences. The current study examines if there are underlying emotion processing biases in working memory (WM) that may contribute to inhibitory control. To assess emotion processing in WM, 350 participants completed an Emotion N-back Task in which they viewed serially presented emotional expressions and indicated whether the emotional expression they were currently viewing was the same or different than the emotional expression they viewed two faces earlier. Emotional expressions were happy, neutral, sad, fearful or angry. Participants also completed the BIS/BAS measure of inhibitory control. A repeated measure Emotion by Condition ANOVA with the BIS subscale entered as a continuous independent variable yielded a significant Emotion x BIS interaction, $F(4, 1396) = 2.568$, $p < .05$. Post hoc correlation analyses reveal that faster updating of Angry content, $r(350) = -.110$, $p<.05$, and slower updating of Sad content, $r(350) = .113$, $p<.05$, predicted higher inhibitory dysfunction. These findings suggest that emotion updating biases in WM may contribute to the behavioral response pattern that characterizes inhibitory dysfunction.

POSTER B-35

THE ANTERIOR CINGULATE CORTEX, EMPATHY, AND PSYCHOPHYSIOLOGICAL RESPONSES TO EMOTIONAL STIMULI

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Descriptors: empathy, anterior cingulate cortex, emotional reactivity

Emotional empathy, or feeling what another feels, facilitates cooperation and behavior intended to benefit others. Existing evidence suggests the anterior cingulate cortex (ACC) may play a role in empathy-related processes: the ACC is more active when people employ empathic responses, and ACC grey matter volume is positively associated with empathy. To better understand how the structure of the ACC impacts empathy and emotional processes, 112 healthy adults, aged 26-85, from the MIDUS refresher sample (www.midus.wisc.edu) completed the Interpersonal Reactivity Index (a self-report measure of empathy), viewed affective pictures while their facial electromyography (EMG) was measured, and underwent a structural MRI scan. We found that greater emotional empathy (indicated by the Empathic Concern subset of the IRI) is associated with greater left caudal ACC (lcACC) cortical thickness (partial correlation controlling for age and whole brain volume $r=.21$, $p=.04$). Greater lcACC surface area is associated with more frowning (corrugator supercilii activation) to negative pictures ($r=.26$, $p=.01$) and less frowning and more smiling (zygomaticus major activation) to positive pictures ($r=-.29$, $p=.007$; $r=.24$, $p=.03$, respectively). Furthermore, greater lcACC surface area predicted a greater emotional range in corrugator EMG responses to negative compared to positive pictures ($r=.23$, $p=.03$). These cumulative findings suggest that a more robust structure of the lcACC is associated with a more empathic and emotionally reactive affective style.

FUNDING: Hilldale Undergraduate/Faculty Research Fellowship

POSTER B-36

SUBJECTBOOK: WEB-BASED VISUALIZATION OF MULTIMODAL AFFECTIVE DATASETS RESIDING ON THE CLOUD

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Descriptors: affective data sets, visualization

Exploratory Data Analysis (EDA) is critical in quality control and abstraction. Conducting EDA for affective data sets is challenging because they include multi-modal data, such as psychometrics, imaging sequences, and wearable sensing, with the latter streaming continuously for hours on end. The complexity and size of these data sets renders them unique intellectual products, for which reproducibility of test results and information sharing acquire paramount importance. To facilitate EDA in affective sciences we developed SubjectBook - an interactive, Internet-based visualization tool. Assuming a properly organized file structure in the cloud, the investigator needs to communicate through a user-friendly interface the study's size, its explanatory and response variables, as well as its covariates. Based on this information, SubjectBook generates a web site for the study, presenting the covariates at the top, followed by the time-registered explanatory and response variables - a visualization fusion that aims to bring together possible cause, effect, and context. For each subject, SubjectBook summarizes context information along with the explanatory and response measurements in a construct reminiscent of an ID card – the SubjectPortrait. SubjectPortrait is a second level of abstraction, enabling the investigator to appreciate phenomena at the subject level. Finally, the investigator can communicate to SubjectBook specific tests on the study's variables, for producing a third level of abstraction, the StudyPortrait – a grid visualization of the study's significant outcomes.

POSTER B-37

REAPPRAISAL CHOICE AS A FUNCTION OF INTENSITY PREDICTS EMOTIONAL EATING

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Descriptors: emotion regulation, intuitive eating, emotional eating

Previous research has demonstrated that emotion regulation (ER) may impact eating behaviors. The present study sought to expand on this literature by examining whether ER choices while viewing negative content of varying intensity may clarify eating behaviors like emotional eating, an increase in food intake in response to negative emotions. To successfully manage distressing emotions, individuals must be able to choose between ER strategies; a process referred to as emotion regulation choice (ERC). Forty-six participants completed an ERC task, where they viewed negative pictures of low, medium, and high intensity and chose to either distract or reappraise in response to each photo. The proportion of reappraisal choice was calculated for each intensity level. Participants also completed questionnaires including the Intuitive Eating Scale which assess intrinsic, physically motivated eating, and extrinsic, emotionally motivated eating. A repeated measures ANOVA revealed a significant curvilinear relation between reported extrinsic eating behavior and reappraisal choice as a function of intensity $F(1,44) = 7.885$, $p<.05$. Specifically, the more the participant chose to reappraise in response to low and high intensity photos, the higher their reported extrinsic eating. The authors postulate that this pattern of findings reflects use of reappraisal to justify food intake to regulate general mood as well as to cope with distressing and intense negative content.

POSTER B-38

THE EFFECTS OF POSITIVE SELF-TALK ON STATE ANXIETY: A COMPARISON OF OVERT VERSUS COVERT SPEECH

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Descriptors: self-talk, state anxiety, overt

Building upon Kross et al.'s (2014) self-talk research, this study (n = 89) investigates whether second-person overt and covert speech strategies aid in reducing state anxiety (SA) and bolstering state self-esteem (SSE). An online survey was completed in advance of a lab manipulation and assessed global self-esteem (GSE) among other filler variables. To induce anxiety in the lab, a modified Trier Social Stress Test (1993) was utilized; prior to giving a "speech," participants were instructed to either speak aloud (overt speech) or think (covert speech) a trio of self-affirming, second-person phrases (You are strong. You are intelligent. You are absolutely capable of handling this.). SA level, SSE, and other data (e.g. demographic info, nervousness) were assessed immediately afterwards. A one-way ANOVA yielded no main effect of self-talk condition on SA or SSE. However, when controlling for self-reported, post-manipulation nervousness, a significant effect on SA did emerge, $F (1, 86) = 4.31$, $p < .05$. Results showed that SA level was lower in the silent compared to the aloud condition. When we examined whether GSE moderated the impact of condition on SA and/or SSE, a significant interaction emerged for SSE, $F (2, 83) = 5.67$, $p < .01$. Specifically, those with higher (vs. lower) GSE at the outset reported higher SSE across both conditions, while participants with lower GSE reported higher SSE in the silent compared to the aloud condition. In general, covert self-talk appeared more effective than overt self-talk, particularly for those with lower self-esteem.

POSTER B-39

ARE YOU HUMAN? CATEGORIZATION FLUENCY DRIVES AFFECTIVE RESPONSES TO AGENTS WITH AMBIGUOUS HUMAN-LIKENESS

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Descriptors: human-likeness, fluency, emotion

One of the most fundamental psychological boundaries is the distinction between humans and non-humans. Consequently, "mixed agents" that incorporate features of both categories (e.g., android, sphinx, etc.) can elicit cognitive conflict and affective discomfort. Prominent theoretical explanations suggest that these effects are obligatory, caused by conflicting perceptual cues. In contrast, here, we show context-sensitivity and top-down control of these effects. Specifically, mixed agents elicit disfluency and discomfort, but only when their processing involves the dimension on which they are categorically ambiguous. Four experiments tested this idea. Participants classified three different agents (humans, androids, and robots) either on the human-likeness dimension (i.e., "human" or "non-human") or on a control dimension, after which they evaluated the agents. The human-classification made androids selectively disfluent (slow RTs), and thereby disliked. Critically, categorization effort mediated the relationship between agent "mixed-ness" and participant evaluations. These findings support a top-down, categorization-based account for how mixed agents can garner dislike. Overall, we highlight the role of flexible, constructive processes in responding to human and non-human agents.

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POSTER B-40

THE ROLE OF EMOTION WORDS IN THE EXPERIENCE AND PERCEPTION OF EMOTION: A META-ANALYSIS OF THE NEUROIMAGING LITERATURE

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Descriptors: meta-analysis, emotion, language

A psychological constructionist theory suggests that emotion words support the conceptual knowledge about emotion that is used to make meaning of sensations during experiences or perceptions of discrete emotions. To address this hypothesis, we performed a comprehensive meta-analysis of the neuroimaging literature to systematically explore whether the presence of emotion words in tasks impacts the neural representation of emotions. Using a database of 356 fMRI and PET studies and the Multi-level Peak Kernel Density Analysis, we assessed brain activity when emotion words (e.g., "anger," "disgust," "fear") were present in experimental tasks versus not present. We predicted that words would prime conceptual knowledge, leading to greater activation in regions involved in semantic retrieval. By contrast, we predicted that in the absence of semantic knowledge, affective sensations would be experienced as more ambiguous and uncertain, signaled by greater activity within the amygdala. As predicted, when emotion words were present in experimental tasks (v. not present), we observed more frequent activations in brain regions related to semantic and basic sensorimotor processing. When words were not present in experimental tasks (v. present), we observed more frequent activations in the amygdala and parahippocampal gyrus, bilaterally. Together, these findings are consistent with the psychological constructionist prediction that the presence of emotion words prime emotion concept knowledge that is used to make meaning of otherwise uncertain affective sensations.

POSTER B-41

EMOTION REGULATION PREFERENCE IN ANGER: EMOTIONAL INTENSITY AND TRAIT REAPPRAISAL MATTER

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Descriptors: emotion regulation choice, anger regulation

Successful anger regulation is vital for psychological and cardiovascular health. Many studies assume emotion regulation (ER) preference to be a stable personality trait but recent findings suggest that an emotional state's intensity determines how it is regulated. Emotional processing and ER preference also change over the lifespan. Here, we investigated the influence of trait ER, an emotional state's intensity, and age on anger regulation. Fourty-nine young (24 males, mean age: 24.8) and 41 elderly healthy participants (28 males, mean age: 67.1) remembered 4 autobiographical anger situations of varying intensity and in random order. They were then asked to choose either cognitive reappraisal (CR) or distraction (D) to regulate their anger during recall. Along with physiological measures we acquired emotional self-reports. Trait reappraisal was assessed with the Emotion Regulation Questionnaire. Generalized estimating equations indicated that young adults (YA) tend to choose less CR than elderly (Wald-chi square(1)=3.68, p=.055). A non-significant triple interaction of age, intensity, and trait CR (Wald-chi square(1)=3.80, p=.051) showed that YA low in trait CR used more D in low intensity memories, while the opposite was true for YA high in trait CR. Our results indicate that YA flexibly regulate anger according to emotional intensity and psychometric constitution. This study extends previous research in testing the discrete emotion of anger and including trait ER. Our results thereby shed light on the dynamic interplay of state, trait, and age in anger regulation.

POSTER B-42

REWARD AS A MULTI-FACETED CONSTRUCT: CONTRASTING THE PROCESSING OF MONETARY AND SOCIAL REWARDS

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Descriptors: reward, event-related potentials, anticipatory/consummatory processing

With the advent of the Research Domain Criteria, there has been an increased emphasis on the neural basis of anticipatory and consummatory reward processing. However, studies have largely focused on neural mechanisms of monetary rewards while ignoring the significance of socially rewarding stimuli. The monetary incentive delay (MID) task has been used to investigate monetary reward dynamics using a multitude of anticipatory (cue-p3, contingent negative variation [CNV]) and consummatory (reward positivity [RewP], feedback P3 [fb-P3]) event-related potentials (ERPs). We modified the MID task in order to develop the social incentive delay (SID) task to measure social reward-related processes. Using a sample of undergraduate students (N = 31), we found behavioral evidence of reward-related speeding on both MID and SID; average reaction times were significantly faster on incentive trials compared to neutral trials (MID $t(30) = -5.33$, $p < .01$; SID $t(29) = -4.39$, $p < .01$). Incentive trial average reaction times were highly correlated across tasks ($r = .73$, $p < .01$), with faster reaction times on MID than SID ($t(29) = -2.54$, $p < .05$). Furthermore, anticipatory and consummatory ERPs across tasks were moderately associated (r's ranged from .21 - .47). The present study represents the first successful attempt in developing an efficacious method of quantifying social reward chronometry using ERPs. The SID is a promising laboratory paradigm for comprehensively characterizing reward-related processes across different types of psychopathologies.

POSTER B-43

AMYGDALA CHRONOMETRY IS ASSOCIATED WITH BEHAVIORAL AND PERIPHERAL PHYSIOLOGICAL MEASURES OF EMOTIONAL RECOVERY

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Descriptors: amygdala, affective chronometry, individual differences

The amygdala has a well-documented role in responding to emotionally arousing stimuli, yet little is known about the chronometry of these responses. In a sample of 90 healthy adults with a wide age range, we used fMRI to investigate the impact of arousal and valence on amygdala reactivity to affective pictures and amygdala recovery, assayed with a neutral face shown 2s after picture offset. Amygdala responses during emotional reactivity tracked the arousal ratings of these pictures irrespective of valence ($p<0.001$). In contrast, amygdala responses to neutral faces presented during recovery were modulated by the valence of preceding pictures ($p<0.05$). Critically, individual differences in amygdala responses during recovery (but not during reactivity) tracked two independent indices of recovery collected outside of the fMRI scanner. First, greater amygdala responses during recovery from negative pictures were associated with greater recovery-related activity in the corrugator supercilii "frowning" muscle (as measured with facial electromyography in a separate experimental session; $p<0.005$). Second, greater amygdala responses to neutral faces during recovery from arousing pictures predicted better memory for those same faces 3 days later ($p<0.01$). These results underscore the importance of affective chronometry in understanding the role of the amygdala in emotional processing, and suggest that individual differences in recovery from emotional challenges may be particularly important in understanding behavioral and physiological correlates of emotional responding in daily life.

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POSTER B-44

QUANTITATIVE ASSESSMENT OF INTERPERSONAL AUTONOMIC SYNCHRONY USING DYNAMICAL SYSTEMS MODELS

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Descriptors: interpersonal, physiology, synchrony

There is growing interest in the application of research on interpersonal synchrony (IS), the study of temporal coordination between individuals, to the study of affective and social processes. IS has been observed to operate at behavioral, affective, and physiological levels, in both rapid (e.g., autonomic) and longitudinal (e.g., daily affect) measures across various contexts studied. Furthermore, IS has been found to correlate with a range of social and affective constructs, including attachment and empathy. Technological advancements in and availability of smart phones and wearable physiological sensors now offer significant potential for both lab-based and naturalistic study of IS. While promising, analysis of IS data can be challenging in that dynamic changes are not adequately captured by common static, linear, or nomothetic approaches. To address this issue, we developed a dynamical systems model that quantifies dynamic changes in multiple parameters of IS (e.g., directionality, sign), and provides a clear, interpretable effect size metric. Using electrodermal activity (EDA) data collected from 9 romantic couples, we show that physiological interdependence is highly dynamic when partners are quietly seated back-to-back (R squared range = 0.0 - 0.42) and face-to-face (R squared range = 0.0 - 0.52). Aggregate results match previous nomothetic findings, indicating synchrony is higher when participants are face-to-face ($t(8) = 3.81$, $p <.01$, $d = 0.64$). This suggests non-verbal communication increases partners' synchrony in EDA and validates the utility of IS.

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POSTER B-45

ALL IN THE FIRST GLANCE: FIRST FIXATION PREDICTS INDIVIDUAL DIFFERENCES IN VALENCE BIAS

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Descriptors: emotional ambiguity, individual differences, eye-tracking

Surprised expressions are ambiguous in that they are interpreted as negative by some people, and as positive by others. When compared to fearful expressions, which are more consistently interpreted as negative, surprise and fear share similar morphological structure (e.g., widened eyes), but these similarities are primarily in the upper part of the face (eyes). We hypothesized that individuals would be more likely to interpret surprise positively when fixating faster to the lower part of the face (mouth). Participants rated the valence of surprise and fear while eye movements were recorded. Individual differences in fixation patterns on the eyes and mouth were associated with valence bias, such that, in individuals with a faster fixation to the mouth, a slower fixation to the eyes was associated with an increasingly positive bias. These findings suggest that the valence bias may be driven, at least in part, by individual differences in fixation patterns when processing faces. However, because fixation to the eyes is dominant in face processing, we conducted a follow-up analysis of degraded face stimuli, where low-spatial-frequency (LSF) information is processed faster than high-spatial-frequency (HSF) information. We compared eye movements for LSF and HSF faces, and found a more direct relationship between fixation to the mouth and valence bias, such that faster fixation to the mouth was associated with a more positive bias. This effect was evident for LSF, but not HSF, surprised faces, suggesting that faster processing promoted these individual differences.

POSTER B-46

LOL: AN EVALUATION OF THE RELATIONS AMONG LAUGHTER, EXPRESSIVITY, AND ENJOYMENT IN DEPRESSION

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Descriptors: depression, laughter, facial expression

Humor is a ubiquitous phenomenon that is associated with enjoyment and facilitates social interactions by bringing people closer together. In depression, substantial evidence has evaluated factors contributing to dysfunction, but we know little about performance of and experience with specific prosocial behaviors (i.e., laughter/mirth) in response to humor. This study evaluates how depressed individuals experience (i.e., enjoyment) and demonstrate prosocial behaviors (e.g., facial expressivity) in response to humor. In an ongoing study with a sample of 15 healthy controls (HC) and 15 individuals with major depressive disorder (MDD), participants watched a series of funny video clips, while being audio and video recorded. We found that the MDD group reported less enjoyment and lower funniness ratings relative to HCs (ps < .05). Further, we found no group difference in facial expressivity while watching videos (p = .700). These preliminary findings suggest a nuanced perspective on the expression of positive emotion and reported enjoyment in response to humorous stimuli among those with MDD, wherein positive facial expressivity may be evident even when coupled with lower reported enjoyment. As we collect a larger sample we will evaluate the roles of depressive, socially anxious, and socially anhedonic symptoms in predicting the likelihood of laughing among individuals in the MDD group. These findings have important implications for our understanding of positive emotions experienced by individuals with MDD, and how mirth and humor appreciation interact with social dysfunction.

