Symposium 1: Overview
STATISTICAL AND COMPUTATIONAL MODELS OF AFFECTIVE DYNAMICS

Bennett, Daniel—Princeton University; Koval, Peter—The University of Melbourne

Descriptors: computational science, emotion regulation, cognitive, methods, mental health

Human affect is fundamentally dynamic. Affective states ebb and flow, evolving over time in response to complex interactions between a person and their environment. Individual differences in affective dynamics have been related to psychological well-being and are thought to be implicated in a number of psychiatric disorders. However, a number of fundamental questions concerning affective dynamics remain to be addressed, and further progress calls for empirical methods and quantitative tools that go beyond traditional laboratory studies. This symposium presents four projects that encompass two distinct research approaches in this field. The first approach (abstracts 1 and 2) involves statistical modelling of repeatedly assessed affective states obtained using naturalistic methods such as experience sampling. Here, researchers use affect ratings collected intensively (e.g., hourly) over several days or weeks, and derive statistical measures from these time-series to quantify various parameters of affective dynamics, (e.g., mean, variance, and autocorrelation of affect). The second approach (abstracts 3 and 4), works from the bottom up, building computational models of the psychological processes that produce affective dynamics. These models can then be used to simulate synthetic affective time-series whose dynamics can be compared to real data. These two approaches have largely arisen in parallel literatures, without strong mutual influence. This symposium will redress this by presenting them side-by-side as complementary tools for understanding affective dynamics.

Symposium 1A
TEMPORAL DYNAMICS OF AFFECT IN DAILY LIFE ARE PARTIALLY MEDIATED BY MOMENTARY USE OF EMOTION REGULATION STRATEGIES

Koval, Peter—The University of Melbourne & KU Leuven; Hinton, Jordan—Australian Catholic University; Gleeson, John—Australian Catholic University; Hollenstein, Tom—Queen's University; Kuppens, Peter—KU Leuven

Descriptors: emotion regulation, methods

Feelings change not only in response to perceived threats and opportunities, but also following deliberate regulation. Yet, few studies have investigated how emotion regulation (ER) relates to affect dynamics. Previous research has shown that positive (PA) and negative affect (NA) dynamically interact over time, and show bi-directional associations with ER strategies. However, the possibility that ER strategies may mediate temporal associations among PA and NA has not previously been tested. To address this question, we analysed data from an existing experience sampling study using dynamic structural equation modeling to estimate how PA and NA mutually predict each other and themselves over time, both directly and indirectly via the use of ER strategies. Data were from community participants (n=176) who reported their momentary experiences of PA and NA and their use of several ER strategies 9-10 times daily for 21 consecutive days, using a smartphone app. Two ER strategies emerged as the most consistent mediators of affect dynamics: rumination was the strongest mediator of NA inertia (indirect effect=0.021, 95% CI [0.013, 0.029]) and the only mediator of NA's inhibitory effect on PA (indirect effect=-0.012, 95% CI [-0.002, -0.004]). In contrast, situation selection was the strongest mediator of PA inertia (indirect effect=0.017, 95% CI [0.010, 0.024]) and the only mediator of PA's inhibitory effect on NA (indirect effect=-0.009, 95% CI [-0.015, 0.004]). Results suggest that spontaneous ER partly accounts for affective persistence and change over time in daily life.

Symposium 1B
DERIVING AFFECTIVE DYNAMICS VIA EXPERIENCE SAMPLING: A STUDY OF MOMENTARY AFFECT IN BIPOLAR PSYCHOPATHOLOGY

Sperry, Sarah—Medical University of South Carolina; Kwapil, Thomas R—University of Illinois at Urbana-Champaign

Descriptors: clinical, emotion regulation, mental health, positive emotion

Research on affective dysregulation in bipolar spectrum psychopathology (BSP) has largely concentrated on studying mood elevations (depression, mania) over long time scales. However, little is understood about moment-to-moment or day-to-day perturbations in affect. Thus, the present study aimed to examine affective dynamics to better understand affective dysregulation in BSP across multiple timescales. Young-adults (n=233) oversampled for BSP completed self-report questionnaires and 14 days of experience sampling assessing high and low arousal negative affect (NA) and positive affect (PA). The time-series of each participant was used to derive variability, instability, and acute instability at the momentary level (within day) and day level (between days). All analyses controlled for mean NA and PA. Within days, BSP was associated with variability of high arousal NA (beta=.02, p=.03), instability of high and low arousal NA (gamma=.18, p=.002) and high arousal PA (gamma=.15, p=.02), and a high probability of acute increases in NA, but not PA (gamma=.01, p=.008). BSP showed similar associations at the between-day level; however, BSP was additionally associated with acute increases (gamma=.01, p=.04) and variability (beta=.05, p=.008) of high arousal PA. Examining affective dynamics across multiple timescales enhances our understanding of affective dysregulation in BSP and can be applied transdiagnostically to understand mood psychopathology.

Symposium 1C
THE AFFECTIVE ISING MODEL: A COMPUTATIONAL ACCOUNT OF HUMAN AFFECT DYNAMICS

Loossens, Tim—KU Leuven; Mestdagh, Merijn—KU Leuven; Dejonckheere, Egon—KU Leuven; Kuppens, Peter—KU Leuven; Tuerlinckx, Francis—KU Leuven; Verdonck, Stijn—KU Leuven

Descriptors: computational science, positive emotion

The typical (continuous-time) vector autoregressive (VAR) models that are used in the field of affect research cannot capture empirical phenomena that are often encountered in affect data such as skewness, bimodality and non-linear relations of the positive and negative affect dimensions (PA and NA). The Affective Ising Model (AIM) is a nonlinear stochastic model for the dynamics of positive and negative affect that was put forward to better explain these phenomena and unify them in one modeling framework. It incorporates principles of statistical mechanics and is inspired by neurophysiological and behavioral evidence about auto-excitation and mutual inhibition of the PA and NA dimensions. Applying the AIM to two large experience sampling studies on the occurrence of PA and NA in daily life in both normality and mood disorder, including 318 participants and 685 distinct timeseries, it has been shown by means of the parametric bootstrap method that the AIM is indeed able to reproduce the aforementioned non-Gaussian features observed in data, which is not true for typical (continuous-time) VAR models. Using the same methodology, it has been shown that the AIM's recovery of Gaussian measures, like the correlation between PA and NA, is comparable to that of the VAR models. The predictive performance of the AIM is also better for 63% of the timeseries in a leave-one-out context and is skewed in favor of the AIM; it can significantly outperform the VAR models but the converse is not true. Currently, a manuscript of the model is being reviewed.

Symposium 1D
A MODEL OF MOOD AS INTEGRATED ADVANTAGE
Bennett, Daniel—Princeton University; Niv, Yael—Princeton University

Descriptors: computational science, cognitive

Our moment-to-moment experiences have complex, non-linear effects on our mood. One way of studying these dynamics is to formally specify a theory of how experience influences mood within a computational model. The model can then be simulated to investigate the mood dynamics that are produced under different parameter settings or in different environments. Here, we present a novel computational model of mood, and demonstrate its utility for modelling affective dynamics. The Integrated Advantage model instantiates the hypothesis that the valence of mood reflects a moving average of the "advantage" of one's actions (i.e., how much better/worse were the results of those actions compared to alternative actions). This model parsimoniously accounts for numerous findings related to mood, including the effects of expectation, surprise, and counterfactual information, as well as typicality effects and action/inaction asymmetries. Simulation of the model allows us to map patterns of affective dynamics onto underlying cognitive processes in a manner that generates testable predictions. We show, for instance, that moment-to-moment mood volatility is associated with a model parameter controlling the timescale over which events are integrated. Similarly, the autocorrelation of mood is related to a parameter governing interactions between mood and learning, such that greater mood-learning interaction results in greater positive autocorrelation (i.e., affective inertia). These results showcase the potential of computational model simulation as a tool for understanding affective dynamics.

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Symposium 2: Overview
PAIN AND EMOTION-BRAIN, BODY, AND BEYOND
Gilam, Gadi—Stanford University

Descriptors: neuroscience, clinical, animal, comparative, mental health, emotion regulation

Pain is defined as a sensory and emotional experience, but is mostly researched and treated as separate from other emotional experiences. Similarly, emotions are typically considered as separate from pain. By merging theoretical and empirical advances made in the largely disparate fields of pain and affective science, we may advance our understanding of the pain and emotion constructs. This symposium highlights conceptual, psychological, and neural intersections between these two constructs, emphasizing opportunity for impactful collaborations across the two research and clinical communities. A diverse panel of young investigators will combine basic and clinical perspectives studying both animal and humans, including healthy and patient populations, and bringing together innovative conceptual models and experimental methodologies. Dr. Corder (UPenn) will present work on animal models and techniques aimed to reveal the neural processing of pain unpleasantness, and its modulation by the endogenous opioid system. Dr. Leknes (UOslo) will present behavioral-pharmacological studies on healthy humans and surgical patients, related to the opioid system's modulation of pain, reward sensitivity, and stress. Dr. Gilam (Stanford U) will present work on the neural bases of chronic low-back pain patients' ability to implement emotion regulation strategies to attenuate noxious heat. Finally, Dr. Aaron (Johns Hopkins U) will present a new model on the trans-diagnostic role of emotion regulation in chronic pain, with supporting meta-analytic work, and implications on clinical interventions.

Symposium 2A
VISUALIZING CORTICAL CIRCUITS ENCODING PAIN UNPLEASANTNESS
Corder, Gregory—University of Pennsylvania; McCall, Norma—University of Pennsylvania; Wojick, Jessica—University of Pennsylvania

Descriptors: neuroscience, animal, comparative, physiology, biomarkers, methods

Damage to the basolateral amygdala (BLA) can induce a rare phenomenon where noxious stimuli are devoid of perceived unpleasantness, while anterior cingulate cortex (ACC) disruption renders unpleasant pain experiences "less bothersome". This indifference to pain affect is similar to the phenomenology of opioid analgesia, suggesting a mu opioid receptor (MOR)-expressing pain circuitry in the ACC. How brain circuits transform emotionally inert nociceptive information into an affective pain percept remains unclear. Here, using in vivo calcium imaging and neural activity manipulation in mice, we sought to determine the functional neuroanatomy of the BLA¥€æACC circuitry encoding the negative affective valence of pain. We found that 6% of 3,397 BLA neurons selectively respond to noxious stimuli, but not to other aversive or rewarding experiences (n=17 mice). Chemogenetic silencing of these neurons alleviates affective-motivational pain-related behaviors (n=14 mice, 2-way RM-ANOVA + Bonferroni, P<0.01). These BLA neurons send long-range projections to the ACC, which target MOR+ pyramidal neurons. Preliminary imaging results find that noxious stimuli activate and inhibit specific ACC neurons, while opioids inhibited ~30% of the noxious neurons and decreased affective pain behaviors (n=3 mice). Our data may suggest that ACC MORs are well positioned within the brain's pain affective circuitry to alter the cortical code of nociception for direct exploitation as a target of neuromodulation therapy.

Symposium 2B
OPIOID ANALGESIC EFFECTS ON STRESS, MOOD AND ANHEDONIA
Leknes, Siri—University of Oslo and Oslo University Hospital; Ernst, Gernot—University of Oslo; Løseth, Guro—University of Oslo; Eikemo, Marie—University of Oslo

Descriptors: clinical, neuroscience, positive emotion, mental health, medicine

How do opioid analgesics affect reward and stress in humans? Work in my lab using opioid agonist and antagonists in healthy humans indicate opioid modulation of reward behaviors that appears conserved across species, e.g. opioids promote motivation for high-value social and food cues in rodents and humans. In contrast to these acute opioid effects, chronic activation of the mu-opioid system due to chronic pain or substance use is thought to downregulate mu-opioid receptors and cause anhedonia. We tested this hypothesis in 488 chronic pain patients, concluding that anhedonia likely results from persistent pain (Z=10, p<0.001) and is worsened by opioid misuse (Z=2.5, p=.01) but not by opioid use (Garland et al, 2019, Psychol Med). The desire to regulate stress and negative affect emerges as a major driver of chronic pain patients' opioid misuse. However although opioids dose-dependently block cortisol, evidence for relief of subjective stress is mixed. I will present new unpublished data from 160 day surgery patients receiving remifentanil on the operating table, indicating little or no relief of anxiety (p=0.04, BF=2). This lack of anxiolysis in a clinical open-label setting matches numerous reports from placebo-controlled lab studies using opioid agonists and antagonists, in which mood is often unaltered. In sum, our findings contrast with the popular belief that both endogenous opioids and opioid drugs cause euphoria and powerfully regulate negative affect. Indeed, chronic opioid use may have the opposite effects, namely anhedonia and maladaptive stress responses.

Symposium 2C
THE NEURAL BASES OF EMOTION REGULATION IN CHRONIC PAIN: REAPPRAISAL AND MINDFULNESS OF NOXIOUS HEAT
Gilam, Gadi—Stanford University; Moodie, Craig C—Stanford University; Law, Christine SW—Stanford University; Goldin, Philippe R—University of California Davis; Manber, Rachel—Stanford University; Mackey, Sean C—Stanford University; Gross, James J—Stanford University

Descriptors: emotion regulation, neuroscience, clinical; mental health, medicine

Chronic pain is both prevalent and burdensome worldwide. Emotion regulation is thought to play a key role in pain perception, its chronicity, and its treatment efficacy. However, the efficacy and neural bases of a person's attempts to use emotion regulation to attenuate their pain is largely unknown. Here we focus on cognitive reappraisal and mindful attention regulation, two emotion regulation strategies that are considered to be key underlying mechanisms in two prominent clinical interventions for chronic pain, Cognitive-Behavioral Therapy and Mindfulness-Based Stress Reduction. People with chronic low-back pain (n=186, age=40.27Œ±12.03, 86 females) had fMRI brain scans during a noxious heat regulation task. We hypothesized and found that: (1) both strategies decreased pain intensity and unpleasantness ratings compared to a natural response to pain (p<0.001), with reappraisal more effective than mindfulness (p<0.001); (2) both strategies decreased pain reactivity in anterior and posterior insula, but unexpectedly not in the amygdala (whole brain corrected p<0.05); (3) reappraisal engaged more of the PFC and was more effective in reducing posterior insula reactivity to pain, while mindfulness engaged more of the parietal cortex (whole brain corrected p<0.05). Findings reveal the efficacy and neural bases of reappraisal and mindfulness in the context of regulating noxious heat by chronic pain patients. Interestingly, they also suggest that emotion regulation of pain is decoupled from the amygdala, which is commonly considered a key target for emotion regulation strategies.

Symposium 2D
THE ROLE OF EMOTION REGULATION IN CHRONIC PAIN: A NEW THEORETICAL MODEL WITH IMPLICATIONS FOR INTERVENTION
Aaron, Rachel—Johns Hopkins University; Finan, Patrick—Johns Hopkins University; Wegener, Stephen—Johns Hopkins University; Keefe, Francis—Duke University; Lumley, Mark—Wayne State University

Descriptors: clinical, emotion regulation, physical health, intervention

Pain has long been defined as an unpleasant sensory and affective experience. Chronic pain often co-occurs with mental health and substance use disorders. However, limited research has examined affective processes, such as emotion regulation, in chronic pain. This is a significant limitation that hinders our understanding of chronic pain mechanisms and interventions. In a new theoretical review, we summarize and organize extant literature examining emotion regulation in chronic pain into a theoretical framework informed by Gross's Process Model (under review). We conclude that the majority of research reviewed converges along two main themes: chronic pain is associated with difficulties in (1) emotion identification (e.g., alexithymia) and (2) down-regulation of pain-related negative affect (i.e., "pain coping"). We present additional data to highlight these trends. For example, results from a meta-analysis (Aaron et al., 2019) showing that individuals with chronic pain have higher alexithymia scores (compared to controls; d=0.81), which is associated with greater pain intensity (d=0.20), depression (d=0.46), and anxiety (d=0.43). To date, pain interventions (e.g., CBT-pain) have primarily focused on pain coping. However, individuals with chronic pain may have difficulties regulating emotions more globally, beyond those associated with pain. In this case, emotion regulation may be targeted to improve outcomes in patients with chronic pain, particularly in those individuals with mental health or substance use disorders.

Symposium 3: Overview
PREDICTORS AND CONSEQUENCES OF DIFFERENT VIEWS OF AFFECT
Koopmann-Holm, Birgit—Santa Clara University

Descriptors: emotion regulation, culture, cognitive, education, learning, mental health

Affective scientists are increasingly aware it is not just the affective states people experience, but also their different views of affect that matter. The goal of this symposium is to highlight recent research on a variety of views (i.e., beliefs about anger and sadness, entity versus incremental mindsets about affect, and the motivation to avoid negative affect), their possible causes, as well as their consequences for emotion and behavior. Koopmann-Holm will present three studies suggesting that the more people want to avoid feeling negative affect, which is associated with having an American versus German cultural background, the less likely they are to process other people's suffering. In two studies, Hagan will show that teachers' beliefs about anger predicts their skill in recognizing anger as well as their disciplinary decisions. Chentsova's studies reveal that Russian parents value negative emotions more than American parents, which partly explains why Russian parents are more likely to read upsetting books to their children. Finally, Soto's studies will demonstrate that people who identify with at least one marginalized group or perceive a negative diversity climate are more likely to have an entity versus incremental mindset about affect, which in turn predicts poorer mental health. Thus, this symposium provides strong evidence that different views of affect have important consequences for people's emotions, skills, and interpersonal choices, and expands the field further with questions related to culture, marginalized identities, and interpersonal roles.

Symposium 3A
SEEING THE WHOLE PICTURE? AVOIDED NEGATIVE AFFECT AND PROCESSING OF OTHERS' SUFFERING
Koopmann-Holm, Birgit—Santa Clara University; Bartel, Kathryn—Santa Clara University; Bin Meshar, Maryam—Santa Clara University; Yang, Huiru E—Santa Clara University

Descriptors: emotion regulation, culture, cognitive

Noticing someone's pain is the first step to a compassionate response, but we know relatively little about the predictors of processing others' suffering. Rather, past research has focused on processing negative information that is threatening to participants' themselves. To fill this gap, in Study 1, 60 undergraduates engaged in a recognition task using complex photographs containing negative aspects (i.e., other people's suffering). As hypothesized, controlling for actual negative affect, the more people wanted to avoid feeling negative, the fewer details of negative aspects they correctly recognized, B=-2.13, SE=.98, t(47)=-2.18, p=.03. However, as predicted, when asked to process negative content, the more people wanted to avoid feeling negative, the more negatively they rated that content, B=-.70, SE=.19, t(54)=-3.68, p=.001. In Study 2, 157 undergraduates were asked to recall what they saw in previously presented images. In line with our predictions, the more people wanted to avoid feeling negative, the fewer negative words they used in their image descriptions, B=-.47, SE=.13, t(157)=-3.53, p=.001. In Study 3, community samples from the U.S. (N=152) and Germany (N=315) viewed an ambiguous image. As predicted, Americans were less likely to perceive suffering in the image compared to Germans (B=-.21, SE=.09, t[456]=-2.34, p=.02), in part because Americans wanted to avoid feeling negative more than Germans did. The importance of assessing people's affective goals for understanding compassion is discussed.

Symposium 3B
TEACHERS' BELIEFS ABOUT THE VALUE OF ANGER PREDICTS ACCURACY OF AND ACTIONS TOWARD STUDENTS

Hagan, Courtney A—North Carolina State University; Halberstadt, Amy G—North Carolina State University; Legette, Kamilah B—North Carolina State University, University of North Carolina

Descriptors: education, learning, child development

Teachers have power to influence the academic success and interpersonal relationships with and between their students. In two studies, we assessed the beliefs that teachers bring to the classroom and how beliefs about anger might specifically influence how teachers interpret and manage the emotions of those around them. In Study 1, 43 4th and 5th grade teachers from 7 elementary schools completed a computer module in which they judged facially expressed emotions of 72 child actors (FACS coded to verify expressions were "true" to the emotions) and completed a measure assessing their beliefs about students' anger (TBASE-Anger). As predicted, controlling for teachers' age and gender, the teachers' belief that students' anger was useful was associated with their ability to identify anger, $F(3, 42)=3.21$, $p=.03$, R2delta=.15. In Study 2, 228 elementary, middle, and high school teachers completed the TBASE-Anger and judged 6 videotaped vignettes of misbehaving boys. Teachers' perception of aggression of the student actors (beta=.47, $p<.001$) mediated the association between the belief that anger is harmful and intention to discipline the students, beta=.14, $p=.02$. Further, teachers' perception of aggression (beta=.48, $p<.001$) fully mediated the association between the belief that anger is useful and disciplinary intention, beta=-.03, $p=.68$. Together, results suggest that teachers' beliefs about students' anger may affect what they perceive in the classroom and how they act on those perceptions. Further, different beliefs lead to different trajectories of influence.

Symposium 3C
IT IS GOOD FOR THEM TO FEEL UPSET AT TIMES: BELIEFS ABOUT EMOTIONS, AND EMOTIONS IN CHILDREN'S BOOKS, IN SAMPLES OF AMERICAN, RUSSIAN, AND RUSSIAN AMERICAN PARENTS

Chentsova Dutton, Yulia—Georgetown University; Leontieva, Anna; Halberstadt, Amy—North Carolina State University

Descriptors: culture, child development

While European American cultural context fosters positive emotions, Russian cultural context is thought to foster emotional diversity. Russian adults emphasize the value of learning from all emotions, including contextually-appropriate negative emotions. Little is known about how these cultural norms are socialized in children. Two studies examined parental reports of beliefs about the importance of negative emotions in their children's lives (i.e., culture "in the head") as well as descriptions of emotions depicted in books that they read to their children (i.e., culture "in the world"). We found that Russian and Russian American parents of young children were more likely to describe negative emotions as valuable for their children in open-ended responses (Study 1, n=40) and on a scale of parental beliefs, $F(2,232)=4.47$, $p=.01$, partial eta squared=0.04 (Study 2, n=322) than American parents. They were also more likely than American parents to read books depicting negative emotions to their children, $F(2,305)=13.84$, $p<0.001$, partial eta squared=0.08, with parental beliefs partially mediating this difference. Cultural differences for emotions depicted in books were evident even for parents reading to children aged 3 and under. These results suggest that Russian parents place more value on negative emotions than American parents and expose their young children to cultural products that depict negative emotions more. If replicated, these findings can further our understanding of how cultures shape experience, consequences and regulation of negative emotions.

Symposium 3D
MINORITY STATUS AND DIVERSITY CLIMATE AS PREDICTORS OF EMOTION BELIEFS AND WELL-BEING

Soto, Jose A—The Pennsylvania State University; Salomaa, Anna C—The Pennsylvania State University

Descriptors: mental health, emotion regulation

Lay beliefs about emotions can range from entity beliefs, or seeing emotions as largely fixed and immutable, to more incremental beliefs, or viewing emotions as flexible and changeable. Entity beliefs have been associated with multiple indicators of poorer mental health and well-being. We explored whether identifying as a member of a marginalized group, often associated with external constraints placed on one's actions and behaviors, might also be related to these individuals feeling that their emotions are also constrained or fixed. Data from 420 individuals who identify with at least one of several marginalized groups (racial/ethnic minority, sexual minority, gender non-binary, or religious minority) completed the Implicit Theories of Emotion Scale, a measure of diversity climate, and measures of mental health and well-being. Consistent with previous work, our data show that greater entity beliefs about emotion are associated with poorer mental health (r2=.36, $p<.00$). We also show that across many comparisons, those with marginalized identities (religious, sexual, gender, etc.) consistently report more fixed beliefs about emotions (all r's>.18, all p's<.01). Greater entity beliefs were also associated for those who perceived more unfavorable diversity climates (r2=.21, $p<.00$). Further analyses suggest that emotion beliefs and diversity climate may partially explain the link between marginalized status and poorer mental health. Our data illustrate how lived experiences associated with marginalized statuses may carry over to phenomena such as emotion beliefs.

Symposium 4: Overview
EMOTION AND SOCIAL PERCEPTION IN NATURALISTIC CONTEXTS: PERSPECTIVES FROM AFFECTIVE COMPUTING AND AFFECTIVE NEUROSCIENCE

Ong, Desmond C—National University of Singapore; Reddan, Marianne—Stanford University

Descriptors: social neuroscience, computational science, cognitive, methods

Real world affect outside the laboratory has remained challenging to measure and model while maintaining the rigor of laboratory studies. However, with today's advances in measurement tools, neuroscientific and experimental methods, and computational modelling, affective scientists are now able to tackle challenging questions about naturalistic affect, both by bringing real world affect into the lab (naturalistic stimuli) and by taking our methods out into the field (naturalistic contexts). This symposium brings together cutting-edge work centered around modelling emotion perception and affect-related constructs in the real world, and enabled by recent innovations in modeling and technologies. Ong will describe how deep learning and probabilistic modeling can give us insights into people's emotion perception as they watch unscripted narratives of emotional life events, and Reddan will discuss the neural representations that support such rich emotion perception and integration. Moving to another naturalistic context, Jolly will discuss work examining the neural computations underlying perceptions of social relationships in a television drama. Finally, D'Mello will describe a large-scale longitudinal study using wearables and other sensors to track the activity and social-emotional outcomes of over 750 professionals across their work and home. All these studies were not possible five years ago, but are today, and together will showcase some progress towards the ambitious goal of bringing the study of affect out of the laboratory and into the real world.

Symposium 4A
USING DEEP AND PROBABILISTIC MODELLING TO STUDY EMOTIONAL CUE INTEGRATION IN NATURALISTIC EMOTIONAL NARRATIVES

Ong, Desmond C—National University of Singapore; Wu, Zhengxuan—Stanford University; Reddan, Marianne—Stanford University; Zaki, Jamil—Stanford University

Descriptors: computational science, cognitive, social

Human emotions unfold in complex patterns over time, and cutting-edge machine learning methodology allow us new insights into how people perceive and understand dynamic emotions. First, we report the collection and curation of a high-quality video dataset of 193 video clips (over 7 hours) of 49 volunteers describing emotional life events. These events are then continuously annotated by 700 raters for emotional valence. This provides rich variation in emotional content and emotional expression, but still within a shared context---sharing life stories. We describe how the latest tools in affective computing and machine learning allow us to extract complex multimodal features from the various channels---video, audio and linguistic information---and use these features to model how human raters understand emotions in these videos, in some cases achieving performance similar to humans (Concordance correlation r=.43 (SD=.32) compared with human inter-rater agreement of r=.47 (SD=.15)). Using such computational models, we can identify "easily-read" cues that predict a high degree of agreement among human raters, as well as cues that predict when raters disagree. This work has implications towards a more precise understanding of emotion perception in naturally occurring, high-dimensional contexts, as is characteristic of the real world. In addition, we plan on using this opportunity to release appropriately-consented parts of the dataset to the affective science community to contribute to the goal of moving the field towards research with richer, naturalistic stimuli.

Symposium 4B
MODALITY-SPECIFIC AND SUPRAMODAL NEURAL REPRESENTATIONS SUPPORT NATURALISTIC EMOTION INFERENCE

Reddan, Marianne—Stanford University; Ong, Desmond C—National University of Singapore; Mattek, Alison —University of Oregon; Kahhale, Isabella—University of Pittsburgh; Zaki, Jamil—Stanford University

Descriptors: social neuroscience, social, methods

People perform emotion inference to guide social interaction, and increasingly rely on communications that restrict social information to particular channels (e.g., isolated visual or auditory cues). Therefore, it is important to understand how the brain infers emotion under sensory constraints. We collected fMRI data from participants (N=100) while they watched 24 videos of social targets describing real-life emotional stories (multimodal), watched silent videos (visual-only), and listened to the audio from these videos (auditory-only). Participants rated the storyteller's affect moment-by-moment on a bivalent scale. We constructed subject-level pairwise distance matrices across all stimulus ratings to uncover how participants organize stimulus content as they make inferences. We then applied these matrices to whole-brain searchlight analyses, allowing us to identify voxels that organize stimulus content similarly to the ratings. When observers had access to both visual and auditory information, brain regions associated with mentalizing (angular gyrus, TPJ, and IPS) tracked their inferences. By contrast, activity in disparate systems—vmPFC and auditory cortices (auditory-only) and amygdala, striatum, and OFC (visual-only)—represented inferences under conditions of restricted information. These results indicate that when emotion inference involves multisensory information integration, it draws from greater levels of neural abstraction. These data pave the way to using multivariate neuroimaging analyses to better understand naturalistic emotion inference.

Symposium 4C
SPONTANEOUS NEURAL REPRESENTATIONS OF SOCIAL RELATIONSHIPS IN NATURALISTIC CONTEXTS

Jolly, Eshin—Dartmouth College; Chang, Luke J—Dartmouth College

Descriptors: social neuroscience, social; methods, computational science

A long history of laboratory-based social cognition research has highlighted how individuals build mental representations of one-another through the use of person-specific attributes such as traits (e.g. warmth, competence). However, outside the lab, humans are often embedded in rich social contexts comprised of dynamic social interactions that influence behavior. An important and open question therefore is how information about rich, changing interpersonal relationships is incorporated into the perception and neural representation of individuals. This work utilizes two naturalistic fMRI studies (N=70; ~3hrs/person) in which individuals watched several hours of a character-drama depicting interactions between 11 main characters. Using novel analytic approaches to capture individual variations in psychological and neural processes (intersubject-representational-similarity-analysis), we find that spontaneous neural activity in regions commonly involved in social cognition are better captured by beliefs about social relationships rather than person-specific attributes. Further, multivariate brain patterns within these same regions explicitly encode information about recurring social dynamics between characters in the main narrative. Together, these results suggest that in a naturalistic unconstrained context, a key aspect of social cognition is explicitly inferring and representing how individuals are connected to each other rather than focusing primarily on the attributes of any given individual.

Symposium 4D
PROJECT TESSERAE: ROBUST LONGITUDINAL AUTOMATED MULTIMODAL MODELING OF INDIVIDUALS IN NATURALISTIC CONTEXTS

D'Mello, Sidney K—University of Colorado Boulder

Descriptors: computational science, physical health, methods

Can we leverage today's ubiquitous sensors (wearables, smart devices) and analytic advances to unobtrusively and automatically model people in their work and home environments? The premise of our project (called Project Tesserae) was to fuse information from low-cost mobile devices that individuals already use with accurate and robust machine learning techniques to develop generalizable models of psychological constructs (e.g., personality, affect, stress/anxiety), health behaviors (e.g., physical activity, sleep disorders), and occupational outcomes (e.g., counterproductive work behavior). Towards this end, we conducted a year-long study of over 750 working professionals from five cohorts across the US to explore the extent to which wearables, smartphones, Bluetooth beacons (to track location), and social media can provide insights into individuals in their work, home, and social contexts. We achieved small to medium sized correlations (rs ranging from 0.08 to 0.41 with a mean of 0.18 across 14 constructs) between computer-estimated and self-reported measures using a robust modeling approach that included, rather than discarded, missing data, generalized across people, and protected privacy and data security. Overall, the results have important implications for the affective sciences because they indicate that wearable sensors and machine learning methods can robustly model psychological, health, and occupational constructs in the wild, but the signals are weak due to individual differences, the noisiness of the real-world, and the hustle and bustle of daily life.

Symposium 5: Overview
BRIDGING DEVELOPMENTAL AND AFFECTIVE SCIENCE IN THE STUDY OF EMOTION UNDERSTANDING
Ruba, Ashley L—University of Wisconsin-Madison

Descriptors: child development, language, cognitive

The study of emotion would benefit from increased communication between affective and developmental scientists. This symposium presents four talks that apply affective science perspectives to the study of emotion understanding development in infancy and early childhood. The first two talks explore the development and structure of children's emotion categories. Talk 1 shows that the ability to differentiate negative emotional expressions (anger/disgust) develops between 10- and 14-months of age. Talk 2 shows that 3- to 6-year-olds sort facial expressions dimensionally (positive/negative), while adults sort facial expressions into more discrete categories. Both talks address the role of language acquisition in these categorization abilities. The second two talks discuss factors that influence emotion understanding development. Talk 3 shows that greater primary caregiver emotional expressiveness relates to better emotion understanding in 2.5-year-olds. Talk 4 shows that emotion word learning varies depending on linguistic content (sentence frames, "She is happy") in 3- to 5-year-old children. Both talks address the role that parents may play in facilitating their children's emotion understanding development. Together, these talks provide critical insights to ongoing debates of (a) whether children have discrete emotion categories, and (b) how environmental factors and language impact emotion understanding. The goal of the symposium is to advocate for increased collaboration between developmental and affective science to advance our understanding of human emotion.