POSTER B-47

HOW IMPORTANT ARE DOCTORS' "BEDSIDE MANNERS"? THE RELATIONSHIP BETWEEN DOCTORS' NONVERBAL BEHAVIOR AND PATIENTS' EMOTIONS DURING PREGNANCY

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Descriptors: emotion regulation

The experience of oncoming motherhood is a time of major transition associated with elevated levels of anxiety, depressivive symptoms, and fear of giving birth. How these states are regulated during pregnancy has received little attention. Suppression, an emotion regulation strategy associated with rumination, depressive symptoms, and negative well-being, may be associated with fear towards giving birth. Also, it is possible that the effects of these emotions can be mitigated by facets of the doctor-patient relationship. Thus, we posited that suppression would predict fear of giving birth; the down-regulation of emotion at the level of expression does not reduce negative emotional experiences. We also predicted that this relationship would be moderated by patients' anxiety, as well as by their perception of their doctors' nonverbal behavior.A sample of 77 women completed measures of emotion regulation, anxiety, fear of giving birth, and non verbal behaviors of their obstrecian during their third trimester.Results showed that high suppression was invariably associated with high levels of fear during pregnancy. However, in low suppression there was an interaction between patients' anxiety and the preceived nonverbal behavior of their doctor. At high anxiety, doctors' nonverbal behaviors were associated with more fear; at low anxiety, doctors' nonverbal behavior were associated with less fear. This could indicate that patients with high anxiety rely more on their doctors' nonverbal behaviors to reduce fear, but that these behaviors are hindrance to patients with less anxiety.

POSTER B-48

THE SOCIAL ORIGINS OF EMOTIONAL COMPLEXITY

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Descriptors: emotional complexity, social situations, daily life

The experience of rich and balanced emotions is associated with mental health and well-being. What kind of situations bring about this emotional complexity? Since people perceive different emotions in others as they interact with them, it is possible that emotional complexity arises in social (vs. non-social) situations. In study 1, 226 Americans answered an online questionnaire where they recalled 6 events from the past week and rated their emotions in these events, some of which involved other people. In study 2, another sample of 226 Americans answered an online questionnaire where they rated their emotions when prompted to recall 4 recent events. Two of the events we presented to them were social (e.g., interacting with a friend) and two were non-social (e.g., reading a book). In both studies, people reported greater emotional complexity when they were with someone else, over and above the effect of mean positive and negative emotions, study 1 r squared = .55, study 2 r squared = .47. These studies demonstrate that the social nature of a situation influences emotional complexity. They add to the burgeoning field of emotional complexity and differentiation, ultimately providing insights on how complexity unfolds in our daily life.

POSTER B-49

AMERICANS DONATE MORE TO RECIPIENTS WITH EXCITED EXPRESSIONS: IDEAL AFFECT DRIVES DONATIONS IN THE DICTATOR GAME

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Descriptors: culture, dictator game, ideal affect

How does culture shape decisions to give to others? We suggest that givers' cultural values and receivers' affective expressions jointly determine giving. Specifically, givers feel good when they are looking at receivers whose expressed affect matches culturally valued affective states ('ideal affect'), and this leads the givers to offer more money to these receivers. We found European American givers (N = 35 for Study 1, N = 89 for Study 2), who desire to feel excited states more, offered more money to excited receivers than calm receivers, whereas Korean givers (N = 54 for Study 1, N = 66 for Study 2), who want to feel calm states more, offered more money to calm receivers than excited receivers, $F(1,84) = 8.00$, $p = .006$ for Study 1, $F(1, 151) = 204.87$, $p < .001$ for Study 2 (Study 1 and 2). Moreover, European American givers (N = 31) felt higher positive arousal when they were looking at excited receivers than calm receivers, compared to their Korean counterparts (N = 43). These cultural differences in positive arousal mediated cultural differences in offer to excited receivers and calm receivers, indirect effect = -.23, S.E. = .11, 95% CI [-.48, -.04] (Study 3). These findings suggest people decide to give to others based on a match between their affective ideal and receivers' expressed affect. Moreover, positive arousal elicited by the match between givers' affective ideal and receivers' expressed affect contributes to decision to give to others. The findings have implications for understanding psychological mechanisms driving cultural variations in giving.

POSTER B-50

THE NEURAL UNDERPINNINGS OF EMOTIONAL PERSPECTIVE TAKING

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Descriptors: perspective-taking, emotion, regulation

The ability to take the perspective of others is a crucial component of social life. Beyond interpersonal effects, perceiving the world "through another's eyes"—and the strategy used in order to do so—might also change one's own emotions. Little is known about the impact of perspective taking on neural response to emotional stimuli. Additionally, the neural mechanisms that subserve distinct perspective-taking strategies (e.g., cognitive versus emotional) are not well understood. To address this, the present fMRI study measured 24 participants' neural activity and affect ratings as they attempted to predict the emotional responses of a "tough" versus "sensitive" individual while viewing aversive images. In a post-scan questionnaire, participants reported the extent to which they engaged in cognitive or emotional perspective taking. Results indicated that amygdala activity, as well as a distributed multi-voxel pattern of affective negativity, "simulated" the affective state of the target individual, and that dorsomedial prefrontal cortex activity regulated this response. Furthermore, greater use of the emotional relative to cognitive strategy co-varied with increased activity in the insula, a key region involved in the appraisal of emotional stimuli. Our findings suggest that perspective taking can help regulate one's own emotions, and delineate the neural underpinnings of distinct perspective-taking strategies.

POSTER B-51

CHOOSING REAPPRAISAL IN RESPONSE TO HIGH INTENSITY STIMULI PREDICTS POST TRAUMATIC GROWTH

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Descriptors: emotion regulation, posttraumatic growth, reappraisal

Posttraumatic growth (PTG) is the experience of positive psychological change that may occur in the aftermath of a traumatic event. Previous research has extensively examined the cognitive underpinnings of PTG, yet the role of emotion regulation (ER) in PTG has yet to be fully elucidated. The present study sought to investigate how emotion regulation choice (ERC) contributes to PTG. One hundred and ten participants completed an ERC task in which they chose to either distract or reappraise in response to negative pictures of varying intensities (low, medium, and high) with the goal of diminishing their negative emotional responses to the photos. Proportion of reappraisal choice was recorded for each trial. Analyses were conducted to determine if reappraisal choice on the ERC task predicted PTG. Results from a repeated-measures ANOVA revealed a significant linear interaction between intensity and PTG ($F(1, 107), = 4.60$, $p<.05$). Follow-up multiple regression analyses indicated that it was only reappraisal choice proportion during high intensity trials that predicted PTG (beta = 39.75, $p<.05$). The findings of the present study suggest that choosing to reappraise high intensity negative stimuli may promote PTG. This study contributes to PTG and ER research by examining how ER choice contributes to growth, with implications for psychotherapeutic interventions for traumatized individuals.

POSTER B-52

GRATITUDE AND POLITICAL PERSUASION: WHEN AND WHY DO GRATITUDE EXPRESSIONS LEAD PEOPLE TO COMPLY WITH POLITICAL MESSAGES?

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Descriptors: emotion, persuasion, politics

When and why do gratitude expressions lead people to comply with political messages? In this experiment, participants (N=609) read a message to supporters of a political candidate that either expressed gratitude for their previous support, or not, and asked for their continued support in the future. Compared to messages that didn't include a gratitude expression, participants felt that messages including a gratitude expression would more positively influence their vote (Beta=.12, p=.03). This influence was mediated by enhanced perceptions of relatedness support (Beta=.12, p=.04; the effect of gratitude was reduced in size from Beta=.12, p=.03 to Beta=.06, p=.20 with relatedness support in the model) and sincerity (Beta=.14, p=.01; the effect of gratitude was reduced in size from Beta=.12, p=.03 to Beta=.04, p=.35 with sincerity in the model). However, results also suggest that gratitude expressions accompanying political requests don't always lead to enhanced compliance, and may even lead to diminished compliance in some cases. Looking at a separate outcome variable, number of voluntary activities the participant was willing to perform on behalf of the candidate's campaign, evidence was found for the moderation of gratitude expressions on compliance both by motivation type (Beta=-.20, p=.01) and persuasion awareness (Beta=-.12, p=.08). This research broadens our understanding of gratitude expressions in social contexts by showing that they can both facilitate and inhibit compliance with requests in political contexts.

FUNDING: Funding was provided by the John Templeton Foundation, the Greater Good Science Center at the University of California, Berkeley, and the University of Minnesota.

POSTER B-53

AN EXPANDED CONCEPTUALIZATION OF INDIVIDUAL DIFFERENCES IN PROFILES OF EMOTION REGULATION

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Marquette University

Descriptors: emotion regulation, regulatory profiles, psychopathology

Recent investigations into how multiple emotion regulation (ER) strategies interact to create regulatory patterns have revealed profiles of ER. One such study in our lab indicated that four profiles of ER (based on the use of six ER strategies) were present in a community sample and had the power to predict severity of psychopathology. The current study extended this work by investigating the profiles of ER present in an undergraduate sample. Self-reported use of six ER strategies was measured in 150 (67% female; average age = 18.9) undergraduates. Hierarchical cluster analysis identified five ER profiles. Although the profiles in the community and undergraduate samples were not identical, we found that the profiles relying predominately on acceptance, cognitive reappraisal, and problem solving are consistently associated with less negative emotion, $F(4,143) = 8.11$, $p < .001$, partial eta sq = .19, and more positive emotion, $F(4,143) = 5.15$, $p = .001$, partial eta sq = .13. Additionally, profiles reflecting frequent use of all six ER strategies continue to result in elevated levels of depression, $F(4,143) = 11.38$, $p < .001$, partial eta sq = .24, and posttraumatic stress, $F(4,143) = 10.58$, $p < .001$, partial eta sq = .23. Finally, a second sample of undergraduates is currently being collected to conduct a validation study for the undergraduate ER profiles. Results of the validation will be presented, along with a conceptualization of current research on the relationships of ER profiles to mood state and psychological symptoms.

POSTER B-54

EXPLORING THE BREAKDOWN OF SUBJECTIVE EMOTIONAL EXPERIENCE IN ALEXITHYMIA USING BEHAVIORAL MEASURES

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Vanderbilt University

Descriptors: alexithymia, interoception

Alexithymia, the inability to label and describe one's emotional experience, hinders normal-range emotional experiences. Decades of research highlights the transdiagnostic and clinical relevance of the construct; yet, little is known about its behavioral manifestation and how this interrupts normal-range emotional processing. The current study takes steps to elucidate its presentation in a non-clinical population. Participants are 68 individuals with no history of psychopathology, with normally distributed alexithymia scores (TAS20). Participants view Gross and Levenson's (1995) battery of standardized film clips and answer a series of questions about their subjective experience, including "what emotion did you experience the most," designed to elicit a "target" emotion. They complete a heartbeat detection (HBD) task to assess interoceptive awareness. We explore how various aspects of subjective emotional experience are related, and the moderating and mediating effect of alexithymia. For example, we find that HBD accuracy predicts selection of the target emotion in response to film clips ($p < .05$); however, this relationship is moderated by TAS20 score. HBD does not predict selection of the target emotion in individuals above a moderate alexithymia cutoff score. Thus, in elevated alexithymia, selection of the target emotion occurs via alternative strategies. We explore this and other findings. Ultimately, we hope this work sheds light on subjective emotional experiences in alexithymia, and point to meaningful targets of assessment and intervention.

FUNDING: This work was supported in part by an NIMH Training Grant (T32 MH018921).

POSTER B-55

TEMPORAL EXPERIENCE OF POSITIVE AND NEGATIVE EMOTION IN SCHIZOTYPY

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Louisiana State University

Descriptors: psychopathology, emotion experience, temporal precision

Schizotypy, the personality organization associated with increased risk for schizophrenia-spectrum pathology, is associated with low positive and high negative trait affectivity. Laboratory studies investigating state affectivity have also found abnormalities, yet prior studies lack temporal precision in analyzing continuous emotional ratings, notably in terms of whether abnormalities are anticipatory, consummatory or retrospective in nature. The current study utilized a novel approach to examining affectivity by having participants make emotional ratings while anticipating, during (using continuous ratings) and while recalling experiences from a series of 30-second videos. Videos reflected unambiguously positive or negatively valenced stimuli and participants rated them using unipolar positive or negatively valenced rating scales. Participants were grouped into controls (N=24) and high schizotypy (N=25); defined as exceeding the 90th percentile, on a validated self-report questionnaire. Ratings for subjects overall changed while anticipating, experiencing and recalling videos for both positive ($F(2,46)= 6.79$, $p=0.03$) and negative ratings ($F(2,46)= 31.60$, $p<0.01$). Individuals with schizotypy versus controls reported higher negative affect overall ($F(1,47)= 5.01$, $p=0.03$), but showed no difference for positive affect ($F(1,47)=0.81$, $p=0.37$). There were no significant time by group interactions observed. These results suggest that schizotypy is characterized by relatively global abnormalities in negative, but not positive, emotional experiences.

POSTER B-56

STATE EMOTION REGULATION AND THE MOOD BRIGHTENING EFFECT IN DEPRESSION

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Descriptors: emotion reactivity, sadness, depression

Daily life reactivity in depression has been characterized by a mood brightening effect (MBE) described as a change in negative affect (NA) in response to positive events. Little is known about this effect in the lab. Given the centrality of sadness to depression we set out to understand sadness reactivity to positive life events and to humorous films in the lab and daily life. We examined experiential reactivity across contexts and types of stimuli on sadness reactivity in 41 currently depressed (CD) and 33 healthy controls (HC). Results from lab show that, despite higher sadness at baseline ($p < .001$), CDs reported similar decreases in sadness to a humorous film as HCs. In daily life, CDs reported larger decreases in sadness in response to positive daily events ($F(1,71) = 4.51$, $p = .038$), yet indistinguishable reactivity to a structured humorous film relative to HCs ($p > .05$). Inspired by prior studies showing a chain effect between experiencing positive events, changes in emotion regulation (ER), and emotional reactivity, we investigated explanatory factors for the MBE. Engagement in psychotherapy and ER in response to an acceptance of NA exercise, but not uninstructed ER in the lab, explained a significant proportion of the MBE. Findings suggest emotional reactivity group differences vary across contexts and stimuli. Self-reported engagement in psychotherapy and response to an ER exercise explained the MBE observed in everyday life. This indicates that the MBE possibly highlights increased flexibility during experience of positive events in daily life in depression.

POSTER B-57

THE ROLE OF POSITIVE AFFECT IN INTERPRETATION BIAS IN REMITTED DEPRESSION

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Descriptors: positive affect, remitted depression, interpretation bias

Affective-cognitive models of depression propose that trait-like affect is related to cognitive processes that contribute to the development of depressive symptoms. While previous research has shown that high negative affect prospectively predicts depression symptoms and related implicit depressogenic cognitive processes (i.e., interpretation, memory, and attentional biases), less is known about the association between low positive affect and these cognitive processes. Interpretation bias has been associated with the onset and recurrence of depression, and has been demonstrated to persist following depressive episodes. The current study (N = 38) used validated objective assessments of interpretation bias and self-report measures to examine the relation between positive and negative affect and interpretation bias in individuals with remitted depression and healthy controls. Regression analyses showed that for individuals with remitted depression, lower levels of positive affect significantly predicted greater interpretation bias after accounting for the effects of current depressive symptoms, negative affect, and anxious arousal ($b = -0.33$, $SE = .10$, $\beta = -0.96$, $p = .002$). Levels of negative affect didnot significantly predict interpretation bias after accounting for current depressive symptoms, positive affect, and anxious arousal ($b = 0.07$, $SE = 0.11$, $\beta = 0.15$, $p = .542$). Future studies should continue to disentangle the distinct roles of low positive affect and high negative affect on the maladaptive cognitive processes related to depression.

FUNDING: Loyola University Chicago Research Mentoring Program; Loyola University Chicago Multidisciplinary Grant Program

POSTER B-58

BEHAVIORAL PATTERNS OF RESILIENCE

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San Francisco State University

Descriptors: resilience, emotion, approach/avoidance

Our aim is to identify the behavioral patterns associated with resilience. Resilience is characterized as the ability to 'bounce back' from adversity. While the benefits of resilience are well-documented, the behaviors that foster this ability remain elusive. One previously unexplored area in resilience involves approach/avoidance tendencies and emotion expressivity. Undergraduates (n = 18, 61% female, Mage = 23.38) completed surveys assessing resilience, attitudes towards emotion expressivity, and approach and avoidance sensitivities. Our sample scored similarly in resilience (m = 74.6) compared to the average associated with college undergraduates using the well-validated CD-RISC 25. Negative attitudes towards emotional expression (r = -.688, p = .002) and attitudes towards modulating one's own emotional experience (r = -.506, p =.032) were strongly negatively correlated with resilience. Sensitivity to negative outcomes such as punishment (r = -.614) was also strongly negatively correlated with resilience. Sensitivity to approach behaviors such as desire for new rewards (r = .598, p = .009) and pursuit of goals (r = .512, p = .030) was strongly positively correlated with resilience. These results suggest that behaviors associated with resilience include a valuing of emotional expressivity which leads to more approach (and less avoidant) tendencies. It follows, resilience is associated with greater sensitivity to reward and decreased sensitivity to punishment which may play an important and previously untested role in one's ability to develop/sustain resilence.

POSTER B-59

TESTOSTERONE CAUSES DIFFERENTIAL PHYSIOLOGICAL AND PSYCHOLOGICAL RESPONSES TO SOCIAL STRESS

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University of Oregon

Descriptors: stress, testosterone, cortisol

Testosterone has been studied as a modulator to the physiological responses to stress, but this effect has not been causally tested in humans. Furthermore, extant theories predict that testosterone could buffer stress physiologically via cellular mechanisms or increase stress through social psychological means. Additionally, although understudied, testosterone may contribute to concomitant psychological responses to stress. To test these relationships, exogenous T was administered as a topical gel to n = 120 participants prior to a social stressor (the Trier Social Stress Test, TSST). Cortisol was collected immediately before and 0, 20, and 40 minutes after the TSST; cardiovascular-derived indices of the autonomic response to stress were recorded continuously throughout the stressor and for ten minutes after. Participants answered self-report measures before and after the TSST while their behaviors were rated from video recordings of the stressor. Results suggest that exogenous testosterone caused a significant increase in the cortisol response to stress but did not significantly alter cardiovascular responses to stress. Behavior responses are explored within the context of this differential physiological response to stress.

FUNDING: National Science Foundation

POSTER B-60

HOW IS AFFECT REPRESENTED IN THE BODY? A META-ANALYTIC INVESTIGATION OF PERIPHERAL PHYSIOLOGICAL FEATURES OF AFFECT CATEGORIES

Erika H. Siegel[1], Lisa Feldman Barrett[2,3,4], Karen Quigley[2,5]
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Descriptors: affect, psychophysiology, meta analysis

There is considerable evidence to support the proposition that affect, in one form or another, is a general psychological process that is not specific to emotion. At the level of subjective experience, affect is fundamental, psychologically primitive, irreducible, and consistently present. In this review, we explore whether there are patterns of bodily responding that correspond to different affective states (e.g. changes in heart rate or movements of the muscles of the face) are similarly fundamental and irreducible. We present data from a meta-analysis of over 320 published studies of peripheral physiological reactivity during instances of affect to directly test whether there are specific biobehavioral patterns for different affective states. We utilized traditional univariate meta-analysis alongside multivariate pattern classification in our search. In our univariate analysis, we found tremendous variation within and across affect categories. In our multivariate pattern classification analysis, we were able to classify affect categories slightly above chance, but found no evidence of specific patterns in our univariate results. Overall, our findings did not suggest robust biobehavioral patterns that corresponded to affective states. Rather, pervasive variation across and within categories suggested that affect, at least at the level of peripheral physiology, may be more accurately described as an abstract category that describing variable instances.

POSTER B-61

SIMPLE PLEASURES: EXAMINING THE AFFECTIVE POTENCY OF FLOWERS

Christine D. Wilson-Mendenhall[1], Linda M. Bartoshuk[2], David G. Clark[2], Thomas A. Colquhoun[2], Lisa F. Barrett[1]
[1]Northeastern University, [2]University of Florida

Descriptors: positive affect, affective neuroscience, affective vision

The "simple pleasures" people often speak of do not receive much empirical attention in affective science. Floriculture, for example, is a major industry with a rich history, yet little research investigates the hedonic potency of flowers. To address this gap, we examined neural activity as participants viewed flowers and other visual objects during a simple categorization paradigm. Flower images were presented rapidly in blocks, amidst blocks of other stimuli, including blocks of within-category comparison images (green plants) and low-level visual comparison images (scrambled versions of the images). Because the sociocultural and sensory significance of flowers varies across individuals, we took an idiographic approach to data analysis (N = 30, 15 male). We predicted that greater neural activity would be observed in the extended social-affective default network during flower viewing (vs. comparison conditions) for females (but not for males) due to the sociocultural significance of receiving flowers. We further predicted that individual differences in post-scan pleasantness ratings of the flower stimuli would predict neural activity in regions of the salience network (e.g., anterior insula) during flower viewing and that individual differences in pleasantness ratings of specific flower-related activities (e.g., gardening) would predict neural activity in relevant sensorimotor regions. The results supported our predictions ($p < .05$ corrected), suggesting that "simple pleasures" like flowers may offer an easy source of positive affect and mood repair in everyday life.

POSTER B-62

EMOTION PERCEPTION AS A FORM OF EVENT PERCEPTION

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Northeastern University

Descriptors: emotion perception, context, facial expression

It is well established that various forms of "context" shape emotion perception (Barrett, Mesquita & Gendron, 2013). We extend and reinterpret the role of context on emotion perception within an event perception (Radvansky & Zacks, 2014) framework. We test the hypothesis that situational context serves as an "event model" that guides the dynamics of processing and mental state predictions. Using cues from notable character actors portraying complex emotional states (Actors Acting by Howard Schatz), we conducted online (MTurk; N=93, 38 Females) and lab-based eye-tracking (N=30, 15 Female) experiments. We find several aspects of gaze behavior are impacted by the presence of a situational context (marginally slowed first fixations: $F(1,3)=7.674$, $p=.07$, partial eta squared=.719; and shifts in conditional probabilities of gaze dynamics, revealed by a marginal interaction effect: $F(15,420)=1.559$, $p=.082$, partial eta squared=.052). Situational context also impacts predictions made about facial actions, such that forced-choice emotion judgments of situations and faces were more correlated with situations judged alone (Mean r=.66) than with faces judged alone (Mean r=.58). Further, when responses are unconstrained in a free-labeling task, faces preceded by situations lead to a greater diversity of predictions (170 unique terms produced across the sample) than faces alone (116 unique terms produced across the sample). Our findings suggest event perception is a fruitful organizing framework for understanding the role of context in emotion perception.

POSTER B-63

WITH A LITTLE HELP FROM MY FRIENDS? THE EFFECT OF SOCIAL SUPPORT DURING THREAT ON EFFORT-BASED DECISION MAKING

Amy H. Sanchez, Ann M. Kring
University of California, Berkeley

Descriptors: social support, effort, stress

Social support reduces people's reaction to threats, and thus may reduce the effort people feel they need to cope in stressful environments. Yet it is unclear if people with social support during stress translate this saved effort into the pursuit of other goals. This ongoing study examines whether social support during a threat induction influences the decision to exert effort. Participants are exposed to threat of electric shock either alone (n=10) or with a friend (n=16) or are assigned to a no threat condition (n=17). Participants then choose to complete easy or hard tasks for the chance to win lower or higher monetary rewards at varying probabilities of winning. Preliminary results suggest that when there is a 50 percent probability of winning the reward, participants who experience threat alone choose a higher proportion of hard trials compared to participants in the no threat condition, $p=.05$. Participants in the friend condition choose an equivalent proportion of hard trials as those who experienced no threat, and choose a significantly smaller proportion of the hard trials than people under threat alone at both a 50 percent probability, $p=.05$, and an 88 percent probability of winning, $p=.03$. Within the friend condition, participants who experience threat with a more supportive friend are less likely to choose the hard task, $r=-.51$, $p<.05$. These findings suggest that acute threat may increase readiness to exert effort, particularly in uncertain contexts, while social support may mitigate this readiness and possibly render the monetary reward less salient.

FUNDING: NIMH Predoctoral Fellowship T32MH02006

POSTER B-64

THE SAME, BUT DIFFERENT: COMPARING EUROPEAN, ASIAN, AND LATINO AMERICAN EMOTION VALUES

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Descriptors: emotion values, culture

Though Latinos are a large US population, little is known about how their emotion values relate to those of more often studied groups, like European and Asian Americans. Understanding these values is important, as they contribute to cultural variation in emotional experience and behavior. The current study examined European (n=491), Asian (n=464), and Latino American (n=666) emotion values along three dimensions: positive/negative valence, desirability/appropriateness, and feeling/expression. The results indicated that an overall pattern of emotion values was shared by all ethnic groups: positive emotions were valued more highly across all dimensions than negative emotions, and negative emotions were perceived as being more appropriate than desirable. Yet a significant 4-way interaction between ethnicity and the three value dimensions indicated that each group tended to conceptualize emotion values in a unique way ($F(4, 2904)=2.38$, $p=.05$), even when controlling for acculturation. Replicating past research, European and Asian American emotion values were consistent with cultural scripts of authenticity and harmony, respectively. Though both Asian and Latino Americans come from contexts where interdependent views of the self prevail, Latinos' positive emotion values shared more in common with European than Asian Americans. Consistent with a cultural script of simpatía, Latino Americans were also least likely to endorse the appropriateness of experiencing negative emotions. Results suggest cultural models of interdependence can encourage distinct patterns of emotion values.

POSTER B-65

WAIT FOR IT… AN FMRI STUDY PARSING ANTICIPATION

Ori Elis, Ann M. Kring
UC Berkeley

Descriptors: anticipation, motivation, reward

Functional magnetic resonance imaging (fMRI) studies of reward delineate anticipation as the period between cue and target onsets in monetary incentive-delay (MID) tasks. However, this period might reflect preparation of motivated behavior rather than anticipation of the reward outcome. Here we examine which regions are involved in anticipation of response (AntR) compared to anticipation of outcome (AntO) by introducing a second anticipation period following the target and preceding the outcome in a MID task. AntR taps anticipation of making a response while AntO taps anticipation of outcome after a response is made. During AntR, participants are presumably engaged in anticipation of the impending outcome and prediction of the likelihood of receipt of reward given the response executed. In contrast, during AntO, participants may be primarily engaging processes related to anticipation of the outcome predicting whether speed of response was sufficient for receipt of reward. Using an event-related design, we contrasted regional brain activity in AntR and AntO (N=16). ROI results indicated differential activation of striatal and frontal regions, with increased activation in caudate, anterior cingulate, hippocampus, and orbitofrontal cortical activity during AntO, and increased activation of putamen, nucleus accumbens and insula during AntO. Although preliminary, these results suggest that the anticipation of response and outcome are conceptually distinct and rely on both unique and common brain circuitry.

POSTER B-66

THE SOCIAL INFLUENCE OF EMOTIONS IN INTERPERSONAL AND INTERGROUP RESOURCE DILEMMAS

Magdalena Rychlowska, Job van der Schalk, Eva M. Breitinger, Antony S.R. Manstead
Cardiff University, School of Psychology

Descriptors: resource allocation, trust , social appraisal

This research investigates whether and how emotions promote fairness and trust in interpersonal and intergroup social dilemmas. In a first set of studies participants were exposed to an exemplar who made a fair or an unfair division in a resource dilemma and expressed pride or regret about this decision. Participants then made their own resource allocation decisions. These allocations were significantly affected by the exemplars' emotional expressions, such that competitive emotions (regret about fair decisions, pride about unfair decisions) decreased the likelihood of participants making fair decisions. Conversely, exemplars' cooperative emotions (regret about unfair decisions, pride after fair decisions) increased fairness. The second set of studies extends these findings by investigating the effects of cooperative and competitive emotions in an intergroup setting. Groups of participants were led to believe that they were playing a two-round trust game with another group. In the first round, each group was exposed to an outgroup member who was fair (reciprocating trust) or unfair (not reciprocating trust) and expressed cooperative or competitive emotions about this decision. In the second round, each participant played with another outgroup member. In line with the interpersonal studies, participants' trust was affected by exemplars' emotional expressions, such that regret following unfair decisions increased the amount of resources shared with the outgroup. Together, the studies reveal that others' emotions shape individual as well as intergroup trust and fairness.

Communicating appraisals and social motives (CASM): Interpersonal effects of regulated and unregulated emotion expression: ESRC (ORA).

POSTER B-67

DISTANCED AND AUTHENTIC: THE EMOTION REGULATION STRATEGY OF SELF-DISTANCING PROMOTES AUTHENTICITY

Craig L. Anderson, Jordan B. Leitner, Ozlem Ayduk
UC Berkeley

Descriptors: emotion regulation, authenticity, self-distancing

Given that reappraisal has been be linked to myriad adaptive social outcomes, it is surprising that the relationship between the habitual tendency to engage in reappraisal and authenticity has been found thus far to be null (Gross and John, 2003; English & John, 2012). One potential explanation is that distinct reappraisal strategies may have different effects on authenticity. Across three studies we use an experimental approach to pursue this line of inquiry by comparing the effects of a reappraisal strategy called self-distancing to other reappraisal strategies. As both emotion regulation and authenticity are important social processes, all three studies use a social context and use observer-rated outcomes. In both studies 1 and 2 (n=200), after using self-distancing participants reported feeling more authentic and were rated as more authentic by coders compared to using a common reappraisal strategy ("think about the situation in a different way..."), $Fs > 4.14$, $ps < .045$. Furthermore, in Study 2 we found that awareness of having changed one's natural emotional response, which was lower in the self-distancing condition, mediated this effect. In Study 3 (n=132) we compared the effects of self-distancing on authenticity in the context of mentoring. Participants in the self-distancing condition reported feeling more authentic than those in a self-immersion condition, $F = 6.74$, $p = .01$. Furthermore, people in the self-distancing condition were rated as higher in warmth and empathy by coders when they were giving advice, an effect mediated by authenticity.

Poster Session C
Saturday, March 19, 2016

Poster Schedule

12:00 noon-1:00 p.m. .....Assemble your poster
1:00 p.m.-4:15 p.m. .....Poster viewing
2:45 p.m.-4:15 p.m. ..... Author present
4:15 p.m.-5:15 p.m. ..... Take down your poster

POSTER C-1

CULTURAL DIFFERENCES IN DISGUST REACTION TO UNPLEASANT ANIMAL REMINDERS

Dolichan M. Kollareth, James A. Russell
Boston College

Descriptors: disgust, culture, animal reminder

According to Rozin, Haidt, and McCauley (2000; 2008), the emotion disgust, helps human beings to avoid confronting situations that would remind them of their animal origin or animal nature. However, not all situations that remind human beings of their animal origin or nature are unpleasant. In the present study, 32 undergraduates from three different cultures – USA, North India, and South India – rated, using an emotion list, their emotional reactions to items that were pleasant and unpleasant reminders of human beings animal origin or nature. To pleasant reminders, participants in all three cultures rated positive emotions (happy and funny). To unpleasant reminders, participants in all three cultures rated negative emotions, but the specific emotions that had the highest rating differed by culture: North Americans rated grossed-out the highest while North and South Indians rated sad and scared respectively the highest. Differing to Rozin et al., our results show that not all instances that remind human beings of their animal nature are disgusting. Instead, there are pleasant reminders to which there are pleasant emotional reactions. More importantly, even when unpleasantly reminded, participants' emotional reactions varied by culture. This variability suggests how cultural groups might differ in their use of emotion categories to communicate emotional reactions, and the limited utility of assuming anyone cultural group's categories as scientific.

POSTER C-2

INHIBITORY CONTROL MODERATES THE LINK BETWEEN TRAUMA SYMPTOMS AND IMPULSIVE BEHAVIOR IN A PEDIATRIC SAMPLE WITH EARLY LIFE STRESS

Sarah-Nicole Bostan[1], Changiz Mohiyeddini[1], Weidong Cai[2], Rachel Rehert[2], Vinod Menon[2], Victor Carrion[2]
[1]Northeastern University, [2]Stanford University School of Medicine

Descriptors: inhibitory control, traumatic stress, impulsivity

Impulsive behaviors in adolescents have been positively associated with early life stress, leading to the development of post-traumatic symptoms. Prior research has found mixed evidence identifying the role of inhibitory control (IC), an executive function involving the stopping of a prepotent response, in the relationship between trauma symptoms and impulsivity. The aim of this study was to examine if IC moderates this relationship in adolescents from an impoverished, Hispanic community with high rates of violence exposure. Data was acquired from 30 children aged 10-12 (males n=18, females n=12). Measures used were the Trauma Symptom Checklist for Children to assess global impact of trauma, parent reports of the Domain-Specific Impulsivity Scale, and the Stop-Signal Task, an experimental paradigm assessing IC. It was hypothesized that IC moderates the relationship between self-reported trauma symptoms and parent-reported impulsivity. Results of moderation analysis indicate that IC significantly moderates the relationship between trauma symptoms and impulsivity (Beta=-0.44, t(29)=-2.152, p=0.041). Simple slope analysis shows that this effect is significant only at the low level of IC (regression coefficient b=8.952, Se=0.292, p=0.008) but not at the medium or high levels. These novel findings show that trauma symptoms may influence development of impulsive behaviors only when inhibitory control is typically developing. When inhibitory control is poor, it may be that biological perturbations are so severe that the impact of trauma cannot significantly be detected by parents.

FUNDING: The Sonima Foundation

POSTER C-3

THE EFFECT OF AROUSAL ON REGULATION OF NEGATIVE EMOTIONS USING COGNITIVE REAPPRAISAL: AN ERP STUDY

Michelle E. Sanchez, Sandra J.E. Langeslag
University of Missouri-St. Louis

Descriptors: emotion regulation, reappraisal, ERP

Because the effectiveness of the emotion regulation strategy cognitive reappraisal may vary with emotion intensity, we investigated how stimulus arousal affects reappraisal success. Participants up- and down-regulated emotional responses to low and high arousing unpleasant pictures while the electroencephalogram (EEG) was recorded. Up-regulation resulted in more negative feelings, while down-regulation resulted in less negative feelings regardless of arousal, suggesting that subjective reappraisal success does not vary with emotional intensity. The late positive potential (LPP) amplitude was enhanced by up-regulation of low arousing pictures between 300-1000 ms and by up-regulation of high arousing pictures between 300-400 ms only. This suggests that objective reappraisal success was greater for up-regulation of low than high arousing pictures, although the observation of an enhanced LPP for down-regulation between 300-400 ms challenged the interpretation of the LPP amplitude as reflecting regulation success. Finally, participants tended to find it relatively hard to up-regulate low arousing and to down-regulate high arousing stimuli, the latter of which corresponds with previous findings that reappraisal is not suitable for regulation of intense negative emotions. Suggestions and recommendations for future research are discussed, including using trial-by-trial manipulation of regulation instructions and studying the effect of arousal on up- and down-regulation of positive emotions.