Symposium 5A
DO PREVERBAL INFANTS UNDERSTAND DISCRETE EMOTIONAL EXPRESSIONS?
Ruba, Ashley L—University of Wisconsin-Madison; Meltzoff, Andrew N—University of Washington; Repacholi, Betty M—University of Washington

Descriptors: child development, language, cognitive

Constructionist theories argue that infants perceive emotions in broad dimensions (valence) that narrow to discrete categories (sadness/anger) with the acquisition of emotion labels (Barrett, 2017). However, there have been few empirical tests of this hypothesis. In three studies, infants watched videos of an emotional eliciting event (an Emoter eating a novel food) followed by a congruent emotional response (disgust) or an incongruent response (anger). If infants have formed links between specific eliciting events and negative emotional expressions (above and beyond valence), they should look longer at the incongruent expression compared to the congruent expression. In Study 1, 10-month-olds (N=60) expected a negative event (having a desired toy taken away) to elicit a negative emotion (anger) rather than a positive emotion (happiness), p=.024. In Study 2, 10- and 14-month-olds (N=120) were presented with two negative events and two high-arousal, negative emotions. Both ages expected losing a desired toy to elicit anger, rather than disgust, p=.017. However, only 14-month-olds expected tasting a novel food to elicit disgust, rather than anger, p=.026. Study 3 provided additional evidence that 10-month-olds (N=60) did not link disgust to a novel food event or anger to an unmet goal event, p>.25. Alongside previous research (Ruba et al., 2019), these results suggest that the ability to differentiate (and perhaps "understand") negative emotional expressions develops across the first two years of life. Constructionist theories could be modified with these developmental data.

Symposium 5B
DEVELOPMENTAL CHANGES IN CHILDREN'S KNOWLEDGE OF FACIAL CONFIGURATIONS
Woodard, Kristina—University of Wisconsin-Madison; Zettersten, Martin—University of Wisconsin-Madison; Pollak, Seth D—University of Wisconsin-Madison

Descriptors: child development, cognitive; language

How do children learn to categorize different facial configurations classically thought to represent various emotions? Many studies have examined when children are able to perceptually discriminate between emotional facial expressions (Grossmann, 2010), and when children are able to verbally label these expressions (Widen & Russell, 2003, 2010). However, while these studies provide important information about the timeline of emotional development, they give less information about the nature of children's category representations for different facial configurations. For instance, children could have discrete emotion categories or perceive facial configurations more continuously along the dimensions of valence and arousal. To distinguish between these possibilities, we had children sort facial configurations on a grid based on whether the people photographed were feeling "the same kind of thing". Tasks of this sort allow researchers to examine the organization of children's semantic knowledge (e.g., Goldstone, 1994; Unger & Fisher, 2019). We found that 3- to 6-year-old children (N=50) sort faces along dimensions of affective valence (R2=.89,p<.01) and arousal (R2=.57,p<.01). Additionally, adults (N=40) placed faces from the same emotion category closer to one another than faces from a different emotion category (Mdistance_same=.28,Mdistance_different=.47,p<.05). This suggests that adults sorted faces using discrete emotion categories tied to linguistic categories, and that changes in the representations of facial configurations could be tied to changes in emotion vocabulary.

Symposium 5C
EMOTION UNDERSTANDING IN EARLY CHILDHOOD AND EMOTIONAL EXPRESSIVENESS IN THE ENVIRONMENT
Ogren, Marissa—University of California-Los Angeles; Johnson, Scott P—University of California-Los Angeles

Descriptors: child development, education, learning, cognitive

Understanding others' emotions is crucial for healthy social and academic development, yet little is known about how environmental factors impact the early development of this skill. Thus, the present study investigated how the emotion understanding of 2.5-year-old children relates to the emotional expressiveness in their environment. Participants were 35 children (17 male; Mean age=30.02 months). Parents completed two surveys: The Family Expressiveness Questionnaire (FEQ; Halberstadt, 1986) asked about the full family's emotional expressiveness and the Berkeley Expressivity Questionnaire (BQ; Gross & John, 1997) asked just about the primary caregiver. Children participated in the Affective Knowledge Test (AKT; Denham, 1986), a common test of young children's emotion understanding. Results revealed that AKT performance was significantly related to parent BQ responses (r=.369, p=.029), but not FEQ responses (r=.147, p=.401). Post-hoc analyses investigating the relation between the three BQ subscales and AKT performance revealed that AKT performance significantly related to BQ Impulse Strength (r=.419, p=.012), but not to Negative Emotionality (r=.236, p=.171) or Positive Emotionality (r=.253, p=.152). These data suggest that exposure to emotional expressiveness from the primary caregiver may be important for developing emotion understanding, and specifically that having a parent who tends to respond more emotionally may be particularly beneficial for learning to identify emotional expressions and reactions.

Symposium 5D
HOW DO CHILDREN LEARN EMOTION WORDS? EMOTION CONCEPT ACQUISITION IN PRESCHOOLERS

Shablack, Holly—UNC-Chapel Hill; Becker, Misha—UNC-Chapel Hill; Lindquist, Kristen A—UNC-Chapel Hill

Descriptors: child development, language

Evidence suggests that learning emotion words leads to emotion understanding. However, little work examines how children acquire emotion words. We conducted two experiments manipulating the linguistic context (sentence frames) surrounding novel words to assess when children perceive them as labeling an emotion v. physical state or action. In Study 1 (N=135) children saw a video of two puppets using a novel word in one of three sentence frames. They then selected the image (out of 3) they judged to match the word. Children were more likely to choose an emotion or physical state with age, $F_{(4,246)}=2.53$, p=.04 and with more informative sentence frames, $F_{(4,246)}=2.28$, p=.06. In Study 2 (N=113) children heard a novel word in one of three sentence frames plus saw situational context via a cartoon. A significant interaction, $F_{(7.47, 190.38)}=2.49$, p=.02, suggests that children selected emotion images more with increasing age and more informative sentence frames. Finally, a study of naturalistic language further examined the role of linguistic context. In 12 transcripts from children ages 2-3 and adults, adults predominantly used be (71.6%) before emotion words and feel infrequently (1.3%). Adults followed emotion words with phrases starting with at (15.5%), to (13.2%), that (14%), and about (10.1%). On-going analyses are establishing the specificity of these linguistic cues for children's acquisition of emotion v. other words. The implications of these findings for language's role in emotion understanding and constructionist theories of emotion will be discussed.

Symposium 6: Overview
WHEN AND WHAT JUST HAPPENED: CONTEXTUAL MODERATORS OF EMOTION REGULATION

Waugh, Christian E—Wake Forest University; McRae, Kateri—University of Denver

Descriptors: emotion regulation, positive emotion, physiology, biomarkers

Advances in emotion regulation (ER) research highlight the importance of context in the selection and success of ER strategies. This symposium includes four talks that examine context, focusing on how ER is affected by 'when' it occurs in relation to other processes, and by 'what' context it occurs in. Kateri McRae will first present work demonstrating a 'when' context, by showing that people's ability to successfully regulate and respond to negative stimuli is affected by whether or not they just exerted self-control. As another example of a 'when' context, Roni Shafir will present data showing that receiving anticipatory information before people attempt to regulate their negative emotions shapes subsequent regulation success, and that their selection of anticipatory information is influenced by the ER strategies people attempt to implement. Next, we shift to presenting 'what' contexts, with Christian Waugh first presenting a framework suggesting three potential roles positive emotions can play in ER to negative events: as the target of ER, as a mediator of ER, and as an incidental moderator of ER. Sarah Pressman will then present studies demonstrating that low, medium and high arousal positive emotional contexts have different effects on psychological and physiological responses to stressors. In sum, this symposium is part of a larger movement in ER research to take our understanding of ER from more basic tasks to more fully embrace the importance of context, understanding 'when' we regulate our emotions and 'what' context we are in when we do.

Symposium 6A
WHAT JUST HAPPENED? SEQUENCE EFFECTS ON EMOTION REGULATION SUCCESS

McRae, Kateri—University of Denver; Capistrano, Christian—University of Denver; Abraham, Damon—University of Denver; Pan, Chelsey—University of Denver

Descriptors: emotion regulation, cognitive

Cognitive reappraisal is thought to be one of the most successful emotion regulation strategies, but there are contextual factors which impact its success. I will present data from two separate investigations which examine the effect of completing either a trial of a different task or a specific trial type of an emotion regulation task on the success of subsequent reappraisal. Study 1 (N=44) was modeled after cognitive paradigms reporting trial order effects in the emotional Stroop task, and required participants to either solve an incongruent or congruent emotional Stroop trial immediately before viewing negative images in an event-related task. Results indicate that solving incongruent Stroop trials was associated with lower levels of negative emotion (t(43)=5.41, p<0.001), but only on non-regulation trials. The second study investigated trial order effects with a combined dataset of 15 studies using an event-related reappraisal task (N=866). We observed a significant effect of previous trial type on emotion rating, $F_{(2,865)}=13.92$, p<.001, indicating that individuals found images more negative following non-regulation negative trials than neutral or regulate-negative trials. Together, these findings indicate that the cognitive and emotional processes engaged immediately before processing negative emotion have a significant effect on emotional responding.

Symposium 6B
ANTICIPATORY INFORMATION AS AN INFLUENTIAL CONTEXTUAL FACTOR IN EMOTION REGULATION

Shafir, Roni—Tel Aviv University; Sheppes, Gal—Tel Aviv University

Descriptors: emotion regulation, social neuroscience

Individuals often receive information concerning future unpleasant events that will require regulating emotions. However, research on how anticipatory information shapes subsequent ER is lacking. In this talk, I present Event Related Potential (ERP) findings (Study 1, N=28) showing how the presence of anticipatory information, which amplifies attention towards upcoming unpleasant stimuli, impairs subsequent regulation efforts to decrease attention (i.e., distraction), but does not influence efforts to decrease negative meaning (i.e., reappraisal) ($F_{(2, 54)}=6.8$, p=.002). Moreover, individuals (Study 2, N=25) adaptively choose to refrain from receiving anticipatory information when about to distract ($F_{(2, 48)}=11.66$, p<.001). I then introduce a novel account that draws on these and other findings to suggest that the mere presence of anticipatory information, which primarily influences attention towards upcoming unpleasant events, largely impacts subsequent attention-modulation strategies. Furthermore, biased contents of anticipatory information, which primarily influence the meaning of upcoming unpleasant events, largely impact subsequent meaning-modulation strategies. According to the account, the fit between the direction of influence of anticipatory information on cognition and the cognitive underlying mechanisms of down-regulation strategies determines regulatory consequences. For instance, enhanced attention to, or negative meaning of, unpleasant stimuli, would challenge subsequent efforts to decrease attention or negative meaning, respectively.

Symposium 6C
A TRIPARTITE FRAMEWORK OF THE ROLES THAT POSITIVE EMOTIONS PLAY IN EMOTION REGULATION
Waugh, Christian E—Wake Forest University

Descriptors: emotion regulation, positive emotion

In this talk, I introduce a framework suggesting that positive emotions (PE) can play three roles when people attempt to regulate their emotional response to negative events. First, positive emotions may serve as the ultimate target of emotion regulation (ER) such that people attempt to feel better by regulating their positive emotions regardless of whether they also regulate their negative emotions. Second, positive emotions may serve as a mediator of ER such that people regulate their positive emotions in order to satisfy their ultimate goal of regulating their negative emotions. Third, positive emotions may serve as a moderator of ER such that incidental positive emotions may moderate people's ability to regulate positive or negative emotions. As evidence for this framework, I will present experimental, survey, and neural studies on regulatory strategies such as positive anticipation, positive distraction, and positive reappraisal. Lastly, I discuss how this framework contributes to the burgeoning literature on regulatory flexibility by providing different roles of PE in ER that may be more or less effective for different people and circumstances.

Symposium 6D
KEEP CALM OR GET EXCITED? HOW DIFFERING AROUSAL LEVELS OF POSITIVE AFFECT INFLUENCE CARDIOVASCULAR RESPONSES TO VARIED STRESSORS
Pressman, Sarah D—University of California, Irvine; Acevedo, Amanda M—National Cancer Institute; Leger, Kate A—University of Kentucky; Jenkins, Brooke N—Chapman University

Descriptors: positive emotion, emotion regulation, physiology, biomarkers, physical health

While there are many different types of positive affect (PA), researchers often ignore these subcategories in stress-relevant research, and operate under the assumption that all forms of PA are equally beneficial when regulating stress. We hypothesize that this association is more nuanced, and may depend on the arousal level of PA and the nature of the stressor. In this study participants (N=279, 75.6% female, Mage=20.6) were randomized to one of four conditions: induced low, mid, or high arousal PA (calm, happy, and excited, respectively) or a neutral control. This was followed by two tasks: a passive (cold pressor) stressor and an active (star tracing) stressor. Pre-ejection period (PEP), reflecting sympathetic responses, and root mean square of the successive differences (RMSSD), reflecting parasympathetic responses, were recorded continuously. We found that during passive cold exposure, excited and control groups had steeper increases in PEP (decreased sympathetic activity) during stress recovery than did the calm group (ps<.05). Additionally, calm and excited groups had steeper increases in RMSSD (increased parasympathetic activity) during reactivity than did controls (p<.05) but there were no differences between these conditions during cold pressor recovery. During active stress, there were no differences between PA conditions. These results qualify past PA stress buffering findings, supporting previous results only for passive stress. Additionally, they support the idea that PA effects on stress vary depending on the nature of arousal and of the stressor.

Society for Affective Science

Emotion Perception
WHAT DOES LAUGHTER COMMUNICATE?

Rychlowska, Magdalena—Queen's University Belfast; McKeown, Gary J—Queen's University Belfast; Sneddon, Ian—Queen's University Belfast; Curran, William—Queen's University Belfast

Descriptors: positive emotion, social

Laughter is a complex and dynamic behaviour occurring in all types of social circumstances. But what exactly does it communicate? The goal of our research is to shed more light on this question using recordings of spontaneous social laughs. Specifically, we explore the extent to which laughter conveys distinct states as opposed to being an ambiguous signal used to emphasize other interaction events. Two studies (N=101; N=404) tested whether different laughs are interchangeable. Altering video recordings such that the original laughs were replaced by other laughs taken from different points in the same conversation, had little or no effect on perceived genuineness of the interaction (d=0.13), as long as laughter intensity was matched. Another set of studies (N=50, N=360, N=200) extends these findings to laughs produced in social settings engineered to induce amusement, embarrassment, and schadenfreude. Interchanging even the most distinctive instances of such laughs had little effect on participants' judgments of suitability of laughs to different social contexts (d=0.10). For example, when laughter in an embarrassing interaction was replaced with laughter from a different (schadenfreude or amusement) interaction, the replacement laughter was likely to be judged as belonging to the embarrassing interaction. This suggests that context largely influences how laughter is interpreted. Upcoming studies manipulate information available to observers to explore the role of social context, facial and bodily expressions, and acoustics in the signal value of laughter.

Emotion Perception
WHEN "GOOD" BELIEFS GO BAD: UPSIDES AND DOWNSIDES OF BELIEVING EMOTIONS ARE CONTROLLABLE

Smith, Angela M—University of Toronto; Ford, Brett Q—University of Toronto

Descriptors: emotion regulation, mental health, social

Beliefs we hold about whether emotions are controllable influence how we approach our emotions, but what about how we approach others' emotions? I propose believing someone's emotions are controllable shape how we treat that person. The exact nature of this treatment is subject to two competing hypotheses. If believing someone else's emotions are controllable is similar to beliefs held about themselves (e.g., because both derive from the same general underlying belief), this belief may promote more positive responses towards that person's distress. However, if believing someone else's emotions are relatively controllable functions similarly to evaluative social judgments (e.g., holding others responsible for their actions and are more likely to criticize them when they fail), this belief may actually promote more negative responses towards that person's distress. Two studies (Ns=308,314) measured participants' behavioral intentions towards a person struggling with emotional distress. Across both studies, individuals who believed this person's emotions were relatively controllable were less positive (i.e., less empathic; rs=-.14,-.23, ps<.006) and more negative (i.e., greater blame; rs=.49, .50, ps<.001) towards them. Believing this person's emotions were relatively controllable also predicted stronger attempts to have her control her emotions using interpersonal emotion regulation strategies likely to backfire. These results suggest beliefs about emotion controllability may powerfully shape our interpersonal interactions, carrying crucial interpersonal downsides.

Emotion Perception
DO YOU SEE WHAT I SEE? INDIVIDUAL DIFFERENCES IN CONTEXTUALIZED EMOTION RECOGNITION

Ensenberg, Noga S—Hebrew University of Jerusalem; Hassin, Ran R—Hebrew University of Jerusalem; Aviezer, Hillel—Hebrew University of Jerusalem

Descriptors: cognitive, social

Recent evidence suggests that real life facial expressions are often more ambiguous than previously assumed. Accordingly, context plays an indispensable role in communicating emotion. In fact, even the recognition of stereotypical, exaggerated facial expressions can be shifted by context. For example, previous reports suggest that the body context in which a face is presented can bring to a categorical shift in recognition from the face. This effect has been studied extensively at the group level but are we all effected in a similar way? Our results suggest the answer is no. Using a multiple-choice categorization task, 101 participants were presented with still presentations of incongruent facial and bodily emotional expressions. We asked whether individuals differ in their susceptibility to the bodily context when categorizing the face and if so whether effects are consistent over time. Striking differences were found, these were stable over two sessions (r=0.84, p<0.001). Our second study suggests that this phenomenon is not bound to the method used and holds also when using an open question paradigm. Testing 83 participants we show a robust correlation between the methods (r=0.63, p<0.01). Our third study shows that individual differences in the susceptibility to context hold even across modalities, presenting participants with dynamic audio-visual expressions (43 participants, r=0.7, p<0.001). We conclude that different people exposed to identical affective stimuli may perceive strikingly different emotions as a function of highly stable individual differences.

Emotion Perception
WHO CHANGES THEIR MIND? REAL-WORLD BELIEF MALLEABILITY AND FOLK THEORIES

Iskiwitch, Carol—University of Southern California; Graham, Jesse—University of Utah

Descriptors: language, social, political

The degradation of political and civic discourse is a problem of intense concern in the United States. Research shows that our decisions about whether to engage in a serious conversation with someone depend on whether we perceive their belief to be malleable (Akhtar & Wheeler, 2016). But how do we judge belief malleability, and how accurate are our judgments? In 4 studies, we provide some of the first data answering these questions. In Study 1, 241 U.S. adults read posts from a debate-themed online discussion forum and guessed which authors ended up changing their beliefs in the course of discussion. Participants' guesses were more accurate than chance (56% correct, chi-squared(1)=38.1, p<.0001). We then asked what distinguishes the language of malleable from non-malleable beliefs. In Studies 2 and 3 (each n=5,000 posts), we found that authors who did not change their beliefs used more language related to morality (Welch's t(3256.1)=-2.81, p=.005) and negative emotion (Welch's t(3281.4)=-3.75, p=.0002) and less language related to positive emotion (Welch's t(3065.7)=4.11, p<.0001). Finally, we asked what signals people think indicate belief malleability, as these theories likely influence real-world judgments. In Study 4, 260 U.S. adults guessed which post authors changed their beliefs and provided reasons for their guesses. We compared these reasons to the text analysis results of Studies 2 and 3 and found that participants' folk theories pinpointed some accurate signals and some inaccurate signals.

Emotion Perception
THE FEATURES OF EMOTION PEOPLE FORECAST TO MAKE IMPORTANT DECISIONS: MEDICAL STUDENTS FORECAST THEIR EMOTIONAL RESPONSE TO MATCH DAY AND RESIDENCY

Carlson, Steven J—University of California, Irvine; Levine, Linda J—University of California, Irvine; Lench, Heather C—Texas A&M University; Flynn, Elinor B—University of California, Irvine

Descriptors: social, positive emotion

People rely on affective forecasts to make decisions. But emotion forecasts are not always accurate, and this can lead people to prioritize goals incompatible with their well-being. People's forecasts of emotional intensity are more accurate than their forecasts about other features of their emotional experience. However, more accurate forecasts of emotion intensity only matter for the quality of people's judgments to the extent that people also rely on these forecasts for decisions. This study is the first to examine which features of emotion people forecast to make decisions with lasting importance for their lives. We assessed how much fourth year medical students (N=178) reported relying on forecasts of emotional intensity, frequency, and duration in order to decide how to rank residency programs in preparation for being matched with a program. We also examined how accurately they forecast each of these features of emotion. Participants reported relying more on forecasts of how intensely happy they would feel than the frequency, t(176)=7.36, p<.001, d=.59, or duration, t(177)=6.40, p<.001, d=.52, of happiness when deciding how to rank residency programs. They overestimated the frequency and duration of happiness they would feel when matched with their residency program, but accurately predicted how intensely happy they would feel. Greater reliance on, and more accurate prediction of, emotional intensity when making decisions with long term personal consequences provides important new evidence that people are better forecasters than previously thought.

Emotion Perception
MY EMOTIONS BELONG HERE AND THERE: EXTENDING EMOTIONAL ACCULTURATION TO THE HERITAGE CULTURE

De Leersnyder, Jozefien—KU Leuven; Kim, Heejung—University of California, Santa Barbara; Mesquita, Batja—KU Leuven

Descriptors: culture, adult development, emotion regulation

When immigrant minorities engage in a new majority cultural context, their patterns of emotional experience come to fit that context-a process we coined emotional acculturation (De Leersnyder, Mesquita, & Kim, 2011). However, most minorities do not only engage in their majority culture's contexts, but continue to engage in their heritage culture's contexts as well. Therefore, the current research investigated which personal and situational factors afford minorities to maintain their heritage culture's emotional patterns. Concretely, Study 1 compared the emotional patterns of Korean Americans (n=49) with those of Koreans (n=80), and Study 2 the emotional patterns of Turkish Belgians (n=144) with those of Turks (n=250). Whereas immigrant minorities had lower fit to the heritage emotional patterns than participants in their cultures of origin (Study 1: Mean_diff=.31; p ä__ .001; Study 2: Mean_diff=.175; p=.005), within-group differences in minorities' heritage culture fit could be explained from spending time with heritage culture friends (personal factor; Study 1: Beta=.372, p=.015; Study 2: Beta=.116, p=.005) and interacting in heritage culture settings as compared to mainstream settings (situational factor; Study 1: Mean_diff=.10, p=.065; Study 2: Mean_diff=.063, p=.070). Hence, the current research shows that minorities' emotional patterns are not only cultivated, but also activated by their interactions in different socio-cultural contexts-a finding that provides initial evidence for cultural frame-switching in the domain of emotion.

Mental and Physical Health
IMPACT OF LIFE EVENTS ON PSYCHOTIC AND AFFECTIVE SYMPTOMS: 10-YEAR LONGITUDINAL STUDY FOLLOWING FIRST ADMISSION

Donaldson, Kayla R—Stony Brook University; Jonas, Katherine—Stony Brook Medicine; Tian, Yuan—Stony Brook Medicine; Klein, Daniel N—Stony Brook University; Mohanty, Aprajita—Stony Brook University; Bromet, Evelyn J—Stony Brook Medicine; Kotov, Roman—Stony Brook Medicine

Descriptors: clinical, mental health

It is well-established that significant life events (LEs) are associated with onset and relapse of psychotic disorders. However, the impact of LEs on specific symptoms over the course of illness is not well characterized, nor is the direction of these associations well documented. The present study utilizes a large (N=428) cohort of individuals with psychotic disorders, followed up for a decade after first hospitalization. Recent LEs and current symptoms were assessed at 6, 24, 48, and 120-months. Multi-level and structural equation models were employed to examine within-subjects effects of positive and negative LEs on psychotic symptoms, negative symptoms, depression, and mania. Positive LEs predicted decreases in psychotic (p=.03) and negative (p<.01) symptoms, and marginally predicted increases in mania (p=.06) over time. Negative LEs predicted increases in depression (p=.02), mania (p<.01), and psychotic symptoms (p<.01) as well as decreases in negative symptoms (p<.01). Structural equation models revealed paths at each timepoint from negative LEs to increased depression, mania, and psychotic symptoms (p<.05), and decreased negative symptoms (p<.05); paths from positive LEs to symptoms were present only at certain time points. These findings shed new light on differential impacts of positive and negative LEs on psychotic and affective symptoms over time, and establish the direction of associations from LEs to symptoms. As treatments exist for many such symptoms, results highlight the importance of monitoring symptoms following LEs, as treatment may need to be adjusted.

Mental and Physical Health
ROLE OF ACUTE PHYSIOLOGICAL STRESS REACTIVITY IN THE RECOGNITION OF EMOTIONS

Jayan, Devi—Marquette University; Fitzgerald, Jacklynn—Marquette University; Porcelli, Anthony—University of Wisconsin Green Bay

Descriptors: physiology, biomarkers, positive emotion, emotion regulation

Accurately comprehending the emotional expressions of others (emotion recognition, ER) may influence one's emotional states and guide decision making (Manstead &, Fischer, 2001). As ER often occurs under stress, it may be influenced by exposure and stress' biological correlates; but this relationship is underexplored. In this study participants (n=84) completed a motion recognition task of bodily movements representing neutral, angry, and happy states (conveyed via point light walkers; Alaerts et al., 2011) after acute stress exposure (SECPT; Schwabe et al., 2008) or a control. Skin conductance, heart rate variability (HRV) and cortisol were measured at baseline, exposure and post-exposure. Cortisol responders exhibited significantly less accurate ER for neutral emotions than non-responders, F(2, 67)=3.4, p<.05, '‡ p2=0.92; this was driven by female responders exhibiting reduced HRV during stress exposure than non-responders, t(14)=2.16, p<.05, and misrecognized neutral stimuli as happy. Further, stressed participants trended towards increased ER accuracy for angry emotions, F(1, 82)=3.0, p=.09, '‡ p2=0.04. Increased misrecognition of neutral as happy in female cortisol responders may correspond to a "tend-and-befriend" response observed in females under stress (Taylor et al., 2000). With only limited research in stress induced effects on ER, this study provides preliminary evidence that acute stress influences ER to varying degrees based on individual differences in stress-related biological changes and the nature of the emotions being conveyed.

Mental and Physical Health
VARIATION IN OLFACTION FOR THOSE WITH CHILDHOOD ABUSE AND SCHIZOPHRENIA

Manis, Hannah—University of Dayton; Allbaugh, Lucy J—University of Dayton; Malaspina, Dolores—Icahn School of Medicine at Mount Sinai

Descriptors: clinical, mental health, child development

Background: Childhood trauma increases risk for schizophrenia (SCZ) and other psychiatric conditions, in part by disrupting the ongoing neurogenesis in certain brain regions. SCZ cases show olfactory deficits but effects of childhood trauma on odor identification and threshold in SCZ cases has not been examined. The purpose of this study was to assess whether childhood abuse predicts odor identification and threshold in individuals with SCZ. Methods: A secondary analysis of data was conducted from a study of 47 SCZ cases (18 female) who were assessed for symptoms and diagnosis, recruited from a Northeast urban hospital. Childhood abuse (physical, sexual, and emotional) and general traumatic events were determined by The Early Trauma Inventory (ETI). Results: Childhood abuse (p=.009), age at time of assessment (p=.028), and general traumatic events (p=.002) independently predicted smell identification, which remained significant when controlling for SCZ symptoms. The model was not statistically significant for odor threshold (p>.05); however, childhood abuse did significantly predict odor threshold (p=.025) and controlling for SCZ did not alter the results. Conclusion: Individuals who experienced childhood abuse were more adept in identification and detection of odors regardless of SCZ symptoms. Identification depends on the hippocampus, whose function is highly perturbed by stress. These findings suggest that childhood trauma may be related to olfactory hypervigilance as a protective mechanism.

Mental and Physical Health
NEURAL REPRESENTATIONS OF TOP-DOWN INFLUENCE ON THREAT PERCEPTION IN ANXIETY

Imbriano, Gabriella—Stony Brook University; Malachowski, Thomas—Stony Brook University; Zhang, Xian—Stony Brook University; Glasgow, Shannon—Stony Brook University; Jin, Jingwen—University of Hong Kong; Mohanty, Aprajita—Stony Brook University

Descriptors: clinical, cognitive, neuroscience

Anxiety is characterized by the anticipation of potential future threats; however, our understanding of threat-related perceptual biases in anxiety, and their underlying neurobiology, is largely based neural processing of acute or present threat. In this study we examined how individuals with clinical anxiety (diagnosis of Generalized Anxiety Disorder, Social Anxiety Disorder, or Panic Disorder; N=26) use prior knowledge of threat in a "top-down" manner to detect threatening targets compared to individuals without anxiety (N=25). Participants completed a perceptual decision-making task in which threatening or neutral cues were used to identify subsequently presented fearful and neutral faces. Threatening cues led to faster (p<.001) and more sensitive (p<.01) perceptual decisions compared to neutral cues. Functional magnetic resonance imaging results showed that for the clinically anxious (vs non-anxious) group, threatening (vs neutral) cues led to differential neural activity while processing threatening (vs neutral) faces in the superior temporal sulcus (involved in processing emotional expressions) and ventromedial prefrontal cortex (involved in maintaining prestimulus representations; small volume corrected for multiple comparisons). The current results shed light on neural mechanisms by which prior knowledge regarding threat influences perception in anxiety, allowing for more comprehensive and ecologically valid models that consider how expectations influence threat perception in anxiety.

Mental and Physical Health
DYNAMIC BIDIRECTIONAL ASSOCIATIONS AMONG EMOTION AND PHYSICAL ACTIVITY IN DAILY LIFE: A BAYESIAN MULTILEVEL VECTOR AUTOREGRESSIVE APPROACH

Benson, Lizbeth—The Pennsylvania State University; Oravecz, Zita—The Pennsylvania State University; Ram, Nilam—The Pennsylvania State University

Descriptors: methods, emotion regulation, physical health

Emotion and physical activity are ubiquitous parts of daily life and individuals' psychological and physical well-being. The dynamic systems framework suggests that emotion and physical activity can be characterized by dynamic self-regulatory feedback loops wherein each construct influences itself over time (inertia) and influences the other construct over time (synergistic dependency). The present study utilizes a dynamic systems modeling approach by fitting multilevel vector autoregressive models in a Bayesian framework to intensive longitudinal data collected from college students (N=25) who provided 28 days of continuous accelerometer data and evening reports on their discrete emotions (i.e., happy, angry, sad) via smartphone. For each person on each day an average unstructured free-living physical activity value was calculated. Results provided evidence that all discrete emotions (a11i=0.16, 0.13, 0.12, respectively) and physical activity (a22i=0.08) showed inertia over time. Additionally, there was some evidence for synergistic dependency such that on days when individuals were more physically active than usual, their happiness the next day also tended to be higher than usual (a12i=0.24). Overall, these results illustrate the utility of examining self-regulatory processes as a system of interacting components spanning multiple levels of analysis. This study provides a unified method for gaining insights into the nature and directionality of emotion and physical activity as coupled dynamic processes that unfold over time.

Mental and Physical Health
BRIDGING THE SCIENCE TO PRACTICE GAP: A REAL-WORLD EXAMPLE OF USING DATA TO DIRECTLY INFORM TREATMENT PATHWAYS FOR INDIVIDUALS WITH SEVERE EMOTION DYSREGULATION

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Descriptors: clinical, methods, intervention, emotion regulation, personality

Borderline personality disorder (BPD) represents a disorder primarily characterized by severe emotion dysregulation, often occurring alongside several comorbidities. Despite having evidence-based treatments for BPD, we have limited insight into avenues to determine differential treatment pathways. This presents an opportunity to use data-driven hypotheses to inform treatment. This study examines the effectiveness of a steps-based empirically-informed treatment program for BPD, whereby changes in BPD symptoms and emotion regulation are used to guide treatment. 150 outpatients with BPD completed questionnaires at the beginning, during, and end of a 20-week emotion regulation skills group. This program replaced a Standard Dialectical Behavioural Therapy program. Data from questionnaires generates a client dashboard used in consultation with the clinical team and the patient to make data-driven decisions about treatment. This program has resulted in a reduction in wait-time from 22 months to 5 months, a change in drop-out rate from 53% (over the past 4 years) to 19%, and reductions in BPD symptoms (p<.001), emotion dysregulation (p<.001), and non-suicidal self-injury (p<.001). This study demonstrates the novel use of the client dashboard in a multi-disciplinary team to target emotion dysregulation, reporting both on empirical evidence and clinician and patient feedback concerning use of the dashboard to inform care paths. The use of data-driven decisions bridges the gap between science and directly informed practice, bringing science alive in a real-world setting.

Society for Affective Science

Mental and Physical Health
EMOTIONAL RESPONSE IN SCHIZOPHRENIA TO THE "36 QUESTIONS THAT LEAD TO LOVE": PREDICTED AND EXPERIENCED EMOTIONS REGARDING A LIVE SOCIAL INTERACTION

Martin, Elizabeth A—University of California, Irvine; Li, Lilian Y—University of California, Irvine; Moore, Melody M—University of California, Irvine

Descriptors: clinical, close relationships, positive emotion

Evidence suggests that individuals with schizophrenia (SZ) report anticipatory pleasure deficits and that these deficits are linked to decreased social motivation. However, these deficits have been identified via self-report measures of hypothetical pleasant stimuli, leaving it unclear whether they exist in reference to actual social situations. To address this issue, we created a live social interaction. SZ (n=16) and control (n=30) participants were told that they would be playing an "enjoyable sharing game" with a study confederate that involved asking and answering questions (36 interpersonal closeness generation questions). Participants then reported their current mood and the emotions they anticipated experiencing during the pleasant social interaction. Following the interaction, they reported their experienced emotions. We found that the SZ group anticipated more negative emotion (d=1.0), but were less accurate in forecasting negative emotion (d=.81), than controls, and these effects were large. There were small, non-significant group differences in anticipation, experience, and accuracy in forecasting of positive emotion (all ds<.29). Also, social anhedonia was positively correlated with anticipated negative affect and negatively associated with experienced positive emotion. This recently published study suggests that "anticipatory pleasure deficits" in SZ might actually be heightened anticipated negative emotion and that inaccurate forecasting could be linked to decreased social motivation.

Mental and Physical Health
EMOTION REGULATION DIFFERENCES BETWEEN SUBTYPES OF PSYCHOPATHIC OFFENDERS

Rodrik, Odile—University of Wisconsin-Madison; Koenigs, Michael—University of Wisconsin-Madison

Descriptors: clinical, emotion regulation

Psychopathy is a personality disorder characterized by affective and behavioral deficits. Research has identified two subtypes of psychopathy, differentiated by their level of negative affect (NA). Investigation of three areas of emotion regulation (ER) may identify mechanisms that underlie the low-NA and high-NA psychopathic subtypes and inform potential treatment targets: (1) ER ability, (2) ER strategy choice, and (3) beliefs about the controllability of emotions. We hypothesized that the high-NA subtype would report greater ER difficulties, less adaptive strategy choice and fewer beliefs about emotion controllability than the low-NA group. Psychopathic participants, recruited from male correctional facilities, filled out self-report questionnaires. K means clustering identified subtypes. Results show that the high-NA subtype (N=29) endorsed greater ER difficulties, p<.001, lack of emotional awareness, padjusted<.01, impulse control difficulties, padjusted<.01, lack of emotional clarity, padjusted<.01, limited access to ER strategies, padjusted<.01, difficulty in goal-directed behavior, padjusted<.001, and nonacceptance of emotional responses, padjusted<.01, than the low-NA subtype (N=38). The high-NA group reported less use of cognitive reappraisal, p<.01, and fewer beliefs about emotion controllability, p<.01. These results further our understanding of emotion in psychopathy, a construct historically associated with shallow affect. Implications include the potential to inform interventions (e.g., ER training) for one subtype of psychopathy.

Social Perspectives
WITH A LITTLE HELP FROM MY FRIENDS: SOCIAL REAPPRAISAL IS MORE EFFECTIVE THAN REAPPRAISING ALONE

Sahi, Razia S—UCLA; Ninova, Emilia—UCLA; Silvers, Jennifer—UCLA

Descriptors: emotion regulation, social, close relationships

Reappraisal is a prevalent and highly effective emotion regulation strategy that involves changing how we think about an emotional stimulus in order to change how we feel about it (Gross, 2014). While extensive research has examined the mechanisms underlying this strategy when we reinterpret the stimulus ourselves (e.g. Ochsner & Gross, 2005), limited research has explicitly examined how we reappraise with the help of others (e.g. Niven et al., 2009), and no research to date has directly compared these two forms of reappraisal in terms of their mechanism and efficacy. This study of 40 pairs of friends (N=80) compared participants' performance on a standard self-generated reappraisal task to their performance on a novel social reappraisal task that involved listening to their friend provide reinterpretations of negative images. Our results indicate that the ability to effectively down-regulate negative affect alone was correlated with the efficacy of social reappraisal (p<0.0001), suggesting that these two forms of reappraisal may share a common mechanism. Furthermore, our results indicate that social reappraisal was more effective than self-generated reappraisal in decreasing negative affect (p<0.0001). These results provide insight into how reappraisal may differ across contexts, particularly when it involves interaction with a close other. We are following up on this work to parse why social reappraisal was more effective than self-generated reappraisal, and to explore potential factors that predict successful social reappraisal.

Social Perspectives
EMOTION REGULATION IN SOCIAL CONTEXTS

Stanoi, Ovidia A—Columbia University; Doré, Bruce P—University of Pennsylvania; Bassett, Danielle—University of Pennsylvania; Mucha, Peter J—The University of North Carolina at Chapel Hill; Falk, Emily—University of Pennsylvania; Ochsner, Kevin N—Columbia University

Descriptors: emotion regulation, social, close relationships

In this study, we address the relationship between emotion regulation, social network position, and wellbeing by asking 1) how emotion regulation strategy use relates to centrality in 8 social networks and 2) how the effect of reappraisal on wellbeing depends on local norms of regulation. To answer these questions, we recruited 5 student groups (N=145) and measured the centrality of each participant in 8 social networks. A subset of 58 participants completed questionnaires about their wellbeing and tendency to use 5 emotion regulation strategies: reappraisal, suppression, distraction, mindfulness, interpersonal regulation. In 8 Bayesian negative binomial regression models, we regress participants' centrality in each network on their preference for the 5 strategies above. We find that use of interpersonal regulation positively predicts centrality in the good news network (b=.42, 95%CI=[.09, .85]), while reappraisal (b=-.34, 95%CI=[-.69,0]) and mindfulness (b=-.77, 95%CI=[-1.46,-.08]) are associated with lower centrality in the drinking network. Next, we investigate how the link between reappraisal and wellbeing changes as a function of local norms of regulation. A Bayesian linear regression model reveals that reappraisal is a weak contributor to wellbeing if immediate ties do not reappraise as well. Together, these results have important implications for research on everyday functioning as well as disorders of emotion regulation, highlighting the importance of the social environment in addition to intrapersonal processes in determining wellbeing outcomes.

Social Perspectives

THE EFFECT OF THE SOCIAL REGULATION OF EMOTION ON RISK ESTIMATES AND THE ROLE OF DESIRED EMOTIONAL CLOSENESS

Inagaki, Tristen K—University of Pittsburgh

Descriptors: social, emotion regulation

Social Baseline Theory (SBT) posits that the social regulation of emotion reduces risk by indicating that there is someone else to share the load of a threat (Coan, 2008). However, it is unclear whether the social regulation of emotion reduces estimates of future risk, which tends to be higher when in a negative mood (Gasper & Clore, 2000). Also, based on previous findings, those who desire emotional closeness may experience a greater reduction in risk estimates. We had 70 undergraduates complete a social regulation of emotion task. In this within-participant task, participants viewed negative images under two conditions: (1) while holding a stress ball; and (2) while holding a research assistant's hand. Within each condition, participants estimated the likelihood that a series of negative events (e.g., having a disagreement with a friend) would happen to them in the near future. Overall, participants reported lower risk estimates in the handholding condition than in the stress ball condition, t(69)=-2.17, p=.033. In addition, using multilevel modeling, higher desired emotional closeness was associated with greater attenuation of risk estimates by the social regulation of emotion, gamma=-0.62 , SE=0.25, t(67)=-2.48, p=.016. This study extends a core component of SBT by providing empirical evidence that the social regulation of emotion reduces risk estimates during an aversive situation. Current findings also suggest that how much one desires emotional closeness helps account for individual differences in benefiting from the social regulation of emotion.

Social Perspectives

PRELIMINARY EXPOSITION OF A DYADIC STUDY ON PARENT-DAUGHTER SOCIO-AFFECTIVE RELATIONSHIPS

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Descriptors: child development, physiology, biomarkers, close relationships

How the parent-daughter relationship changes during the transition into puberty remains unclear; we present ongoing work from a pre-registered study (N=46) in which we investigate the parent-daughter relationship during the transition into adolescence (ages 9-13) and examine the role of emotional disclosure in increasing social closeness, empathy, and physiologic covariation. Parent-daughter dyads complete a 2-hour laboratory study where we collect continuous physiologic responses during dyadic tasks including a task in which the parent undergoes a stressful, evaluative task while the daughter observes the task. We examine subjective affective experience across these tasks with self-reported affective responses (PANAS), the extent to which the parent and daughter feel socially connected to each other, and we use impedance cardiography and electrocardiography to estimate sympathetic (pre-ejection period) and parasympathetic responses (heart rate variability). We observe a time by role (i.e., parent-child) interaction (Eta squared=0.09, CI95%=[0.37, 1.30]). Parents show changes in negative affective response to the evaluative task (Pre-Task Mean=2.37, Post-Task Mean=1.70, d=1.06, CI95%=[-1.05, -0.30]) but daughters showed little change in affect when observing the stress task (Pre-Task Mean=1.28, Post-Task Mean=1.44, d=0.33, CI95%=[-0.13, 0.45]). These data may elucidate how affective responses are shared within a parent-daughter relationship and how factors like pubertal development and emotional disclosure influence these processes.

Social Perspectives

FEELING HOPELESS, NOT ANGER INSPIRES COLLECTIVE ACTIONS

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Descriptors: political, social, positive emotion, moral

Collective action refers to an action undertaken by an individual on behalf of a group with the aim of improving the status, power, or influence of that group (Saab, Spears,Tausch, & Sasse, 2016, p. 529). Negative emotions, particularly anger, have been recognized as fuels to collective actions. Recent literature, however, demonstrated the contributions of positive emotions to collective actions. Particularly, hope has been identified as a key motivator of social actions (e.g., Greenaway et al., 2016; Wlodarczyk, 2017). Still, relatively little attention has been paid to compare the role of positive and negative emotions between online and offline collective actions. Our study presented data from Hong Kong Chinese college student sample (N=1365) and found that only hope moderated the relationship between perceived future of Hong Kong and offline collective actions, b=-.03, t(1313)=-2.08, p=.04. When participants perceived Hong Kong with a worse future, those with high hope showed the increase in offline collective actions b=.17, 95% CI [0.12, 0.22]. However, participants with low hope showed the largest increase in offline collective actions, b=.24, 95% CI [19, .29]. In contrast to prior work, current findings showed that both anger and hope may not always be the positive predictors of collective actions. When people perceive the future of society as getting worse, feeling less hopeful could be the key motivator and catalyst for social change.

Social Perspectives

WHAT REALLY MATTERS IN INTERPERSONAL EMOTION REGULATION: STRATEGY OR WARMTH?

Liu, Daphne Y—Washington University in St. Louis

Descriptors: emotion regulation, social, close relationships

Emerging research suggests the importance of using social resources to regulate emotion—interpersonal emotion regulation (IER). We examined how two critical elements of IER, IER strategies and warmth, related to IER outcomes. In a two-week experience sampling study, 87 healthy adults (50 women, mean age=46) repeatedly reported on interactions during which they shared negative emotions or experiences with others (sharing partner; SP). For each interaction, they reported which strategies the SP used, including putatively supportive (reappraisal, problem solving, affection, encouraging sharing) and unsupportive (invalidation, blaming) strategies; they also indicated the warmth of the SP (cold to warm), and how their feelings about the problem (problem outcome; much worse to much better) and the SP (relationship outcome; much less close to much closer) changed based on the interaction. Using multilevel modeling, we used the six IER strategies (entered simultaneously) to predict the two IER outcomes. Supportive strategies generally predicted better problem and relationship outcomes, whereas unsupportive ones predicted poorer outcomes. After accounting for warmth, which was significant in both models, only reappraisal, beta=.57, p<.01, and problem solving, beta=.36, p=.01, predicted problem outcome, and only reappraisal predicted relationship outcome, beta=.31, p=.02. These findings highlight both the strong benefits related to reappraisal and problem solving and the importance of warmth in understanding IER outcomes.

Society for Affective Science

Social Perspectives
RESTING STATE CONNECTIVITY IN THE DORSOMEDIAL DEFAULT SUBSYSTEM IS ASSOCIATED WITH GIVING NURTURING, SUPPORT-RELATED RESPONSES

Ho, Yuen Wan—Northeastern University; Tang, Gary—Hang Seng University of Hong Kong; Chung, Hiu Fung—Hong Kong Baptist University; Yeung, June Chun—Lingnan University

Descriptors: emotion regulation, neuroscience, social

Giving nurturing support to others in need is one of our most fundamental social behaviors, though variability in such behavior exists. Based on the possibility that the dorsomedial (dMPFC) default network subsystem is associated with social thinking and behavior, integrity of this subsystem may facilitate giving support to others. To examine this possibility, the current study tested associations between dMPFC subsystem connectivity at rest and tendencies related to giving emotional support. During a functional magnetic resonance imaging session, 45 participants completed an emotional social cues task, a resting state scan, and self-report measures of supportive behavior. Supportive behavior during the month following the scan session was also assessed. Greater dMPFC subsystem connectivity at rest was associated with greater emotional support-giving, both at the time of the scan (r=.317, p=.017) and one month later (r=.313, p=.023), even after adjusting for extraversion. In addition, greater resting state dMPFC subsystem connectivity was associated with attenuated dorsal anterior cingulate cortex (dACC), anterior insula (AI), and amygdala activity in response to others' negative emotional social cues, suggesting that dMPFC subsystem integrity at rest is also associated with the dampened withdrawal response proposed to facilitate care for others in need. Together, results begin to hint at an additional role for the 'default' social brain: giving support to others, and an underexplored pathway by which giving to others may ultimately influence physical health.

Social Perspectives
AWE WALKS PROMOTE PROSOCIAL POSITIVE EMOTIONS IN OLDER ADULTS

Sturm, Virginia E—University of California, San Francisco; Roy, Ashlin RK—University of California, San Francisco; Sible, Isabel J—University of California, San Francisco; Kosik, Eena L—University of California, San Francisco; Veziris, Christina—University of California, San Francisco; Morris, Nathaniel—University of California, San Francisco; Miller, Bruce L—University of California, San Francisco; Kramer, Joel H—University of California, San Francisco; Holley, Sarah R—San Francisco State University; Keltner, Dacher—University of California, Berkeley

Descriptors: positive emotion, social

Positive emotions, such as awe, confer numerous social benefits that are critical for successful aging. We investigated whether a weekly outdoor "awe walk" increases awe, a positive emotion that shifts attention away from the self and promotes prosocial positive emotions such as compassion, in healthy older adults. Fifty-two participants (mean age=74.7 years) were randomized into one of two groups: an awe walk group or a control walk group. All participants were instructed to take a weekly 15-minute walk for eight weeks. Whereas the control group received no additional instructions, the awe walk group was taught how to experience awe during their walks by attending to the details of the world around them. Participants reported on their daily emotional experience each day over the eight week study and answered additional questions about their emotional experience during their walks. Our results indicated that, as expected, participants in the awe walk group experienced greater awe than those in the control group during their walks (p=.003), which was a successful manipulation check of the intervention instructions. More importantly, participants who took awe walks also reported greater increases in daily prosocial positive emotions (p=.02) and greater decreases in negative emotions (p=.017) than those in the control group over the course of the study. The present study suggests that in vulnerable populations such as older adults, a simple intervention can increase awe and prosocial positive emotions that promote social connectedness and well-being.

Mind, Body, and Brain
DEPRESSION, MUSIC CHOICE, AND AFFECTIVE OUTCOMES IN DAILY LIFE

Yoon, Sunkyung—University of South Florida; Rottenberg, Jonathan—University of South Florida

Descriptors: clinical, emotion regulation, mental health

Persons with depression consistently report a preference for sad music. It is unknown whether such preferences are maladaptive (increasing sadness and decreasing positive affect (PA)) or beneficial (helping to induce calm or relaxed states). This project tested this question in three sub-studies that examined 77 participants' (39 with and 38 without clinical depression) music choice, affective outcomes, and the reasons for music choice in daily life. Firstly, participants made song choices from a preset music library (happy and sad songs) and rated their affect before and after hearing the chosen song during a 3-day ecological momentary assessment (EMA). Secondly, we collected freely chosen songs over 7 days from participants' Spotify music streaming accounts and analyzed their characteristics (e.g., tempo). Finally, participants reported their reasons for music listening when feeling happy and sad. The depression group lacked the preference for happy over sad songs observed in the non-depression group. Notably, both groups reported increased relaxedness after hearing sad songs in the EMA study (t(76)=3.783, p<.001), whereas sadness did not change. Further, depressed persons' freely chosen songs had slower tempo, compared to their non-depressed counterparts' (t(58)=-2.2, p=.035). Across groups, a mood enhancement (to increase high-arousal PA) was not a primary reason for song listening when feeling sad. Depressed persons' music choices may reflect a desire to feel increased low-arousal PA, which cannot be assumed maladaptive or considered as an intervention target

Mind, Body, and Brain
NEURAL BIOMARKERS OF NATURALISTIC POSITIVE AFFECT FROM HUMAN DIRECT INTRACRANIAL RECORDINGS

Bijanzadeh, Maryam—University of California, San Francisco; Shafi, Alia—University of California, San Francisco; Wallace, Deanna L—University of California, San Francisco; Dawes, Heather E—University of California, San Francisco; Chang, Edward F—University of California, San Francisco

Descriptors: positive emotion, neuroscience

Human emotions and their associated neural networks are often studied using task-based paradigms, but the brain circuits underlying naturalistic affective behaviors remain largely unexplored. Here, we used multi-site, continuous intracranial electroencephalography recordings from individuals with epilepsy undergoing surgery for seizure localization. Neural data from mesolimbic structures including the amygdala, hippocampus, insula, anterior cingulate cortex, and orbitofrontal cortex were measured in 10 participants (mean age=29.2 years) during a multi-day hospital stay (mean=9.6 hours) while participants' naturalistic behaviors were recorded from cameras in their hospital rooms. Videos were later annotated to identify spontaneous moments of positive affect (e.g., smiling). We used machine learning approaches and trained participant-specific classifiers on the oscillatory brain activity from each individual. We discriminated moments of positive affect from a neutral state with up to 80% accuracy (chance=50%). Across the mesolimbic network, activity in the high frequency gamma band (70-150 Hertz) was tuned to positive affect (mean T score=8.84) while activity in the lower frequency bands (e.g., theta) was tuned to neutral moments. Across patients, activity in the insula, anterior cingulate cortex, and hippocampus showed robust associations with positive affect. These results suggest direct brain recordings offer a novel window into the biology of human emotions and can help to elucidate the neural circuits underlying naturalistic moments of positive affect.

Society for Affective Science

Mind, Body, and Brain
EMOTION FACILITATES OBJECT RECOGNITION: EVIDENCE FROM SPATIAL FILTERING

Wylie, Jordan—The Graduate Center, CUNY; Storbeck, Justin—Queens College; The Graduate Center, CUNY

Descriptors: cognitive, social

Whereas traditional ascending-neural pathway models of object recognition rely on the ventral stream for object identification, recent work considers descending-neural pathways to explain emotion induced biases in perception. We examined how emotions, specifically fear, bias processing toward the dorsal stream to quickly influence object recognition. Two studies examined if induced fear states selectively enhance recognition for objects presented in low spatial frequency (SF). Exp 1 utilized a within-Ss block-event Emotion (fear vs. neutral) by SF (Low, High, Broad) design to investigate how fear affects categorization of common objects. We predicted and found that fear states, compared to neutral (N=57), enhanced accuracy of low SF identification (p=.043). Exp 2 utilized a mixed Emotion (b/w: Fear vs. Neutral; Disgust vs. Neutral) by SF (w/in: Low, High, Broad) factorial design where participants (N=173) categorized objects after the emotion induction. It was predicted that fear states (vs. neutral and disgust states) would facilitate identification of objects in low SF. Results partially supported this prediction; there was a main effect of emotion on reaction times (p=.017), but not accuracy. Further, fear states (vs. neutral states) decreased reaction times across each SF band, while disgust states (vs. neutral states) increased reaction times (ps<.001). In support of functionalist accounts of emotion, results suggest fear states may co-opt the speedy dorsal stream to quickly allow for global image analysis and facilitate awareness of important environmental features.

Mind, Body, and Brain
LINKING EMOTION CONCEPTS TO COGNITIVE AND BODILY STATES ACROSS 2,474 LANGUAGES

MacCormack, Jennifer K—University of North Carolina at Chapel Hill; Henry, Teague R—University of North Carolina at Chapel Hill; Jackson, Joshua Conrad—University of North Carolina at Chapel Hill; Watts, Joseph—Max Planck Institute for the Science of Human History; List, Johann-Mattis—Max Planck Institute for the Science of Human History; Lindquist, Kristen A—University of North Carolina at Chapel Hill

Descriptors: language, culture

Some psychological models of emotion emphasize the cognitive aspects of emotion, whereas others argue that emotions are rooted in internal bodily or interoceptive states. These theories may reflect differing lay theories of emotion that are reflected in spoken language. We thus hypothesized that cultures around the world would differ in the extent to which they see emotions as more similar to cognitive vs. interoceptive states. To test this hypothesis, we use a computational linguistics approach with a new database of concepts across 2,474 spoken languages within 20 language families. We examined cases of colexification—where languages express semantically related concepts using the same word—to compute networks of emotion semantic structure across languages. By analyzing networks of colexification, we found both variability and commonalities in how languages colexify emotion (e.g., "anger" "pride"), cognitive (e.g., "memory" "think"), and interoceptive (e.g., "hungry" "fever") concepts across languages. All language families tended to colexify emotion with cognitive concepts more than interoceptive concepts (ps<.01), suggesting that people across the world may view emotions as more mental in nature and less rooted in bodily drives. However, language families also colexified interoceptive concepts with emotions in different ways, perhaps reflecting differences in how people link together bodily states with emotion. These findings bring together linguistics, network science, and affective science to weigh in on differences and similarities in emotional meaning.

Mind, Body, and Brain
HOW THE BRAIN BUILDS EMOTIONAL FACIAL EXPRESSIONS: STRUCTURAL NEUROANATOMY OF FACIAL MUSCLE MOVEMENTS

Noohi, Fatemeh—UCSF; Kosik, Eena—UCSF; Veziris, Christina—UCSF; Kramer, Joel—UCSF; Miller, Bruce—UCSF; Seeley, William—UCSF; Holley, Sarah—SFSU; Sturm, Virginia—UCSF

Descriptors: emotion regulation, neuroscience

Facial expressions are a central feature of emotions. Whether the facial muscles and their movements are reflected in human brain structure is unknown but is suggested by animal studies. Here, we investigated the neural systems that produce facial expressions. Fifty-five healthy adults viewed five emotion-eliciting videos (awe, sadness, amusement, disgust, and nurturant love), and their facial expressions were later coded with a modified version of the Emotional Facial Action Coding System. We computed total scores for: (1) individual facial action units (AUs) displayed across trials, and (2) combinations of common facial AUs displayed during each trial. Voxel-based morphometry analyses revealed that activity in individual AUs was correlated with gray matter volume in largely non-overlapping regions of primary sensorimotor cortex (T=3.32, p<.005). Activity in combinations of AUs displayed during specific emotion trials, in contrast, was associated with gray matter volume in distinct subregions of the cingulate cortex. Whereas greater smiling (AUs 6, 7, and 12) during the amusement trial correlated with larger volume in the left anterior midcingulate cortex (T=3.62, p<.005), greater brow furrowing (AUs 6, 7, and 4) during the disgust trial correlated with larger volume in the right posterior midcingulate cortex (T=4.15, pFWE<.05). These results expand current models of the neuroanatomical basis of facial expressions and suggest the brain bundles specific muscle movements into the facial expressions that accompany emotions.

Mind, Body, and Brain
EVERYDAY EMOTIONAL EXPERIENCES DO NOT MAP DIRECTLY ONTO PATTERNS OF PHYSIOLOGICAL ACTIVITY

Hoemann, Katie—Northeastern University; Khan, Zulqarnain—Northeastern University; Nielson, Catie—Northeastern University; Devlin, Madeleine—Northeastern University; Feldman, Mallory—Northeastern University; Dy, Jennifer—Northeastern University; Wormwood, Jolie B—University of New Hampshire; Feldman Barrett, Lisa—Northeastern University; Massachusetts General Hospital/Martinos Center for Biomedical Imaging; Quigley, Karen S—Northeastern University; Edith Nourse Rogers Memorial Veterans Hospital

Descriptors: methods, physiology, biomarkers, language

Emotion researchers acknowledge there is variability in the expression of emotion across individuals and cultures but differ in whether they view this variability as a superficial feature or a more integral one. According to classical accounts, there exists a one-to-one mapping between an emotion category (e.g., anger) and a pattern of physiological activity in the body. In contrast, constructionist accounts hold that emotion categories are populations of instances that are each tied to situation-specific needs, such that instances will vary considerably in their patterns of physiological activity. To test these hypotheses in everyday life, we integrated experience sampling with ambulatory physiological monitoring. Participants (N=46) wore devices that recorded peripheral physiological (e.g., cardiovascular) activity and physical movement, and prompted them to describe their current experience after substantive heart rate changes in the absence of movement. Unsupervised clustering analyses of physiological data revealed variability in the number of patterns of physiological activity that recurred within individuals over time (range=5). Patterns of physiological activity were reliably associated with more than one self-reported emotion label (t(45)=17.80, p<.001), and did not differ within individuals by self-reported valence or arousal (all ps>.05). These findings support a constructionist account of emotion, and showcase a powerful approach for investigating affective experience outside of the lab.

Society for Affective Science

Mind, Body, and Brain
ARE THEY REAL? NON-DECEPTIVE PLACEBOS REDUCE SELF-REPORTED AND A NEUROLOGICAL MARKER OF EMOTIONAL DISTRESS
Guevarra, Darwin A—Michigan State University; Moser, Jason S—Michigan State University; Wager, Tor D—Dartmouth College; Kross, Ethan—University of Michigan, Ann Arbor

Descriptors: emotion regulation, intervention, neuroscience, mental health, social neuroscience

Recent studies suggest that placebos administered without deception (i.e., non-deceptive placebos) can manage a variety of clinical and nonclinical conditions, including emotional distress. However, a limiting translational issue is these benefits have been demonstrated exclusively using self-report measures. These raise questions about whether the positive outcomes from non-deceptive placebos represent "real" benefits or are a byproduct of response bias. We address this issue in two studies. We randomly assigned participants to a control and non-deceptive placebo group before they viewed emotional images. Participants in the control group read a neutral article and received a saline nasal spray with neutral instructions. Those in the non-deceptive placebo group read an article on placebos and how they can still work even without deception; then they received a saline nasal spray with instructions of benefits. In Study 1 (N=63) we piloted our experimental manipulation and demonstrated that non-deceptive placebos, compared to control, reduced self-reported measures of emotional distress, F(1,60)=7.34, p=.009. In Study 2 (N=100), we used a neurological marker of emotional distress, the late positive potential (LPP) neural waveform, and showed that non-deceptive placebos, compared to control, lead to a gradual reduction in LPP amplitude over time, F(4,87.77)=8.05, p=.001. Our results showed that the beneficial effects from non-deceptive placebos are not merely a product of response bias and that it takes time to exert their regulatory effect on emotional distress.

Emotion Regulation
POWER AND EMOTION REGULATION: LINKS WITH GREATER ACCEPTANCE AND REAPPRAISAL AND LESS SUPPRESSION
Zerwas, Felicia—University of California, Berkeley; Chen, Serena—University of California, Berkeley; Mauss, Iris—University of California, Berkeley

Descriptors: close relationships, emotion regulation, personality, social

One's sense of power (i.e., one's perception of one's influence over others) is inextricably linked to one's experience and expression of emotion. Yet we know very little about how power relates to the regulation of emotions. To better understand this link, we examined individuals' power and emotion regulation use in general and in an interpersonal context. Power is characterized by greater authenticity and self-efficacy and less inhibition; thus, we hypothesized that greater (v. lesser) power would be associated with more adaptive emotion regulation including greater use of acceptance and reappraisal and less use of suppression. Study 1 (N=451) was an exploratory survey and Study 2 (N=190) was a preregistered, confirmatory survey. Participants' power was associated with greater acceptance (r=.20, .24) and reappraisal (r=.28, .19) and less suppression (r=-.22, -.23). In Study 3 (196 romantic couples), we examined the relationship between power and reappraisal and suppression (acceptance was not measured) during a laboratory conflict conversation. Power during the conversation was associated with greater reappraisal (B=.11, t=2.11, p<.05) and less suppression (B=.27, t=5.47, p<.01). Taken together, these findings suggest greater power might allow for more adaptive emotion regulation and/or adaptive emotion regulation might give rise to greater power. Further, examining the association between power and emotion regulation contributes to a more complete understanding of the complex role of emotion regulation in interpersonal contexts.

Emotion Regulation
EMOTION DIFFERENTIATION FACILITATES HEALTHY STRESS COPING IN ADOLESCENCE
Nook, Erik C—Harvard University; Flournoy, John C—Harvard University; Rodman, Alexandra M—Harvard University; Mair, Patrick—Harvard University; McLaughlin, Katie A—Harvard University

Descriptors: clinical, language, child development

Emotion differentiation—the ability to specifically identify one's feelings—has been associated with better mental health in several cross-sectional studies. However, we know little about the mechanisms through which emotion differentiation has this salutary effect. Here, we used an intensive longitudinal design to test the hypothesis that emotion differentiation might buffer individuals from developing internalizing symptoms when exposed to stressful life events (SLEs). Adolescents (N=30) completed a laboratory measure of emotion differentiation before completing a year-long study that collected: (i) momentary self-reported measures of perceived stress, depression, and anxiety (n=4,291 momentary assessments) and (ii) monthly interview-based measures of stressful life experiences and symptom inventories of generalized anxiety and depression (n=355 monthly assessments). Results showed that high negative and positive emotion differentiation attenuated the moment-to-moment coupling between perceived stress and depression (interaction betas=-.03 and -.08, respectively, ps<.001). This pattern was mirrored at the monthly level. Whereas adolescents with low negative emotion differentiation experienced heightened anxiety symptoms on months with more SLEs, those with high negative emotion differentiation did not (interaction beta=-.08, p=.021). Consequently, being able to specifically identify one's emotions may attenuate the emergence of stress-related internalizing problems in adolescents by facilitating their adaptive responses to stressful events.

Emotion Regulation
PUPIL DILATION DURING REAPPRAISAL PREDICTS SELF-REGULATION SUCCESS ACROSS DOMAINS
Maier, Silvia U—University of Zurich & ETH Zurich; Grueschow, Marcus—University of Zurich

Descriptors: emotion regulation, methods, physiology, biomarkers, mental health, cognitive

Emotions are processed on a moment-to-moment basis, yet tools to monitor such momentary changes are scarce. We quantified the timing and extent of emotion regulation by a pupil dilation index. We recorded eye-tracking from thirty-four healthy volunteers while they reappraised and viewed positive and negative pictures that were equated between the reappraise and view blocks for average arousal and valence. Reappraisal success was quantified as the difference between reappraisal and view ratings. We identified a time window in which the pupil diameter during reappraisal was significantly larger than during viewing (p<0.01). The area under the curve during that time is the pupil dilation index. This index robustly explained individual differences in reappraisal success (beta=0.34 Œ± 0.14 SD, 95%CI [0.06, 0.61]) and significantly predicted individual success differences out-of-sample with an accuracy of 61%. It was also associated with individual performance differences in a dietary self-control task completed on the same day (Spearman's rho=0.51, p=0.0005). Our results suggest that our pupil dilation index may capture a domain-general process contributing to successful regulation. Our measure provides a methodological innovation, as it allows tracking the onset and timing of emotion regulation. This allows testing theoretical predictions of process models of emotion, as it captures the time at which an individual actively starts regulating their emotional experience, the extent of cognitive engagement in regulation, and individual differences in regulation success.