POSTER C-5

CHILDHOOD TRAUMA AND SYMPTOM SEVERITY IN SOCIAL ANXIETY DISORDER: THE MEDIATING ROLE OF RUMINATION

Shreya Lakhan-Pal[1], Courtney Crisp[1], Amanda S. Morrison[1], Philippe Goldin[2], James J. Gross[1]
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Descriptors: childhood trauma, rumination, social anxiety

Childhood trauma, especially emotional trauma, is known to predict social anxiety in adulthood. However, little is understood about the mechanisms underlying this association. Poor emotion regulation (ER) may explain this relationship, given its associations with both childhood trauma and social anxiety disorder (SAD). Therefore, we examined the indirect effects of different types of childhood trauma on SAD symptom severity via maladaptive and adaptive ER strategies, namely, rumination and reappraisal. Participants were adults with generalized SAD, N=222, 51% female, age M= 32.2, who completed self-report measures of childhood trauma, rumination, reappraisal, social anxiety (LSAS, BFNE), and life satisfaction in a cross-sectional design. Mediation analyses, with 10,000 bootstrap resamples yielding 95% CIs, revealed that elevated levels of rumination mediated the link between greater childhood emotional trauma (abuse and neglect) and elevated social anxiety (LSAS kappas=.03; BFNE kappas=.06), as well as between greater emotional abuse and lower life satisfaction (kappa=.06). In contrast, rumination did not mediate the link between childhood physical trauma (abuse or neglect) and any outcome, nor did reappraisal mediate any paths from childhood trauma to outcomes. Therefore, the maladaptive ER strategy rumination explained the relationship between childhood emotional trauma and SAD severity, but the adaptive strategy reappraisal did not. This is consistent with prior findings suggesting a stronger role for rumination than reappraisal in psychopathology in general.

POSTER C-6

AN EXPERIMENTAL INVESTIGATION OF THE EFFECTS OF INTRAPERSONAL AND INTERPERSONAL EMOTION REGULATION ON SUBSEQUENT AFFECT AND STRATEGY CHOICE

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Descriptors: emotion regulation, interpersonal processes, experiment

Recent theorists have suggested that the use of emotion regulation (ER) strategies might be transmitted within dyads (Butler, 2011; Zaki & Williams, 2013). Indeed, a recent study shows that when one member of a dyad uses rumination, the other increasingly adopts this strategy (Haeffel & Hames, 2014). However, little is known about how other ER strategies such as worry (maladaptive) and acceptance (adaptive) are transmitted. Because maladaptive strategies have a stronger link with mental health indices than adaptive strategies (Aldao et al. 2010), they might play a more central role in a person's emotional functioning. Thus, we expected an asymmetric contagion effect, such that worry would "spread" more than acceptance. We induced 74 undergraduates to use worry or acceptance (intrapersonal induction; within-subjects) before interacting with a confederate engaging in either worry or acceptance (interpersonal induction; between-subjects). After the intrapersonal induction, when participants were induced to worry, they reported greater worry and anxiety than when they were induced to accept (p's < .001). After the interpersonal induction, those who interacted with the worrying confederate reported higher worry (p = .023) and anxiety (p = .063) than those who interacted with the accepting confederate. There were no differences in acceptance. These findings suggest that the use of maladaptive strategies might be particularly susceptible to interpersonal influences and they highlight the importance of incorporating interpersonal contexts in the study of ER.

POSTER C-7

AGE-RELATED DIFFERENCES IN PROFILES OF SELF-REPORTED EMOTION REGULATION PREFERENCES

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Descriptors: emotion regulation, aging

Despite a proliferation of research on aging and emotion regulation, no studies have examined age-related patterns in self-reported preferences for different emotion regulation strategies across different contexts. The present study extends the literature by identifying profiles of emotion regulation preferences in an adult lifespan sample. Participants were 139 younger adults, 86 middle-age adults, and 67 older adults. Emotion regulation preferences were measured using self-report. Participants read fifteen emotional situations and were asked to rate their preference (least likely to use to most likely to use) for thirteen emotion regulation strategies. Profiles of emotion regulation preference were analyzed using latent profile analysis in Mplus 7.31. Fit indices converged on three classes: Rumination, Management, and Avoidance. In the Rumination class, participants focused on negative aspects of the emotion and situation. In the Management class, participants managed physical and cognitive aspects of the immediate situation. In the Avoidance class, participants preferred avoidance or distraction strategies. Compared to younger adults, older adults had increased odds of being in the Rumination rather than Avoidance class; middle-age adults had decreased odds. Both older and middle-age adults had increased odds over younger adults of being in the Management rather than the Avoidance class. These findings indicate that people vary systematically in their preferences for different emotion regulation strategies across contexts, and that age is a predictor of this variation.

POSTER C-8

CORRELATION BETWEEN VALENCE AND AROUSAL RATINGS OF EMOTIONAL PICTURES IN JAPANESE ELDERLY ADULTS

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Descriptors: emotional evaluation, international affective picture systems, elderly people

It is revealed that older adults recalled more positive than negative materials (positivity preference; Reed et al., 2014), but it dose not reveal in universal (Kwon et al., 2011; Ueno et al., 2013). Because of Asian people focus on more adaptation in interdependent culture, it seems that Asian people are sensitive to harmful for other than beneficial for one material. This study examined correlations and age-related differences in emotional ratings of IAPS among Japanese older and younger adults. Participants were 31 elderly adults (69 ± 5.17 years old) and 31 younger adults (19 ± 0.77 years old). The average ratings of valence were 4.99 ± 1.70, and arousal were 3.38 ± 1.19 for 120 IAPS images (Lang et al., 2007). Each picture was projected on the screen for about 5 minutes, and then participants rated each picture for valence, from "unhappy" to "happy," and for arousal, from "relaxed" to "exciting," with 9-point scales. According to Pearson's correlation analysis, valence was negatively correlated with arousal in both age groups. Valence was classified as negative from 1 to 4 points, neutral from 5 to 6 points, and positive from 7 to 9 points. A 2 (Group) × 3 (Valence) ANOVA was conducted on the arousal ratings. There were no significant differences between the age groups but arousal in negative pictures was significantly higher than arousal in positive pictures for both age groups. Because both age groups rated arousal higher in negative pictures than in positive pictures, this study suggested that Asian people are sensitive to harmful materials.

POSTER C-9

GENETIC AND ENVIRONMENTAL CORRELATES OF TEMPERAMENT IN INFANCY: OBSERVED AND PARENT REPORTED POSITIVE AFFECT

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Descriptors: positive affect, twin method, infancy

Temperament, often viewed as biologically based, is a developmental construct with components that are differentially heritable. Substantial shared environmental factors influence variation in infant positive affect, suggesting that differences in family dynamics may contribute to variation in infants' developing positive affect. We estimated the magnitude of genetic and environmental influences on continuity and change in infant positive affect at 6 and 12 months of age in 901 twin pairs. Infant positive affect was measured using parent reports of Smiling and Laughter (Rothbart, 1981) and infants participated in tasks from the Laboratory Temperament Assessment Battery (Goldsmith & Rothbart, 1999). Parents reported on their own affect and family emotional expressiveness. Results from a classical bivariate twin model indicated that observed infant positive affect was determined by genetic (standardized Est.=.42) and shared environmental influences (Est. = .55, .36) which were independent across development and genetic (Est.=.55) influences across age. Parent reported infant affect was largely influenced by shared environmental factors (Est.=.87, .31) that overlapped across ages (Est =.41). By 12 months of age, infant positivity was related to both parent affect and family expressiveness, indicating that positive affect may be, at least in part, learned from experiences with caregivers. Findings highlight the importance of using genetically informed research to evaluate temperamental development, as well as to identify sources of individual differences in infant positivity.

POSTER C-10

ASSESSING MINDFULNESS ABILITY: NOVEL PARADIGM REFLECTS CHANGES IN EMOTIONAL AROUSAL FOLLOWING BOTH BRIEF AND LONGER-TERM TRAINING

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Descriptors: mindfulness, measurement, emotion

Mindfulness is a multifaceted mental state that blends focused awareness of moment-to-moment experience with an attitude of acceptance, curiosity, and affection. The last decade has witnessed a veritable explosion of mindfulness research and enthusiasm regarding its potential applications to clinical work, education, and business. Most research asks participants about their typical use of mindfulness rather than conducting more targeted performance-based assessments in the face of emotional challenge. Modeled after laboratory assessments of emotion regulation, we developed a brief training in and assessment of two aspects of mindfulness – awareness and acceptance. Participants (n = 24) were instructed to respond with and without mindfulness to negative pictures while we recorded self-reported emotional arousal, electrodermal activity, and activity of the corrugator supercilii muscle. Participants completed the task twice; before and after the 8 week Mindfulness-Based Stress Reduction (MBSR) program. We observed that participants were effectively able to change their emotional response using mindfulness at the initial assessment (for one example, greater reductions in arousal ratings while implementing awareness versus not, $p < .001$), and MBSR appeared to improve this ability (e.g., interaction of time and instruction for ratings $p = .018$). These results suggest that the paradigm is capable of assessing both momentary and longer-term changes in mindfulness ability and therefore may be useful in future studies of the mechanisms and consequences of mindfulness.

FUNDING: Assumption College/University of Massachusetts Medical School Collaborative Pilot Research Program

POSTER C-11

PICKING UP GOOD VIBRATIONS: DELINEATING THE FULL RANGE OF POSITIVE EMOTIONS

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Descriptors: positive emotions, taxonomy, scale development

Despite an uptick in the study of distinct positive emotions over the past decade (e.g., awe, love, pride), little research has examined how these positive states are similar and dissimilar to each other, or explored the specific, non-shared psychological content of each. To redress this gap in the literature, we conducted an iterative series of 11 studies that aimed to develop a comprehensive taxonomy of distinct positive emotions. First, in Studies 1a-1e and 2a-2e (N=2581), we used bottom-up approach to uncover the experiential content of each distinct positive emotion previously examined in the literature. In each study, participants recalled momentary experiences of several positive emotions, and rated how strongly they felt each of a set of approximately 18-25 subjective components (thoughts, feelings, actions) associated with each emotion (components were generated by a separate sample of 30 participants). Factor analyses of these ratings revealed that, across the 10 studies, 15 positive emotions formed distinct factors. Next, Study 3 (N=350) examined interrelations among all 15 positive emotions, and developed brief, reliable self-report scales to measure each. The scales showed good discriminant validity (mean intercorrelation=.37), but several notably high correlations indicated emotions that did not appear distinct (e.g., attachment love and tenderness, r=.70). Together, these findings allow us to pinpoint exactly how many positive emotions are likely to be subjectively experienced as distinct, and the specific feelings, thoughts, and actions that constitute each.

POSTER C-12

TRAIT RUMINATION PREDICTS WORD USE IN NEGATIVE MOOD INDUCTION

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Descriptors: trait rumination, linguistic processing, negative mood induction

Introduction: Rumination has been identified as a major risk factor for the onset and maintenance of affective disorders. However, it remains unclear how rumination affects the onset of negative mood. In this study, we investigated how trait rumination influences linguistic processing of emotional material while inducing negative mood. Methods: A sample of undergraduates (N=209) participated in a lab-based negative mood induction, in which they wrote about a negative personal experience while listening to sadness-inducing music (Barber, Adagio for Strings). Narratives were analyzed using Linguistic Inquiry and Word Count (Pennebaker, Booth, & Francis, 2007) to examine patterns of word use, including frequency, types of pronouns, emotion words, causal and certainty words. Participants also completed affect ratings before and after negative mood induction. Results: High ruminators had significantly lower ratios of positive to negative words ($M= 2.60$, $SD= 1.93$) than low ruminators, after controlling for age, gender, word count, and depression symptoms, ($M= 3.06$, $SD= 1.64$), $F(1, 187)= 3.91$, $p< .05$, 95% CI [.001, 1.10], with high ruminators using significantly more negative emotion words ($M= 2.70$, $SD= 1.78$) than low ruminators ($M= 2.17$, $SD= 1.71$), $F(1, 202)= 3.70$, $p< .05$, 95% CI [-1.01, .01]. No other significant differences were found. Conclusions: These results suggest that trait rumination may impact negative mood through linguistic processing, such that high trait ruminators use greater negative emotion words relative to positive words, as compared to low trait ruminators.

POSTER C-13

POSITIVE BELIEFS ABOUT SELF-COMPASSION PROMOTE RESILIENCE

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Descriptors: self-compassion, coping, beliefs

Despite self-compassion's benefits, many people believe it is harmful. Here, we examined how beliefs about self-compassion tracked with actual self-compassion and coping behaviors. Pilot testing confirmed that a roughly equal proportion of people believe self-compassion is helpful versus harmful. In Study 1, participants read hypothetical scenarios about painful life events such as the loss of a loved one, job cuts and relationship strain. Then, they indicated how they would feel and cope in each situation. Both positive beliefs about self-compassion and actual self-compassion predicted fewer negative emotions and more adaptive coping strategies. Actual self-compassion fully mediated the relationship between beliefs about self-compassion and certain adaptive coping behaviors. In Study 2, participants responded to the same scenarios after reading an article describing either the helpful or harmful nature of self-compassion. Participants who read about self-compassion's helpful nature had more positive beliefs about self-compassion than participants who read about its harmful nature. Interestingly, the articles did not influence actual self-compassion. This further suggests that beliefs about self-compassion and actual self-compassion are unique constructs. Although both constructs predicted adaptive coping strategies, only positive beliefs about self-compassion predicted support seeking, and only actual self-compassion predicted fewer avoidant coping strategies. Further research should clarify how beliefs about self-compassion and actual self-compassion interact over time.

POSTER C-14

THE GRATEFUL ARE PATIENT: HEIGHTENED DAILY GRATITUDE IS ASSOCIATED WITH ATTENUATED TEMPORAL DISCOUNTING

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Descriptors: gratitude, self-control, temporal discounting

Past research has regularly linked the experience of affect to increased impatience and, thereby, decreased self-control. Given emerging work identifying the emotion gratitude as a fairly unique affective state capable of enhancing, rather than inhibiting, patience, the present study examined the association between chronically elevated gratitude and individual differences in temporal discounting. One hundred and five participants' levels of gratitude were assessed over a three-week period and in response to a standardized lab induction prior to measurement of their financial patience in the form of an incentivized discounting task. Analyses revealed a strong relation between lab-based and naturally occurring gratitude levels, thereby confirming the validity of the daily online measures. Of import, mean levels of daily gratitude were significantly associated with increased patience in the form of decreased temporal discounting, b = .053, beta = .21, p = .032. As expected, no similar relation emerged for daily levels of happiness, thereby confirming the specificity of the positive state of gratitude on self-control.

POSTER C-15

ADULT ATTACHMENT FORMATION AND NEGATIVE REINFORCEMENT SCHEDULES

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Descriptors: attachment, learning, emotion regulation

Much is unknown about the formation of adult attachment styles. We investigated whether negative reinforcement schedules promote hallmark features of secure and insecure anxious attachment in a support-seeking paradigm. Participants (N = 60) ostensibly asked for help (via button press) from another participant each time a shock threat signal appeared. If the supporter helped, the supporter's face appeared and the shock was not delivered. Supporter reliability was varied to be consistent (continuous reinforcement) or inconsistent (variable ratio reinforcement). We measured P1 ERP responses to the faces, implicit evaluations of the faces via a lexical decision task, and explicit evaluations of the faces as dependent measures. Results indicated that inconsistently responsive others led to heightened P1 indexed approach related attentional biases toward the supporter, F(1.979, 98.944) = 3.314, p=.041 (See Cunningham, Van Bavel, Arbuckle, Packer, & Waggoner, 2012), stronger implicit positive attachment associations with the supporter, F(2,107.64)=4.39, p=.015, and more negative explicit evaluations of the supporter, F(1.557, 90.281) = 34.44, p<.001. These findings support the model of attachment style formation forwarded by Beckes and Coan (2015), which argues that anxious attachment styles, which are characterized by excessive approach motivation, clinginess, and ambivalence, emerge out of a variable-ratio negative reinforcement schedules during distressed support seeking.

POSTER C-16

THE COGNITIVE APPRAISAL PATTERNS OF 15 POSITIVE EMOTIONS

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Descriptors: positive emotion, appraisal theory, emotion differentiation

Emotion research often fails to differentiate among positive emotions. To address this issue, Tong (2015) evaluated how 13 cognitive appraisals corresponded with 13 positive emotions. In the present study (n=312), we used a retrospective survey of appraisals and emotions to distinguish 15 positive emotions using 18 appraisals, conducting separate regression models to assess how specific hypothesized appraisals were related to each emotion. We analyzed models for the positive emotions from Tong (2015) as well as two other emotions—surprise and excitement. In general, we conceptually replicated the previously demonstrated appraisal-emotion patterns and expanded on Tong (2015) by uncovering further appraisals that differentiated among the emotions. Most notably, the appraisal of likeability was associated with affection; the appraisal of being in line with expectations was associated with amusement; and the appraisal of revealing a positive aspect of self was associated with pride (all ps<.001). With regard to the two emotions that were not included in Tong (2015), we found that appraisals of active coping potential, revealing a positive aspect of self, and likeability corresponded with experiences of excitement (all ps<.05); in contrast, appraisals of low acceptability, the involvement of others, and a deviation from expectations differentiated surprise from the other positive emotions (all ps<.04). The present study underlines the importance of positive emotion differentiation and adds to the growing body of literature on how appraisals may be used to differentiate emotions.

POSTER C-17

IMPAIRED AFFECTIVE REGULATION, BUT UNIMPAIRED AFFECTIVE PROCESSING, WITH CONTROLLED TOTAL SLEEP DEPRIVATION

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Washington State University

Descriptors: sleep deprivation, affective processing, emotion regulation

Sleep deprivation (SD) often results in decreased global positive affect. It has been assumed this decrease influences processing of affective stimuli, which could bias cognitive processes downstream. However, there is little experimental evidence to support this assertion. The objective of this study was to determine whether SD-induced changes in global affect influence processing of affective stimuli from the International Affective Picture System (IAPS) and Affective Norms for English Words (ANEW). Healthy adults lived in a sleep laboratory for six days with random assignment to 62 hours of SD (N=40), or Control (N=20) with nighttime sleep. Global affect was assessed throughout the study by the Positive and Negative Affect Schedule. Tasks were scheduled at baseline, during SD/Control, and after recovery sleep to examine affective processing in: (1) psychomotor vigilance test using ANEW words as stimuli; (2) categorization task with IAPS pictures; (3) N-back task with ANEW words; (4) emotion regulation task with IAPS pictures. Global positive affect decreased for SD subjects, but almost all aspects of affective stimulus processing were comparable between SD and Control. The only group difference was in the emotion regulation task, where SD subjects rated stimuli as more negative and had less effective emotion regulation. Thus, while SD changes self-reported global affect, it does not necessarily bias processing of affective stimuli. Effects of SD on emotion regulation may reflect SD-impaired top-down attentional control, rather than bias in affective processing.