Society for Affective Science

Emotion Perception

FEELING MIXED TO STAY IN CONTROL: MIXED EMOTIONS MODERATE THE NEGATIVE CONSEQUENCES OF TENSIONS AND FRUSTRATION ON WORK RECOVERY IN THE WORKPLACE ACROSS TWO COUNTRIES

Berrios, Raul—Universidad de Santiago de Chile

Descriptors: culture, mental health

People often get frustrated when they experience conflicting demands and personal constraints in the workplace, making recuperation during leisure time difficult. In the present study I investigate whether the experience of mixed emotions can moderate the negative consequences of frustration on recovery from workplace tensions. A multicultural sample of 480 active workers (Chile=240 and the UK=251) completed two surveys separated in time by three weeks (T1 and T2). Independent variables were measured at T1 (tensions and emotions), whereas dependent variables (work recovery) were measured at T2. A Structural Equation Model analysis revealed that the measurement model was consistent across the two cultures (based on measurement invariance comparisons). Furthermore, results showed that people get frustrated when experiencing tensions at work (Beta=0.739, p<0.01, 95%CI [0.67, 0.81], R2=0.56), and that this emotional reaction significantly reduces workers' ability to recover from work (Beta indirect effect=-0.15, p<0.05, 95%CI [-0.26, -0.03]). However, this negative effect was reversed for those individuals that experienced higher levels of mixed emotions in the face of workplace tensions (Beta Interaction=0.11, p<0.05, 95%CI [0.02, 0.20], R2=0.07). These findings add support to the idea that complex emotions are important to understand workplace dynamics beyond the PA-NA tradition. The results also provide initial evidence of a novel role of mixed emotions when coping with tensions at work, which is consistent with the existing theory on mixed emotions.

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Emotion Regulation

CONTEXT MATTERS: EFFECTS OF SITUATIONAL FACTORS ON EMOTION REGULATION

Pruessner, Luise—Heidelberg University; Barnow, Sven—Heidelberg University; Schulze, Katrin—Heidelberg University

Descriptors: emotion regulation, mental health

A key challenge of emotion regulation in daily life is to adjust to the changing demands of the context. Nevertheless, emotion regulation strategies have been categorized into adaptive or maladaptive, assuming a uniform efficacy across situations. To address this gap, we investigated the effect of contextual factors on emotion regulation in three studies. In study 1, 921 participants reported their imagined emotional responses and regulatory strategies after reading 20 vignettes. Choosing acceptance more often was linked to higher depression levels in controllable contexts and to lower depression levels in uncontrollable contexts (ps<.01). In study 2, 124 participants viewed negative images in a laboratory setting and chose between acceptance, suppression, or reappraisal to regulate their emotions. Predicting regulatory choices revealed a higher probability of choosing reappraisal compared to suppression and acceptance with increasing controllability and ambiguity (ps<.01). Intensity, on the other hand, increased the probability of choosing suppression (ps<.001). In study 3, using ecological momentary assessment, 339 participants reported their naturally occurring daily emotions and regulatory strategies. Reappraisal in controllable situations was associated with lower goal attainment compared to uncontrollable situations (ps<.001). Our studies indicate that both regulatory choices and success are moderated by controllability, ambiguity, and emotional intensity, underscoring the importance of delineating situational factors when investigating emotion regulation.

Excellence initiative Field of Focus 4

Emotion Regulation

NURSE AND PARENT TRAINING IN POSTOPERATIVE STRESS (NP-TIPS): EVALUATION OF AN EMOTION REGULATION INTERVENTION TO DECREASE CHILD PAIN AFTER SURGERY

Jenkins, Brooke N—Chapman University; Fortier, Michelle A—University of California, Irvine; Stevenson, Robert—University of California, Irvine; Makhlouf, Mai—University of California, Irvine; Lim, Paulina—University of California, Irvine; Fang, Remy—University of California, Irvine; Kain, Zeev N—University of California, Irvine

Descriptors: emotion regulation, child development, clinical, intervention, physical health

Children experience significant pain after surgery. Nurse and parent behaviors that help children regulate their emotions impact this pain. Distraction and coping advice reduce pain by directing a child's attention away from it. Empathy, reassurance, and apology increase child pain by drawing a child's attention toward their pain. We have developed, evaluated, and tested a new intervention to alter parent and nurse emotion regulation behaviors in a way consistent with reducing child postoperative pain. In Phase 1, a multidisciplinary team of experts developed an empirically-based intervention which was then evaluated in focus groups by experienced nurses (N=8) and parents (N=9). In Phase 2, nurses (N=23) who worked in the recovery room were recruited to be part of both pre- and post-intervention data collection periods. Parents were recruited to be part of either pre- (N=52) or post-intervention (N=60) data collection periods. Participants were recorded in the recovery room and videos were coded for desired (distraction, coping advice) and non-desired (empathy, reassurance, apology) behaviors. After receiving the intervention, nurses significantly increased their rate of desired behaviors by 231% (p<0.01) and decreased their rate of non-desired behaviors by 62% (p<0.01). Parents in the intervention used desired behaviors 124% more than those in the control condition (p=0.033). Moreover, the intervention significantly decreased child pain (b=ä_[2.19, p<0.01). Results demonstrate the feasibility of altering emotion regulation behaviors ultimately leading to reduced child pain.

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Emotion Regulation

USING AFFECT REGULATION TO IMPROVE DIETARY DECISION-MAKING

O'Leary, Daniel—Stanford University; Smith, Angela—University of Toronto; Gross, James—Stanford University

Descriptors: emotion regulation, physical health

Research has shown that negative affect leads to unhealthy eating, the top cause of death in the United States. This project examined whether AR can be applied to incidental negative affect to improve eating behavior. In Studies 1 and 2 (n=80), we developed a negative affect induction, showed that it induces negative affect, and demonstrated that participants can learn to downregulate this negative affect. In Study 3 (n=40), participants completed a three-phase dietary food choice task. In phase 1, participants made food choices under neutral conditions. In phase 2, participants made food choices after receiving the negative affect induction from Studies 1 and 2. In phase 3, participants made food choices while downregulating the negative affect caused by the induction. In phase 2, participants placed less importance on health (b=-0.15, z=-5.99, p<.001) when making food choices than under neutral conditions (phase 1). In phase 3, participants successfully downregulated their negative affect (b=-1.2, t=-22.01, p<.001) and placed the same level of importance on health when making food choices as in phase 1, indicating that AR applied to incidental affect is an effective method for improving eating behavior. In Study 4 (n=120), we pre-registered and replicated our findings from Study 3. In addition, we fit drift-diffusion models to participants reaction time data and show that these results extent to the by-participant weights participants place on health when making food choices. These results are a step towards scalable AR interventions to improve eating behavior.

Society for Affective Science

Empathy and Prosocial
INFLUENCES OF PARTNER EMOTIONAL EMPATHY DURING DYADIC SOCIAL INTERACTIONS

Brown, Casey L—University of California, Berkeley; West, Tessa V—New York University; Sanchez, Amy H—University of California, Berkeley; Mendes, Wendy B—University of California, San Francisco

Descriptors: social, close relationships, emotion regulation, clinical

Although research suggests distressed individuals benefit from others' empathy, less is known about how an individual's level of empathy influences other's affective and physiological responses during emotionally evocative situations. In the current study, female participants (N=140; 70 dyads) were paired with a stranger, and one member of each dyad (the experiencer) was randomly assigned to undergo a stressful task and disclose negative personal experiences to their partner (the listener). Electrocardiography and impedance cardiography were used to calculate participants' pre-ejection period, a pure measure of sympathetic nervous system activity. Results from dyadic multilevel models suggest that experiencers randomly paired with listeners higher in dispositional emotional empathy had lower sympathetic nervous system reactivity during the stressful task, t(182)=5.27, p<.001, and when disclosing their personal experiences t(157)=2.12, p=.036. Additionally, experiencers paired with listeners higher in dispositional emotional empathy reported less negative affect following emotional disclosure, r(64)=.34, p=.005. Findings shed light on specific interpersonal functions of empathy and suggest that a stranger's level of empathy influences another's physiology and emotions during emotionally evocative situations.

Empathy and Prosocial
THE IMPACT OF NEURODEGENERATIVE DISEASES ON TWO KINDS OF EMPATHIC ACCURACY: DIAGNOSTIC DIFFERENCES AND NEURAL CORRELATES

Hua, Alice Y—University of California, Berkeley; Brown, Casey L—University of California, Berkeley; De Coster, Lize—University of California, San Francisco; Sturm, Virginia E—University of California, San Francisco; Kramer, Joel H—University of California, San Francisco; Rosen, Howard J—University of California, San Francisco; Miller, Bruce L—University of California, San Francisco; Levenson, Robert W—University of California, Berkeley

Descriptors: social neuroscience, clinical

Empathic accuracy, or recognizing another person's emotions accurately, is an important aspect of emotional functioning that may go awry in neurodegenerative diseases. We examined the effects of neurodegenerative diseases on two tests of empathic accuracy: (a) an emotion labeling task (identifying a character's emotion in a series of film clips), and (b) a dynamic tracking task (rating a character's changing valence of emotion in a film). Participants were individuals with six different forms of neurodegenerative diseases and a comparison group of healthy controls (N=178). Results indicated that, compared to controls, individuals with the behavioral variant of frontotemporal dementia (FTD) were impaired on both tasks; those with semantic variant FTD were impaired only on the emotion labeling task; and those with nonfluent variant FTD, progressive supranuclear palsy, and Alzheimer's disease were impaired only on the dynamic tracking task (all ps<.05). We also examined neural correlates for each task using whole-brain voxel-based morphometry. Smaller volumes in bilateral frontal and left insular regions were associated with worse performance on the emotion labeling task, whereas smaller volumes in bilateral medial frontal, temporal, and right insular regions were associated with worse performance on the dynamic tracking task (p<.005, uncorrected). Findings shed light on impairments in empathic accuracy found in different neurodegenerative diseases and suggest that different neural regions are critical for labeling versus tracking others' emotions.

Empathy and Prosocial
EMPATHY AS A VALUE-BASED CHOICE: INCREASING FELLOW FEELING BY INCREASING THE SUBJECTIVE VALUE OF EMPATHIC ENGAGEMENT

Ferguson, Amanda—University of Toronto; Cameron, C Daryl—The Pennsylvania State University; Inzlicht, Michael—University of Toronto

Descriptors: emotion regulation, social, cognitive

Empathy often feels automatic, but variations in empathic responding suggest that, at least some of the time, empathy is affected by one's motivation to empathize in any particular circumstance. Here, we show that people can be motivated to engage in (or avoid) empathy-eliciting situations with strangers, and that these decisions are driven by subjective value-based estimations of the costs (e.g., cognitive effort) and benefits (e.g., social reward) inherent to empathizing. Across seven experiments (overall N=1350), and replicating previous work (Cameron et al., 2019), we found a robust empathy avoidance effect, as well as support for the hypothesis that individuals can be motivated to opt-in to situations requiring empathy that they would otherwise avoid. Participants were more likely to opt into empathy-eliciting situations if 1) they were incentivized monetarily for doing so (Experiments 1a, beta=4.78, p<.001, and Experiment1b, beta=2.05, p<.001), and 2) if an alternative, more familiar and liked, empathy target was available (Experiments 2a, beta=1.24, p<.001 and Experiment 2b, beta=0.42, p<.001). Framing empathy as explicitly related to one's moral character and reputation did not consistently motivate participants to engage in empathy (Experiment 3a, beta=0.25, p=.222; Experiment 3b, beta=0.69, p=.009; Experiment 3c, beta=0.12, p=0.625). These findings suggest that empathy can be motivated in multiple ways, and is a process driven by context-specific value-based decision making.

Empathy and Prosocial
TESTING THE EFFECTIVENESS OF BRIEF INTERVENTIONS FOR IMPROVING EMPATHIC ACCURACY IN COUPLES

Sened, Haran—Bar Ilan University; Pshedetzky-Shochat, Rony—Bar Ilan University; Cohen, Ben Shalom—Bar Ilan University; Jacobson, Rotem—Bar Ilan University; Rafaeli, Eshkol—Bar Ilan University

Descriptors: close relationships, social, intervention, methods

Empathic Accuracy (EA) is the extent to which people accurately infer others' inner mental states (e.g. thoughts, emotions). As EA is associated with beneficial outcomes, researchers have developed ways to improve it. However, existing interventions either focus on recognizing emotions in photos or recordings (as opposed to live, interactive and multi-modal interactions), or require resource-heavy, multi-session programs. To address these issues, we examined two brief interventions for EA in live discussions.In a pre-registered study, romantic couples were randomized to motivation, feedback, none or both interventions. They held two 6 minute discussions in which one participant discussed changing something in their lives. After each one they watched a recording and rated self and partner moods every 40 seconds.While rating the first discussion, the motivation group received verbal encouragement, and the feedback group received feedback on partners' self-ratings. Effectiveness was tested on ratings of the second discussion. Three EA subtypes (Negative, overall and profile) were measured by correlating self- and partner-reports.In mid-study (N=52 couples) results, feedback was effective for overall and profile EA (p<.05, partial R2 .08,.15), motivation was effective for negative and overall EA (p<.05, partial R2 .25,.1). However, using both was less effective than either one alone for negative and overall EA (p<.05, partial R2 .19,.11). We will present results from the full study (planned N=100 couples) and discuss implications for future research.

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Empathy and Prosocial
TYPE 1 DIABETES MANAGEMENT IN ADOLESCENCE: ASSOCIATIONS WITH DYADIC POSITIVE AFFECT AND PARENTAL EMPATHY

Main, Alexandra—University of California, Merced; Miramontes, Maritza—University of California, Merced; Wiebe, Deborah—University of California, Merced; Raymond, Jennifer—Children's Hospital Los Angeles

Descriptors: positive emotion, physical health

Adolescence is a developmental period when metabolic control, adherence to treatment regimens, and health-related quality of life often decline in adolescents with type 1 diabetes. Adolescents manage their diabetes better in the context of warm, supportive family relationships. However, no studies to our knowledge have examined how characteristics of real-time parent-adolescent interactions, particularly positive features of these interactions, are associated with diabetes management.

This study tested whether positive affect (e.g., happiness) and parental empathy were associated with adolescents' health-related quality of life in a sample of adolescents with type 1 diabetes and their parents (N=144, Madolescentage=12.68 years). Parents and adolescents participated in a discussion about a conflict topic related to the adolescent's diabetes. Dyadic parent-adolescent positive affect and parental empathy were coded by independent observers and adolescents reported on their health-related quality of life (PedsQL; Varni et al., 2003).

Contrary to hypotheses, dyadic positive affect and parental empathy were not associated with adolescent health-related quality of life (ps>.05). However, when dyads expressed more positive affect, adolescents reported better health-related quality of life when parents expressed more empathy in the conversations (beta=.27, p=.03). Findings suggest that adolescents with type 1 diabetes perceive better health when parents express empathy during real-time interactions in combination with relationships characterized by high positive affect.

Empathy and Prosocial
WE ARE ANGRY: THE ROLE OF EMOTION AND COLLECTIVE IDENTITY WORD USE ON EMOTION CONTAGION

Levens, Sara M—University of North Carolina at Charlotte; Gallicano, Tiffany—University of North Carolina at Charlotte; Maestas, Cherie—Purdue University; Shaikh, Samira—University of North Carolina at Charlotte

Descriptors: computational science, political, social, language, emotion regulation

A number of recent social and political movements have been catalyzed by viral emotional content. Less is understood, however, regarding the factors that predict the transformation of emotion contagion to the collective action that characterizes online social movements. To address this question, we examined the linguistic features associated with social contagion in 526,102 tweets from the 2017 Charlottesville Protests. Linguistic Inquiry Word Count was used to assess emotion, individualized (I, you) and collective (we, they) identity word use and regressions were conducted to predict retweet, like, reply and quote count. A significant anger and first-person plural ('we') pronoun word use ('_=0.20) interaction revealed that tweets high in anger and first-person plural pronoun word use were associated with higher retweet count. In contrast, significant negative emotion and first person singular ('I') pronoun word use ('_=-0.12, '_=-.0074 & '_=-.0001) interactions revealed that high negative emotion and first-person singular pronoun use was associated with lower like, reply and quote count respectively. This pattern of findings indicates that negative emotional content that is delivered with in-group collective identity words such as 'we' is associated with higher contagion, while negative emotional content that is delivered with individualized in-group words, such as 'I' is associated with lower contagion. These findings, in the context of the highly polarized Charlottesville riots, suggest that in-group collective identity word use may catalyze group oriented social movements.

Empathy and Prosocial
COMPASSION TRAINING IN INTERPERSONAL CONFLICTS

Cernadas Curotto, Patricia—University of Geneva; Halperin, Eran—The Hebrew University of Jerusalem; Sander, David—University of Geneva; Klimecki, Olga—University of Geneva

Descriptors: intervention, emotion regulation, social, positive emotion

Feeling hostility, contempt or dislike toward a person can be detrimental not only for the relationship but also to one's own wellbeing. Studies have shown that emotion-based interventions such as cognitive reappraisal training promote constructive interpersonal relations. Here we tested compassion training as a new emotion-based intervention in the field of conflict resolution compared with a reappraisal training. In order to do so, 108 participants were recruited and randomly assigned to one of three conditions: compassion training, reappraisal training, or an active control training (i.e., learning a foreign language). We measured schadenfreude feelings to misfortune scenarios involving a disliked person and closeness feelings toward this person at pre- and post-training. After 5 weeks of training, we found an increase of feelings of closeness toward the disliked person in the compassion training compared with the other two trainings, F(2,98)=4.86, p=.01, partial eta squared=.09. In addition, compassion training was found to decrease schadenfreude feelings toward the disliked person, t(99)=-3.25, p=.008, d=-.56 and a trend for decreased schadenfreude was found for the reappraisal training, t(99)=-2.33, p=.055, d=-.40; whereas no decrease was shown in the control group, p=.41. This study shows, for the first time to our knowledge, that compassion training reduces schadenfreude feelings and increases feelings of closeness toward a disliked person. These findings open new perspectives concerning emotion-based interventions in conflict resolution.

Empathy and Prosocial
GRATITUDE AND THE GREATER GOOD: ONE EMOTION THAT MAY INCREASE UTILITARIANISM VIA SELF-SACRIFICE

Duong, Fred—Northeastern University; DeSteno, David—Northeastern University

Descriptors: moral, positive emotion

Gratitude is a powerful driver of moral behavior, yet its role in moral judgement is unexplored. Emotions reduce utilitarian judgements, though this may only apply to Instrumental Harm (IH) utilitarianism (i.e., harming others for the greater good). Given gratitude's ability to increase self-sacrificing behaviors, we predicted that gratitude would increase Impartial Beneficence (IB) utilitarianism (i.e., self-sacrifice and impartiality for the greater good), while having a negative effect on IH.In Study 1, 208 participants were randomly assigned to a gratitude or neutral mood condition. Grateful participants agreed with IB statements more than neutral participants, t(397)=2.09, p=.037, while not differing on IH statements, as measured by the Oxford Utilitarianism Scale (OUS). Felt gratitude intensity fully mediated the relationship between emotion condition and IB (Partially standardized 95% CI=.04, .49). Examining just self-sacrifice OUS items, we found a stronger effect between gratitude and endorsement, t(383)=2.39, p=.017. Gratitude did not significantly alter decisions on traditional IH dilemmas (e.g., the trolley problem). Additional exploratory analyses using content analysis of writing samples examine mechanisms of gratitude. Study 2 (N=396) is a high-powered replication, with an additional happiness condition to control for positive mood effects. These studies provide evidence against the dominant account that emotions lead to less utilitarian judgements. In addition, they are the first to investigate how gratitude affects moral judgement.

Society for Affective Science

POSTER A-1
NEGATIVE AFFECT GRANULARITY IS ASSOCIATED WITH LOWER REACTIVITY TO DAILY STRESSORS IN OLDER ADULTS

Zhu, Xianghe—North Carolina State University; Neupert, Shevaun D—North Carolina State University

Descriptors: adult development, emotion regulation

Emotional granularity, the tendency to experience emotions in a differentiated manner, has been considered a regulatory capacity contributing to positive psychological and health outcomes. However, it is not clear whether emotional granularity is associated with reactivity to stressors on a daily basis. We examined the moderating role of negative affect (NA) granularity in reactivity to daily stressors (the within-person association between stressor exposure and NA). In a daily diary study, 115 older adults (aged 60-90 years) reported daily stressor exposure and NA for 8 consecutive days. Multilevel models revealed significant within- (25%) and between-person (75%) variance in NA. To index granularity, an intraclass correlation was computed with 10 NA items across study days for each person. NA granularity moderated reactivity to stressors (gamma=-0.48, t=-3.23, p=0.001) when intraindividual mean and variance in NA were controlled. For older adults with low granularity, days with stressors were associated with increases in NA (slope=0.18, t=5.44, p<.0001). For older adults with high granularity, days with stressors were not associated with changes in NA (slope=-0.13, t=-1.61, p=0.11). These results suggest that NA granularity may buffer reactivity to daily stressors. This may be an important mechanism through which emotional granularity benefits long-term outcomes. Our findings extend previous research by supporting the adaptive value of negative affect granularity in daily life contexts through a dynamic, within-person lens.

College of Humanities and Social Sciences, North Carolina State University

POSTER A-2
POSITIVE ASSOCIATIONS BETWEEN DAILY MOMENTS OF POSITIVITY RESONANCE AND DAILY SELF-TRANSCENDENT VIRTUES

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Descriptors: positive emotion, social, intervention, close relationships, moral

We hypothesize that when positivity resonates between people-especially strangers-it builds virtues, such as spirituality, altruism and humility. To test these links, the current study randomized participants (N=324) to 4 conditions: 1). Social distal targets, 2). Social others, 3). Mindfulness, 4) Control. In the two social interventions, participants learned about the value of positivity resonance and through daily emails were encouraged to have more such moments with all others, or to selectively target strangers and acquaintances, respectively. Nightly reports of perceived positivity resonance and the three virtues were gathered over 35 days. A mixed two-level model with random intercepts and random slopes revealed both between-person and within-person effects, and effects of randomized condition. Individuals who reported on average higher level of positivity resonance also reported higher level of altruism (b=0.36, p<.001), humility (b=0.24, p<.001) and spirituality (b=0.47, p<.001) across days. On days when people reported higher level of positivity resonance, they also reported higher level of altruism (b=0.21, p<.001), humility (b=0.13, p<.001) and spirituality (b=0.24, p<.001). As hypothesized, the within-person dose-response relationships between positivity resonance and the virtues of humility and spirituality were the strongest for people who were assigned to have more social connections with distal others. The findings illuminate the value of everyday love as a potential drive to transcend oneself and to build virtues.

POSTER A-3
THE IMPACT OF COGNITIVE LOAD ON EXECUTIVE FUNCTIONING: DOES OLDER AGE MAKE YOU MORE VULNERABLE?

Zebarjadian, Sheyda—University of California San Francisco; Mendes, Wendy B—University of California San Francisco; Crosswell, Alexandra—University of California San Francisco

Descriptors: cognitive, adult development

Specific cognitive abilities decline as we age, including executive functions like planning, problem solving, and cognitive flexibility. Similarly, living under chronic stress can impair executive functioning. Here, we modeled chronic stress through a cognitive load paradigm to test whether older adults are particularly vulnerable to the impact of stress on cognition compared to younger adults. A sample of N=207 adults (n=102 younger, age range=25-45; n=105 older, age range=60-85) were randomly assigned to a cognitive load (counting musical notes or remembering a 7-digit number) or no-load condition and completed problem solving, planning, and attention tasks (Tower of London, Trails A & B, and Sustained Attention to Response Task). Results show a main effect of age on planning, problem solving, and attention switching, with older adults solving fewer problems (p=.02), and for the problems they did solve correctly, they attempted the problems more times (p<.001), used more moves (p=.004), and took more time (p<.001). Older adults were also slower to switch between mental sets (p<.001). There was a marginally significant main effect of condition, with those under cognitive load solving fewer problems (p=.09) and needing to attempt problems more times (p=.08). There were no significant age by condition interactions, and no significant effects of age or condition on sustained attention. Thus, older adults remained resilient to the impact of increased cognitive load on executive functioning, suggesting that they are not more vulnerable than younger adults to these demands.

POSTER A-4
THE EMBODIMENT OF FEAR

Yu, Anna Alessandra Nicoletta C—Yale University; Pezzulo, Giovanni—Institute of Cognitive Sciences and Technologies; Barca, Laura—Institute of Cognitive Sciences and Technologies; Iodice, Pierpaolo—University of Rouen Normandy

Descriptors: cognitive, physiology, biomarkers

According to the embodied prediction view of emotion, emotional processing leverages bottom-up information from both the outer world and the body, as well as top-down predictions based on past experiences. As such, the processing of an emotion, such as fear, re-enacts a distributed neural network of exteroceptive, interoceptive, and predictive states. Activating one of those states should consequently anticipate perception of that emotion. Pezzulo et al. (2018) found that manipulating an increased heart rate—an interoceptive signature of fear—facilitated the processing of fearful faces, but not neutral or disgusted ones. In the present study, we sought to replicate Pezzulo et al.'s findings and investigate whether top-down prior information from affective priming interacted with interoceptive and exteroceptive bottom-up signals from heart rate and facial expressions, respectively, in emotion perception. After rest or exercise, 36 participants performed a gender-categorization task, wherein they were shown positive, neutral, or negative prime images followed by fearful, neutral, or happy faces. We replicated Pezzulo et al.'s findings on fear (Mann-Whitney test, p<.05) and found that the processing of fearful faces was faster after negative priming compared to positive and neutral priming (Mann-Whitney test, p<.05), but only, as hypothesized, after exercise. This interaction between prior, interoceptive, and exteroceptive information supports an embodied prediction view of emotion and highlights the fear-congruence of increased heart rate and negative prior information.

POSTER A-5
EMOTION LABELS FACILITATE CATEGORICAL PERCEPTION OF BLENDED FACIAL EXPRESSIONS

Yang, Hyeonbo—Pusan National University; Lee, Donghoon; Lim, Seung-Lark

Descriptors: cognitive, language

From the view of the basic emotion theory, categorical perception (CP) of facial expressions occurs as a result of the biologically endowed ability for recognition of emotions. On the contrary, the theory of constructed emotion argues that people perceive facial expressions categorically because they have labels like "anger," "sadness," and "fear," which provide conceptual knowledge of emotions to structural information of facial movements. However, it is difficult to determine whether CP of facial expressions is due to the innate ability for facial expression or due to emotion labels, because adults are already familiar with basic facial expressions and may label them easily. To answer this question, we created an atypical blended facial expression, which is relatively difficult to label, by blending of two stereotypical expressions ("fear", "disgust"). In the CP experiment using X-AB discrimination task, the influence of the label was examined by providing an emotion label ("horrible") to the blended facial expression or not. We performed a 2 (discrimination type; between vs. within-category) í„ 2 (label presence; Label vs. no label group) mixed ANOVA. Results showed a significant interaction effect, $F(1,134)=8.39$, $p<.01$. Compared to the No label group, CP was observed only in the Label group. The current results show that CP of ambiguous facial expressions is facilitated by an emotion label and support the claim of the theory of constructed emotion that language plays an important role in the process of constructing emotions.

POSTER A-6
ESSENTIALIST BELIEFS ABOUT EMOTION AND GENDER PREDICT PERCEPTUAL MEMORY BIASES FOR EMOTIONAL EXPRESSIONS

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Descriptors: cognitive, social

Essentialism refers to the perspective that categories of people, objects, or experiences are defined by a set of inherent or natural characteristics. People who essentialize emotion believe that distinct emotion categories (e.g., anger, fear) have a defining essence, and thus that all instances of a particular emotion share deep underlying similarities. We predicted that essentialist beliefs about emotion would extend to perceptual memory biases for emotion expressions. To test this, participants were first trained to distinguish two morphed emotional expressions: a more fearful face (30% anger, 70% fear) and a more angry face (70% anger, 30% fear). Then, participants were shown all of the morphed images (from 100% anger to 100% fear) one at a time and asked to identify the two training faces. Questionnaires assessed essentialist beliefs about both emotion and gender. Findings generally confirmed predictions. The more a person held essentialist beliefs about emotion, the more their perceptual memory was distorted toward recalling males' emotion expressions as more extreme than they were in reality, $F(1,73)=4.05$, $p=.05$. In addition, the more a person held essentialist beliefs about gender, the more their perceptual memory was distorted in gender-stereotyped ways (i.e., more distorted with regard to anger than fear for male faces). Critically, essentialist beliefs were not related to perceptual memory biases for females' expressions, though this may be because perceptual memory was more biased toward extreme emotion expressions for females overall.

POSTER A-7
COMPARING SUPERVISED AND UNSUPERVISED MACHINE LEARNING APPROACHES TO EMOTION CATEGORIZATION

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Descriptors: methods, physiology, biomarkers

Machine learning methods provide powerful tools to map physical measurements to scientific categories, but are these methods suitable for discovering the ground truth about emotion categories that exist in nature in some objective way? In the science of emotion, researchers have used supervised machine learning classifiers to discover biomarkers in the brain or body for various emotion categories (happiness, anger, etc). However, this practice relies heavily on the assumption that the labels refer to objective categories that can be discovered. In the present study, we critically examine the validity of this approach across three distinct datasets collected during emotional episodes. Specifically, we contrast findings from supervised and unsupervised clustering approaches across datasets measuring (1) the brain (n=16), (2) the body (n=52), and (2) subjective experience (n=853). Using supervised classification with a priori emotion category labels, we achieved significant above-chance classification across all three datasets (mean accuracy for fMRI: 46.1% vs. 33.3% chance; physiology: 44.4% vs. 33.3% chance; self-report: 39.7% vs. 16.7% chance; $p<0.05$). However, when using unsupervised approaches that attempt to discover meaningful structure in the data rather than classifying data according to ground truth labels, we discovered clusters in the data that did not meaningfully correspond to the a priori labels. Our findings highlight the importance for future researchers to critically explore the validity of their machine learning labels in the science of emotion and beyond.

POSTER A-8
THE DISCREPANCY BETWEEN MOMENTARY AND REMEMBERED PLEASURE IN SCHIZOPHRENIA

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Descriptors: clinical, cognitive, mental health

Investigating memory for emotional experience in schizophrenia can provide insights into deficits in anticipation and savoring. Thirty-three participants with and 31 without schizophrenia verbally described and rated their emotional experience while engaging with emotionally evocative visual and taste stimuli and after a 48-hour delay. Across visual and taste stimuli as well as two measures of emotional experience, we found no difference between people with and without schizophrenia in their remembered emotional experience. However, those with schizophrenia displayed a greater momentary-remembered emotional experience discrepancy ($F(1, 35.34)=4.38$, $p=.044$, '‡p2=.11). Remembering more pleasure was linked to better functioning (r=.48, p=.016) and tended to be related to more savoring and fewer negative symptoms. Together, these findings suggest that remembered pleasure may not be disrupted in schizophrenia; however, the discrepancy between momentary and remembered emotional experience is worthy of future investigation.

POSTER A-9
POSITIVE AND NEGATIVE SCHIZOTYPY ARE ASSOCIATED WITH ABNORMAL HEDONIC RESPONSE TO ODOR

Walsh-Messinger, Julie—University of Dayton; Kaouk, Sahar—University of Dayton; Lipnos, Brooke—University of Dayton; Malaspina, Dolores—Ichan School of Medicine at Mount Sinai

Descriptors: clinical, mental health, personality, physiology, biomarkers

Background: Research findings suggest that individuals with schizophrenia have abnormal hedonic response to odor, but it is unknown whether the same is true for individuals with psychometrically defined schizotypy. The present study investigated associations between schizotypy and odor detection threshold, odor identification, hedonic response to odor. Methods: 62 undergraduate students were tested for odor detection sensitivity, odor identification, and hedonic response to odor. They also completed the Iowa Gambling Task, which measures decision-making, and the Chapman Scales, a self-report measure of schizotypy. Linear multiple regression was used to test whether positive and negative schizotypy predicted the olfaction measures when controlling for age and decision-making. Results: Higher positive schizotypy predicted greater positive affect in response to unpleasant odor (p=.032). Greater negative schizotypy (p=.019) and poor decision making (p=.035) predicted more negative affect in response to neutral odor. (p=.028). Lower positive schizotypy (p=.043), higher negative schizotypy (p=.026), and poor decision-making p=.047) were related to greater negative affect in response to unpleasant odor. Greater negative schizotypy predicted more negative affect in response to pleasant odors (p=.015). None of the variables predicted odor identification or odor detection threshold. Conclusion: These findings suggest that schizotypy and decision-making independently predict hedonic response to odor, suggesting both amygdala and prefrontal abnormalities in individuals with schizotypy.

POSTER A-10
EMOTIONAL AWARENESS AND PHYSICAL AFFECTION AMONG INDIVIDUALS WITH POSTTRAUMATIC STRESS AND PSYCHOGENIC SEIZURES

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Descriptors: emotion regulation, close relationships, clinical, mental health

Psychogenic non-epileptic seizures (PNESs) resemble epileptic seizures but occur without abnormal electrocortical activity. PNESs are associated with past trauma, signs of emotion-related dysfunction (e.g., high attention to and possible misinterpretation of somatic cues), and disrupted interpersonal relationships. Given links among trauma, emotion, physical affection, and relationships, we examined self-reported somatic symptoms, difficulties with emotional awareness and overall emotion regulation, and frequency of physical affection among 11 PNES patients, all but one with posttraumatic stress symptoms (PTSS), and 49 trauma controls (TCs; 25 with and 24 without clinically-significant PTSS). As hypothesized, those with PNES reported more somatic symptoms than TCs (ps<.001); groups did not differ in reported difficulties with emotional awareness or overall emotion regulation difficulties. Those with PNESs were equally likely to be in a committed relationship and more likely married than TCs, yet reported less frequent physical affection than either TC group (ps<.05). Across the sample, greater frequency of physical affection was associated with fewer somatic symptoms (p=.027) and a trend toward fewer difficulties with emotional awareness (p=.058); physical affection and overall emotion regulation difficulties were unrelated. Results point to links among physical affection, somatic symptoms, and emotional awareness, and suggest that disruptions in these processes may be targets for intervention among those with trauma and seizure-like reactions.

POSTER A-12
EMODIVERSITY, HEALTH, AND WELL-BEING IN THE MIDUS DAILY DIARY STUDY

Urban-Wojcik, Emily J—University of Wisconsin-Madison; Mumford, Jeanette A—University of Wisconsin-Madison; Almeida, David M—The Pennsylvania State University; Lachman, Margie E—Brandeis University; Ryff, Carol D—University of Wisconsin-Madison; Davidson, Richard J—University of Wisconsin-Madison; Schaefer, Stacey M—University of Wisconsin-Madison

Descriptors: mental health, physical health, cognitive, positive emotion

Emodiversity (ED), or the variety and relative abundance of emotions experienced, provides a metric that can be used to understand emotional experience and its relation to well-being above and beyond average levels of positive and negative affect. Past research has found that more diverse emotional experiences, both positive and negative, are related to better mental and physical health outcomes. The present research tested the relationship between positive and negative emodiversity (PED & NED) across the span of 8-days with measures of health and well-being using two large national samples. Participants (N=2,788) reported emotional states for 8 days. ED scores were computed for each day using an adaptation of Shannon's biodiversity index and averaged across days. All models included average affect and demographic covariates. ED added explanatory value to 7 of 11 models above and beyond mean levels of emotion (R2change: .01 to .05; Fchange>2.96). Greater PED was associated with fewer symptoms of depression and anxiety, higher levels of hedonic well-being, and fewer physical health symptoms and chronic conditions, but was not related to eudaimonic well-being nor cognitive functioning. In contrast to previous research, greater NED was related to more symptoms of depression and anxiety, worse hedonic well-being, more physical symptoms and chronic health conditions, but better executive functioning. These findings illustrate inconsistencies across studies in whether NED is associated with adaptive outcomes and raise questions about refining the construct of ED.

POSTER A-13
INTERPERSONAL EMOTION REGULATION IN INDIVIDUALS WITH CURRENT AND REMITTED MAJOR DEPRESSIVE DISORDER

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Descriptors: emotion regulation, social, clinical

Major depressive disorder (MDD) is characterized by emotion dysregulation and social impairment. Still, little is known about how frequently individuals with MDD engage in interpersonal emotion regulation (IER) or the response of others in these interactions. The present study examined how frequently those with current MDD (cMDD; n=48), remitted MDD (rMDD; n=80), and healthy controls (HC; n=87) shared negative affect and the emotion regulation strategies employed by their sharing partner (SP). Participants (66% women, mean age=44) completed a two-week experienced sampling protocol (five surveys/day). At each survey, they reported whether they had disclosed negative emotions or experiences to their SP and, if so, which strategies (reappraisal, problem solving, encouraging sharing, showing affection, invalidating, blaming) the SP employed. The two MDD groups shared the most frequently of the three groups, but the only significant difference was between the rMDD and HC groups (b=.41, p=.03). cMDD experienced a mixed IER pattern: Their SPs provided significantly higher encouragement of sharing than HCs, but also more blaming than both groups. rMDDs received generally supportive IER, with significantly more affection and less invalidation than both groups and significantly more encouragement of sharing than HCs. These results shed light on the nuanced and mixed ways in which cMDD individuals experience IER and highlight the largely positive IER strategies that surround those with rMDD. Future research should explore how these IER characteristics contribute to the course of MDD.

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POSTER A-15
EMOTION REGULATION AND NAP OUTCOMES

ten Brink, Maia—Stanford University; Yan, Yan—Nanjing University; Bekir, Selin—Bogazici University; Eiroa Solans, Conrad—College of St. Scholastica; Schíne, Jonas—Oxford University; Manber, Rachel—Stanford University; Gross, James—Stanford University

Descriptors: emotion regulation, physical health

The role of emotion regulation (ER) in falling asleep and achieving restful sleep is relatively unexplored. Here we asked whether pre-sleep ER impacted a nap following a mood induction. 44 subjects were randomly assigned to watch either a negative or a neutral virtual reality video, after which they took a one-hour nap in the lab. Subjects retrospectively reported on their use of ER from the video's end until they fell asleep. Data on emotions and sleep were collected via self-report and physiological measures (actigraphy, heart rate, and respiration). The mood induction had no significant effect on self-reported or physiological sleep outcomes. Self-reported ER success, but not amount of ER, predicted longer total sleep time (B=0.24, p=0.007) following both videos. The effect of specific ER strategies on sleep interacted with condition. Distraction decreased sleep difficulty in the negative condition but increased difficulty in the neutral condition (B=0.83, p=.009). Reappraisal induced a more rested feeling upon waking in the neutral compared to negative condition (B=0.51, p=0.03). Self-reported amount of thought regulation also interacted with condition to predict sleep outcomes, benefiting sleep in the negative condition while worsening it in the neutral condition. In sum, this study found that success of ER rather than amount of ER alone influenced sleep outcomes. The efficacy of emotion and thought regulation before sleep seemed to vary by emotional context, aligning with other findings about the context dependence of different regulation strategies.

POSTER A-16
EXPERIENCES OF INTERPERSONAL EMOTION REGULATION: EXPLORATORY AND CONFIRMATORY FACTOR ANALYSES OF RECIPIENTS' RATINGS OF RECALLED INTERACTIONS

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Descriptors: emotion regulation, social

Recent empirical and theoretical contributions have drawn attention to and begun to elucidate functional consequences of individual differences in interpersonal emotion regulation (IER), which is defined as a goal-directed process whereby two or more individuals engage in live social transactions that are motivated to regulate their own or each other's emotional states or behaviors. Nevertheless, relatively little is known about individuals' perceptions of IER interactions, such as the dimensional structure of IER recipients' subjective experiences of providers' enacted behaviors. In the current studies, participants drawn from undergraduate, online, and clinical samples (ns ranging from 199-895) were asked to recall a recent episode of receiving interpersonal emotion regulation and to provide ratings of providers' behaviors as part of a larger effort to develop and validate a new measure, the Interpersonal Regulation Interaction Scale (IRIS). Exploratory (RMSEA=.06) and multi-group confirmatory (robust RMSEA=.07) factor analyses converged on and replicated a four factor structure. These factors were labeled responsiveness, hostility, cognitive support, and physical presence. With the exception of physical presence, in both exploratory and confirmatory analyses, ratings of each of these factors contributed significant and unique variance to models of the perceived benefits of the recalled IER interactions (betas ranging from .18 to .46). These results suggest that it is essential to carefully consider the content of IER interactions in relation to psychosocial outcomes.

POSTER A-17
EFFECTS OF INCREASED INTEROCEPTIVE AWARENESS ON POSTPARTUM DEPRESSION AND EMOTIONAL STATES äó´AN EXPERIENCE SAMPLING STUDY USING SMARTPHONE PHOTOPLETHYSMOGRAPHYäó´

Suga, Ayami—Unicharm Corporation; Naruto, Yosuke—Unicharm Corporation; Uraguchi, Maki—Nagoya University; Sasaki, Toru—Unicharm Corporation; Ozaki, Yuka—Toyo University; Ohira, Hideki—Nagoya University

Descriptors: child development, intervention, positive emotion

Though depression has been linked with dull interoceptive awareness, the relationship between postpartum depression and interoception is unclear. We examined whether an intervention designed to heighten mothers' interoceptive awareness (MAIA) could reduce postpartum depression (EPDS) with 99 dyads of mothers and their infants aged 2-8 months. Questionnaires at baseline included MAIA and EPDS. In all, 24 participants (intervention group) measured their heart rate (1-3 times) at home for a month via smartphone photoplethysmography and recorded their subjective emotions and perceived infants' emotions (control group=75 participants). Both groups answered post-questionnaires at the end of the month. For the intervention group, in a hierarchical multiple regression analysis with EPDS change (post-pre scores) as the outcome, the interaction between MAIA Noticing change (post-pre scores) and pre-EPDS approached significance ('_=ä_Í.351, SE=.202, t(20)=ä_ Í2.049, p=.054). Simple slope tests showed that EPDS change was negatively associated with pre-EPDS in the high-Noticing change group ('_=ä_Í.738, SE=.224, t(20)=ä_Í3.504, p=.002); low-Noticing change group showed no significant association. In a between-individual multilevel correlation analysis, increased scores of pre-MAIA Emotional awareness positively correlated with positive emotions of infants (rs=.443ä_Í.562, ps=.016ä_Í.047). These results suggest that an association between the increase in interoceptive awareness and positive assessments of the infants' emotions may have contributed to the reduction in EPDS.

POSTER A-18
EMOTIONS IN CONFLICT: A BEHAVIORAL ANALYSIS OF ADOLESCENT-PARENT CONFLICT CONVERSATIONS

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Descriptors: close relationships, child development, positive emotion

Adolescent-parent relationships are often described as conflicted as adolescents seek autonomy, while parents strive to maintain control. Surprisingly little research has examined how adolescents and parents navigate disagreements using fine-grained objective behavioral coding systems. In the current study, 21 adolescents (age: M=15, SD=2.4) and their parents engaged in a videotaped 10-minute conversation about an area of disagreement. Conversations were coded second-by-second by trained coders using the Specific Affect Coding System, taking into account facial expressions, language, tone of voice, and content (kappa=.65). Independent samples t-tests revealed no significant differences in mean levels of overall positive or negative behaviors between adolescents and parents, ps>.05. However, parents showed a greater variety of positive behaviors (M=4, SD=.92) than adolescents (M=2.95, SD=1.1), t(40)=-3.47, p=. 001. Moreover, differences emerged for specific interpersonal behaviors. Parents (M=143.96, SD=78.4) showed more domineering behaviors (e.g., lecturing) than adolescents (M=3.8, SD=10.2), t(40)=-8.13, p<.001, whereas adolescents (M=120.5, SD=91.04) exhibited more defensiveness behaviors (e.g., deflecting blame) than parents (M=15.7, SD=22.3), t(40)=5.12, p<.001. Parents (M=18.1, SD=13.7) also showed more interest behaviors (e.g., opinion seeking) than adolescents (M=4.5, SD=4.6), t(40)=-4.33, p<.001. These findings illuminate the interpersonal behavioral profile that characterizes adolescent-parent conflict conversations in this important transitional period.

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POSTER A-19
DOES IT MATTER HOW WE FEEL OR HOW WE WANT TO FEEL? PREDICTING RELATIONSHIP SATISFACTION FROM WITHIN- AND BETWEEN-COUPLE DIFFERENCES IN EMOTION AND EMOTION GOAL SIMILARITY

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Descriptors: close relationships, emotion regulation

Emotion goals guide how individuals manage their emotions and navigate the social world. Similarity in couples' goals may contribute to relationship satisfaction by facilitating joint efforts to reach preferred states. Satisfied couples are expected to show more concordance in their emotional experience and goals. The present study examines how similarity in emotion goals and emotional experience relate to relationship satisfaction. Married couples (N=270) aged 23-85 years completed trait measures and daily diaries of emotion and emotion goals. At the trait level, similarity in emotion goals predicted higher relationship satisfaction (low arousal positive emotion beta=.31, p<.01) but similarity in emotional experience did not. At the daily level, there was substantial within-couple variability across days for emotion goal similarity (ICC=.36) and emotion similarity (ICC=.41). However, daily relationship satisfaction was only predicted by concordance in emotional experience. Specifically, couples were more satisfied with their relationship on days when their emotional experience profiles were more similar than usual (r=.18, p<.001). These effects held regardless of relationship length or time spent with partner each day. This project highlights motivational aspects of emotion and the utility of examining similarity at the between- and within-couple level. The findings suggest unique patterns for how social functioning is tied to alignment in emotion goals versus emotional experience. Implications for emotion regulation and close relationships will be discussed.

POSTER A-20
PRELIMINARY EXAMINATION OF INTRAINDIVIDUAL DYNAMICS AMONG ALCOHOL, CAFFEINE, AND SLEEP QUALITY

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Descriptors: neuroscience, physiology, biomarkers, methods, mental health

How does day-to-day coffee and night-to-night alcohol use impact sleep, which is linked to emotional health? Numerous studies have examined these relationships at the group level, but few have investigated these relationships at the level of the individual. Here, we address this issue. Daily diary data from N=17 adult subjects over six weeks (mean entries per subject=35.9) were collected and investigated for temporal interactions between alcohol and caffeine intake (measured in glasses/cups per day) and sleep quality (self-reported, 0-100 scale; and number of awakenings). Separate models were created for each participant, allowing for interindividual differences in these intraindividual processes. Alcohol intake was a negative predictor of self-reported sleep quality for 3 of 16 participants who consumed alcohol (R2adj.=0.08-0.21) and a positive predictor of awakenings for 2 participants (R2adj.=0.13-0.33). Caffeine intake predicted lower self-reported sleep quality for 1 of 17 participants (R2adj.=0.32) and higher self-reported sleep quality for 2 participants (R2adj.=0.14-0.39). The effect of caffeine intake on awakenings was positive for 2 participants (R2adj.=0.08-0.11) and negative for 2 participants (R2adj.=0.12-0.24). Overall, 9 participants exhibited significant relationships between alcohol/caffeine intake and sleep quality variables. These results demonstrate interindividual heterogeneity in the effects of alcohol and caffeine on sleep quality, and support the case for idiographic approaches to better understanding these dynamics.

POSTER A-21
CHILDREN'S AND ADULTS' BELIEFS ABOUT HOW THE TIMING OF EXPECTATIONS SHAPES FUTURE EMOTIONS

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Descriptors: child development, social

We examined 8- to 10-year-olds' and adults' beliefs of whether the timing of expectations influences later emotional wellbeing. Participants (N=84) reasoned about scenarios where hours before an event (e.g., a raffle) one character had high expectations (e.g., thinks she will win) and the other had low expectations (e.g., thinks she will lose). Right before the outcome, each character's expectations changed (high to low; low to high). Participants then rated both characters' emotions (7-point scale) after three outcomes: positive (e.g., win), negative (e.g., lose), and attenuated (e.g., get a consolation prize). We conducted three separate 2 (age: 8/10-year-olds, adults) x 2 (character: high-low, low-high) repeated measures ANOVAs on emotions for (a) positive, (b) negative, and (c) attenuated outcomes. After positive outcomes, participants judged that characters felt equally good regardless of prior expectation sequence (Fs<0.96, ps>.321, Np2=.01). The negative outcome analysis yielded an Age x Character interaction, F=5.72, p=.019, Np2=.07, and the attenuated test resulted in a main effect for character, F=12.69, p<.001, Np2=.13. Following both negative and attenuated outcomes, adults judged that a person with recent high expectations would feel worse than a person with recent low expectations (ps<.001). In contrast, 8- to 10-year-olds only trended in this direction for both outcomes (ps>.055). Thus, in conjunction with Lara et al. (2019), these results illustrate that even by the age of 8, children still need help knowing when it is most beneficial to lower expectations.

POSTER A-22
REDUCED VISUAL ATTENTION TO EMOTIONAL FACES IN FRONTOTEMPORAL DEMENTIA

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Descriptors: clinical, physiology, biomarkers

Individuals with frontotemporal dementia (FTD) often show diminished emotional reactivity to a range of emotion-eliciting stimuli. The extent to which these deficits reflect alterations in earlier-stage visual processing of emotional cues is unclear. We investigated visual attention to emotional faces in 18 individuals with FTD and 23 healthy controls. Participants viewed a series of six, side-by-side, static emotional face-pairs which consisted of one emotional face (either sad, angry, or happy) paired with one neutral face. Participants' eye movements were tracked using a monocular eye-tracker and the average percentage of time looking at each pair of emotional and neutral faces was calculated. A MANOVA with diagnosis (FTD, healthy control) and emotion (sad, angry, happy) as factors, age and sex as covariates, and percentage time looking at the faces as the dependent measure revealed a main effect for diagnosis, F(1,41)=25.98, p<.001, with the percentage of time looking at the emotional faces less for individuals with FTD (43.9%) than for healthy controls (51.7%). The main effect for emotion and the diagnosis X emotion interaction in this analysis was not significant. A similar MANOVA of time spent looking at the neutral faces revealed no significant main effects or interactions. These findings of less time spent viewing a number of different emotional faces suggest that reduced visual attention to emotion-relevant stimuli may play an important role in explaining some of the deficits in emotional reactivity often reported for individuals with FTD.

POSTER A-24
HUMAN AFFECTIVE-STATES ESTIMATION BY A MODEL OF META-LEVEL PATTERNS OF EEG

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Descriptors: computational science, methods, cognitive, physiology, biomarkers

We proposed novel feature quantities of electroencephalogram (EEG) to effectively detect affects in humans. A machine learning model using the proposed feature quantities of time series EEG powers showed higher accuracy to estimate affective states of concentration and relaxation compared to a model using conventional EEG powers. Ten healthy human participants conducted a 3-back task with monetary reward to evoke a state of concentration and a 0-back task as relaxation, three times in different days. Their EEG signals from frontal areas were measured during each task period using a wearable devise. We first analyzed EEG powers' time series in theta and alpha frequency bands in shorter segmentations. The theta power was greater, and alpha power was smaller, statistically significant at most electrodes (p<.05), during the concentration task than during the relaxation task, certificated validity of our experimental manipulation to induce concentration and relaxation. We then proposed the novel feature quantities, the 2nd-order time series of EEG power (fluctuation of time series of time series of EEG power), as we found nontrivial fluctuation in time series of EEG powers during both tasks. An accuracy of estimation of two internal states by the machine learning model (Support vector machine) using proposed the 2nd-order EEG powers was outperformed by the model using conventional EEG powers (67.1% to 83.3%). These results suggest that feature quantities reflecting the meta-level pattern of fluctuations of EEG power should be beneficial to estimate affective states in humans.

POSTER A-25
TARGETING FAMILY ENVIRONMENTS IN SCHIZOPHRENIA: AN OXYTOCIN INTERVENTION STUDY

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Descriptors: close relationships, mental health, intervention

A negative family environment is a top predictor of relapse in schizophrenia and interventions targeting the family improve outcome. This study examines whether oxytocin has acute effects on family interactions. Young adults with schizophrenia (N=29) and control participants (N=31) brought a parent for two sessions one week apart. Parents were administered either intranasal oxytocin or placebo, receiving the other drug at the second session. Both sessions, dyads engaged in three conversations: a neutral topic, a positive memory, and a conflict. At baseline and after the conversations participants rated closeness with their family member and how warm and critical the parent was. Mixed ANOVAs indicated that, compared to the control group, people with schizophrenia reported that their parents were less warm (p's<.02), they felt less close to their parents (p's<.01), and they perceived that their parents felt less close to them (p's<.01) at baseline and post-conversations. Parents of people with schizophrenia reported that they perceived that their child felt less close to them (p=.05) and that they felt marginally less warm toward their child (p=.06) post-conversations only. Oxytocin had no effect on parent reports. There was a trend of young adults' report of lower parental warmth on oxytocin days (p=.07) but also lower criticalness (p=.06). Our findings suggest that schizophrenia predicts less positive family relationships, but that the acute effects of oxytocin on perceptions of the family environment may be subtle and complex.

POSTER A-26
OUTGROUP HARMING MEASURED BY THE INTERGROUP PRISONER'S DILEMMA-MAXIMIZING DIFFERENCE GAME IN JAPANESE POPULATIONS

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Descriptors: culture, social, moral

Parochial altruism is expressed both by cooperation with the ingroup and by harming the outgroup. The Intergroup Prisoner's Dilemma Maximizing Difference game (IPD-MD) was designed to differentiate them. The IPD-MD enables group members to make a costly contribution to either a within-group pool that benefits to ingroup or a between-group pool that not only benefits to the ingroup but also reduces outcome for the outgroup (Halevy et al., 2010). Previous studies have shown that participants contributed more to the within-group pool than the between-group pool (e.g., Smith et al., 2012). However, few studies have conducted IPD-MD on Asians. Previous studies regarding cultural differences have suggested that East-Asians tend to derive self-worth from their relative position in society. Japanese people may be motivated to increase the ingroup's relative profit, thus allocation to the between-pool may be higher than the within-pool. To confirm this hypothesis, IPD-MD was conducted for minimum groups constructed by Japanese university students (N=43). As a result, the allocations to the between-pool was significantly higher than the within-pool (F (2,84)=10.11, p<.01; between>within: p<.01). A retest conducted in another population showed the same results (N=23). Moreover, the allocation to the between-pool was comparable whether all ingroup members belonged to their same university or not (N=46). These results were consistent with our hypothesis. The contribution to outgroup harming in Japan may be due to a tendency to emphasize the relative value of the ingroup.

POSTER A-27
HABITUAL EMOTION REGULATION IS REPRESENTED IN FUNCTIONAL CONNECTIVITY OF CORTICO-LIMBIC NETWORKS IN YOUNG AND OLDER HEALTHY ADULTS

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Descriptors: emotion regulation, neuroscience, adult development, mental health

The capacity to regulate emotions is vital for social functioning and mental health. Here we test whether self-reported emotion regulation strategies are represented in cortico-limbic networks using resting-state functional magnetic resonance imaging (rs-fMRI), a method representing the intrinsic synchronization of functionally coupled networks, which can serve as a biomarker of personality. 120 young (YA) and 49 older healthy adults (OA) underwent a 15 min rs-fMRI scan and completed 3 self-report measures of emotion regulation (ERQ, C-ERQ, COPE). We ran a principle component analysis on those measures, defined the left and right amygdala as seed regions and investigated their whole-brain functional connectivity, including 4 components (consecutively positive reappraisal, detached reappraisal, action planning, distraction), sex, age and mean frame displacement as covariates. Thresholds were p<.05 on voxel-and cluster level (FWE corrected). Correlation analysis of rs-fMRI data and habitual reappraisal revealed a positive association with the inverse functional connectivity of the right amygdala and the right precuneus in YA, and right thalamus in OA. Habitual action planning was associated with a positive coupling of the right amygdala and the cingulate cortex in OA. Habitual distraction showed a positive correlation with the positive coupling between right amygdala and the superior frontal gyrus in OA, and parietal and occipital regions in YA. Our results overlap with previous fMRI findings of cognitive emotion regulation and shed light on their resting-state networks.

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POSTER A-28
TRAUMA HISTORY AND FACIAL EXPRESSIONS OF EMOTIONS IN INDIVIDUALS AT CLINICAL HIGH RISK FOR PSYCHOSIS

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Descriptors: clinical, mental health

Psychosis is a devastating mental illness that is characterized by alterations in emotional functioning. A growing body of work has found links between traumatic experiences (e.g., abuse) and alterations in facial expressions of emotion among individuals with schizophrenia. There is limited work determining whether traumatic experiences are related to alterations in facial expressions of emotion prior to the onset of psychosis although understanding links between trauma and emotional functioning is critical for our understanding of the etiology of psychosis. The current study sought to determine whether traumatic experiences were related to alterations in facial expressions of emotion among 39 CHR individuals and 39 age-matched healthy controls. Facial expressions of negative emotions (i.e., anger, contempt, sadness [disgust and fear were not observed]) were deduced from 1-minute video-recorded clinical interviews and measured on a second-by-second basis using the Emotion Expressive Behavior (EEB) coding system. Traumatic experiences (e.g., experienced a life-threatening situation) were extracted from the Structured Clinical Interview for DSM-IV (0=no trauma, 1=at least one trauma). Findings revealed that CHR individuals who had experienced trauma showed higher levels of facial expressions of negative emotions (i.e., anger, contempt, sadness) (r=.35, p=.03), whereas controls did not (r=-.09, p=.58). These data shed light on our understanding of emotional alterations and psychopathology.

POSTER A-29
USING RESPONSE SURFACE ANALYSIS TO INVESTIGATE THE CONSEQUENCES OF EMOTIONAL EXPERIENCE-EXPRESSION INCONGRUENCE ACROSS CULTURES

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Descriptors: emotion regulation, methods, culture, clinical

Even though there is a relation between experience and expression of emotions, people's intensity of expressions is not always congruent with their feelings. For example, some people habitually suppress the expression of their emotions, a tendency which is considered maladaptive in Western cultures. In the present research, we use Response Surface Analysis (RSA) to investigate the relation between experience-expression incongruency and well-being across 4 cultures (US, Malaysia, Japan, China). RSA allows us to investigate the distinct influence of emotional suppression (expression<experience) vs. amplification (expression>experience). In stage 1, based on 960 emotion narratives collected from participants from 4 countries, a scenario-based inventory was developed to measure emotional experience and expression across common situations for 6 emotions. In stage 2, participants (N=2250) completed this inventory and measures of satisfaction with life, depression, and anxiety. Across all cultures, experience-expression incongruence in joy had the stronger association with negative outcomes, a4=0.22 to 0.94, followed by sadness, a4=0.08 to 0.28. The association between incongruence and negative outcomes was weaker and cross-culturally inconsistent for anger, pride, disgust and fear. Importantly, when there was a significant effect of incongruence, the association between amplification (compared to suppression) and negative outcomes was consistently stronger. These results complement past findings by demonstrating the maladaptiveness of over-expression of emotions.

POSTER A-30
AN INTEGRATIVE SOCIAL EMOTION REGULATION FRAMEWORK

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Descriptors: emotion regulation, social

Social settings provide opportunities for individuals to advance their emotional goals through inter-personal emotion regulation (ER). However, little research has considered how individuals also use long-studied forms of intra-personal ER in social settings. Here, we introduce a theoretical framework for social ER that integrates both inter-personal and intra-personal strategies by which people regulate their own and others' emotions in social contexts. This framework disentangles social ER processes from social contexts, revealing that people use intra-personal ER strategies (1) in social settings, (2) for managing others' emotions (extrinsic), and (3) in ways that can depend on how others respond (response-dependent). This broader framework reframes well-known intra-personal ER strategies, and reveals new ones that have received limited attention. We highlight the potential added explanatory power of an integrative social ER framework for guiding research on complex social dynamics with consequences for mental health, relationship quality, prosocial action, and other domains of social behavior. The wide-angle lens of this new framework has potential to integrate diverse lines of ER research, and to motivate new empirical and theoretical questions about how people use both intra-personal and inter-personal ER strategies to navigate their social lives.

POSTER A-31
INDIVIDUAL DIFFERENCES IN EMOTIONAL FACE-PROCESSING PREDICT DYNAMIC PATTERNS OF AFFECT IN DAILY LIFE

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Descriptors: Face-processing, Affective Dynamics, EMA, valence bias, behavioral task

How do our momentary appraisals of affective stimuli shape our day-to-day emotional experience? The evaluation of ambiguous emotional faces as negative rather than positive reflects a trait-like negative valence bias (NVB). However, in order to demonstrate the ecological validity of the NVB assessed in the laboratory, we aimed to use NVB to predict one's daily emotional experience outside of the laboratory, including mean and instability of negative affect (NA). To this end, we had 121 undergraduates first complete a computerized task where they rated happy, angry, and surprised faces presented for 500ms as either positive or negative. NVB was operationalized as the percentage of surprised, or ambiguous, faces that were rated as negative. Then, students completed mobile surveys of their emotions every other day for one academic semester. We hypothesized that greater NVB would be linked to greater mean NA, and greater NA instability, operationalized as the square root of the mean squared successive difference. In a single multivariate regression, we found that greater NVB predicted greater NA instability (b=0.03, p=0.04) but not greater average level of NA (b=0.02, p=0.55). However, greater average NA was positively predicted by greater accuracy at rating angry faces as negative (b=0.11, p=0.04). We controlled for gender, number of mobile survey responses, average task response time and accuracy for rating happy faces as positive. These findings highlight that rapid appraisals of affective stimuli are linked to specific patterns of affect in one's daily life.

POSTER A-32
SUBJECTIVE DIFFICULTY ESTIMATES OF SOCIAL EMOTION REGULATION VARY BY SELF-REPORT TIMING

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Descriptors: emotion regulation, cognitive, social

Studies of emotion regulation (ER) tend to rely heavily on self-report data, collected either online (i.e., with each trial) or retrospectively (i.e., after all trials completed). Such self-reports generally include affective state and sometimes difficulty of ER; however, the same reports are rarely collected both online and retrospectively within a study to assess consistency. The present study investigated this issue in the context of social ER. We trained participants (N=105) to reappraise negative pictures using reinterpretation. For half of trials, participants were instructed to generate reappraisals as they would for themselves, while for the other half, they were instructed to generate reappraisals as they would to help a specific, close acquaintance feel less negative. Participants rated negative affect (always their own) and reappraisal difficulty online and immediately post-task. Both REAPPRAISE-SELF and REAPPRAISE-OTHER resulted in significant ER success, as defined by decreases in negative affect relative to natural viewing. Nevertheless, online ratings indicated more negative affect (p<.001, d_av=.21) and more difficulty (p=.024, d_av=.17) for REAPPRAISE-OTHER versus REAPPRAISE-SELF. Interestingly though, retrospective reports were reversed, with REAPPRAISE-OTHER rated less negative (p<.001, d_av=.46) and less difficult (p=.004, d_av=.25). Thus, retrospective self-reports of social ER may reflect considerable evaluative biases, although offline evaluations are likely important in guiding everyday ER behavior.

POSTER A-33
ATYPICAL DYNAMIC AUTONOMIC NERVOUS SYSTEM STATES IN BEHAVIORAL VARIANT FRONTOTEMPORAL DEMENTIA

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Descriptors: neuroscience, physiology, biomarkers, mental health

The autonomic nervous system (ANS) links brain to body and body to brain via a continuous, dynamic interaction. Recent resting state functional neuroimaging studies have uncovered dynamic intrinsic connectivity states that appear to reflect trait-like signatures of distributed neural activity. We used machine-learning algorithms to investigate whether analogous dynamic states are present in resting ANS outflow. We measured multichannel ANS activity during a two-minute resting baseline period in 59 healthy older adults and 31 individuals with behavioral variant frontotemporal dementia (bvFTD), a neurodegenerative syndrome characterized by ANS deficits. A hidden Markov model was trained on the ANS recordings in the controls and identified three dynamic ANS states: (1) an "arousal state" characterized by greater skin conductance level, lower respiration depth, and lower respiratory sinus arrhythmia; (2) a "quiescence state" characterized by lower skin conductance level, greater respiration depth, and greater respiratory sinus arrhythmia; and (3) a "transition state" characterized by skin conductance level, respiration depth, and respiratory sinus arrhythmia levels that were neither high nor low. Next, the trained algorithm was used to detect and quantify time spent in these dynamic ANS states in bvFTD. Individuals with bvFTD spent less time in the arousal state (p<.0001) and displayed fewer transitions between states (p<.0001) than the controls. These findings suggest the ANS may have a dynamic organization at rest and that dynamic ANS profiles are atypical in bvFTD.