FUNDING: Supported by Office of Naval Research grant N00014-13-1-0302 (Van Dongen, PI)

POSTER C-18

AN ECOLOGICAL MOMENTARY ASSESSMENT EVALUATION OF EMOTION REGULATION IN SCHIZOPHRENIA

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Descriptors: emotion regulation, ecological momentary assessment, schizophrenia

Prior studies using self-report questionnaires and laboratory-based methods suggest that schizophrenia is characterized by abnormalities in emotion regulation (i.e., using strategies to increase or decrease the frequency, duration, or intensity of positive or negative emotion). However, emotion regulation abnormalities have not been systematically explored in schizophrenia using more ecologically valid methods. Using the Ecological Momentary Assessment (EMA) approach, outpatients diagnosed with schizophrenia (SZ: n = 30) and demographically matched healthy controls (CN: n = 30) completed 6-days of EMA reports of in-the-moment positive and negative emotion, emotion regulation strategy use, and psychotic symptoms. Adaptive and maladaptive emotion regulation strategies were probed, including: reappraisal, suppression, soothing, interpersonal interactions, situational avoidance, and distraction. Analysis of the EMA data indicated that: 1) SZ reported comparable in-the-moment positive emotion to CN when engaged in activities ($F = 0.73$, $p = 0.40$); 2) greater negative emotion than CN ($F= 4.8$, $p < 0.05$); 3) more frequent use of all 6 emotion regulation strategies to decrease negative emotion ($F = 7.5$, $p < 0.01$). These findings suggest that SZ is characterized by increased negative emotionality, and that while these patients make a greater number of attempts to regulate their negative emotions, they are less effective at doing so.

FUNDING: Interdisciplinary Collaborative Grant from the State University of New York

POSTER C-19

DECOMPOSITION OF THE ALEXITHYMIA CONSTRUCT USING LASSO REGULARIZATION AND LINEAR REGRESSION MODELING

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Descriptors: alexithymia, emotion, regression

Alexithymia denotes an inability to identify and to explicate subjective emotional experience—normally a self-regulatory process critical in regulating and organizing emotional states, such as anger and sadness. For this reason, alexithymia has been implicated as a potential mediator in various forms of psychopathology, particularly in affect-related symptomology. As a sub-clinical personality construct, alexithymia has been defined conceptually only through self-report measures, an inherent limitation stemming from single-method bias. As such, the present study utilized a collection of emotion-induction video clips to invoke seven major emotions in a normal population (N = 108) in order to (1) obtain direct behavioral measures of emotional intensity, subjectively reported physiological arousal, experienced subjective feelings, and reaction times therein so that (2) these indices could be used in the prediction of alexithymia, measured using the 20-item Toronto Alexithymia Scale. In this exploratory analysis, 186 explanatory variables were generated; and the LASSO shrinkage estimator was employed, isolating 17 optimal predictors. A linear regression model was fitted with all 17 parameters demonstrating significance, and bootstrapping validation procedures were used to assess multiple R-squared estimates. Results suggest alexithymia is behaviorally complex and can be decomposed into measures of subjective arousal; specific emotional word labels; reaction times; and other indicators that collectively necessitate further, specialized study and theoretical consideration.

POSTER C-20

AS YOU "LIKE" IT: EFFECTS OF ATTACHMENT AND REWARD DRIVE IN PREDICTING SOCIAL MEDIA USAGE

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Descriptors: social media, social support, anxious attachment

Social networking has become an increasingly significant component of society, specifically in collegiate environments. The college culture breeds opportunities for new self-discovery and subsequently obsession with finding outlets for emotional reactions and commentary. This study seeks to gain a more comprehensive understanding of the underlying emotional and cognitive mechanisms that give rise to specific social networking behaviors. 116 undergraduate participants completed an online survey including the BIS/BAS, trait attachment, measures of social media usage, and use of social media for support including comfort seeking and evaluation concern. A series of hierarchical regressions were performed using anxious attachment and BIS/BAS subscales to predict levels of comfort seeking and evaluation concern in social media use. Results reveal that anxious attachment (beta=.514, p<.001) and BAS Reward Drive (beta=.21, p<.01) both significantly predict comfort seeking behaviors on social networking sites, yet only anxious attachment predicts evaluation concern behaviors on social networking sites (beta=.404, p<.001). These results suggest that participants with higher reward drive and anxiousness are more motivated to actively seek social support and are more likely to post frequently for continued support. Moreover, greater anxious attachment predicted higher evaluation concern suggesting that these individuals are more selective in deciding which emotional projections are displayed on their social media platforms.

POSTER C-21

CONTRIBUTORS TO SELF-CONSCIOUS EMOTIONS IN ADOLESCENTS: THE ROLES OF PERSONALITY AND MOOD-RELATED PSYCHOPATHOLOGY

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Descriptors: self-conscious emotions, adolescents, mood disorders

Personality characteristics, such as neuroticism and extraversion, relate to emotion reactivity and recovery. Both personality traits and the experience of emotions, particularly self-conscious emotions, are linked to mood disorders in youth. The dysregulation of self-conscious emotions has been tied to many poor functional outcomes; thus it is important to understand mechanisms driving self-conscious emotions. This study assessed the extent to which variation in state shame and guilt is explained by mood psychopathology and personality traits in adolescents. Personality was measured with the Five Factor Personality Inventory for Children. The personality traits of interest were emotion regulation (the inverse of neuroticism) and extraversion. Shame and guilt were measured with the State Guilt and Shame Scale. Youth (N=103), aged 12-17, were diagnosed with a mood disorder (n=77), i.e. bipolar disorder or major depressive disorder, or were healthy (n=26). For shame, the overall model ($F = 15.904$, $p < .001$) and emotion regulation ($F = 24.016$, $p < .001$) were significant, while extraversion ($F = .030$, $p = .864$) and diagnosis ($F = 1.09$, $p = .299$) were not. For guilt, the overall model ($F = 6.301$, $p < .005$) and emotion regulation ($F = 10.62$, $p < .005$) were significant, but extraversion ($F = .402$, $p = .710$) and diagnosis ($F = .859$, $p = .357$) were not. These results suggest that emotion regulation predicts shame and guilt, more than extraversion or mood diagnosis. Personality may influence shame and guilt, by establishing a trait-level predisposition for emotional dysregulation.

POSTER C-22

A MULTIMETHOD INVESTIGATION OF SHAME AS AN ANTECEDENT FOR PROBLEMATIC DRINKING

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Descriptors: alcohol, shame, guilt

The causal status of shame in provoking problematic drinking has not been established. This poster presents data from a larger observational study aimed at extracting ecologically valid information about drinkers' daily drinking patterns as they relate to dispositional, contextual, and shame-related factors. A sample of 88 community drinkers were assessed at baseline and completed a 21 day online diary. Hierarchical regressions showed that shame and guilt measures were predictive of alcohol-related problems ($F(4, 83)=5.67$, $p<.001$) but not days of drinking ($p=.84$) or total number of drinks in the last 30 days ($p=.43$). Regression models showed that shame measures, overall, better predicted drinking-related problems than guilt measures ($F(1,83) = 4.46$, $p = .006$). Daily diary results showed that daily experiences of shame, above and beyond negative affect and previous drinking, did not predict the likelihood of drinking alone that evening (Odds Ratio = 1.17; $p = 0.73$). In contrast, daily experiences of shame, above and beyond negative affect and previous patterns of drinking, did predict amount of drinking alone that evening (Risk Ratio = 1.37; $p = 0.02$). Level of previous night's drinking alone also predicted level of shame experienced the next day, after controlling for previous day's drinking (Risk Ratio = 1.02; $p = 0.04$), but the effect was smaller than the effect of shame on that night's drinking.Overall, these findings demonstrate that shame is a more important predictor of drinking behavior than guilt and that shame is a close temporal antecedent of problematic drinking

POSTER C-23

VOCAL ACOUSTICS AND THE CROSS CULTURAL PERCEPTION OF EMOTION

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Descriptors: vocal acoustics, harmonics, cross-cultural

Humans and nonhuman animals alike can make sounds to communicate about their affective states. We evaluated whether acoustic variation impacts cross-cultural perception of sounds conveying emotion. Acoustic analysis of 36 vocal samples was performed using Praat v5.3.55. The vocal samples were produced by actors to represent 9 discrete emotions. Acoustic analyses identified the average pitch, intensity, and harmonics of each sound. In a series of cross cultural experiments, US Americans (N=24) and Himba people (N=24) freely labeled the vocal samples and responses were coded for accuracy based on emotion category, valence, and arousal of each sound. Average labeling accuracy per vocal sample was computed from individual-level data. There was no correlation between average pitch and accuracy labeling emotion for both samples (all p's >0.13). The Himba's accuracy for labeling discrete emotion improved as mean intensity of the sound decreased ($r=-0.44$, $p\leq0.01$). The Himba were more accurate at labeling arousal with greater pitch and intensity ranges (pitch: $r=0.34$, $p\leq0.04$; intensity: $r=0.41$, $p\leq0.01$). Consistently, the average value of the first harmonic was significantly correlated with the Himba's ability to accurately label the valence ($r=0.35$, $p\leq0.04$), arousal ($r=0.36$, $p\leq0.03$), and discrete emotion category ($r=0.37$, $p\leq0.03$) of the vocal samples. These findings suggest that when understanding the affective meaning of sounds is challenging, variation in pitch and intensity (or "loudness") and higher harmonic information may improve understanding.

POSTER C-24

THE ROLE OF STRESSOR-RELATED APPRAISALS IN MEDIATING THE RELATIONSHIP BETWEEN PERSONALITY AND EMOTIONAL REACTIVITY TO STRESSORS

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Descriptors: emotional reactivity, personality, appraisals

Some people have stronger negative reactions to stressors than others. Researchers posit that personality traits in part explain individual differences in this emotional reactivity. Appraisals of stressors may be one potential mechanism through which personality is associated with emotional reactivity to stressors. Yet, few studies have examined if stressor-related appraisals account for associations between personality and stress reactivity. The current study examines the role of appraisals in partially mediating the relationship between Big 5 personality traits and emotional reactivity to daily stressors. Participants (N=1814) completed a series of daily interviews in Wave 2 of the National Study of Daily Experiences (NSDE II), a subset of the Midlife in the United States (MIDUS II) Survey. Regression models indicate that stressor severity, stressor appraisals, and controllability are related to emotional reactivity to stressors and decrease the effects of conscientiousness (beta= -.21 to -.13; a 38% decrease), neuroticism (beta = .31to .20; a 35% decrease), and openness to experience (beta =-.11to -.07; a 36% decrease) on this reactivity. Results indicate that stressor appraisals are factors that account for the associations between personality traits and emotional reactivity to stressors.

POSTER C-25

YOUTHFUL BRAINS IN ELDERLY ADULTS: DEFAULT MODE AND SALIENCE NETWORK CONTRIBUTIONS TO SUPERAGING

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Descriptors: superaging, salience network, default mode network

Decline in cognitive skills, especially in memory, is often understood as part of "normal" aging. Yet some individuals "age better" than others, raising the question: what is the key to aging well? Building on prior research showing that cortical thickness in one brain region, the dorsal anterior cingulate, is preserved in elderly people with above-average memory capacity (i.e., "SuperAgers"; Rogalski et al , 2013), we examined the contributions of two large-scale intrinsic brain networks to superaging: the default mode network, associated with memory, and the dorsal salience network, associated with attention. We predicted that Superagers would have more thickness in critical nodes in these two networks when compared to typically aging adults. We defined Superagers (60-80 years old) based on their performance compared to young individuals (18- to 32-year-olds) on the California Verbal Learning Test Long Delay and Trails Making Task B. We identified regions within the two networks of interest where our SuperAgers are significantly thicker than cognitively typical elderly, and where Superagers were anatomically indistinguishable from normal 18-32 year-olds ($p<.05$). These regions also significantly predicted memory performance. SuperAgers are similar to Youngs both behaviorally and anatomically: not only do they achieve Young-like scores on memory tasks, in certain regions, their brains are anatomically indistinguishable from Young brains. Our findings suggest that limbic circuitry plays a key role in maintaining memory function as we age.

FUNDING: National Institutes of Health: R01AG030311 awarded to Lisa Feldman Barrett & Bradford C. Dickerson

POSTER C-26

I DON'T DESERVE TO FEEL GOOD: ASSOCIATIONS OF DAMPENING POSITIVE EMOTION WITH DEPRESSIVE SYMPTOMS AND HIPPOCAMPAL VOLUME IN CHILDREN AT RISK FOR DEPRESSION

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Descriptors: emotion regulation, positive emotion, depression

Blunted positive emotion is characteristic of depression yet less is known about how the regulation of positive emotion contributes to this. While dampening positive emotion (cognitive responses that downregulate positive emotion; i.e., "I don't deserve this") is implicated in depression, how dampening positive emotion imparts risk for the onset of depression is unknown. The current study examined 119 healthy children (age 7-10) at low and high risk for depression due to maternal history of depression and tested whether dampening positive emotion from recent positive life events was associated with depressive symptoms and brain volumes of key structures. Regression analyses consistently demonstrated a 3-way interaction between dampening, risk, and positive life events. Specifically, when high-risk children experienced few positive events, dampening was associated with elevated depressive symptoms (Beta= -0.42, p = .008). Moreover, high-risk children who dampened positive emotion exhibited smaller hippocampal volume compared with high-risk children who didn't dampen and low-risk children (Beta= -0.34, p = .039). Cognitive rumination was controlled in all analysis. Findings indicate that negative thoughts about positive emotion via dampening may be one mechanism of risk for depression in healthy children. This may operate by increasing depressive symptoms as well as contributing to structural hippocampal changes associated with depression.

POSTER C-27

INDIVIDUAL DIFFERENCES IN WORKING MEMORY MANIPULATION PREDICT CHOICE TO REAPPRAISE

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Descriptors: emotion regulation, working memory, reappraisal

Empirical evidence linking individual difference in executive control to individual differences in emotion regulation (ER) is lacking. The goal of the present study was to assess if individual differences in time to manipulate information in working memory (WM) predicted choice to reappraise on an ER task. Sixty participants completed a WM manipulation task that assessed time to manipulate happy, neutral, and sad content. In a subsequent experiment session participants completed a version of the Emotion Regulation Choice (ERC) task, in which they viewed a series of negative pictures of varying intensity (low, medium, or high). Participants were taught two emotion regulation strategies, reappraisal and distraction, and instructed to choose the ER strategy for each photo that would reduce its negative impact. Analyses were conducted to determine if time to manipulate emotional content predicted reappraisal choice on the ERC task. Repeated measure ANOVA results revealed a significant interaction between time to manipulate sad content and choice to reappraise ($F(2,112) = 3.138$, $p<.05$). Specifically, faster manipulation of sad content predicted greater reappraisal choice proportion in response to low intensity negative stimuli, ($r(60)= -.295$, $p<.05$). These findings illustrate how individual differences in emotion processing and executive control may underlie individual differences in ER choice.

POSTER C-28

GENDER DIFFERENCES IN REWARD RESPONSIVENESS AND INHIBITION AFFECT RISK-TAKING BEHAVIOR

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Descriptors: gender differences, inhibitory control, risk behavior

Evaluating risk involves controlling reward related impulses. The behavioral inhibition and activation systems (BIS/BAS) have been consistently implicated in risky behavior and reward pursuit. Previous research has shown that men participate in risky behavior more often than women, an investigation of gender differences in the relation between reward responsiveness and inhibitory control may elucidate the origin of gender differences in risk behavior. The goal of the present study is to examine if gender impacts the relation between BIS/BAS and risk behavior. Participants (n=175) completed a battery of questionnaires including the BIS/BAS followed by the Balloon Analogue Risk Task (BART). A hierarchical regression was conducted to examine the moderating role of gender on the relation between BIS/BAS levels and earnings on the BART. Results reveal that gender significantly interacts with behavioral inhibition ($\beta=.171$, $p<.05$) and reward responsiveness ($\beta=-.168$, $p<.05$) subscales of the BIS/BAS to predict BART total earnings ($F(5,169) = 2.28$, $p<.05$). Overall, greater reward responsiveness and greater inhibitory control in males predicted greater BART earnings, whereas lower reward responsiveness and lower inhibitory control in females predicted greater BART earnings. This study contributes to research examining the impact of gender differences in reward responsiveness and inhibitory control in understanding risky behavior. Findings from this study have implications for understanding gender differences in achievement in the workplace.

POSTER C-29

SELF-EFFICACY IN DEPRESSION: BRIDGING THE GAP BETWEEN COMPETENCE AND REAL-WORLD FUNCTIONING

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Descriptors: depression, self-efficacy, functional disability

Depression is associated with reduced skills and remarkable disability in adaptive behaviours. This study used a multi-level (competence and performance) approach to determine whether self-efficacy (i.e., one's belief in their capability to perform actions) predicts why those with depression under-perform in the real world relative to their ability level. Sixteen participants' adaptive competence (University of California, San Diego Performance-Based Skills Assessment Battery; Patterson et al., 2001), real world performance of adaptive behaviours (World Health Organization Disability Assessment Schedule; WHO, 2001), depression severity (Beck Depression Inventory-II; Beck et al., 1996) and self-efficacy (Revised Self-efficacy Scale; McDermott, 1995) were assessed. Functional disability and self-efficacy were significantly correlated, $r = -.488$ ($p < .05$). Hierarchical regression was performed, with competence entered into the first step ($R2=.08$, $p = .264$), self-efficacy entered into the second ($R2=.18$, $p = .096$), and functional disability as the outcome variable. This study is ongoing, with an expected sample of 60 by February 2016. With the potential to inform clinical practice, this investigation will indicate whether self-efficacy can explain persistent functional disability in spite of competence to perform tasks in depression.

FUNDING: Canadian Foundation for Innovation, Ontario Ministry of Health

POSTER C-30

PRESERVICE TEACHERS' INACCURACY AND ANGER BIAS FOR BLACK FACES AND RACIALIZED JUDGMENTS OF CHILDREN'S MISBEHAVIORS

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Descriptors: emotion perception, anger bias, prejudice

Prejudice is endemic in American life, and, as such, may be perpetuated in educational settings via emotional interpretations that teachers apply to children differentially by race. To assess misperceptions of African American (AA) adults and children as "angry" and "hostile" compared to European Americans (EA), we gave 40 preservice teachers two tasks: a validated dynamic facial emotion recognition accuracy task with 20 adult actors (10 AA, 10 EA) depicting 5 emotions developing in 5 rounds from early cues to almost prototypical facial expressions, and a judgment task with videotapes of 2 AA and 2 EA boys misbehaving in school. Key variables were Recognition Accuracy and Anger Bias from the facial accuracy task, and Perceived Hostility from the misbehavior task. As predicted, in multilevel modeling analyses, preservice teachers demonstrated less accuracy in recognizing emotions in AA faces (OR= .48, t= -10.55, p< .001) and greater anger bias for AA faces (OR= 3.38, t= 10.79, p<.001) compared to EA faces; they also judged the AA boys as significantly more hostile than the EA boys, even after accounting for severity (gamma=1.256, t= 9.08, p< .001). In sum, across three different assessments, race of actor was a significant and robust predictor of preservice teachers' responses to emotion-related stimuli. Thus, racialized interpretations appear alive and well in those pursuing the teaching profession, and present in the form of inaccurately identifying anger in AA faces than EA faces, and judging black boys' behavior as more hostile than white boys' behavior.

POSTER C-31

FUNCTIONAL CONNECTIVITY OF MEDIAL PREFRONTAL-AMYGDALAR CIRCUITRY DURING AUTOMATIC EMOTION REGULATION IN LONG-TERM MEDITATORS COMPARED TO NON-MEDITATORS

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Descriptors: connectivity, meditation, regulation

Long-term mindfulness meditation is associated with behavioral and self-reported improvements in emotion regulation ability, but the neural basis of these changes has not been elucidated. In a sample of 30 long-term meditators (LTMs) and 61 meditation-naive participants (MNPs), we investigated activity and functional connectivity of the medial prefrontal cortex (mPFC) and amygdala, circuitry critical for emotion regulation. Relative to MNPs, LTMs exhibited lower overall amygdala activity during negative (relative to neutral) image presentation in a voxelwise analysis limited to a small-volume corrected amygdala region of interest (ROI, alpha=0.05). The amygdala ROI used in this and the subsequent analysis was functionally defined in an independent sample, while the a-priori MPFC ROI was anatomically defined. Functional connectivity during the viewing of negative versus neutral IAPS images was assessed using a psychophysiological interaction (PPI) analysis. LTMs had more positive amygdala-MPFC functional connectivity than MNPs in a voxelwise analysis small-volume corrected to the MPFC ROI (alpha=0.05). Critically, within the MNP group, increased amygdala activation was correlated with reduced levels of mPFC-amygdala connectivity (p=0.02). These data support the hypothesis that long-term meditation practice leads to enhanced amygdala-MPFC functional connectivity during automatic emotion regulation, and over time this enhanced connectivity may lead to a reduction in amygdala activity in meditators.

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POSTER C-32

FACIAL AGE CUES AND EMOTIONAL EXPRESSION INTERACT ASYMMETRICALLY: AGE CUES MODERATE EMOTION CATEGORIZATION

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Descriptors: emotion categorization, age categorization, person construal

Social category cues indicating a person's race, age, and sex have been found to interact with facial emotional expressions. Compared to the literature addressing the interaction of emotional expression with cues of sex or race, studies investigating the nature of the interaction between facial cues of age and emotion are rare and have produced conflicting results. In two experiments (N = 61 in Experiment 1; N = 32 in Experiment 2), participants categorized young and older adult faces expressing happiness and anger by their age and their emotional expression. Results revealed an asymmetrical interaction. Age cues influenced categorization of happiness and anger, Fs > 4.39, ps < .040, in the absence of a moderating influence of emotional expression, on age categorization, Fs < 1.60, ps > .211. Further, the pattern of results suggested that the influence of age cues on emotion perception was due to relatively positive implicit evaluations of younger faces facilitating the categorization of valence congruent happy expressions.

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POSTER C-33

WHY DO WE FEEL BETTER WHEN WE REGULATE OUR EMOTIONS? SIGNAL-DETECTION THEORY-BASED ANALYSIS OF FEELING GENERATION UNDER EMOTION REGULATION

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Ben-Gurion University of the Negev

Descriptors: emotion regulation, feeling generation, signal detection theory

Feelings, the conscious subjective experience of emotion, are an important component of emotion. Feelings are constantly being both the trigger to and the outcome of various regulation strategies. Past literature describes different regulation strategies for the reduction of negative feelings and their adaptiveness in different situations, yet little is known about the underlying psychological mechanisms enabling such reduction. We recently provided a new conceptualization of feeling generation based on Signal Detection Theory (SDT), which enabled the assessment of feelings via two parameters: Sensitivity (d'), or the ability to emotionally differentiate between external stimuli, and the criterion (c), or the "report threshold", the point along the emotional sensation continuum above which reportable feelings exist. Using SDT, we explored the influence of two established strategies (distraction and expressive suppression vs. control) on feeling generation. Results from an initial sample (N=54) indicate that compared to control, both distraction and suppression significantly elevated c (t(53)=2.18, p=.03, 2-tailed), meaning more negative emotional sensation was required in order to report negative feelings. In addition, a trend was found (t(53)=1.65, p=.11, two-tailed), suggesting that only suppression impaired d', the basic ability to perceive nuances in the intensity of negative feelings. The results suggest that the new SDT-based conceptualization of feeling generation can shed light on the complex interaction between feelings and their regulation.

POSTER C-34

AUDITORY-INDUCED AROUSAL FACILITATES SUBSEQUENT VISUAL SEARCH

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Descriptors: auditory-induced affect, visual search, visual attention

Emotional stimuli can influence perception and attention by forming a special group of high-salient stimuli. Emotion-induced enhancements in perception and attention were shown in visual and auditory modalities in isolation. Here, we studied whether emotional arousal induced by environmental sounds could facilitate visual attention in a subsequent search task. The task was designed to facilitate both parallel (target stands out among distractors) and serial (observer needs to attend to individual items) search. Participants (N=29) performed the search task both with and without task-irrelevant sounds that preceded visual search arrays, while their reaction times (RTs) were recorded. It was found that participants were faster for parallel compared to serial search, and for central compared to peripheral targets. Critically, RTs decreased with increasing auditory-induced arousal (measured by self-reports) for both serial ($F(1.28)=11.2$, $p<.01$) and parallel ($F(1.28)=7.4$, $p<.05$) search. Further, RT differences between search conditions and target locations were decreased with increasing auditory-induced arousal. These findings indicate that auditory-induced arousal can facilitate subsequent visual search. An increase in emotional arousal can lead to an increase in vigilance, i.e. facilitated neuronal responsiveness in sensory systems. Also, it was shown that auditory attention could have a priming effect on subsequent visual processing. Here, the findings suggest that auditory-induced arousal can lead to an overall facilitation of attention, which could influence a visual task.

POSTER C-35

THE BRAIN'S SALIENCE NETWORK IN AGING

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Descriptors: salience network, aging, affect

A network of brain regions referred to as the "salience network" is implicated in a variety of functions that are critical for healthy aging, including attention, and homeostatic regulation. This network is comprised by two dissociated subsystems; a dorsal subsystem includes regions important for executive function such as dorsal anterior insula and mid cingulate cortex; a ventral subsystem includes regions implicated in negative affect such as ventral anterior insula (vAI), anterior cingulate cortex and amygdala (Touroutoglou et al., 2012). We examined age-related differences in the brain's salience network and the behavioral implications of these differences. Analysis of intrinsic brain activity using functional connectivity MRI revealed the intrinsic brain connectivity within the dorsal subsystem is decreased with age. In contrast, the brain connectivity within the ventral subsystem is preserved with age, and even increased between the vAI and amygdala. Using brain-behavior mediation analysis, we found that the salience sub-networks correlate with how elderly function outside the scanner. Age-related declines in executive function were mediated by connectivity within the dorsal subsystem, whereas age-related changes in feelings of arousal were mediated by altered connectivity within the ventral subsystem. We suggest that the aging brain has preserved circuitry for identifying information that it finds evocative and homeostatically important, even if the circuitry for allocating attention to information on a cognitive basis is diminished with age.

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POSTER C-36

ELECTROPHYSIOLOGICAL INDICES OF SOCIAL THREAT PROCESSING BIASES IN CHILDREN WITH INTERNALIZING, EXTERNALIZING, AND COMORBID SYMPTOMS

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Descriptors: affective attention biases, event-related potentials, psychopathology

Automatic attention biases to social threat are hypothesized to contribute to the development of anxiety disorders. Attention biases to threat have also been suggested to play a role in reactive aggression, but research in this area is sparse and even less is known about the role that such biases may play in the development of comorbid anxiety and aggression. This study examines associations between ERP indices of social threat processing biases and joint internalizing-externalizing symptom profiles within a sample of 203 at-risk 1st-grade children. Latent profile analyses revealed 4 symptom profiles: comorbid (29%), externalizing (37%), internalizing (17%), and well-adjusted (18%). ERPs were recorded while children completed a go/no-go task with emotional face stimuli, and differences in P1, N170, and P2 amplitudes to threatening (fearful or angry) versus neutral faces were calculated. Children with an externalizing profile had lower P1 amplitudes to fearful vs. neutral faces ($p=.04$) and lower P2 amplitudes to both fearful ($p=.04$) and angry ($p=.001$) vs. neutral faces, relative to children with other symptom profiles. Post-hoc analyses suggested that the P2 effects may be driven by higher P2 amplitudes to neutral faces in the externalizing profile. Neither internalizing nor comorbid symptom profiles differed from well-adjusted children in their ERP threat bias indices. The results suggest that children with high externalizing and low internalizing symptoms show deficient automatic attention to threatening faces and enhanced controlled attention to neutral faces.

POSTER C-37

DOES EMOTION PERCEPTION ACCURACY VARY BY COLLEGE MAJOR?

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West Virginia University

Descriptors: emotion perception, gender, college major

Research on emotion perception (EP) has found gender differences in perception accuracy with females interpreting emotions more accurately than males (Hall, 1978; Hall et al., 2010). Yet other individual differences (e.g., occupation) in EP are largely unexplored. In the present study, we investigated the differences in EP and college major, serving as proxy for occupation. We hypothesized that social science majors would more accurately identify emotions compared to hard sciences, but not differ from health and business majors. EP accuracy was collected from 220 college-student participants ($M=19.82$, $SD=1.84$; 71.4% female) using the Amsterdam Dynamic Facial Expression Set (van der Schalk et al., 2011). A series of two-way ANOVAs were conducted. Results indicated that females more accurately detected disgust than males, $F(1, 212)=5.33$, $p=.02$. For both fear and sadness, business majors identified these emotions less accurately than health and social science majors: $F(3, 212)=3.25$, $p=.02$, $F(3, 212)=2.73$, $p=.05$, respectively. The main effect for fear was qualified by an interaction effect, $F(3, 212)=2.66$, $p=.05$, indicating the effect for major held for men but not women. No significant differences between gender or college major emerged for anger, contempt, embarrassment, surprise, or joy. Overall, EP accuracy appears to vary by gender and college major. Future research is needed to determine factors (e.g., personality, coursework) that may explain the novel findings for college major.

POSTER C-38

IS EMOTIONAL BEHAVIOR DRIVEN BY APPRAISED STIMULUS FEATURES OR BY EXPECTED OUTCOMES?

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University of Leuven

Descriptors: emotion theories, outcome-driven explanations, aggressive behavior

Some current emotion theories propose that emotional behavior is driven by appraised stimulus features (e.g., goal congruence, controllability). In our research, we tested an alternative view that emotional behaviour is better explained by the outcome expectancy of the behavior in a given situation. Outcome expectancy is a function of the value of an outcome and the likelihood that the behaviour will achieve the outcome. We tested an outcome-driven account of emotional behavior in two experiments, in which the stimulus situation consisted of ostracism in a cyberball game. Outcome expectancy was manipulated by either highlighting the need for status and/or the need to belong. In both experiments, participants were given the opportunity to act either prosocially or aggressively. In the first experiment (N=94), we measured the action tendency to behave prosocially/aggressively with an implicit measure (i.e., Implicit Relational Assessment Procedure), and we recorded overt behavior. In the second experiment (N=90), we also measured the strength of the goal to satisfy the need for status/to belong implicitly. In both studies, we found that the degree to which participants responded with aggression (tendencies) was higher in situations that highlighted the need for status (as manipulated and perceived). The results suggesting that an outcome-driven explanation of emotional behavior can provide an alternative to common stimulus-driven explanations.

POSTER C-39

BIG FIVE PERSONALITY TRAITS PREDICT EMOTIONAL REACTIVITY

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Descriptors: five factor model, emotional reactivity, subjective emotional experience

Personality predicts well-being and health outcomes, yet little is known about how personality predicts emotional functioning. This laboratory-based study examined associations between personality traits as measured by the Big Five Inventory (alphas ≥ .77) and emotional reactivity (i.e., subjective experience) in response to a happy and a sad film clip among younger and older adults (N = 82). Analyses were controlled for age, gender, and, when analyzing reactivity, baseline emotion. Results showed that (1) openness to experience and conscientiousness predicted neither emotion at baseline nor emotional reactivity, ps > .05; (2) Extraversion predicted greater joy and excitement at baseline, p = .037 and p = .045, greater joy in response to the happy clip, beta = .28, p = .002, and greater sadness in response to the sad clip, beta = .31, p = .007; (3) Agreeableness predicted lower fear at baseline, beta = -.30, p = .011, and greater joy in response to the happy clip, beta = .26, p = .004, but not emotional reactivity to the sad clip, ps > .05; and (4) Neuroticism predicted greater fear and sadness at baseline, p = .006 and p = .002, but not emotional reactivity, ps > .05. These findings suggest that further examination of the emotional correlates of personality is needed. Extraversion and neuroticism were associated with baseline (i.e., dispositional) emotion, converging with previous research. Extraversion's link with emotional reactivity and neuroticism's lack thereof elucidate extraversion's role in engagement with the external world and neuroticism's emotional inertia.

FUNDING: Funding was provided by the Summer Research Opportunities Program, Northwestern University.

POSTER C-40

REPORTED EXPERIENCE, EXPRESSION, AND COMMUNICATION OF EMOTION IN BULLYING: EMOTIONS REPORTED AND PERCEIVED BY BULLIES, VICTIMS, AND OTHERS

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Descriptors: bullying, emotion, victimization

Bullying is a serious problem prevalent among young people. With new technology, bullying can happen both in real life and by social media, which makes it difficult to control. Studies have examined personality traits, motives, socio-cognitive abilities, relationships, and attachment with parents of bullies and victims; but no studies have been found investigating emotions associated with bullying and victimization, or emotional communication exploring whether people involved in bullying express their feelings effectively or correctly perceive and understand the other party's feelings. We examine the feelings reported by victims and bullies when involved in bullying, and how they understand the other party's feelings. 544 undergraduates from a large university participated in an online Qualtrics survey and divided into four groups: 1. Never bullied /victimized (Outsiders: N=196, 36.03%), 2. Bullies never victimized (Bullies: N=28, 5.15%), 3. Victims never bullied others (Victims: N=197, 36.21%), and 4. Both bullied and victimized (Bully/Victims: N=123, 22.61%). All were asked how THEY FELT, or how THEY THOUGHT bullies and victims felt, when experiencing bullying or victimization. When bullying, reported feelings of Bullies included Shame, Remorse, and Guilt. Reported feelings of Bully/Victims included Guilt, Shame, Remorse, Power (for males) and Disgust (for females). When victimized, reported feelings of Victims included Humiliation and Embarrassment; while for Bully/Victims they included Humiliation, Embarrassment, Resentment, Hatred (for males) and Disgust (for females).

POSTER C-41

AGE-DIFFERENCES IN AFFECTIVE PROCESSING IN EXPERIENTIAL RISKY DECISION MAKING

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Descriptors: experiential decision making, framing bias, older adults

Age-differences in risky decision making are often found when decisions require learning from previous consequences, i.e., experiential decision making. When risk information for decisions is provided, i.e., descriptive decision making, older and younger adults make more similar decisions, and both groups are susceptible to framing bias. The present study examined how experience with choice outcomes reduces framing bias in risky decision making, and how older and younger adults differ in benefiting from choice outcomes. We used a novel Framed Gambling Task, which combines risky choice framing with an experiential gambling task. Optimal decision making required overcoming the pre-existing framing bias through experience with choice outcomes. We measured affective reactions to choice outcomes using skin conductance response and asked probe questions to assess knowledge of choices outcomes. We independently evaluated reactions to gains and losses with the Monetary Incentive Delay task. Results indicated that both older [n = 19] and younger adults [n = 20] learned to make better choices in the Framed Gambling Task over time [partial eta squared = 0.35], but that younger adults showed greater improvement [partial eta squared = 0.15]. Skin conductance response results revealed that better task performance by younger adults was not attributable to stronger affective reactions to choice outcomes. Rather, age-related differences in task performance appeared to be based on the development of anticipatory choice affective reactions in younger adults [partial eta squared = 0.17].

FUNDING: This research was supported by the Washington State University Proposal Development Stimulus Grant 121872 awarded to Paul Whitney.