POSTER A-34
EMOTIONAL MEMORY BIAS PREDICTS FUTURE DEPRESSION AND ANXIETY: A CROSS-LAGGED NETWORK MODELLING APPROACH

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Descriptors: mental health, child development, cognitive

Previous work has highlighted distinct developmental trajectories of anxiety and depression in adolescence. In a recent study (Songco et al. 2019), these trajectories were found to co-occur with trajectories of emotional information-processing biases in interpretation and memory. However, these analyses were not able to provide any indication of causality-for instance testing whether emotional information-processing biases predict future anxiety and depression (or vice versa). This is a key hypothesis within the emotional information-processing bias literature that remains largely untested due to standard limitations of cross-sectional data. Therefore, in this study we expand on our previous results to examine the complex temporal interplay between emotional information-processing biases, anxiety, and depression. We analysed data from a cohort of 354 adolescents that completed all measures at approximately 13, 14.5, and 16 years old. We used two novel network approaches: cross-lagged network models, and symptom trajectories. The cross-lagged models provide initial evidence that memory bias predicts future anxiety (regularized regression estimates=.99-1.00) and depression (1.42-1.91), but not vice versa. The symptom trajectories network similarly indicates coherence amongst bias and mental health trajectories. We discuss results in light of the hypothesis that cognitive biases play a causal role in the development and etiology of anxiety and depression in adolescence-a core claim within emotional information-processing bias research that remains largely untested.

POSTER A-35
EFFECTS OF INFANT-DIRECTED SINGING DURING DIAPER CHANGING ON POSTPARTUM DEPRESSION

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Descriptors: child development, intervention, positive emotion

Infant-directed singing (IDS) attracts infants' attention and promotes mother-infant communication. Yet, the effectiveness of IDS during diaper changing has not been clarified. Hence, this study investigates how IDS affects mothers' impressions and behaviors toward diaper changing and their psychological states. We hypothesized that mothers who listened to IDS while changing diapers for one month (IDS group) would show a positive change in their impressions and behaviors toward diaper changing compared to the control group. It was also hypothesized that their parenting self-efficacy (PSE) would improve and postpartum depression (EPDS) would reduce. The participants were 2- to 8-month-old infants and their mothers. The IDS group had 25 infants (4.44 Œ± 1.89 months), whereas the control group had 27 (4.24 Œ± 1.99 months). Both groups answered a pre-questionnaire and then a post-questionnaire one month later. A two-factor ANOVA (group í„ time) indicated that the "Talk to the baby" score increased in the IDS group, and the "Play by touching the baby" score decreased in the control group (F(1,50)=7.46, p=.01; F(1,50)=2.85, p=.02). A hierarchical multiple regression analysis using post-EPDS as the objective variable showed a significant interaction of infant age í„ and the "Play by touching the baby" score change ('_ ¥_ùä_Í.86, t=ä_Í2.69, p=.01). Specifically, in older infants of the IDS group, EPDS decreased as "Play by touching the baby" score increased ('_ ¥_ù ä_Í.55, 'Í=ä_Í.86, t=ä_Í2.69, p=.01).

POSTER A-36
FINDING MEANING AFTER A NATURAL DISASTER: THREAT-BASED AWE TRIGGERS MEANING MAKING.

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Descriptors: positive emotion, personality, emotion regulation, culture

The emotion of awe is characterized by the appraisal of vastness and need for accommodation. We investigated the role of awe when people accommodate natural disaster experience to find eudaimonic meaning. Immediately after a severe typhoon hit Japan (October 2019), 412 participants from Japan were asked to rate individual tendencies to feel negative and positive awe in general, and how often they thought of the typhoon (i.e., a potentially awe-eliciting stimuli) to measure awe-related individual differences. They were then asked to write either about their typhoon experience (typhoon condition) or a negative experience (control condition) as a manipulation for threat. They rated awe amongst other emotions, and meaning making (e.g., "I felt like it will be a meaningful experience for me.") during the experience they wrote about. Finally, chronic level of eudaimonic meaning in life was measured. Analysis of individual differences showed multiple mediation effects. Those who tend to feel awe in general thought of the typhoon more frequently, which increased eudaimonia (indirect effects of negative awe, .031, 95% confidence interval [.003-.060]; positive awe, .033 [.004-.062]. Analysis of experimental manipulation also showed multiple mediation effects even after controlling for awe-related individual differences. Participants felt more awe in the typhoon condition and found more meaning in their experience, which lead to eudaimonia (net indirect effect .035 [.016-.053]). The results suggest that there is a path from threat-based awe to eudaemonic happiness.

POSTER A-38
THE CENTRAL ROLE OF AFFECT IN HEALTH MESSAGE FRAMING

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Descriptors: physical health, intervention

Adopting healthy behaviors is often influenced by differently framed messages; gain-framed messages emphasize the benefits of engaging in a behavior, whereas loss-framed messages highlight the consequences of not engaging in a behavior. Gain-framed messages are particularly impactful for older adults, especially in the domain of exercise. We examined the role of affect in message framing with 134 older adults enrolled in an exercise program. Participants were randomly assigned to a gain-frame, loss-frame, or no-frame condition and were called 4 times during the program. During the calls, we measured current state positive and negative affect. We also read 4 framed exercise reinforcement messages to the participants and measured their feelings about each statement. Finally, we measured attendance at class sessions during the 8-week program. We found that message framing indirectly influenced attendance through affect. Specifically, the gain frame predicted more positive feelings toward the messages than neutral and loss frames (b=.539, CI=.321, .758, p<.001). Higher positive feelings toward the messages predicted higher positive state affect (b=.297, CI=.097, .497, p<.02). Higher positive state affect predicted greater attendance (b=.089, CI=.028, .150, p<.005). Finally, frame indirectly influenced attendance via feelings toward the statements and state affect (IE: b=.014, 95% CI=.001, .028, p=.04). These findings indicate that message framing does influence behavioral outcomes-but critically through affective pathways.

POSTER A-39
REAPPRAISAL TRAINING: ARE THERE DOMAIN-SPECIFIC BENEFITS?

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Descriptors: emotion regulation, intervention, mental health

Cognitive reappraisal is an often-adaptive strategy for regulating one's emotions. Consequently, many attempts have been made to train participants to effectively implement reappraisal. Results of these efforts have been mixed. While studies training more general forms of reappraisal have shown less success (e.g. Keng, Smoski, & Robins, 2016; Denny & Ochsner, 2014), studies training reappraisal within particular domains (e.g. social anxiety: Kivity & Huppert, 2016; caretaker burden: Cheng et al., 2016; marital quality: Finkel et al., 2013) have shown more promise. We posit that this may be attributable to the specificity of the domain in which the participant practices reappraisal. To test this hypothesis, we employed a large dataset (N=6008) from a consumer mental health app, Youper. We analyzed user interactions in which the participant reported a negative emotion before and after completing a brief CBT-based reappraisal exercise and specified the domain which evoked the emotion (e.g. school, partner, health, etc.) We found that emotion intensity decreased (b=-.07, p=.007) and the change in emotion intensity (before to after the reappraisal exercise) increased as the user accumulated more reappraisal practice (b=-.06, p=.027). Critically, we found an additional benefit of practicing within a given domain above and beyond the effect of practicing in general (b=-.06, p=.025). This finding bears on the potential mechanisms that may be at play in reappraisal training. This finding also may inform future interventions to promote healthy emotion regulation.

POSTER A-40
LINKS BETWEEN SOCIAL RELATIONSHIPS AND DAILY MOOD AMONG LOW-INCOME YOUTH WITH ASTHMA

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Descriptors: close relationships, social, positive emotion, physical health

Prior research has shown that healthy peer and sibling relationships in childhood and adolescence are strongly linked to well-being. However, less is known about how youth social relationships are linked to experiences of emotions in daily life. Further, most prior work has been conducted with predominantly white and educated samples; little is known on how these processes unfold in vulnerable populations (e.g., underrepresented groups or those with chronic illness). Our intention was to observe how support processes in peer and sibling relationships influence daily mood in a low-income, predominantly African-American sample of 196 youth with asthma from Detroit, MI. Participants completed the Network of Relationships Inventory and then recorded their daily mood each day over the course of four days. We found that both youth provision and receipt of secure base support in best friendships were significantly associated with greater positive affect in daily life (r=.243, r=.247), while negative aspects of peer relationships (e.g., hostility) were associated with greater negative affect (r=.334). For siblings, greater positive involvement was linked to higher levels of daily positive mood (r=.368). A similar pattern of effects was found when we examined associations among daily reports of peer and sibling interactions (in lieu of the NRI) and daily mood. Overall, we found stronger effects of peer relationships—compared to relationships—on daily mood. Implications for future research in the links between social relationships and emotions in adolescence are discussed.

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POSTER A-41
MORAL APPRECIATION: THE EMERGING FIELD OF THIRD-PARTY GRATITUDE

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Descriptors: positive emotion, moral, social, evolutionary, political

Moral outrage has received much attention from researchers in the recent turmoil of political conflicts, yet its positive counterpart is largely an uncharted research field and does not even have a name. Researchers have identified the certain type of anger elicited by harm done to an unrelated third party (i.e. moral outrage) decades ago, yet study of its positive counterpart, gratitude, has remained constricted to the situation where self is the direct beneficiary. However, recent findings from social and industrial psychology provided evidence for the existence of gratitude where an unrelated third party rather than self is the direct beneficiary. Here we coined the term, moral appreciation, to name this type of gratitude, and defined it as gratitude at upholding of a moral standard. We reviewed evidence for its existence and its potential ontogenetic/ phylogenetic roots (preference towards prosocial agents from a third-party perspective). We compared moral appreciation with other similar positive emotions, including other types of gratitude and moral elevation, based on cognitive-motivational analysis. We proposed that it was adapted for downstream indirect reciprocity (specifically third-party reward) and discussed the possibility of moral appreciation cultivation as antidote to the negative effects of moral outrage (hatred, dehumanization, etc) by positive reframing of the wrong-doer but not the wrongness, while maintaining its positive effects, e.g. enhancing wiliness to engage in activism and planned third-party punishment.

POSTER A-42
MUSIC PREFERENCE, JOB SEARCH STRESS AND KNOWLEDGE-SKILL DEVELOPMENT: AN EXPLANATION OF CAREER ADAPTATION THEORY

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Descriptors: personality, mental health, language

The purpose of this research is to explore the mediation mechanism of how music preference may influence personal stress and knowledge-skill development when searching for a job based on the theory of career adaptation. We used a two-wave study design to collect data and test our hypotheses. 337 college students were invited to fill out the questionnaires of music preference and career adaptability at the first time point while 240 students among them filled out the questionnaires of job search stress and knowledge-skill development later. A total of 188 participants were kept as our final sample after matching two samples. The data revealed that: (1) music preference had significant effects on job search stress, knowledge-skill development, and career adaptability; (2) career adaptability had significant positive effect on knowledge-skill development and negative effect on job search stress; (3) career adaptability played significant mediating effects on the links between musical preference and job search stress and knowledge-skill development. The findings indicated that music preference could be a novel approach to manage job search stress and to improve knowledge-skill development of job search.

POSTER A-43
THREAT AND MORAL-EMOTIONAL LANGUAGE DRIVE NEURAL DIVERGENCE BETWEEN CONSERVATIVES AND LIBERALS DURING VIEWING OF POLITICAL VIDEOS

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Descriptors: social neuroscience, political, language, computational science

Americans have grown more politically polarized in recent years. This widening gap is a threat to social harmony and effective governance. In this study, we combined functional magnetic resonance imaging and natural language processing to study how the brain processes real-world audio-visual political messages and how these processes contribute to political polarization. We scanned 40 participants watching videos related to immigration policy. These videos include news clips, campaign ads and public speeches. During video-watching, activity in the dorsomedial prefrontal cortex was more similar between individuals with similar political attitudes (whole-brain FWE p<0.05). Furthermore, the extent to which a participant's neural timecourse resembled that of an average liberal or an average conservative predicted attitude change towards a liberal or conservative position respectively (b=0.30, p=0.014). The neural divergence between conservative and liberal participants increased with the use of threat-related and moral-emotional language in the videos (PLS regression VIP>2), suggesting that these semantic categories were most responsible for driving differences between the two groups in our experiment. Our work introduces a new multi-method approach to study the neural basis of political cognition in naturalistic settings. Using this approach, we identified a novel neural marker of ideological polarization and examined the contribution of moral and affective language. These results add to the growing evidence highlighting the role of emotion in political partisanship.

POSTER A-44
EMOTION DIFFERENTIATION DURING THE TRANSITION TO PARENTHOOD: DAILY DIARY MODERATION AND LONGITUDINAL PREDICTION RESULTS

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Descriptors: close relationships, emotion regulation, personality, adult development

Emotion differentiation (ED) reflects the extent to which individuals represent or experience their emotions as distinct. Several studies have documented the salubrious effects of such differentiation, particularly for negative emotions. Recent studies have begun to explore the role of ED within interpersonal relationships; the present work addresses this topic by examining the differentiation of emotions experienced within a particularly important and challenging interpersonal matrix-namely, couples undergoing the transition to parenthood. We collected daily diaries from 100 committed couples for a period of 21 days approximately 3 months post-partum, and examined the extent to which both partners' ED (a) moderated the effects of stressful events during the diary period and (b) predicted subsequent levels of relationship quality (at 6 and 12 months post-partum). As expected, both partners' negative (but not positive) ED significantly moderated the negative effects of stressors on relationship quality during the diary period. Additionally, negative (but not positive) ED prospectively and consistently predicted one's own (though not one's partner's) levels of relationship quality at 6 and 12 month post-partum. In both analyses, the ED results held after adjusting for the emotions' mean levels. These findings are the first to demonstrate the protective role of negative ED within relationships. Importantly, they suggest that negative ED may play a role that extends beyond individuals themselves to their romantic partners.

POSTER A-45
INFLUENCE OF ALEXITHYMIA ON THE PROCESSING OF EMOTION WORDS

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Descriptors: language, clinical

One of the main characteristics of alexithymia is that the patients have difficulty in identifying and describing their emotion using proper words. Although some evidence shows the deficit of alexithymia in processing emotion stimuli (e.g., Parker et al., 1993), the influence of alexithymia symptom on the processing of emotion words has not been clearly understood yet. Using two different tasks, we demonstrated that the deficit of alexithymia is not to lexical access, per se, but to emotional access. In the first experiment, 129 participants judged whether a series of latter strings is a word or not (i.e., lexical decision task; LDT) and in the second experiment 142 participants judged whether a word is positive or negative (i.e., valence decision task; VDT). The alexithymia score of each participant was measured by using TAS-20. In linear mixed regression, the effect of alexithymia and its interaction with the task factor on RTs were examined while controlling for the frequency, concreteness, arousal, and valence of words, and anxiety level of participants. The interaction between alexithymia and tasks was significant ($t=5.49$, $p<.001$). While the effect of alexithymia was not significant for the LDT ($t=-1.34$, $p=.184$), it was significant for the VDT ($t=2.44$, $p<.05$). These results imply that alexithymia does not influence the lexical access processing of emotion words but influences a higher level processing such as valence judgment.

POSTER A-46
UNCOMFORTABLE CONVERSATIONS: THE RELATIONSHIP BETWEEN PARENTS' ATTACHMENT INSECURITY AND EMOTIONAL EXPERIENCES DURING INTERACTIONS WITH THEIR CHILD

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Descriptors: close relationships, adult development

Insecure attachment in romantic relationships has well-documented negative effects on emotional functioning. Research on adult attachment has often focused on the impact of parents' attachment on children's emotions, while the impact of parents' attachment on the emotions they themselves experience when interacting with their child has yet to be explored. The present laboratory-based study examined whether parents' (N=26; Mage=48) attachment was related to emotions they experienced during conversations with their child (Mage=17). Parents' insecure attachment (17 items; alpha=.85; anxiety subscale: alpha=.757; avoidance subscale: alpha=.808) was measured using the Adult Attachment Questionnaire. Parents and children engaged in a neutral conversation about the day, a conflict conversation about a topic of disagreement, and a positive conversation about a topic of mutual enjoyment. Parents reported on their emotional experiences after each conversation. Results showed that higher levels of parents' insecure attachment were associated with higher levels of negative emotional experiences during the conflict conversation ($r=0.48$, $p=0.015$). Findings generalized across both anxious and avoidant attachment; were driven by anger, disgust, fear, and sadness (and not found for positive emotions) and were specific to the conflict conversation (and did not emerge for the neutral or positive conversation). These findings highlight the downstream effects that parents' attachment insecurity has on emotional functioning when navigating disagreements with their children.

POSTER A-47
THE ROLE OF KAMAMUTA IN TIMES OF THREAT

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Descriptors: positive emotion, mental health, culture, intervention

Kamamuta, the feeling of being moved by communal love, deepens the sense of social closeness and increases prosocial motivations (Fiske, 2019). However, when and why Kamamuta is functional in rallying human connection remains unclear. We posit that Kamamuta is enhanced by threat, and serves to alleviate personal distress. In three studies, participants first listed and rated their negative attitudes towards personal problems (Time 1 ratings). Participants then watched a threat-inducing or neutral video (Study 1, N=302); reported on thoughts about an ongoing natural disaster (Study 2, N=119); read articles that highlighted a social or nature-related threat (Study 3, N=304). They watched an advertisement depicting human connectedness, completed a measure for Kamamuta (KAMMUS Two: Zickfeld et al., 2018) and rated their personal problems again (Time 2 ratings). In all studies, Kamamuta significantly predicted lower problem ratings at time 2 after controlling for time 1, $ps<.004$, and also other positive emotions of awe, happiness and gratitude in Studies 2 and 3, $ts<-2.04$, $ps<.043$. In Studies 2 and 3, nature-related threat significantly increases Kamamuta, $ts<3.34$, $ps<.023$. The indirect mediation between condition/threat and problem difference ratings by Kamamuta were significant in all studies, indirect effects$<-.790$, $ps<.042$. The overall findings show that Kamamuta functions to lighten individuals' negative mental load, especially in threatening times such as natural disasters, to cope with mounting worry and anxiety, possibly to lay aside personal troubles and aid others.

POSTER A-48
CHARACTERISTICS OF KOREAN FIGURATIVE EXPRESSIONS FOR EMOTION

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Descriptors: language, culture

It has been said that Korean people prefer figurative expressions to emotional words for describing their emotion. However, few studies have reported the characteristics of figurative emotional expressions. In the current research we investigated psychological and linguistic characteristics of 308 Korean figurative expressions for emotions. Korean native speakers rated the degree of emotional intensity, arousal, familiarity, concreteness, and figurativeness for each expression. In addition, linguistics variables such as types (e.g., metaphor, metonymy), sources (e.g., body parts) of expressions were specified. We conducted partial correlations between psychological and linguistic variables. There are three main findings. First, the more familiar expressions, the lower emotional intensity ($r=-.21$, $p<.05$), indicating that Korean tend to use mild expression in daily life. Second, the higher arousal expressions, the more concreteness ($r=.20$, $p<.05$). For example, the expressions with body parts (e.g. hearts, head, etc.) of high concreteness were rated as the ones of high arousal. Finally, figurativeness of metaphor was positively correlated with familiarity but that of metonymy was negatively correlated with familiarity and concreteness. This indicates that familiar metonymic expressions with body parts (e.g., heart beats) were rated less figurative and more concrete. Our current results provide fundamental information of Korean figurative expressions for emotion which may be useful for future studies investigating cultural characteristics of emotional expressions.

POSTER A-49
THE EFFECT OF FACIAL EXPRESSION ON THE PERCEPTION OF SOCIALLY IRRITATING BEHAVIORS

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Descriptors: social, cognitive

Studies have revealed that people composing the world around children with developmental disorders suffer from high stress. While intervention toward mitigating stress is necessary, the nature of the behavioral and emotional problem is quite diverse, and require scrutiny. This study aimed to explore ways of decreasing the discomfort toward some of these issues.Ninety-two Japanese university students participated in online experiments. First, the participants were shown a scene where a target acted out one of three annoying behaviors (being late for a class and making noise / forcibly squeezing into a narrow space between people on the train seat / speaking in the library in a loud voice). The target was female and her facial expression was also manipulated (sadness, anger, happiness, neutral). Second, the participants were asked to rate the level of their irritation, their impression toward the target (familiarity, social desirability, and activeness) and how they felt toward the target.One-way ANOVA showed a significant main effect of facial expression on irritation and all the impressions ($F_{(3, 91)}$=34.45, 74.06, 51.69, 171.00; each Eta squared were .12, .34, .24, .59, respectively). Particularly, irritation was the lowest and social desirability highest when targets acted out the behaviors in a sad face. Also, the facial expression affected the content of the free-response: those shown the sad face were more likely to seek out the reasons for the target's behavior.These findings suggest that a sad face will buffer the negative influence of problem behaviors

POSTER A-51
INVESTIGATING STRATEGY-SPECIFIC IMPLICATIONS FOR EMOTION EXPERIENCE AND BROADER EMOTION REGULATORY ABILITY

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Descriptors: emotion regulation, methods

The ability to flexibly deploy different strategies, such as cognitive reappraisal (CR) and expressive suppression (ES), is linked to higher well-being and may also indicate broader regulatory ability. However, data on ES's effect on emotion is mixed and there is little evidence on how one strategy's effectiveness relates to that of another within-subject. To address these gaps, two studies asked: (Q1) does ES influence negative affect (NA), and (Q2) are changes in NA during ES and CR linked? Study 1 (N=234) ps used CR, ES, and no regulation while viewing negative images and self-reporting NA in a randomized, repeated measures design. Q1 analyses indicated that ES reduced one's NA vs. no regulation (beta=-.29***). Q2 analyses predicted CR affect from ES, controlling for no regulation, which revealed that NA during ES was positively related to NA during CR (beta=.27***). Study 2 (N=180) ps reduced NA via CR (positive or detached), ES, and general regulation while viewing negative images and self-reporting NA in a blocked, mixed design. Q1 and Q2 analyses replicated Study 1's results: ES lowered one's NA vs. general regulation in both groups (beta=-.29***; beta=-.46***), and NA during ES was positively related to NA during positive (beta=.57***) and detached CR (beta=.57***). These results suggest that ES may effectively reduce NA relative to one's natural response or general attempts to decrease NA. Furthermore, this outcome is linked to one's ability to use CR, providing evidence that a broader emotion regulatory ability may underlie different strategies.
***p<.0001

POSTER A-52
NEGATIVE INTERACTIONS AND MARITAL SATISFACTION ACROSS ADULTHOOD: THE MODERATING ROLE OF IDEAL AFFECT

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Descriptors: adult development, emotion regulation

Negative emotion experienced by both partners is one of the most detrimental consequences of negative interactions in marriage. Previous studies have found that using emotion regulation strategies, such as reappraisal and suppression, could weaken the negative effects of negative interaction. However, to date, no study has examined whether the negative effect may be buffered when individuals ideally want to feel more affect of different valence (ideal affect). Based on the framework of affect valuation theory, the current study examined the moderating role of ideal affect in the relationship between negative interaction and marital satisfaction across adulthood. We conducted a 14-day daily diary study among 132 heterosexual couples aged from 21 to 80 years. At both the person- and daily-levels, we found that valuing negative affect weakened the negative association between negative interaction and marital satisfaction in husbands. The moderating effect of negative affect valuation was stronger in the older than the younger husbands at the personal, but not daily level. Valuing positive affect more was associated with a stronger negative association between negative interaction and marital satisfaction in husband at the person- but not daily-level. Such effect was again stronger in the older than the younger husbands. We did not find the above effects in wives. These findings shed light on the importance of ideal affect in understanding marital dynamics across adulthood.

POSTER A-53
METHODS TO AUTOMATICALLY IDENTIFY CARELESS RESPONDING IN ECOLOGICAL MOMENTARY ASSESSMENT RESEARCH: FROM POST-HOC ANALYSES TO REAL-TIME DATA MONITORING

Jaso, Brittany A—University of Miami; Kraus, Noah—University of Miami; Heller, Aaron S—University of Miami

Descriptors: methods, emotion regulation

With the emerging ubiquity of cell phones, ecological momentary assessment (EMA) enables researchers to longitudinally study momentary social, psychological, and affective responses in everyday life. As the use of EMA in research studies increases, so too does the importance of determining what makes a "good" EMA response to ensure data quality. To that end, we examined over 25,000 EMA emotion item responses from 418 participants over a 3-year period to derive a data-driven model of what makes a careless EMA response and should thus be excluded. Results indicate that the time to complete per assessment, time to complete per item, and the standard deviation of the responses are reliable indicators of careless responses. Additional analyses determined that such careless responses predicted the degree to which the relationship between emotion items that were negatively associated (e.g. relaxation and anxiety; b=-0.57) no longer met that criterion (b=0.89). Removing such careless responses impacted the magnitude of the inverse relationship between the items. Using such data, we have also determined a criteria for what makes a poor responder, beyond simply poor response rate. The results from these analyses were used to develop an R package that will be publicly shared so that EMA researchers may identify careless responses and responders live during data collection. Additionally, this R package can encourage participants to respond thoughtfully during data collection, to prevent the need to remove data post-hoc.

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POSTER A-54
TODDLERHOOD TEMPERAMENT PREDICTORS OF MIDDLE CHILDHOOD MENTAL HEALTH PROFILES

Hilton, Emily C—University of Wisconsin-Madison; Goldsmith, H. Hill—University of Wisconsin-Madison

Descriptors: mental health, child development, clinical

Temperament can be a risk factor for psychopathology; however, most studies examine limited aspects of temperament in relation to single disorders. We pursue a more comprehensive approach by examining how broad temperament factors during toddlerhood predict empirically-derived classes based on symptoms in a birth record-based twin sample, which reveals pervasive symptom overlap and co-morbidity. Vendlinski et al. (2014) identified nine classes each for boys and girls from latent class analysis of the MacArthur Health and Behavior Questionnaire items, which tapped symptoms. We derived three temperament factors from the Toddler Behavior Assessment Questionnaire: Negative Affect + Control, Interest/Attention, and Fear. We used a linear mixed effects model, with nesting within families, in a twin sample of 533 boys and 504 girls studies at ages 2 and 7-8 years. For both boys and girls, temperament associations with the probability of membership in symptom classes were generally highly significant but modestly sized. Key findings, controlling for certain family characteristics, were that (1) the high negative affect/low control factor predicted membership in more impaired (more severe) classes, which contained both internalizing and externalizing symptoms; (2) lower fear predicted male classes with moderate impulsivity; and (3) high interest/attention and low negative affect/high control predicted low and mild symptoms classes. Thus, toddler temperament factors were weak, non-specific risk factors—and in some cases, protective factors—for childhood mental health symptoms.

POSTER A-55
EMOTION REGULATION IN RESPONSE TO DAILY NEGATIVE AND POSITIVE EVENTS IN YOUTH: THE ROLE OF EVENT INTENSITY AND PSYCHOPATHOLOGY

Hiekkaranta, Anu P—KU Leuven; Kirtley, Olivia J—KU Leuven; Lafit, Ginette—KU Leuven; Decoster, Jeroen—Sint-Kamillus, University Psychiatric Center; Derom, Catherine—KU Leuven, Ghent University Hospital; de Hert, Marc—KU Leuven, Sint-Kamillus, University Psychiatric Center; Jacobs, Nele—Maastricht University, Open University Netherlands; Menn-Lothmann, Claudia—Ghent University Hospital; Rutten, Bart PF—Ghent University Hospital; Thiery, Everrt—Ghent University Hospital

Descriptors: emotion regulation, positive emotion, mental health

Few studies have investigated psychopathology and emotion regulation in youth in the context in which personally relevant stimuli and regulation naturally occur: in the fabric of daily life. In the current study, 713 participants aged 15-25 completed a six-day Experience Sampling Method (ESM) study, where each evening, they reported on the intensity of the most negative and most positive event of the day and their emotion regulation responses to both. Psychopathology symptoms were assessed at baseline. We conducted mixed effects regressions and found that higher intensity of negative events was associated with more emotion regulation effort (beta=0.80, SE=0.13, p<0.001), except for acceptance (beta=-0.25, SE=0.05, p<0.001) and reappraisal (beta=-0.16, SE=0.05, p<0.01), which were negatively associated with intensity. Moreover, higher intensity of positive events was associated with more emotion upregulation responses (beta=0.19, SE=0.03, p<0.001). When intensity of negative events was accounted for, higher psychopathology was associated with more rumination (beta=0.67, SE=0.15, p<0.001) and less sharing (beta=-0.54, SE=0.23, p<0.05). Psychopathology was not associated with regulating positive emotions. Finally, we found that in line with recent theoretical accounts, polyregulation was common across positive and negative events. The current study highlights the importance of contextual factors such as event intensity in emotion regulation and provides further insight into the relationship between psychopathology and emotion regulation.

POSTER A-56
FEELING FAST AND SLOW: REACTION TIMES MODERATE THE RELATIONSHIP BETWEEN EMOTIONAL EMPATHY AND VALENCE BIAS

Harp, Nicholas R—University of Nebraska-Lincoln; Brock, Rebecca L.—University of Nebraska-Lincoln; Neta, Maital—University of Nebraska-Lincoln

Descriptors: social, emotion regulation, personality

Interpretations of emotionally ambiguous cues (e.g., surprised face) reveal individual differences in valence bias: some interpret ambiguity as positive and others as negative. Previous work has supported an initial negativity hypothesis, demonstrating that faster reaction times (RTs) are associated with more negative (and slower with positive) ratings. Recently, we have attempted to understand how personality traits interact with behavioral measures to predict these differences in valence bias. Empathy, a trait characterized by the ability to share others' emotional experiences, is associated with enhanced detection of negative affect in faces. More specifically, emotional empathy, which represents one's own emotions in response to the emotions of others, may be particularly relevant in driving interpretations of ambiguous facial expressions. In a sample of 1,254 participants, we found a significant interaction between RT and emotional empathy predicting valence bias, p=.01. Regions of significance analyses revealed that individuals who tend to respond more quickly (mean RTs<.19 SD above the mean) showed a stronger relationship between higher empathy and a more negative valence bias. In contrast, individuals who responded more slowly (>2.90 SDs) showed an inverse effect where empathy was associated with a more positive bias. These results demonstrate the buffering effect of slower RTs on empathy and valence bias, suggesting that interventions to promote more deliberative processing (e.g., mindfulness) may protect against a negative valence bias in high empathizers.

POSTER A-57
RACIALIZED ANGER BIAS: SEEING MORE ANGER IN BLACK THAN WHITE FACES

Halberstadt, Amy—North Carolina State University; Cooke, Alison N—North Carolina State University; Garner, Pamela W—George Mason University; Hughes, Sherick A—UNC-Chapel Hill

Descriptors: social, education, learning, child development

Being "seen" as angry or hostile by White people is a well-known concern for Black people, spanning from being falsely arrested or shot at by police to suspensions and expulsions in school. A variety of studies suggest an underlying component of prejudice in the general population, but we don't know much about emotion perceptions and whether it is racialized, nor whether children might be exempt from such responses. To understand more about misperceptions of anger, we conducted three studies, all converging to the same point: Anger, even when it does not exist, is "seen" in Black children more than White children. All studies used FAC-coded videos of emotions forming in the faces of 72 child actors (balanced by race, gender, & 6 emotions). In Study 1, with 178 prospective teachers from 3 southeastern universities, both Black girls and boys were misperceived as angry at higher odds than White girls and boys (Girls: OR=1.74, CI=1.53, 1.98, p<.001; Boys: OR=1.16, CI=1.04, 1.29, p<.01). Study 2, with 43 in-class teachers of 4th and 5th graders from 4 NC school districts, replicated the effect. Study 3, with 152 parents on M*Turk investigated age effects; racialized anger bias increased with child age (for Black children, gamma=0.15, p<.001, but for White children, gamma=0.01, p=0.73). These results suggest that racialized misperceptions of children's emotions continue to be alive and well. Implications for emotion understanding and discipline in school, and guidance related to "the Talk" for Black parents and allyship with White parents will be discussed.

POSTER A-58
THE EFFECT OF COGNITIVE ABILITY ON EMOTION REGULATION SUCCESS DEPENDS ON STRATEGY TYPE

Growney, Claire M—Washington University in St. Louis; English, Tammy—Washington University in St. Louis

Descriptors: emotion regulation, cognitive, adult development

There are mixed findings regarding the role of cognitive ability in emotion regulation (ER) success. ER strategies vary in the resources that they demand, with some drawing on cognitive control more than others. Cognitive ability may be most important when using high-demand strategies. In the present study, an adult lifespan sample (N=130; age 25-83) completed a cognitive battery as well as self-reports of trait ER strategy use and well-being. Fluid cognitive ability moderated the effect of trait ER on life satisfaction differentially across strategy types. Among individuals relatively low in ability, high-demand strategies (e.g. suppression) showed more negative effects (beta=-.39, p<.01), while low-demand strategies (e.g. savoring) showed more positive effects (beta=.58, p<.01). Participants also completed an ER task in which they reported their strategy use after regulating their emotions during disgust, sadness, and amusement clips. ER success was assessed via subjective experience and coded behavioral expression. Film type moderated the effect of cognitive ability and strategy use on ER success. Cognitive ability X strategy interactions were present only for disgust and amusement films (betas=.42 to .53, ps<.05), with lower ability predicting less ER success when using high-demand strategies but not low-demand strategies. These results provide novel insight into how the impact of cognitive resources can vary by ER tactic and contextual features (e.g. arousal). Implications for ER flexibility and maintaining well-being across adulthood will be discussed.

POSTER A-59
ADOLESCENT POSITIVE AFFECT AND POSITIVE RELATIONSHIPS WITH PARENTS AND PEERS: CO-DEVELOPMENT ACROSS THREE YEARS

Griffith, Julianne M—University of Illinois at Urbana-Champaign; Hankin, Benjamin L—University of Illinois at Urbana-Champaign

Descriptors: positive emotion, close relationships, child development

The broaden-and-build theory of positive emotions proposes that the experience of positive affective states functions to promote social engagement behaviors in ways that enhance interpersonal relationships and the accumulation of social support. Thus, the experience of positive affect (PA) and positive interpersonal relationship quality should mutually reinforce each other, demonstrating patterns of co-development over time. Such patterns of co-development may be particularly salient during adolescence, a developmental period of social reorientation characterized by normative change in parent and peer relationships. The present study used parallel process latent growth curve modeling (LGCM) to evaluate co-occurring trajectories of PA and parent- and peer-relationship quality in a sample of 680 youth age 8-16 (M=11.87, SD=2.41). Youth PA and relationship quality were assessed every 18 months for 3 years (3 total assessments). We hypothesized the trajectories of youth PA would be positively associated with trajectories of youth relationship quality with parent and peers over time. Consistent with this hypothesis, parallel process LGCM analyses indicated positive correlations between slope terms describing growth in PA and growth in both parent-(beta=.64) and peer-(beta=.59) relationship quality. Consistent with tenets of the broaden-and-build theory of positive emotions, findings provide evidence that youth PA and experiences of high-quality relationships demonstrate reciprocal patterns of growth over a three year period, with implications for youth health and wellbeing.

POSTER A-60
DRUG-INDUCED RISE IN GLUTAMATE PREDICTS ACTIVATED POSITIVE EMOTION IN HEALTHY WOMEN

Gonsalves, Meghan A—Brown University; White, Tara L—Brown University

Descriptors: neuroscience, positive emotion, physiology, biomarkers

Issue: Glutamatergic (Glu) antagonists alter subjective emotion in clinical samples. Glu agonists' effects are less well understood,and would inform the neural mechanisms of emotion. Method: D-amphetamine (AMP; 20 mg), methamphetamine (MA; DesoxynŒ¬, 20 mg), and placebo (PBO) were administered to 26 healthy young adults in a double-blinded, within-subjects crossover design. Glu was assessed in the dorsal anterior cingulate (dACC) using proton magnetic spectroscopy (1H MRS) 140-150m post-drug. Emotion was evaluated using multiple self-report measures, producing 31 measures x 8 time points x 3 sessions (744 data points per participant). Time-series data were reduced to area under the curve (AUC) scores; delta values summarized AUC differences under drug and PBO; and a principal components analysis (promax rotation) identified orthogonal factors of emotion induced by the study drugs. Drug effects on emotion and Glu were evaluated using Pearson correlations. Results: In the PCA, AMP and MA both induced a primary factor of Activated Positive Affect (Eigenvalues>12). Females: AMP-induced changes in dACC Glu predicted the AMP-induced rise in Activated Positive Affect, r=.609 (p<.05), R2=0.371, (p<.05). MA-induced changes in dACC Glu also predicted AMP-induced rise in Activated Positive Affect, r=0.520 (p<.05), R2=0.277 (p<.05). Males: AMP and MA-induced changes in Glu did not significantly predict Activated Positive Affect (p>.05). Conclusion: Our findings indicate that positive emotion is sensitive to acute changes dACC glutamate in healthy young adult women.

POSTER A-61
THE SHAPE OF A SMILE: RELATIONSHIPS BETWEEN FELT EMOTION AND SMILE APPEARANCE

Girard, Jeffrey M—Carnegie Mellon University; Liu, Zhun—Carnegie Mellon University; Shandar, Gayatri—Carnegie Mellon University; Cohn, Jeffrey F—University of Pittsburgh; Yin, Lijun—Binghamton University; Morency, Louis-Philippe—Carnegie Mellon University

Descriptors: social, computational science, methods, positive emotion

People smile for a wide variety of reasons (e.g., to express happiness, be polite, or conceal negative emotion), and there is substantial research interest in identifying reliable indicators of smile meaning. Current theories emphasize the role of smile appearance, hypothesizing that the emotion underlying a smile is revealed by the facial actions (i.e., muscle contractions) that accompany it. To test this hypothesis, we analyzed 431 spontaneous smiles collected from 124 participants in the BP4D+ dataset as they were induced to feel amusement, embarrassment, fear, and pain. We measured 16 facial actions accompanying these smiles using the Facial Action Coding System (FACS) and explored the relationships between these measurements and participants' self-reported emotions. Data were analyzed using two complementary approaches. First, machine learning was used to estimate how well emotions could be predicted from FACS measurements. Second, Bayesian multilevel regression was used to estimate how much each emotion uniquely predicted the occurrence of each facial action. The predictive performance of the machine learning algorithms was only moderate, with correlations between predicted and self-reported emotions ranging between 0.11 and 0.39 for different emotions. These results suggest that facial action occurrence is relevant to, but not sufficient for, accurate smile interpretation. The multilevel model revealed an unexpectedly complex pattern of associations between facial actions and emotions, suggesting that more sophisticated theories of smile interpretation may be needed.

POSTER A-62
EXPERIENCE SAMPLING OF HAPPINESS, MOTIVATION, AND SOCIAL GOAL STRIVING IN PEOPLE WITH SCHIZOPHRENIA

Gill, Kathryn A—Boston University; Mote, Jasmine—Boston University; Mow, Jessica—Boston University; Leung, Lawrence—San Francisco State University; Gard, David—San Francisco State University; Mueser, Kim—Boston University; Fulford, Daniel—Boston University

Descriptors: social, clinical, intervention

When individuals make greater progress than expected towards a goal, subsequent positive affect can temporarily lead to a reduction in goal directed behavior. However, this phenomenon has yet to be explored in people with schizophrenia (SZ) in the social domain. In this study, participants with SZ (preliminary n=19) partook in a smartphone-based intervention designed to improve social motivation, skills, and functioning. Participants selected a self-identified social goal (e.g., make a new friend). The application breaks down the goal into steps, provides feedback on goal pursuit, and incorporates video content for social skills training. For 60 days, participants were sent surveys twice daily, including questions about their current happiness about goal progress. We found that happiness about past progress was unrelated to the decision to work on their goal in the future (b=0.176, p>.05). However, when people chose to work on their goal, happiness about past progress was related to higher motivation to work on the goal in the near future (b=0.197, p<.001), as well as actual progress toward their goal (b=.355, p<.001). When people made more progress than they expected, they reported feeling happier about that progress (b=0.351, p<.001), but did not report higher motivation to work on their goal in the future (b=.037, p=.148). Overall, for people with SZ, positive feelings about social progress rather than amount of progress may prompt motivation for future effort towards social goals.

POSTER A-63
EMOTIONAL EXPERIENCE AFTER SOCIAL INCLUSION OR REJECTION IN GROUPS AT RISK FOR SCHIZOPHRENIA-SPECTRUM DISORDERS

Fung, Christie K—University of California, Irvine; Martin, Elizabeth A—University of California, Irvine

Descriptors: clinical, personality, mental health, social

Individuals with increased risk for schizophrenia-spectrum disorders, such as those with elevated social anhedonia (SocAnh) or with frequent perceptual aberrations/magical ideation (PerMag), are characterized by shared and unique emotion abnormalities. For instance, both report increased negative affect (NA) but only SocAnh is associated with decreased positive affect (PA) in daily life. Less is known about these at-risk groups' emotions after engaging in social situations. Prior evidence suggested SocAnh is actually associated with experiencing more NA after being socially included than rejected, but it is unclear whether PerMag shows the same pattern. The current research examined the effects of social inclusion and exclusion on emotions in both SocAnh (N=30) and PerMag groups (N=29), compared to healthy controls (N=47), after playing a Cyberball game. Data collection is ongoing, but preliminary analyses suggest a Time X Group interaction in PA after social inclusion (p=.001). Post-hoc tests indicated only the SocAnh group felt significantly less PA than both other groups (ps<.05) after inclusion. In addition, post-hoc tests following a Time X Group interaction (p=.04) in NA after social exclusion indicated only the PerMag group felt significantly more NA than the control group (p=.001). Results suggest these at-risk groups have shared (decreased NA after inclusion) and unique (decreased PA after social inclusion in SocAnh; increased NA after exclusion in PerMag) emotion abnormalities in response to social situations.

POSTER A-64
SEX AND SEXUAL ORIENTATION RELATED DIFFERENCES IN NEURAL ACTIVITY DURING PERFORMANCE OF THE READING MIND IN THE EYES TASK.

Folkierska-Zukowska, Monika—University of Warsaw; Dragan, Wojciech—University of Warsaw

Descriptors: cognitive, neuroscience

The origins of sex and sexual orientation differences are a matter of much debate among scholars; ultimately, they are likely due to multifactorial causes. On average, men perform better on tasks such as the Mental Rotation task, while women usually excel in social cognitive tasks, such as the Reading the Mind in the Eyes task. The cross-sex shift hypothesis postulates that gay men will be more similar to heterosexual women in the aspects of cognitive functioning in which sex differences are consistently observed. Numerous studies have reported a slight female advantage in performance of the Reading the Mind in the Eyes task. This task has been previously adapted for fMRI; however, no study has investigated gender- or sexual-orientation-related differences in neural activation associated with the task. The current study is the first to explore these differences. We used functional magnetic resonance imaging to compare the brain activations of 22 heterosexual men, 22 heterosexual women and 46 gay men while performing the Reading the Mind in the Eyes task. We found group differences in brain activations (F(3,86)=5.93, p>0.001, FWEc correction extent threshold: 231 voxels), and that patterns of brain activations in the precuneus and medial frontal cortex observed for gay men during the performance of the task were more similar to those observed in heterosexual women than heterosexual men. This suggests that both sex and sexual orientation are important factors to consider when discussing the neural processing involved in social and/or affective cognition.

POSTER A-65
THE INFLUENCE OF SELF-EFFICACY ON ADAPTIVE AND MALADAPTIVE INTERPERSONAL EMOTION REGULATION DURING LATE ADOLESCENCE

Fearey, Eliot—University of Maine; Clement, Evie—University of Maine; Schwartz-Mette, Rebecca A—University of Maine

Descriptors: emotion regulation, close relationships, social

Interpersonal emotion regulation (IER), one form of support seeking behavior, is characterized by recruiting others to impact one's emotions (Zaki & Williams, 2013). Adaptive forms of IER include seeking others to improve affect, provide sympathy, and model how to respond (Hofmann, Carpenter, Curtiss, 2016). Maladaptive forms of IER include excessively seeking assurance that one is liked (Joiner, Metalsky, Katz, & Beach, 1999) or redirecting conversation to focus on one's own problems (Schwartz-Mette & Rose, 2009). Williams and colleagues (2018) propose that IER is associated with beliefs about interpersonal-efficacy. It may also be that individuals with higher self-efficacy engage in higher levels of adaptive IER, yet these associations have not been tested.Adolescents (N=274, M age=19 yrs) reported on self-efficacy (Schwarzer & Jerusalem, 1995), adaptive IER (Hofmann, Carpenter, & Curtiss, 2016), and maladaptive IER (Metalsky, et al., 1991; Schwartz-Mette & Rose, 2006). Self-efficacy was positively associated adaptive types of IER, including recruiting others to improve affect (b=.28, p<.001) and model how to respond (b=.25, p<.001). Self-efficacy, however, was inversely associated with maladaptive IER, including excessive reassurance seeking (b=-.19, p<.01) and conversational self-focus (b=-.17, p<.01). These results suggest adaptive IER may be fueled by beliefs that one can achieve positive emotional goals via interpersonal relationships; maladaptive IER, however, may be an outgrowth of feeling unable to recruit interpersonal relationships for support.

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POSTER A-66
PREDICTING EMOTIONAL COMPETENCE: TESTING A MULTIROUTE MODEL OF ALEXITHYMIA

Edgar, Christopher J—Goldsmihs, University of London; Banissy, Michael J—Goldsmihs, University of London; Bird, Geoff—University of Oxford

Descriptors: personality, social, language, mental health

Alexithymia is characterised by difficulty identifying and describing internal affective states, and a bias towards externally orientated thinking. Building a theoretical understanding of alexithymia represents an important challenge, as it is associated with low emotional competence, and social and psychiatric dysfunction. A mixture of self-report and ability-based tasks were used to test alexithymia's relationship with two of its theoretical subfacets: interoception and verbal reasoning ability (as a proxy for language processing). We analysed the relative roles played by both subfacets, when testing alexithymia's ability to predict performance in tests of emotion perception and emotional knowledge. Participants were recruited from the general population using an online testing platform (n=172). Data were entered into hierarchical regressions, with measures of emotional competence entered as dependent variables, and measures of alexithymia, interoception, and verbal reasoning ability successively entered in a stepwise manner as independent variables. Results showed that alexithymia predicted emotional competence, and its ability to do so could be largely accounted for when entering interoception and (to a greater extent) verbal reasoning ability as predictors into the models (R^2=.49-.60, all p<.001). Our findings support a multiroute model of alexithymia, with interoception and verbal reasoning ability being related to the construct. Moreover, both traits appear to play important but disproportionate roles in alexithymia's ability to predict emotional competence.

POSTER A-67
NEGATIVE AFFECT AS A POTENTIAL MODERATOR BETWEEN REWARD-BASED EATING AND WAIST CIRCUMFERENCE

Dileo, Rebecca—University of California, San Francisco; Mendes, Wendy B—University of California, San Francisco; Epel, Elissa—University of California, San Francisco

Descriptors: physical health, emotion regulation

Obesity is related to poor health outcomes, such as increased risk for cardiovascular disease and hypertension, stroke, and mental illness. Dysregulated eating and sedentary behaviors are two main factors that contribute to excess weight and a high body mass index (BMI), and negative emotions may strengthen this association. However, waist circumference and waist-to-hip ratio tend to be stronger predictors of health risk related to excess body fat. In a study of 96 middle-aged women (M=42.33, SD=9.61), participants' reward-based eating behaviors, negative affect, waist and hip measurements were measured. We hypothesized that more reward-based eating would predict a larger waist circumference, and that negative affect would moderate this effect. Preliminary results revealed that, independent of negative affect, reward-based eating was positively associated with waist circumference ('_=0.30, t(89)=3.03, p<.001). Contrary to expectations, the interaction between negative affect and reward-based eating was not significant. These results suggest that dysregulated eating behaviors may put one at risk for a higher waist circumference, and consequently poorer health, but negative affect is not driving reward-based eating.

POSTER A-68
ELECTROMYOGRAPHY REVEALS DIMINISHED FACIAL RESPONSE TO ANOTHER'S FACIAL EMOTION DISPLAY IN PSYCHOPATHY

Deming, Philip—University of Wisconsin-Madison; Eisenbarth, Hedwig—Victoria University of Wellington; Koenigs, Michael—University of Wisconsin-Madison

Descriptors: clinical, physiology, biomarkers, personality, social

Psychopaths are notorious for their shallow affect and callousness toward others. Facial muscle activity, reflecting affective reactivity, may constitute one key correlate of psychopaths' altered assessment of others' emotion displays, a proposal in need of further study. Adult male inmates (N=88), assessed with the Psychopathy Checklist-Revised (PCL-R), viewed 6s videos of people making prototypic facial expressions conveying one of six emotions (anger, disgust, fear, joy, sadness, and neutral). After each video, participants identified the emotion and rated the valence and intensity experienced by the other person. Electromyography (EMG) was recoded at four facial muscle sites (corrugator sup., zygomaticus maj., levator labii sup., and depressor ang. oris). PCL-R scores were negatively related to intensity ratings for displays of anger, F(1,79.5)=4.49, p<.04, disgust, F(1,77.4)=5.54, p<.02, fear, F(1,79.5)=4.42, p<.04, and sadness, F(1,77.8)=5.59, p<.02. Furthermore, analyses of log-transformed EMG power spectral density revealed a significant Time by PCL-R interaction; psychopathy was related to diminished levator activity to disgust faces, F(1,86.0)=5.23, p<.03, and corrugator activity to fear faces (trend-level), F(1,86.0)=3.36, p=.07. Findings help to specify a psychophysiological correlate of psychopaths' altered assessment of others' distress displays, a crucial step to inform intervention development.

POSTER A-69
OCULOMOTOR AVOIDANCE: A VALID, RELIABLE, AND OBJECTIVE MEASURE OF DISGUST

Danielson, Siri E—Whitman College; Stewart, Jeremy G—Queen's University; Rowe, Megan—Queen's University; Morris, Matthew C—University of Mississippi; Leong, Daniel—Whitman College; Brown, Zoe—Whitman College; Delgado, Nikki—Whitman College; Antilla, Alissa—Whitman College; Dalmaijer, Edwin—Cambridge University; Armstrong, Thomas—Whitman College

Descriptors: methods, physiology, biomarkers

Disgust is a basic emotion that prevents contact with "offensive" stimuli. Research on disgust has expanded from food rejection to include a range of topics, from morality to mental disorders. However, there has been less innovation in disgust measurement. The present study examines the psychometric properties of oculomotor avoidance, a novel eye tracking measure of disgust. Participants viewed pairs of affective and neutral images for 12 s while gaze was recorded. In Experiment 1 (N=126), we found that oculomotor avoidance of disgusting stimuli was correlated with state (r=-.49, p<.001) and trait disgust (r=-.42, p<.001). Although oculomotor avoidance increased within and between trials, total dwell time on disgusting images had excellent internal consistency, as revealed by split-half correlations (Spearman-Brown coefficient=.92). In Experiment 2 (N=58), we included additional categories of stimuli (suicide, attack, pleasant) to determine if oculomotor avoidance specifically measures disgust. In addition to replicating the findings of Experiment 1, we found that other categories of unpleasant images did not elicit oculomotor avoidance, as predicted, F (3, 171)=29.86, p<.001, partial eta squared=.34. Disgusting images were viewed less than neutral images, whereas all other affective images were viewed more. Together, these findings suggest that disgust can be measured reliably through eye tracking, an increasingly affordable technology (<$1000) that may soon be feasible online through webcams.

POSTER A-71
MEASURING ANHEDONIA USING THE BECK DEPRESSION INVENTORY: SCALE VALIDATION AND NEXT STEPS

Cogan, Ashby B—University of California Berkeley; Persons, Jacqueline B—Oakland Cognitive Behavior Therapy Center; Kring, Ann M—University of California Berkeley

Descriptors: clinical, positive emotion, methods, mental health, personality

Anhedonia has been posited to be a transdiagnostic difficulty impacting disorders such as depression, opioid use disorder, and schizophrenia. Although several anhedonia measures have been developed, one of the more commonly used clinical measures has not been evaluated for use as an anhedonia measure. Nearly two decades and at least 20 published studies have used the so-called anhedonia subscale of the Beck Depression Inventory (BDI), but no study has examined the psychometric properties of the measure. We administered the BDI with several other measures to approximately 500 people students and community residents) to evaluate 3- and 4-item anhedonia scales. Internal consistency was moderate across samples, ranging from .55 to .66. Both scales were significantly related to other anhedonia measures (correlations ranging from .24 to .42) and measures of conceptually related constructs (e.g., positive affect, r (n=473)=-.36 and -.41). Discriminant validity was also good; the anhedonia scales were not related to conceptually distinct constructs after controlling for shared variance with the remaining BDI items (e.g., self-esteem, r's=-.15, -.17; hopelessness, r's=.13, .14). Together our findings provide evidence for the robustness of the BDI anhedonia subscales.

POSTER A-72
CULTURAL DIFFERENCES IN ATTRIBUTION TO RUMINATION

Choi, Jeong Ha—University of Wisconsin-Madison; Miyamoto, Yuri—University of Wisconsin-Madison

Descriptors: emotion regulation, culture

Previous studies have suggested that, compared to Westerners, East Asians engage in more rumination yet show weaker negative effects of rumination. We suggest this may be partly due to what individuals attribute rumination to; if people attribute rumination relatively more to growth reasons than to hopelessness, rumination may have less harmful effects. Study 1 was conducted to develop the Rumination Attribution (RA) measure, which presents a hypothetical individual ruminating in a stressful academic situation and asks respondents to judge the extent to which growth and hopelessness are potential reasons why the individual is ruminating. University college students either of East Asian or European American descent (N=1254) completed the questionnaire. Multiple group confirmatory factor analysis supported the questionnaire's factor structure and measurement equivalence across groups. As expected, European Americans were less likely than East Asian descents to make a relatively positive attribution of rumination (b=.56, F(1,812)=25.17, p<.001). Study 2 was conducted to examine whether the attribution of rumination moderates the association between rumination and depressive symptoms (N=184). As predicted, the association between brooding subscale of rumination and depressive symptoms was weaker among those who have relatively more positive attribution of rumination, b=-.06, F(1,180)=4.14, p=.043, which was not moderated by culture. Findings provide preliminary evidence for a mechanism of why rumination may not always be maladaptive.

POSTER A-73
INSPIRING THE MASSES: AUTHENTIC VERSUS INAUTHENTIC PROSOCIAL BEHAVIOR DISPLAYS ON OBSERVER INSPIRATION

Caprariello, Peter A—Stony Brook University; Poznanski, Krystyna—Stony Brook University

Descriptors: moral, mental health, social, positive emotion

Can actors' prosocial motives inspire perceivers? Observing prosocial actions has emotional benefits, but do these benefits perpetuate more than good feelings, depending on perceived motives? We suggest that perceiving a prosocial actor as having 'authentic' intentions inspires 'pay it forward' prosociality in observers, through enhanced hedonic and eudaemonic well-being and increased prosocial motivation. We created an Instagram post of an actor's African volunteer work. In one condition, captions and hashtags were manipulated to appear authentic by focusing on benefits accrued by the African residents. In a 2nd condition, the post focused on benefits accrued to the actor, to appear inauthentic. Prosocial engagement was assessed prior to and one day after the manipulation. Well-being was assessed before, immediately after, and one day after exposure. Among 317 subjects, exposure to authentic prosocial posts increased immediate hedonic and eudaemonic well-being, compared to inauthentic and adjusting for baseline, Fs(1, 314)>4.71, ps<031. Next-day prosocial motivation varied in the same directions, F(1, 288)=4.05, p=.045. Next-day well-being trended marginally, suggesting a weakening effect over 24 hours.Together, we interpret these findings as evidence of inspiration (or lack thereof), resulting from perceiving others' prosocial displays as authentic or inauthentic. Other research, in progress, will examine whether inspiration resulting from perceived authenticity perpetuates actual prosocial behavior, beyond motivation and well-being effects.

POSTER A-74
SPRING BREAK OR HEART BREAK? EXTENDING VALENCE BIAS TO EMOTIONAL WORDS

Brown, Catherine C—University of Nebraska-Lincoln; Harp, Nicholas R—University of Nebraska-Lincoln; Neta, Maital—University of Nebraska-Lincoln

Descriptors: positive emotion, language, cognitive, emotion regulation

Ambiguous stimuli are useful for assessing individuals' biases toward positivity or negativity. For example, images of surprised faces presented without context could convey a positive (unexpected gift) or negative meaning (seeing a car crash). The degree to which an individual tends to interpret ambiguity as negative measures their "valence bias" and characterizes their affective style. Currently, the most well-validated sets of ambiguous stimuli for assessing valence bias include nonverbal signals (images of faces and scenes), overlooking an inherent ambiguity in verbal signals (language). This study contributes a set of ambiguous words (as well as lexically-matched clear-valence words) to further capture emotional bias toward positivity and negativity. Using an initial list of 630 words chosen from existing stimulus sets, 103 participants rated each word as positive or negative. From these pilot data, we selected 32 words with dual valence ambiguity (i.e., low response consensus in ratings and relatively slow response times) and 32 words with clear valence (16 positive, 16 negative). To demonstrate generalizability in valence bias, we compared ratings of this final set of words to ratings of faces and scenes in a new sample of 87 adults (36 female, 51 male). Valence bias for ambiguous words was significantly correlated with ratings for ambiguous (surprised) faces (r(85)=.23, p=.031) and scenes (r(85)=.49, p<.001). These findings suggest that valence bias generalizes to verbal ambiguity and thus provide a novel way to measure valence bias.

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POSTER A-75
CONSTRUCTING CONFIDENCE THROUGH EMOTIONS

Bilovich, Avri—University College London; Johnson, Samuel GB—University of Bath; Tuckett, David—University College London

Descriptors: behavioral economics, cognitive

Investment decisions require individuals to commit to abstract debt contracts whose value depends on forward looking expectations that are fraught with uncertainty. As uncertainty raises the possibility of losses or the promise of gains it evokes affect. Yet decision research largely ignores affect to focus either solely on reasoning or on only one emotional side-loss aversion. An exception, which explicitly provides a role for reasoning and both approach and avoidance emotions is Conviction Narrative Theory (CNT). CNT posits that while any forward-looking decision task evokes such emotions, a predominance of approach is required to create enough confidence to allow decision-makers to act. Applying CNT's framework, we show the relationship between approach-avoidance emotions and decision makers' confidence in their financial decisions. Study 1 presented arguments for a stock to rise, in an approach emotional context (i.e. excitement) and a neutral one and compared argument evaluations, investment decisions, and confidence of participants (N=293). Approach emotions led to higher relevance judgements, investment and confidence (F(1,292)=10.966, p<0.001). These differences were greater in study 2 (N=275), which compared avoidance and neutral emotional contexts. Investments, confidence (F(1,274)=77.420, p<0.001), and evaluation of relevance was lower, regardless of strength of arguments. Thus, approach-avoidance emotions affect people's relevance judgements and their confidence, the latter mediated by cognition (indirect effect 95% CI: [0.2849,0.4504]).

POSTER A-76
AROUSING AND SELF-RELEVANT NEGATIVE EMOTIONS KEEP US AWAKE

Bekir, Selin—Bogazici University; ten Brink, Maia—Stanford University; Manber, Rachel—Stanford University; Gross, James J—Stanford University

Descriptors: physical health, mental health

Why do some emotional experiences keep us awake, but not others? In a preregistered study, we tested whether the combination of emotional arousal (EA) and self-relevance (SR) would be more detrimental to sleep than negative valence (NV) or either alone. Participants (N=44) were randomly assigned to watch a negative or a neutral video in a virtual reality (VR) environment, then rated their emotional arousal, negative valence, and the intensity of 27 specific emotions, and then took a 1-hour nap in the lab. After waking, participants reported how long it took to fall asleep (SOL: sleep onset latency), how rested they felt after napping, and how personally relevant they found the video. In the neutral condition, SR, EA, and NV did not predict either SOL or feeling rested post-nap. In the negative condition, NV predicted 21% of the variance in SOL. Adding SR and EA did not significantly improve model fit, but adding specific emotions did. High EA and high SR emotions (shame, contempt) predicted SOL better than NV across both conditions (R2=0.39, p<0.01), especially in the negative condition (R2=0.57, p<0.01). For high EA but low SR emotions (anger, fear), only anger predicted variance in SOL (R2=0.15, p<0.01), while low EA and low SR emotions (tired, bored) did not predict SOL (p=0.28). These results could not be explained by emotion intensity, as the top five most intense emotions did not predict outcomes. Results indicate that experiencing high EA and SR emotional states before bed may make it particularly difficult to fall asleep.

POSTER A-77
BELIEF IN ZERO-SUM HAPPINESS: THE MORE I GIVE, THE LESS I HAVE?

Baltiansky, Dean—Stanford University; Santos, Laurie R—Yale University; Zaki, Jamil—Stanford University

Descriptors: social, positive emotion

The intuitive link laypeople draw between money and happiness can potentially spread to economic mindsets of zero-sum (as opposed to win-win). That is, happiness may be construed as a currency, by which people believe that if they engage in prosocial behavior to make others happier, it would come at a cost to their own happiness. Contrary to this, however, empirical evidence suggests that prosocial behavior leads to greater personal happiness. Therefore, this belief is not inaccurate and can lead to less prosocial behavior, which, in turn, leads to less happiness for the potential actor (and not just the target). Across two correlational studies, we found a negative relationship between Belief in Zero-Sum Happiness (BZSH) and subjective happiness. Exploratory in nature, study 1 (194 MTurk workers) consisted of various measures, validated a new BZSH scale, and informed constructs and hypotheses for a follow-up confirmatory study. In a preregistered study 2 (490 MTurk workers), we found a partial mediation by which BZSH predicts lower prosociality, which in turn, predicts lower subjective well-being. Interestingly, the same was not true for economic zero-sum beliefs. Additionally, adjusting for participants' race and economic zero-sum beliefs, endorsement of group inequality predicts greater BZSH. Although still in its nascent stage, the concept of BZSH holds great potential for our understanding of laypeople's beliefs about happiness, their influence on prosocial behavior and subjective happiness, as well as possible theoretical contributions to political ideology research.

POSTER A-78
THE ONLY WAY OUT IS THROUGH: DEVELOPMENT AND VALIDATION OF THE EMOTION PROCESSING SCALE (EPS)

Ash, Jude—University of Notre Dame; Yoon, K Lira—University of Notre Dame

Descriptors: clinical, cognitive, emotion regulation, evolutionary, mental health

The concept of emotion processing has been proposed as relevant to mental health and therapeutic outcomes. However, multiple definitions of emotion processing exist, making it difficult to appropriately measure the construct. We conceptualize emotions as part of a dynamic and multidimensional process through which the mind processes information about differential changes in the external environment and internal needs. As such, we propose that emotions are processed through four main stages: 1) awareness, 2) acceptance, 3) experiencing, and 4) expression. A pilot study that aimed to construct and validate a new measure to assess emotion processing, the Emotion Processing Scale (EPS), supported its basic convergent, discriminant, and concurrent validity. In this presentation, we present preliminary data (N=234/450) from an ongoing study that aimed to further validate the EPS. Preliminary exploratory factor analysis revealed two underlying factors: 1) Emotion Rejection/Avoidance, and 2) Nonjudgmental Emotion Processing; Cronbach's alpha was .96 for the full scale and .95 and .96 for the subscales, respectively. In addition, convergent and discriminant validity for the full-scale and the subscales was supported. Finally, the EPS predicted internalizing symptoms above and beyond similar existing measures (i.e., experiential avoidance, Baker's emotion processing, and mindfulness). Results suggest that the EPS is a valid measure of emotion processing.