POSTER C-42

A PLACE TO BELONG: DIFFERENTIAL EFFECTS OF PSYCHOLOGICAL RESOURCES ON INDIVIDUAL ENGAGEMENT FOR RACIAL AND ETHNIC MINORITY STUDENTS

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Descriptors: engagement, belonging, diversity

The motivational pathway of the Job Demands-Resources (JD-R) model posits that heightened individual resources nurture well-being (i.e. engagement). However, the JD-R model neglects that group membership may affect how we experience such resources. Although increases in diversity initiatives have seen gains over recent years, racial/ethnic minority (REM) students are at a greater risk of isolation experiences and stereotype threat. Research has demonstrated that simply increasing diversity is not enough; rather, fostering an inclusive environment is key. Such inclusive initiatives may have positive effects as they increase personal resources (e.g. belonging). Our results indicate REM students reported less sense of belonging compared to majority students ($F(115)$-$=2.99, p<.10$) thus, we aim to demonstrate the particular importance that university belonging plays in student outcomes. To test our hypothesis, diary methods were utilized with 117 undergraduate students. Results indicate REM student status moderated ($F=8.42, p<.01$) the relationship between belonging and week-level change in engagement (T2-T1), such that REM students experienced a relationship between belonging and change in engagement ($r=.61, p<.01$), while majority students did not ($r=.07$, $p=51$). Further, REM student status moderated ($F=11.26, p<.01$) the relationship between belonging and student absences, with respective correlations of REM ($r=-.70$, $p<.01$) and majority students ($r=.10$, $p=34$). Together our findings extend the JD-R model begging the consideration of group membership within the motivational pathway.

POSTER C-43

ACQUISITION OF NOVEL EMOTION CONCEPTS IS FACILITATED BY VERBAL LABELS

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Descriptors: concept acquisition, category learning, emotion words

Previous research demonstrates that words facilitate category learning for novel objects that share limited or no perceptual features (Chen & Waxman, 2013; Sloutsky, 2010). Words bind diverse category instances by directing attention, communicating intentionality, and organizing shared experience (Ferry, Hespos, & Waxman, 2010). We examined the role of words in facilitating the acquisition of novel (other-culture) emotion concepts in an associative learning paradigm. Participants completed a progressive training task based on Lupyan, Rakison, & McClelland (2007), in which learning is assessed and feedback provided on a trial-by-trial basis. Participants' task was to judge whether a situational description matched non-verbal content (face, voice, or body) in emotion. Participants were randomly assigned to either a 'label' condition, in which a verbal label is embedded within the feedback, or a control 'no label' condition. Consistent with predictions, our preliminary data (n=22, 14 female) reveal an interaction between trial number and labeling condition: $F(14,280)=1.964$, $p=.021$, partial eta squared=.089. In follow up analyses, accuracy increased across trials in the labeling condition: $F(14,140)=2.522$, $p=.003$, partial eta squared =.201, but not significantly in the no-label condition: $F(14,140)=1.541$, $p=.104$, partial eta squared =.201. A replication study is currently under way. These results provide support for language as a critical element in the construction of emotions (Barrett, Lindquist & Gendron, 2007; Lindquist & Gendron, 2013).

POSTER C-44

THE ROLE OF EMOTIONAL CONTEXT IN THE EFFECTIVENESS OF COGNITIVE REAPPRAISAL AND ACCEPTANCE

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Descriptors: emotion regulation, context, reappraisal

Two emotion regulation strategies—cognitive reappraisal (changing one's thoughts to alter emotions) and acceptance (fully experiencing one's emotions without manipulating them)—seem opposite in nature, yet previous research has shown that both can be used to effectively regulate emotions. However, little research has examined the contexts in which these strategies may have differential effects. The present study compared the effectiveness of reappraisal and acceptance in the contexts of sadness and anxiety. A sample of highly stressed participants (N=75) was randomly assigned to a laboratory sadness induction (with film clips) or an anxiety induction (with speeches). During the emotion inductions, participants were randomly instructed to reappraise and accept their emotions. Each induction was followed by a two-minute rest period to assess recovery. In the context of sadness, cognitive reappraisal was more effective than acceptance at reducing self-reported negative emotions both during a sad film clip ($t=4.4$, $p<.01$) and during a recovery period ($t=1.92$, $p=.06$), while acceptance was better at increasing self-reported positive emotions during the film clip ($t=2.9$, $p<.01$). In the context of anxiety, reappraisal and acceptance were equally effective at reducing self-reported negative emotions during the speeches and the recovery period. These findings suggest that it is important to consider the context when examining the effectiveness of emotion regulation. Reappraisal appears to be more effective than acceptance in the context of sadness but not in the context of anxiety.

POSTER C-45

UNDERSTANDING THE UNCANNY: EMOTION REGULATION IN ENCOUNTERS WITH HUMANLIKE ROBOTS

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Descriptors: uncanny valley, emotion regulation, human-robot interaction

People tend to anthropomorphize robots that look and/or act human, and further, they evaluate them more positively than their less humanlike counterparts. This has thus motivated the development of increasingly humanlike robots. Yet, some robots have the opposite effect (wherein people evaluate them more negatively). This curvilinear relationship is captured by the Uncanny Valley Hypothesis (Mori, 1970), which posits that anthropomorphic entities which are "too humanlike" will elicit avoidance. Avoidance behavior - defined as an unwillingness to experience negative emotions and the desire to change situations giving rise to those experiences - is an example of emotion regulation (ER) through situation selection. Thus, using Gross' process model of ER (1998), we investigated the implications of the UVH via the elicitation of situation-targeted ER in encounters with humanlike agents. In two studies (N=60, 71), we assessed the frequency and context of use of ER in viewing pictures of humans and robots of varying human similarity. Whenever participants wished to stop viewing a picture, they could press a button to remove it from the screen (thereby engaging in situation-targeted ER). The results show participants terminated encounters with highly humanlike robots more frequently than those with less humanlike robots or humans, $F(2,136)=22.46$, and reported doing so due to distress, $F(2,74)=35.06$ ($p<.01$). Together, they demonstrate that not only do people respond negatively to highly humanlike robots, but moreover, they are averse to even viewing pictures of such agents.

POSTER C-46

RAMIFICATIONS OF IDENTIFICATION WITH POLITICAL LEADERS: THE LESSONS LEARNED FROM THE GREEK REFERENDUM

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Descriptors: leader identification

Greek citiziens were recently asked by Prime Minister Tsipras to approve/reject the restrictions proposed by the EU in response to the national financial crisis; Tsipras himself publically favored a “No” vote. The social identity theory describes leadership as a process where followers who identify with the leader are likely to agree and comply with the leader’s ideas and suggestions, as well as to develop congruent action tendencies. However, the role of emotions towards the leader in these processes have been understudied. 75 greek participants reported their emotions towards, and their perceived motivations of, Tsipras’s public stance towards the referendum, and their appraisal of a “yes” and “no” vote. We posited that identification with Tsipras would predict conformity to his approved policy appraisals. We found positive emotions towards Tsipras mediated the relationship between identification with Tsipras and acceptance of his beliefs towards the referendum; consequentially, inidividuals were more likely to positively apprasie a “No” vote. These results have implications for voting behavior in other contexts.

POSTER C-47

THE ROLE OF DOPAMINE IN POSITIVE AFFECT-COGNITION INTERACTIONS

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Descriptors: dopamine, positive affect, affect-cognition interaction

Positive affect with low approach motivation increases cognitive flexibility, allowing for faster switching between different goals, but causing greater distractibility. Higher levels of prefrontal dopamine (DA) during positive affect might underlie this affect-cognition interaction. The relationship between dopamine and cognitive flexibility is non-linear, with high and low DA levels leading to flexibility and intermediate levels leading to stability. The present work tests whether DA mediates the non-linear relationship between DA and attentional flexibility. Subjects performed an attention shifting task with distractor stimuli on 20% of trials. Eye blink rate (EBR), a correlate of striatal DA, and an inverse correlate of prefrontal DA, was calculated. A first study (N = 22) indicated a quadratic relationship between EBR and RT switch costs on distractor trials, one index of flexibility (beta = -.53, $t(21) = -2.82$, $p = .01$). In an ongoing second study (target N = 64 by 1/1/2016), participants perform the same task after a positive or neutral affect induction. It is expected that EBR will increase following positive affect induction, and that subjects’ attentional flexibility will change in a quadratic fashion to reflect altered DA levels. The results will clarify the relationships among positive affect, DA, and attentional flexibility. The results also have methodological implications: given the non-linear relationship between DA and flexibility, cognitive changes depend not only on the magnitude of DA changes following affect induction, but also on baseline DA levels.

FUNDING: R.D.C. is supported by a postgraduate scholarship from NSERC.

POSTER C-48

TO THINE OWN SELF BE TRUE: INTEROCEPTIVE AWARENESS AND INTERPERSONAL PROBLEMS

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The New School for Social Research

Descriptors: interoceptive awareness, interpersonal boundaries, emotion dysregulation in personality disorders

The abilities to accurately perceive both one’s environment and one’s internal states are crucial for emotional life: inaccurate interpretation of both oneself and others has the capacity to distort relationships. Indeed, interoceptive accuracy—the ability to correctly perceive body states, such as how quickly one’s heart is beating—has been associated with social emotions like empathy. Here, we examine whether individuals with personality disorder symptoms had less ability to accurately detect their heartbeats. Sixty-five individuals completed the Inventory of Interpersonal Problems (IIP) and the Millon Clinical Multiaxial Inventory (MCMI). Participants who reported difficulties with interpersonal boundaries (i.e., easily exploited, difficulty with asserting oneself) were more likely to endorse personality disorder symptoms. Dependent ($r = .272$), borderline ($r = .242$), and schizotypal ($r = .278$) personality styles and thought disorders ($r = .259$) were related to poor interoceptive accuracy, as were difficulties with being easily exploited ($r = .265$) and nonassertive ($r = .262$). They also reported more emotion dysregulation. Taken together, these findings suggest that poor interoceptive accuracy may manifest in interpersonal problems where people who are unable to detect their own internal states are overly influenced or enmeshed with others, possibly to compensate for the absence of their self-knowledge.

POSTER C-49

LINKS AMONG DEPRESSIVE SYMPTOMATOLOGY, EMOTIONAL INFLEXIBILITY AND RELATIONSHIP SATISFACTION

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Descriptors: emotion dynamics, couples, psychopathology

Depression has been separately linked with emotional inflexibility and with relationship difficulties, but little research has explored the dyadic influences of depression on emotional flexibility in couple interactions and the potential link between emotional flexibility and relationship quality. Autocorrelations across time of continuously observed emotional expression (rated by neutral coders) from laboratory-based couple (n=105) discussions of an upsetting event were used to index the emotional flexibility of both partners. Actor-Partner Interdependence Modeling was used to distinguish between within- and cross-individual associations of depressive symptomatology (assessed by the Beck Depression Inventory) and emotion inflexibility. Results indicate that men’s depressive symptomatology is linked with their own (Beta= .21, $p < .05$) and their partner’s (Beta= .27, $p < .01$) emotional inflexibility while women’s depressive symptomatology is connected only to their own inflexibility (Beta= .21, $p < .05$). Emotional inflexibility is also negatively linked to marital satisfaction for both partners (r= -.42 for men and -.47 for women, p’s<.001).These results suggest that depressive symptomatology affects not only the flexibility of one’s own emotional expression but also that of one’s spouse. The within-person associations may reflect impaired self-regulatory abilities and an insensitivity to changing demands in the environment (Brose et al., 2014). The cross-partner association may be due to the inhibiting influence of a depressed partner on emotional expression.

POSTER C-50

THE EFFECT OF LIMITED COGNITIVE RESOURCES ON AFFECT AND SPEECH IN SERIOUS MENTAL ILLNESS

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Descriptors: cognitive resources, speech, affect

Though speech disturbances are a persistent feature of serious mental illness (SMI), there is evidence that they fluctuate as a function of psychological state. Of note, negative affect tends to exacerbate their severity. Thus, emotion regulation may be important for understanding speech disturbances. One factor that may be important involves reduced "on-line" cognitive resources (e.g., working memory, controlled attention); abilities that are impaired in SMI. We tested the hypothesis that as cognitive resources are depleted, negative affect and accompanying speech disturbances becomes exacerbated in individuals with SMI. We compared controls (n=27) to individuals with SMI (n=52) on behavioral-based coding of speech disturbances and computerized lexical analysis of affectively valenced words. Participants produced natural speech during separate baseline and experimentally-manipulated high cognitive-load dual tasks. While individuals with SMI produced more referential failures across all conditions, individuals with SMI exhibited significantly decreased referential failures in the high cognitive-load condition compared to controls, $F(1,77)=6.27$, $p=.01$. For both groups, positive word usage significantly increased as a function of increased cognitive demands, although there were no group differences in positive word usage. There were no significant findings for negative word usage. Contrary to our expectations, reduced cognitive resources may temporarily relieve speech disturbance, possibly through increased positive emotion.

POSTER C-51

EMOTION REGULATORY SKILL IS VALENCE DEPENDENT REFLECTING AN UNDERLYING AFFECTIVE STYLE

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Descriptors: emotion regulation, corrugator, EMG

Using corrugator electromyography we examined individual differences in the voluntary (instructed) and automatic (uninstructed) regulation of picture-induced negative and positive affect to determine whether the abilities to regulate negative and positive affect are orthogonal. 100 participants (49 female, age range=18-65, mean=26.03 years) completed 2 sessions 1 week apart during which measures of automatic and voluntary emotion regulation were obtained. We found that participants better at voluntarily increasing their negative emotional responses to unpleasant stimuli are (i) worse at voluntarily decreasing their negative emotional responses to unpleasant stimuli ($r=.47$, $p<.001$), and (ii) better at voluntarily decreasing their positive emotional responses to pleasant stimuli ($r=.35$, $p=.001$). Similarly, those participants better at voluntarily increasing positive emotional responses tend to be worse at decreasing positive emotional responses ($r=.36$, $p<.001$). Thus, the ability to voluntarily manipulate negative and positive emotional responses appears to be unidirectional along the negative-positive valence continuum: participants who show greater ability to increase their emotional responses to a particularly valenced stimuli are generally worse at decreasing their emotional responses to that same valence of stimuli, while being better at regulating the opposite valence in the opposite direction. These findings suggest that individual differences in emotion regulatory skill truly reflect an underlying affective style rather than a valence-independent regulatory skill.

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POSTER C-52

RELATIONAL IMPLICATIONS OF EMOTIONAL FUNCTIONING IN TRAUMATIZED YOUTH

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Descriptors: childhood trauma, emotion perception, physiology and emotional awareness

Exposure to childhood adversity is associated with a host of negative outcomes, spanning social, emotional, and physiological domains. Significant ongoing interpersonal traumatization can be a key causal factor in emotional and social dysregulation. However, few studies have examined mechanisms of alterations to relational functioning among traumatized youth. Here, we examine a factor that may contribute to an important element of social functioning: recognizing other's emotions. In the broader experimental literature, the ability to recognize one's own internal states (interoception), and physiological mechanisms of self-regulation (heart rate variability) are strongly connected to individual and social emotional capacities. Fifty-three youth in protective services custody and residential treatment completed biobehavioral assessments. Participants completed measures of a) emotion recognition, using the Reading the Mind in the Eyes Task; b) interoceptive awareness, using a heartbeat detection task; and c) heart rate variability. Emotion recognition was significantly lower than established norms, whereas heart rate was elevated relative to developmental norms (85 bpm; the age norm is 75 bpm). Emotion recognition, interoceptive awareness, and heart rate variability were all inter-related; interoceptive awareness and heart rate variability independently contributed to emotion recognition (beta = .442 and .405, respectively). These findings point to potential pathways from psychological outcomes, such as social difficulties, to long-term physiological outcomes.

POSTER C-53

PERINATAL PSYCHIC BLUNTING: RETROSPECTIVE ACCOUNTS OF DISSOCIATION DURING CHILDBIRTH

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Descriptors: trauma, dissociation, blunting

One's ability to effectively and adaptively regulate emotions begins at birth with an infant's attachment with their principal caregiver. This relationship has been extensively researched in the literature of attachment styles and its subsequent effects on regulatory emotions and behaviors (Bowlby, 1980). The trajectory of this line of research has been that of following the infant-mother dyadic formation through time postnatally. This current work proposes a new paradigm: postnatal attachments and emotion regulation development may already be at risk due to prenatal stressors. Presently, prenatal stressors are indicative to trauma exposure, specifically that of sexual trauma, that blunts mothers' perinatal responses to childbirth, essentially rendering them into dissociative states, $t(32)=-2.138$, $p<.05$. This lack of psychic presence may impair mothers' experiences of bonding with their child securely. Not only is the trauma a significant predictor of this numbed expression, but natal care resources are also implicated as a potential factor, which was directly recorded from narratives in this sample. Hence, the present paradigm aims to reveal that the dyadic formations postnatally could already be positioned at a disadvantageous risk if the expectant mother is emotionally blunted perinatally due to prenatal stressors incurred during her lifetime.

POSTER C-54

FACETS OF MINDFULNESS AND THE EXPERIENCE OF PLEASURE

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Descriptors: mindfulness, positive emotion

Mindfulness-based therapies are gaining in popularity as a treatment for psychological disorders like depression. Although the effectiveness of such treatments has been reported, the relationships between the facets of mindfulness (observing, describing, acting with awareness, nonjudging, and nonreactivity) and the symptoms of these disorders are not fully understood. The current study examined the relationship between the experience of pleasure – a core feature that is impaired in depression – and the five facet structure of mindfulness. Undergraduates (N=222) completed questionnaires and a positive emotion induction as part of a larger study. Mindfulness was measured with the Five Facet Mindfulness Questionnaire. The Temporal Experience of Pleasure Scale, a self-report measure of general anticipatory and consummatory pleasure, was used to measure the experience of pleasure at the trait level. The Self-Assessment Mannikin was used to calculate the change in participants' emotional valence following the positive emotion induction, as a state measure of pleasure. 'Observing' correlated with both trait consummatory (r=.45, p<.001) and anticipatory (r=.23, p<.001) pleasure. 'Observing' also positively correlated with participants' change in emotional valence following the positive emotion induction (r=.26, p<.001), with higher levels of the 'observing' skill relating to a stronger response to the positive emotion induction. Results suggest that skill in 'observing' may be of particular importance in the experience of pleasure and positive emotion.

POSTER C-55

SHIFTS IN PARENTAL SUPPORTIVE BEHAVIOR AS MODERATED BY CHILD'S AGE

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Descriptors: development, emotion socialization, emotion regulation

Parents' supportive responses to children's emotions are often positively associated with children's socioemotional development in early childhood. As children age and gain autonomy, parents must adjust their socialization strategies to facilitate children's developing socioemotional competence. Research on middle childhood suggests that when parents fail to make such adjustments, previously supportive practices may impair children's socioemotional development. This study pinpoints when supportiveness may be harmful. Parents (n=81) of 3-6 year olds (M=4.5, SD=.82 years) completed questionnaires assessing their responses to children's negative emotions, children's emotion regulation, social competence, and maladjustment. Hierarchical regressions tested whether child age moderates associations between parents' supportive emotion socialization and child outcomes. The age X supportive socialization interaction term explained unique variability in child lability (R2ch=.08, p=.008), emotion regulation (R2ch=.07, p=.015), aggression (R2ch=.06, p=.04), and internalizing (R2ch=.07, p=.012). For children aged 3-4, parents' supportiveness relates positively to children's emotion regulation and negatively to lability, aggression, and internalizing but for children aged 5-6, parents' supportiveness relates negatively to emotion regulation and positively to lability, aggression, and internalizing. These results suggest that by ages 5, parents' supportive reactions to children's negative emotions may no longer help children develop socioemotional competence.

FUNDING: National Science Foundation

POSTER C-56

DIFFERING EFFECTS OF TWO MEDITATIVE PRACTICES ON DAILY-LIFE EXPERIENCES OF POSITIVE EMOTIONS

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Descriptors: positive emotion, meditation, health behavior

The Upward Spiral Theory of Lifestyle Change posits that the experience of positive emotions plays a key role in individuals' ability to adopt and maintain healthy behaviors crucial for late life health and well-being. To test this theory, ongoing experimental work has utilized two meditative practices (i.e., wellness behaviors) that differ primarily in the hypothesized presence (loving-kindness mediation) or absence (mindfulness meditation) of positive emotional experiences. The current study examined daily diary reports of positive affect collected from 124 individuals over 77 days to determine whether engagement in these two practices resulted in different positive emotional responses. A series of mixed-effect linear models suggested that: (1) regardless of meditation type, individuals engaging in more practice reported higher levels of positive emotions ($b = .003$, $p < .001$); (2) this effect operated within, but not between, participants such that days in which a select participant engaged in more minutes of meditation compared to their average level of practice was associated with higher positive affect on those days ($b = .004$, $p < .001$); (3) importantly, this within-person "dose-response" relation was stronger for those practicing loving-kindness meditation compared to those practicing mindfulness meditation ($b = .003$, $p = .011$). These results provide preliminary evidence that loving-kindness meditation and mindfulness meditation produce different affective response patterns in daily life and thus may be useful for making comparisons in active-controlled studies.

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POSTER C-57

DECREASED FRONTAL AND LIMBIC ACTIVATION DURING APPROACH-AVOIDANCE CONFLICTS IN EXTERNALIZING PSYCHOPATHOLOGY

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Descriptors: externalizing psychopathology, approach-avoidance conflicts, decision making

Externalizing psychopathology (EXT) represents the covariance of multiple disorders, including substance use and antisocial disorders, characterized by poor behavioral control. Individuals with EXT display disadvantageous decision-making when approaching an immediate reward despite cues for adverse outcomes. Thus, those with EXT display deficits in the behavioral resolution of approach-avoidance conflicts. Studies suggest that this behavioral under-control may be exacerbated by strong affective states particularly in high EXT individuals, suggesting that affective cues likely result in poor behavioral control in approach-avoidance conflict contexts; however, the specific neural mechanisms of poor conflict resolution are not well understood. The present study examined BOLD activation in a sample of high and low EXT individuals in an approach-avoidance conflict task. Participants moved positive, negative, or neutral images on a computer screen either towards or away from themselves resulting in congruent trials (e.g. pushing a negative picture away) and incongruent trials (e.g. pulling a negative image closer). Broadly, high EXT individuals displayed reduced activation in frontal and limbic regions during incongruent trials, voxelwise $p < .01$, in contrast to predominant models of dysregulation in EXT. These findings are consistent with other data from our group suggesting that EXT is characterized by lower activation in a wide range of brain regions. These results may help further clarify the neural mechanisms associated with approach-avoidance conflict resolution in EXT.

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POSTER C-58

STRENGTH OF FAMILIAL BOND PREDICTS NEURAL CODING OF THREAT IN ADOLESCENCE

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Descriptors: neural-coding, threat, family

Threat processing is a putative risk factor for internalizing disorders, yet more research is needed to identify its neural mechanisms and how they relate to stressful life experiences. The present study tested the hypothesis that lower self-reported familial connection (FC; e.g., "I feel a sense that I personally belong in my family") would be related to neural hypersensitivity to maternal, angry faces, based on inferred coding of threat responding using multi-voxel pattern analysis (MVPA) of fMRI data. The sample comprised 22 adolescents in 8th grade who reported their FC at the study's outset and took part in a fMRI study 1 year later involving an emotional Go No-Go task. Trials included emotionally-neutral faces to which the participant responded quickly, generating a prepotent response that must be inhibited during less frequent trials involving an angry face. An MVPA, block-design analysis was carried out which classified unpredictable, mother- and stranger-related angry faces. Upholding a priori hypotheses, FC (failed test of normality; Shapiro-Wilk = .892, p=.025) was negatively related to sensitivity to mother's (Kendall's tau=-.375, p=.02) but not stranger's (Kendall's tau=-.102, p=.529) unpredictable, angry faces in right hemisphere regions of amygdala, middle temporal gyrus and inferior temporal gyrus, a neural system thought to instantiate threat-processing. These findings provide evidence that adolescents' sensitivity to familial threats, inferred from associated neural coding, increases as a function of levels of perceived weak connections with their family.

POSTER C-59

CULTIVATION OF EMOTION KNOWLEDGE: EVALUATION OF EMOTION CATEGORIES USING HEDONIC AND EVALUATIVE DIMENSIONS

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Descriptors: emotion, affect, value

The value placed on emotion categories, such as anger and lust, can be influenced by the various environments we take part in, from family households to religious establishments. Previous studies focusing on emotion knowledge mainly investigated the hedonic value of emotions without consideration of how people might assess these emotions along other dimensions. In this study, we looked at how participants valued emotion categories, using evaluative and hedonic dimensions, in order to investigate the influence of various environments on emotion knowledge. Participants judged several emotion words for hedonic value ("pleasantness"/"unpleasantness"), but also made evaluative judgments of them ("good"/"bad", and "important"/"not important"). Results indicate that emotions such as happiness, misery, and jealousy showed strong positive associations between their evaluative and hedonic judgments. On the other hand, emotions such as guilt, empathy, and fear did not show a strong association between their hedonic and evaluative values. As for importance, social emotions such as empathy and guilt were judged as more important than putative "survival" and reproduction-oriented emotions such as disgust and lust. These findings suggest that several dimensions may contribute to how an emotion is evaluated, and points to several future avenues for work examining contextual, individual, and sociocultural variability in how people decide which emotions are good and which are bad.

POSTER C-60

LOW POSITIVE AFFECT IS ASSOCIATED WITH ABNORMAL PREFRONTAL BRAIN ACTIVITY IN REMITTED DEPRESSION

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Descriptors: positive affect, alpha oscillation, remitted depression

Anhedonia is a hallmark feature of depression that is associated with low positive affect (PA) and high negative affect (NA). Low PA has been associated with unremitting depression, as well as risk for future depressive episodes. Abnormal levels of left prefrontal alpha activity have also been identified as a potential risk factor for depression, with the caveat that inconsistent findings have emerged. Much of research using alpha oscillations has relied on heterogeneous, categorical diagnoses of depression, but the abnormal prefrontal abnormalities may be related to a more specific, dimensional index of affect such as low PA. Previous studies have not explicitly measured the relation between low PA and prefrontal alpha. The present study (N = 64) evaluated the hypothesis that prefrontal alpha is associated with low PA in individuals with remitted depression. As predicted, low PA was distinctly associated with lower levels of left prefrontal activity, even after variance associated with diagnostic group, comorbid anxiety (anxious apprehension and anxious arousal) and negative affect was accounted for (R^2 = .26, F(5, 58) = 2.82, p = .02; Beta(PA) = 0.37, p = .02). Longitudinal studies designed to identify mechanisms relating low PA and left prefrontal alpha in remitted depression are warranted.

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POSTER C-61

DIFFERENTIAL IMPACT OF VALENCE ON PATTERN SEPARATION ABILITIES IN YOUNGER AND OLDER ADULTS

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Descriptors: memory, valence, aging

Pattern separation is the process of transforming similar memories into non-overlapping representations. The hippocampus has many noradrenergic receptors, especially in the CA3 and dentate gyrus regions where pattern separation occurs, making it quite responsive to emotional arousal. In addition, the hippocampus is particularly vulnerable to the effects of abnormal and normal aging. We aimed to study the effects of valence on pattern separation processes in younger and older adults. Participants completed a behavioral continuous recognition memory task aimed to assess pattern separation processes. Images were presented one at a time with some images being repeated, and some considered "lures" or items that were similar to previously seen items. Participants were asked to indicate for each item if it was new, had been previously seen, or was similar to an image they had seen before. Trials were presented in blocks with negative, positive or neutral filler items. Results showed a main effect of valence. In fact, older adults showed better pattern separation during negative blocks relative to neutral and positive blocks. Younger adults did not show this pattern. Our findings suggest that older adult's pattern separation abilities were better in negative blocks, indicating that older adults were able to better ignore the negative lures, relative to the positive lures, in order to properly pattern separate. These findings are in line with previous work on socioemotional selectivity theory, and older adult's avoidance of negative material.

POSTER C-63

INFANT SELF-REGULATION DURING THE STILL FACE: A MULTI-MODAL APPROACH

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Descriptors: self-regulation, mimicry, individual differences

Infants display impressive resilience to daily stresses, which is cultivated through ongoing engagement and reparation with caregivers (DiCorcia & Tronick, 2011). In this study, we assessed whether mimicry, as the direct match of behavior, facilitates infants' self-regulation above and beyond what is offered by maternal contingent responding. Hallmarks of successful self-regulation include avoidance of negative affect and inhibition of physiological arousal to a stressor (Porges et al., 1994). Mothers and their 4- to 6- month infants (N=55) were observed in the Still Face paradigm; dyads were sorted into high, medium and low mimicking groups based upon the ratio of mothers' mimicked to contingent responses in the initial Play phase. Infants of high mimicking mothers smiled and looked more at their mothers during the Still Face compared to infants of middle and low mimicking mothers, $F(2,51)= 4.55$, $p=0.02$ and $F(2,51)= 5.85$, $p=0.005$. Infants' ECG was recorded and analyzed with Porges' CardioEdit/CardioBatch software. Heart rate increased relative to baseline during the Still Face, and decreased during Reunion, replicating the still-face effect (e.g. Haley & Stansbury, 2003). However, in Reunion infants of low-mimicking mothers failed to recover heart rate to near baseline levels, $t(41)= 2.34$, $p=0.04$. Overall these results extend previous research on maternal sensitivity (e.g. Haley & Stansbury, 2003; Conradt & Ablow, 2010) and suggest individual differences in the frequency of maternal mimicry may contribute to infants' affective and physiological self-regulation to stress.

POSTER C-64

DE-STRESS AND DON'T DEPRESS: COGNITIVE REAPPRAISAL USE IN EXPRESSIVE WRITING IS PROTECTIVE

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Descriptors: cognitive reappraisal, stress, daily writing

Expressive writing has many documented physical and psychological health benefits. We examined whether cognitive reappraisal (CR) might potentiate the psychological benefits. Participants (Study 1 N = 191, Study 2 N = 61) wrote for several minutes about a stressful event on consecutive days outside the laboratory. By random assignment, half of them did CR Writing in which they were encouraged to rethink the event; the other half did expressive writing (EW) in which they simply wrote about their thoughts and feelings about the event. Participants rated current negative emotion before and after writing and depressive symptoms before and after the study. As hypothesized, the CRW groups used CR more in their writing (Study 1: Beta = 0.61, $p < .001$; Study 2: $t(57) = 4.15$, $p < 0.01$) and experienced less negative emotion after writing each day (Study 1: Beta = -3.00, $p = .001$; Study 2: $F(1, 58) = 9.88$, $p < 0.01$) compared to the EW groups. In Study 1, there was a significant indirect effect of group on depression, Beta = 0.15, $p = .001$, and in Study 2, there was a significant direct effect of group on depression, $F(1, 55) = 6.42$, $p = 0.01$, such that participants in the CRW groups ultimately reported decreased depressive symptoms after the study. Taken together, these findings suggest that writing about daily stressful events in a way that promotes CR may be advantageous to psychological functioning.

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POSTER C-65

DIMINISHED INTENSITY AND ALTERED TEMPORAL DYNAMICS OF FEAR AND ANGER IN OLDER ADULTS

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Descriptors: aging, fear, anger

Emotional well-being tends to improve overall in older age, but little is known about age-related changes in the moment-to-moment experience of emotion This study examined age differences in dynamic characteristics (latency and duration) of self-reported fear and anger with 16 older (OA; 65 - 79 years old) and 16 middle-aged (MA; 38 - 55 years old) adults. Low and high levels of emotional challenges were created using simulated driving scenarios: 1) Low fear task: subjects drove in fog and encountered static obstacles on the road; 2) High fear task: subjects drove at nighttime and encountered deer running across the road; 3) Low anger task: subjects followed a slow-moving vehicle; 4) High anger task: subjects followed a slow vehicle and were honked at by a tailgating vehicle. Subjects rated intensity of emotional experiences at 1-minute intervals. We found that: 1) fear intensity tended to be lower in OA in the high fear ($p < .10$) but not the low fear task, but latency and duration of fear were similar between groups in both fear tasks. 2) Anger intensity was lower in OA in both anger tasks ($ps < .01$). Anger latency and duration were similar between groups in the high anger task -- but in the low anger task anger took longer to develop and was of shorter duration in OA ($ps < .05$). These findings provide a window into how the moment-to-moment experience of negative emotions in response to environmental challenges may contribute to the overall emotional well-being of older adults, and suggest that both the type of emotion and level of challenge may be important factors.

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POSTER C-66

RESILIENCY TO POOR SLEEP: VIGOR, WELL-BEING, CALM, AND THE STRESS CONTEXT

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Descriptors: positive emotion, sleep, stress

Given the known detrimental effects of poor sleep on an array of psychological and physical health processes, it is critical to understand the factors that protect sleep. Positive affect (PA) arises as a variable of interest given its known associations with health and health behaviors. In two studies, this investigation examined which types of PA (i.e., vigor, well-being, and calm) are most beneficial for sleep and whether these associations are different during times of high versus low stress. In study 1, using a college sample (N = 99) we collected PA data several days before a major examination and then assessed sleep the night before that test (high stress). In study 2, we collected 13 days of daily diary data assessing PA and sleep each day from a similar college sample (N = 83) during a period with no examination (low stress). Results of study 1 revealed that high vigor predicted better sleep efficiency (b = 2.06, p = .04, 95% CI [0.53, 4.06]) and quality (b = 0.23, p = .04, 95% CI [0.02, 0.45]) during a period of high stress while calm and well-being did not. Results of study 2 revealed that during low stress, calm and well-being predicted more sleep hours (calm: b = .24, p = .04, 95% CI [0.01, 0.47]; well-being: b = .27, p = .01, 95% CI [0.06, 0.48]) and better sleep quality (calm: b = 0.10, p = .03, 95% CI [0.01, 0.19]; well-being: b = 0.09, p = .02, 95% CI [0.01, 0.17]) while vigor did not. These findings demonstrate that the effects of specific types of PA may have differential effects on sleep and that these associations may be moderated by the stress context.

POSTER C-67

PRIMING ESSENTIALIST BELIEFS ABOUT EMOTION INCREASES IN-LAB EXPERIENCES OF NEGATIVE EMOTIONS

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Descriptors: intuitive thinking about emotions

Psychological Essentialism is the intuitive belief that categories have an underlying, unobservable 'essence' that determines category membership and gives rise to observable properties. Recent work in affective science suggests that emotions tend to be essentialized (e.g. Lindquist et al., 2014). However, little is known about how holding essentialist beliefs about emotion may influence our emotional lives. The current work set out to examine the ways in which essentialist thinking about emotion could influence emotion regulations strategies and the way that we experience negative emotions. To investigate this, we primed essentialist beliefs about emotions using fabricated scientific articles that discussed emotions from perspectives that were essentialist-consistent, essentialist-inconsistent or neither. We then induced negative emotions using emotionally evocative film clips. Participants in the essentialist-consistent condition experience a greater increase in negative affect from watching the film clips compared to participants in the control or essentialist-inconsistent conditions. In conjunction with related studies, these results suggest that our implicitly held theories of emotion influence our emotional experiences and strategies for emotion regulation.

POSTER C-68

THE POSITIVITY OFFSET THEORY OF ANHEDONIA IN SCHIZOPHRENIA

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Prior studies have concluded that schizophrenia (SZ) patients are not anhedonic because they do not report reduced positive emotion or arousal to pleasant stimuli. The current study reconsidered anhedonia through the lens of the Evaluative Space Model of emotional experience to test the hypothesis that anhedonia reflects a reduction in the "positivity offset" (i.e., tendency to experience higher levels of positive than negative emotion at lower levels of motivational significance) rather than as a diminished capacity for pleasure. Outpatients with SZ (n = 38) and controls (CN n = 25) completed an emotional experience task where they reported levels of positive emotion, negative emotion, and arousal to pleasant, unpleasant, and neutral stimuli. The positivity offset was operationalized as intercept parameters within regression models using arousal data as the predictor and positive or negative emotionality ratings as dependent variables. Similar to past studies, SZ and CN reported similar mean levels of positive emotion and arousal to pleasant stimuli. However, positivity offset scores were lower in SZ than CN, $F(1, 62) = 7.98$, $p < 0.01$. SZ patients also exhibited a steeper slope function for positive emotion suggesting that the capacity to experience pleasure is intact for the most motivationally significant stimuli. Findings suggest that although SZ patients do not exhibit a diminished capacity to experience pleasure, they are anhedonic. Anhedonia manifests as a reduction in the positivity offset, an abnormality that occurs at lower levels of motivational significance.

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