POSTER A-79
ADOLESCENTS' EMOTIONAL EXPERIENCES DURING ADOLESCENT-PARENT INTERACTIONS AND LINKS WITH DISPOSITIONAL AFFECT

Anaya, Isabel C—Northwestern University; Stephens, Jacquelyn E—Northwestern University; Mittal, Vijay A—Northwestern University; Haase, Claudia M—Northwestern University

Descriptors: child development, positive emotion, close relationships

The present study examined associations between adolescents' emotions during interactions with their parents and dispositional affect. Thirty adolescents (age: M=15, SD=2.3) and their parents engaged in 10-minute conversations about (1) a topic of disagreement and (2) something they enjoyed doing together. Afterward, adolescents reported on their negative (i.e., anger, disgust, sadness, fear, shame, embarrassment; alpha=.78-.95) and positive (i.e., amusement, affection, gratitude, excitement, pride, love, calm; alpha=.80-.81) emotional experiences during the conversations. Dispositional positive (10 items; alpha=.86) and negative (10 items; alpha=.81) affect were measured using the Positive and Negative Affect Schedule. Findings revealed that, for the conflict conversation, greater negative emotional experiences were associated with greater negative dispositional affect (r=.51 p=.01) and greater positive emotional experiences were associated with greater positive dispositional affect (r=.40 p=.04). No links were found between emotional experiences in the conflict conversation and the opposite-valence dispositional affect (rs<|.03|, ns). No emotion-affect links were found for the positive conversation. These findings show (a) links between emotions produced in an adolescent-parent interaction with dispositional affect among adolescents, consistent with the idea of the adolescent-parent relationship (and conflict conversations in particular) as a hotbed of emotion and (b) specificity in linking negative emotions to negative affect and positive emotions to positive affect.

POSTER A-80
IS TRAIT BOREDOM ABOUT WHAT YOU FEEL OR HOW YOU RESPOND TO BORING SITUATIONS?

Bambrah, Veerpal—York University; Friedman, Eva—York University; Gurovich, Sophia—York University; Eastwood, John D—York University

Descriptors: personality, emotion regulation

Trait boredom (TB) has traditionally been defined as the tendency towards feeling bored more frequently and more intensely, with concomitant negativity, distress, and low arousal. Yet, boredom theorists have recently proposed that TB may instead represent a tendency towards maladaptively responding to in-the-moment (state) boredom, an untested theory that provides a parsimonious account for the myriad relations between TB and other negative affective states and psychological outcomes (e.g., depression, anxiety, aggression). The current study sought to examine if TB, as measured by the Short Boredom Proneness Scale (SBPS), moderates the impact of a boring situation on individuals' feelings or motivations to respond in certain ways after the situation. Participants were randomly assigned to watch a boring or a non-boring video. They rated their boredom intensity, valence, arousal, distress, and response motivations before and after their assigned video. Multiple regression analyses found that the situation (boring vs. non-boring) and TB (SBPS) independently predicted participants' affective experiences, however only the SBPS uniquely predicted responses, specifically uncertainty on what to do, difficulties with amotivation/avolition, and lack of motivation to seek meaning or creativity. The SBPS interacted with the situation in predicting participants' motivation to seek relief and to release frustration, but not participants' affective experiences. The implications of the findings, as they relate to refining the definition of TB, are discussed.

POSTER A-81
QUANTIFYING THE INFLUENCE OF CONTEXT ON THE AFFECTIVE MEANING OF WORDS AND THEIR ACCURACY IN DETERMINING SENTENCE VALENCE

Braun, Nadine—Tilburg University; Goudbeek, Martijn—Tilburg University; Krahmer, Emiel—Tilburg University

Descriptors: language, computational science, methods

Bag-of-words approaches to sentiment analysis generally assume that a text with many negative words is also negative overall. However, the valence of such words is often determined in isolation, disregarding the possible influence of context on affective meaning. This study explores whether and how linguistic and pragmatic context changes word valence and emotionality. First, we investigate whether sentence contexts bias individual word affect in a domain-specific corpus (soccer), focusing on 499 words and two sentences each, rated by 125 MTurk workers on a 9-point scale. Results show an overall change in valence from isolated ratings (M=5.29, SD=2.38) to context ratings (M=5.40 SD=2.36, b=5.29, SE=0.03, BC 95% CI [0.05, 0.17]) and a stronger relation of words rated in context (Spearman r=.72, N=998) to the overall sentence valence compared to isolated word ratings (Spearman r=.46, N=998). Second, we evaluate these context ratings against four affective lexicons, which differ in their sensitivity to semantic and pragmatic context, and examine their accuracy in determining sentence valence. Results show that sentiment analyses with human-evaluated, context-sensitive lexicons are most strongly related to sentence valence (Spearman r=.20 up to r=.61, N=998). This study demonstrates how context can be used to determine the affective meaning of words, a finding that is especially relevant for sensitive applications of textual sentiment analysis, such as cyber-bullying detection or suicide prevention.

POSTER A-82
HOW DO WE DESCRIBE OUR FEELINGS? THE ROLE OF EMOTIONAL GRANULARITY IN SOCIAL-EMOTIONAL EXPERTISE

Bruni, Pietra T—Vanderbilt University; Bachorowski, Jo-Anne—Vanderbilt University

Descriptors: social, emotion regulation, personality

"Social-emotional expertise" (SEE) describes individual differences in the ease and adaptability of navigating social situations. SEE is conceptualized as consisting of a socioemotional "toolkit," in which multiple, moderately correlated affect-related skills drive high-SEE individuals to excel at the social-emotional components of interactions. One such affect-related skill is Emotional Granularity (EG), defined as an individual's ability to differentiate between emotions and to provide specificity regarding their affective experiences. This study tested the relationship among measures of EG and self-reported SEE. To the extent that an individual's ability to describe their emotions in a more fine-tuned manner may be linked to the "toolkit" of affect-related behaviors that assist in enhancing the quality of social interactions, it was hypothesized that high-SEE participants would have higher levels of emotional granularity. A community sample of sixty adults (30 males, 30 females), 18 years of age and older were tested. A modified version of the Day Reconstruction Method (DRM) was used to measure EG, in addition to the word count, # of emotion words used, and a tone analysis of free-response text. By analyzing the average intraclass correlations calculated from participants' DRM responses, results showed significant differences in EG based on self-reported SEE. Gender differences were also explored, and analyses showed that women had both a higher total word count and utilized significantly more emotion words than men (p<.05) when describing their emotional experiences.

POSTER A-83
LOWER MOVEMENT LINKAGE IN PATIENTS WITH NEURODEGENERATIVE DISEASES AND THEIR CAREGIVERS IS ASSOCIATED WITH GREATER CAREGIVER ANXIETY: A FIELD STUDY

Chen, Kuan-Hua—University of California, Berkeley; Connelly, Dyan E—University of California, Berkeley; Merrilees, Jennifer—University of California, San Francisco; Yang, Chien-Ming—National Chengchi University, Taiwan; Miller, Bruce L—University of California, San Francisco; Levenson, Robert W—University of California, Berkeley

Descriptors: close relationships, social, mental health, physiology, biomarkers

Close social connectedness to our loved ones is critical for our health and wellbeing. Past research has typically examined social connectedness via self-report, which can be limited in validity when studying patients with cognitive impairment. In this study, we quantified social connectedness between patients with neurodegenerative diseases and their caregivers by examining the degrees that their movements were linked to each other's at home. We then examined the relationship between the degree of linkage and anxiety symptoms in the caregiver. Twenty-two patients and their spousal caregivers wore wristwatch devices that provided a continuous measure of their level of movement over a seven-day period. Patient-caregiver movement linkage was computed during waking hours by correlating averages for each minute using a 10-minute rolling window. Caregiver anxiety was assessed using the Beck Anxiety Inventory. We found that lower levels of patient-caregiver movement linkage were associated with higher levels of caregiver anxiety (r=-.48, p=02). Those dyad-level effects were robust, remaining statistically significant after adjusting for patients' and caregivers' movement at the individual level ('_=-.43, p=.05). To the extent that movement linkage reflects social connectedness in this setting, we believe these findings suggest that caregivers with low linkage/connectedness with the patients under their care may be particularly prone to experience anxiety as the disease progresses.

POSTER A-84
SMILING AND SNARLING: CONTEXTUAL-RESPONSIVITY IN EMOTIONAL EXPRESSION AS A PREDICTOR OF ADJUSTMENT TO SPOUSAL LOSS

Connolly, Philippa-Sophie—Columbia University, Teachers College; Bonanno, George A—Columbia University, Teachers College

Descriptors: emotion regulation, positive emotion

Why do some people experience more emotional distress than others after spousal-death? And can we predict who will struggle more than others? While many will exhibit resilience in the wake of a bereavement, a small but notable portion ranging from 7-10% experience a prolonged period of elevated symptoms and distress. Although there is marked individual variation in the grief course, little is yet known about the mechanisms underlying enduring grief, and why some people will struggle more than others after experiencing the death of a spouse. Compelling findings have linked deficits in emotion regulation with the development of psychopathology, and the study of one particular form of emotion regulation-contextually responsive emotional responding-may be particularly promising in predicting divergent individual differences in the grief course following the death of a spouse. This study used a longitudinal design to investigate whether individual differences in emotional expressions of happiness and contempt, across varied contexts, could predict long-term adjustment and psychopathology. Findings indicated that contempt and genuine happiness expressed in an inappropriate context consistently predicted a worse grief course across time. Moreover, consistent with recent studies demonstrating the central role of contextually responsive facial displays in adjustment (Coifman & Bonanno, 2010; Diminich & Bonanno, 2014), we found that these maladaptive effects were evidenced primarily for those with initially elevated grief symptoms.

POSTER A-85
OXYTOCIN INCREASES LIKELIHOOD OF FOOD SHARING IN UNACQUAINTED TRIADS

Cooper, Sara—University of California, San Francisco; Sakai, Kimberly S—University of California, San Francisco, San Francisco Veterans Affairs Medical Center; Anderson, Craig—University of California, San Francisco; Woolley, Joshua D—University of California, San Francisco, San Francisco Veterans Affairs Medical Center; Mendes, Wendy B—University of California, San Francisco

Descriptors: social, close relationships

Oxytocin, an endogenous neuropeptide, is associated with cooperation and trust. After a rare food sharing event between both kin and non-kin, it was found that chimpanzees had increased oxytocin levels in their urine. In humans, administration of intranasal oxytocin has been associated with positive prosocial behaviors, but group studies are still limited. In this randomized double-blind, placebo-controlled study, 65 same sex groups of three (n=195) received 20IU intranasal oxytocin or placebo, and engaged in activities requiring cooperative teamwork. Groups were offered a variety of single-serving snacks during a scheduled break, and their overt sharing behaviors were video recorded. Team sharing was then categorized and quantified by blind coders for evidence of communal sharing (i.e. team members poured out snacks onto plates and placed on shared table) or lack thereof (i.e. allocation of snacks, lack of proximity while eating, and without explicit effort to share). Teams who were administered oxytocin were significantly more likely to engage in overt sharing behaviors than teams who received placebo (p=0.024), and these effects were not sex-moderated (p=0.76). These findings expand on the limited research of oxytocin as a moderator in group prosocial behaviors, and may also contribute to the growing body of literature focusing on understanding oxytocin's context-specific effects regarding intergroup dynamics.

POSTER A-86
EYEING AMBIGUITY: PUPILLARY REACTIVITY DURING INTERPRETATION BIASES IN MDD

Cowden Hindash, Alexandra H—San Francisco VAMC/ UCSF; Siegle, Greg J—University of Pittsburgh; Kelley, Ashley—University of South Florida; Christopher, Rachel—University of South Florida; McLean, Jared—University of South Florida; Rottenberg, Jonathan A—University of South Florida

Descriptors: clinical, physiology, biomarkers, cognitive, mental health

Theoretically (Beck & Haigh, 2014) automatic interpretation biases (AIB) reflect mood states and are a risk factor for depression-with negative biases associated with depression and positive biases associated with psychological health. However, AIB have been difficult to document in MDD and the source (affective vs cognitive) of biases remains unclear. To examine the AIB process, a sample of 25 clinical interview assessed individuals experiencing a current major depressive episode and 28 never-depressed control individuals completed the Word Sentence Association Paradigm for Depression (WSAP-D) while their pupil size was recorded. Repeated measures ANOVAs were used to examine behavioral response data and multilevel modeling was used to examine pupillary reactivity (change from trial baseline). Compared to controls, the depressed group was both more likely to endorse negative AIB (p=.001, d=1.01) and less likely to endorse benign AIB (p=.011, d=.72). Further, the depressed group exhibited significantly increased pupil size while processing negative words during negative AIB compared with controls (ps=.010-.037, ds=.69-.87), but did not differ during other AIB trial types. Although the observed pupillary reactivity pattern is counter to cognitive effort based hypotheses of pupillary reactivity, the patterns fits with an emotional salience based explanation of pupillary responses. Results suggest people with depression may be more emotionally engaged during negative AIB compared with healthy controls.

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POSTER A-87
FAILURE TO ANTICIPATE ANXIETY'S DISRUPTION OF ENJOYMENT OF POSITIVE OUTCOMES

Dang, Van—Texas A&M University; Lench, Heather C—Texas A&M University; Tirso, Robert M—Texas A&M University; Levine, Linda J—University of California Irvine; Wan, Yidou—Texas A&M University

Descriptors: positive emotion, mental health

Cognitive theories of anxiety posit that anxious individuals possess a propensity toward negative affective bias. Accordingly, previous research has demonstrated that individuals with anxiety symptoms overestimate the likelihood that negative events are going to happen, and overestimate their future negative moods. Thus, negative expectations about the future appear to be characteristic of anxiety. The current study examined anxiety's association with individuals' affective forecasts for future events. Participants predicted their grades on an upcoming exam and forecasted their emotional responses to three potential outcomes: getting a better grade than they expect, a lower grade than they expect, and the grade they expect. Two days after receiving their exam results, participants reported their experienced emotions in response to their grades. Anxiety was more strongly associated with emotional forecasts for receiving an expected or worse than expected grade than with forecasts for receiving a better than expected grade. However, upon receiving their grades, anxiety influenced how participants responded to a better than expected grade just as much as other grade outcomes. This suggests that individuals accurately anticipate that anxiety will influence responses to negative outcomes, but fail to anticipate that anxiety also disrupts the ability to enjoy positive outcomes.

POSTER A-88
USING REAPPRAISAL TO SHAPE THE EFFECTS OF POTENTIALLY THREATENING HEALTH MESSAGES

Doré, Bruce P—University of Pennsylvania; Falk, Emily B—University of Pennsylvania

Descriptors: emotion regulation, social neuroscience, physical health

The emotion regulation literature often focuses on cases where reappraisal is a good thing, but people may sometimes apply this emotion regulation strategy in the service of hedonic goals that are detrimental to health. Here, we examine one such case: using reappraisal to generate counterarguments against potentially threatening health information. With behavioral and neuroimaging studies, we evaluated the evidence for a model whereby arguing against health messages influences emotion and behavior by engaging mechanisms that underlie reappraisal. Consistent with this model, 1) reappraising anti-binge drinking messages evoked decreased message-related negative affect, perceived self-relevance, and intentions to reduce risky drinking behavior, effects that were also evoked by counterarguing against the messages. Further, 2) reappraisal and counterarguing were similar in how they engaged control-related brain regions and modulated activity in affect- and valuation-related brain regions. These findings draw connections between theories of persuasion and emotion regulation to provide a mechanistic account of how people can deliberately shape the meaning they derive from persuasive appeals. Further, just as emotional responses are often but not universally functional, these data suggest that whether emotion regulation strategies are beneficial, neutral, or detrimental to health depends on the ends to which they are applied.

POSTER A-89
EXTRACTING PATTERNS OF REGULARITY WITHIN EMOTIONAL INFORMATION: THE ROLE OF MOOD STATE

Everaert, Jonas—Ghent University; Koster, Ernst HW—Ghent University; Joormann, Jutta—Yale University

Descriptors: cognitive, positive emotion

In everyday life, people are bombarded with to continuous flows of emotional information. The ability to organize and segment such flows of emotional information to extract embedded patterns of regularity is critical to understanding what is happening around us. This study investigated whether (a) people are sensitive to subtle statistical regularities within flows of positive and negative verbal stimuli and (b) if naturally occurring positive and negative mood states modulate the detection of these regularities. Participants (N=133) first viewed an uninterrupted stream of emotional words and then completed a forced-choice recognition task. Next, they provided self-relevance ratings for the presented words and filled out the Positive and Negative Affect Schedule. The results revealed that people detect co-occurrences among positive, t(132)=10.39, p<.001, d=0.90, and negative, t(132)=7.30, p<.001, d=0.63, words above chance level even without instruction to detect patterns, intention to learn or explicit awareness. Detection of regularities within positive words was enhanced compared to negative words, t(132)=2.01, p=.047, d=0.17. Interestingly, positive mood state ('_=.22, p=.035) was positively associated with the extraction of regularities within positive words. No association was found between negative mood state and extraction of regularities within negative words ('_=.05, p=.470). This study helps to understand individual differences in how people learn and extract patterns within emotional information to understand their emotional environment.

POSTER A-90
DEPRESSION AND THE REGULATION OF POSITIVE AND NEGATIVE EMOTIONS IN YOUTH: MODERATION BY EMOTION DIFFERENTIATION

Gadassi Polack, Reuma—Yale University; Paganini, Gabriela—Yale University; Zhang, August K—Yale University; Silk, Jennifer S—Pittsburgh University; Kober, Hedy—Yale University; Joormann, Jutta—Yale University

Descriptors: child development, clinical, emotion regulation, mental health

Difficulties regulating negative affect (NA) and positive affect (PA) are associated with increased risk for depression. Recent studies show that emotion differentiation-the ability to identify one's own emotions in a specific manner-increases efficacy of emotion regulation (ER). However, these studies have not examined children and adolescents. In the present study, 135 youths (children and adolescents 9-15 year old) completed a 21-day daily-diary (Experience-Sampling Method; ESM). Every evening, participants rated (1) In-the-moment PA and NA; (2) Daily use of ER strategies for NA (rumination, problem-solving, and distraction), and PA (emotion-focused positive rumination, self-focused positive-rumination, and dampening); and (3) In-the-moment depressive symptoms. Emotion differentiation was computed based on ESM data. Multilevel models examined whether daily variations in ER predicted daily variations in depressive symptoms, controlling for individual differences in depressive symptoms and ER strategy use, as well as for previous-day depressive symptoms. Emotion differentiation was computed as the average inter-item correlation for NA and PA separately. Interim results showed that more use of rumination and dampening, and less use of emotion-focused and self-focused positive rumination predicted higher levels of depressive symptoms. Importantly, differentiation of NA (but not PA) moderated the associations between rumination/da

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POSTER A-91
THE SHAME OF THE IRISH: THE CATHOLIC CHURCH & SHAME IN 20th-21st CENTURY IRISH LITERATURE

Garcia, Carleigh L—Mary Immaculate College, University of Limerick

Descriptors: moral, language, social, culture

This project will examine seven Irish novels written between 1940 and 2010 through the lens of affect theory in order to better understand the Catholic Church's influence on shame by way of Irish literature. I will utilize Eric Cross's *The Tailor and Ansty,* John McGahern's *The Dark*, Enda O'Brien's *The Country Girls Trilogy*, Colm Toibin's *The Blackwater Lightship*, and Anne Enright's *The Gathering*. The Church obtained a monopoly over the spirituality and morality of Irish people in twentieth century Ireland. The authority the Church obtained was visible in education, social welfare, family values, health care, and Irish day-to-day life. They chose which books were read, who was good, what was obscene, and where funding went. Affect theory, founded by Silvan Tomkins, is a biopsychological theory that identifies shame as a negative affect which can only take place after a positive affect, joy or interest, has been partially depleted. Not everyone has the same source of shame, as it depends on what interests and causes joy for a person. We will feel shame most in areas of life that are of utmost importance to us, because we are more invested in them: religion, love, work, and family. If the Catholic Church was the paramount force and influence in twentieth-century Ireland, the Church would most likely be a source of shame for Irish people, and I wish to identify how this is being expressed in Irish literature.

POSTER A-92
IS THREAT DETECTION BLACK AND WHITE? THE ROLE OF RACE IN THREAT-RELATED PERCEPTUAL DECISION-MAKING

Glasgow, Shannon—Stony Brook University; Imbriano, Gabriella—Stony Brook University; Jin, Jingwen—Hong Kong University; Mohanty, Aprajita—Stony Brook University

Descriptors: cognitive, social

There is a vast literature base indicating that people respond differently to Black and White individuals based on differential perceptions of threat. As facial affect is a fundamental way that individuals communicate their emotional state, studies have examined differences in how Black and White threatening facial expressions are perceived. However, perceptual decisions regarding threatening and neutral stimuli often occur in familiar contexts or in environments where explicit cues indicate the presence or absence of threat. Furthermore, these decisions often occur in noisy environments where the quality of sensory evidence is poor, requiring us to rely on prior knowledge or expectations to interpret such evidence. Therefore, in the present study we used a two-alternative perceptual decision-making task in which participants used threatening and neutral cues to discriminate between subsequently presented threatening and neutral Black and White faces. Threatening cues lead to faster and better discriminability between threatening and neutral Black and White faces, as well as a greater tendency to decide that both Black and White faces were threatening. However, race-related differences revealed that, following both cues, discriminability between threatening and neutral Black faces was reduced compared to White faces. Thus, our findings highlight the importance of examining basic aspects of visual perception as well as top-down factors in investigations regarding race-related differences in threat-related perceptual decision-making.

POSTER A-93
FIVE WEEKS OF HEART RATE OSCILLATION BIOFEEDBACK TRAINING REDUCED DEFAULT MODE NETWORK FUNCTIONAL CONNECTIVITY AT REST AND IMPROVED MINDFULNESS

Grigoryan, Vardui—University of Southern California; Nashiro, Kaoru—University of Southern California; Yoo, Hyun Joo—University of Southern California; Min, Jungwon—University of Southern California; Cho, Christine—University of Southern California; Thayer, Julian F—University of California, Irvine; Lehrer, Paul—Rutgers University; Chang, Catie—Vanderbilt University; Feng, Tiantian—University of Southern California; Nasseri, Padideh—University of Southern California; Bachman, Shelby—University of Southern California

Descriptors: cognitive, emotion regulation, intervention, neuroscience, mental health

Heart rate oscillation biofeedback training, which involves slow-paced breathing, has shown to be beneficial in emotional health. Similarly, regulation of the autonomic nervous system as a result of slow rhythmic breathing during meditation may be associated with reduced emotional stress and anxiety. Previous studies reveal functional changes in areas of the default mode network (DMN) of long-term meditators. Reduced functional connectivity within the default mode network (DMN) is correlated with less mind-wandering, less rumination, and better emotional health. The current study (N=100) examined whether five weeks of biofeedback training to increase heart rate oscillations via breathing at one's unique resonance frequency provides some of the essential benefits seen in meditation. Half of the participants received biofeedback to increase heart rate oscillations during practice while the other received biofeedback to decrease heart rate oscillations during practice. The increase-oscillations group showed reduced functional connectivity within the DMN at rest after the intervention (p<.01, FWE corrected) whereas the decrease-oscillations group did not. Reductions in the DMN of the increase-oscillations group were marginally significantly associated with improvement in mindfulness scores (p<.10). A reduction in default mode processing may contribute to greater mindfulness and emotional health in individuals who engage in slow rhythmic breathing.

POSTER A-94
PSYCHOPHYSIOLOGICAL CORRELATES OF STRESS AND AROUSAL REAPPRAISAL IN AGING

Gurera, Jacob W—Northeastern University; Isaacowitz, Derek M—Northeastern University

Descriptors: adult development, physiology, biomarkers

Psychological states during acute stress are shaped by cognitive appraisals of physiological arousal, with challenge states resulting in better task performance than threat states. Positive impacts on performance during stress have been shown when participants are instructed to reappraise perceptions of arousal to fit the profile of a challenge state. However, this arousal reappraisal strategy has only been observed so far in studies of younger adults. It is possible that the utility of this strategy may vary by age, given age differences in physiological reactivity and cognitive reappraisal abilities. For this study, we measured physiological markers of autonomic activity as well as task performance during an arousing serial subtraction task utilizing a 2 (young, older) x 2 (challenge, threat) design. Preliminary results (n=82) show a significant interaction between age and reappraisal condition on task performance, F(1, 80)=8.58, p<.05, such that challenge young adults outperformed threat young adults, t(45)=7.02, p<.05, while these condition effects were not observed for older adults, t(33)=0.12, p>.05. A main effect of condition on arousal was observed across age groups? t(80)=2.29, p<.05, as threat subjects showed greater electrodermal activity than challenge subjects. While most prior research has observed positive changes resulting from arousal reappraisal during acute stress for younger adults, the current study suggests this strategy may not be equally beneficial for older adults.

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POSTER A-95
ELATION AND DEVASTATION: RELATIONSHIPS BETWEEN MEDIA CONSUMPTION, POLITICAL AFFILIATION, AND EMOTIONAL RESPONSES TO THE 2016 U.S. PRESIDENTIAL ELECTION

Harris, Bailey B—University of Denver; Adcock, R Alison—Duke University; Chiew, Kimberly S—University of Denver

Descriptors: political, cognitive

The 2016 U.S. Presidential Election was a uniquely divisive and consequential historic event. How did people differentially emotionally experience this event as a function of political affiliation and media consumption over time? We investigated the relationship between self-reported political affiliation, media consumption, and emotional responses to the 2016 US election, over a 12-month period starting in November 2016, in a U.S.-based online sample (N=500 at Time 1). As expected, Clinton and Trump supporters reported strong differences in emotional response to the election outcome, with Clinton supporters reporting negative affect and Trump supporters reporting positive affect (all ps<.001); emotion intensity in both groups decreased over time (p<.05). Media consumption also decreased over time in all groups (p<.001), and appeared to interact with political affiliation to predict emotional outcome. Specifically, viewing Fox News was associated with increased emotion intensity in Trump supporters, but did not significantly affect emotion intensity in Clinton supporters (Political Affiliation x Fox News Viewing interaction: p<.001). Using metrics of political bias in individual media sources (Pew Research Center, 2014) and self-reported shifts in political affiliation over time, we are conducting further analyses to examine relationships between media consumption, emotion, and political affiliation in terms of individual variance.

POSTER A-96
DIFFERENTIATION OF EMOTIONAL FACIAL EXPRESSIONS AND HAND ACTIONS IN THE ACTION OBSERVATION NETWORK

Harrison, Laura A—University of Southern California; Kilroy, Emily—University of Southern California; Butera, Christiana—University of Southern California; Jayashankar, Aditya—University of Southern California; Hossain, Anusha—University of Southern California; Nalbach, Alexis—University of Southern California; Aziz-Zadeh, Lisa—University of Southern California

Descriptors: neuroscience, cognitive, social, social neuroscience

The Action Observation Network (AON) is involved in action observation and execution and is proposed to be involved in empathy and simulation accounts of social cognition. Much work on this network has focused on hand actions; here we investigate how emotional expressions differentially activate the AON relative to hand actions. Thirty typically developing youth, aged 8-17 completed a blocked design fMRI experiment in which they viewed and imitated videos of adults making either emotional or non-emotional facial expressions or bimanual hand actions in 15 second blocks consisting of three action videos. Task blocks were intermixed with resting blocks during which subjects lay still and viewed a black fixation crosshair. Group level analysis contrasted responses to hand and emotional facial actions at Z>2.3 in regions that were positively activated as a main effect of imitation greater than rest. Within the AON, imitation of emotional facial expressions bilaterally activated the anterior inferior frontal gyrus (IFG) more strongly than hand actions. Meanwhile, imitation of hand actions bilaterally activated the inferior parietal lobule and the posterior IFG more strongly than imitation of facial expressions. These results support the theory that as you move more anteriorly in the IFG, there may be an increase in these regions supporting social and affective processing. We plan to compare these results to data from children with autism spectrum disorder and explore their relationship to individual differences in affect recognition and empathy.

POSTER A-97
HOW OFTEN AND HOW WELL DO PEOPLE REAPPRAISE?: AN INVESTIGATION OF SELECTION AND IMPLEMENTATION OF REAPPRAISAL TACTICS

Hayutin, Ilana—University of Denver; Vardakis, Joseph M—University of Haifa; Pan, Chelsey—University of Denver; Admon, Roee—University of Haifa; McRae, Kateri—University of Denver

Descriptors: emotion regulation, cognitive

Although the effects of discrete emotion regulation strategies are well documented, most studies focus on selection and implementation of strategies, overlooking patterns of selection and implementation of specific tactics. The present study focused upon cognitive reappraisal and evaluated differences in the frequency and the emotional consequences associated with implementation of different reappraisal tactics. Eighty-six participants completed a laboratory task in which they reappraised, or did not reappraise, negative images and reported on the use of specific reappraisal tactics on a trial-by-trial basis. Analyses were focused on comparing tactic selection when used in response to a prompt to reappraise and during spontaneous use in the non-reappraise condition. Preliminary results indicate differences in the frequency of tactics used when prompted (F(7)=37.02, p<.05, N=86) and used spontaneously (F(7)=44.19, p<.05, N=86). When prompted, the "reality challenge," "agency," and "distancing" reappraisal tactics were selected most frequently. Spontaneously, the "reality challenge," "acceptance," and "agency" tactics were selected most frequently. Both prompted and spontaneous reappraisal tactic implementation were associated with lower levels of negative emotion than the use of no reappraisal tactic. Knowing which reappraisal tactics are most commonly used, and their emotional consequences (i.e., efficacy) when used with prompting or spontaneously, may help us better understand how to improve people's ability to use reappraisal to achieve their emotional goals.

POSTER A-98
TWITTER CONTENT AND CONTAGION REFLECT AFFECTIVE IDEALS IN THE US AND JAPAN

Hsu, Tiffany W—Stanford University; Thelwall, Mike—University of Wolverhampton; Knutson, Brian—Stanford University; Ko, Michael—Stanford University; Tsai, Jeanne L—Stanford University

Descriptors: computational science, language, culture

Previous findings on social media suggest that people post more positive vs. negative content and are more likely to "catch" high-arousal vs. low-arousal states. However, these findings were primarily based on US/Western samples, which value positivity and high-arousal affect. Do these trends hold in cultures that have different views of affect? For instance, compared to the US, Japan encourages its members to experience a greater balance of positive and negative affect, and to value low more than high arousal states. Here, we examined this question by directly comparing Twitter posts of random users in the US (N=1889 users, 55,917 tweets) and Japan (JP; N=1836 users, 64,390 tweets). We adapted the sentiment analysis program SentiStrength for use in Japan and developed a novel computational model that quantifies contagion within users. Consistent with previous findings, US users posted more positive than negative content, Cohen's h=.291, particularly low-arousal positive content. In contrast, JP users posted more negative than positive content, particularly low arousal negative content, hs>.150. US users also posted more high-arousal positive content than JP users, h=.126. Moreover, high arousal negative states (the opposite of low arousal positive states) were particularly contagious among US users, Ps<.05, but high arousal positive states (the opposite of low arousal negative states) were particularly contagious among JP users, Ps<.01. These findings reveal the importance of considering cultural values when understanding the role of emotions on social media.

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POSTER A-99

TRUST IN ADVISORS ENHANCES PH.D. STUDENTS' EMOTIONAL AND MOTIVATIONAL EXPERIENCES

Hu, Danfei—Pennsylvania State University; Park, Hyun Joon—Pennsylvania State University; Ruberton, Peter—Pennsylvania State University; Purdie-Greenaway, Valerie—Columbia University; Cohen, Geoffrey—Stanford University; Cook, Jonathan—Pennsylvania State University

Descriptors: social, education, learning

Research has theorized the importance of trust in mentoring relationships in both academic and industrial organizations, yet few studies have empirically examined how trust in advisors affects Ph.D. students' emotions and motivation. In Study 1, 88 Ph.D. students reported their trust in their advisors and then reported their daily anxiety, motivation, and confidence about graduate school for a week. At the end of the week, they completed a survey that included a measure of experienced burnout. In Study 2, 332 Ph.D. students participated in a longitudinal smartphone study during eight weeks spread across their first year of graduate school. At week 3, participants reported their trust in advisors. In weeks 5-8, participants indicated their daily anxiety, motivation, and confidence about graduate school. At the end of each week, participants reported their burnout. Results from both studies indicated that trust in advisors predicted lower burnout. Multilevel mediation analyses further revealed that this association was mediated by daily anxiety, motivation, and confidence. These findings suggest that trust in advisors plays a critical role in Ph.D. students' emotional and motivational experiences.

POSTER A-100

ON THE SCIENCE OF FEAR: A NETWORK APPROACH TO THE LITERATURE

Iancarelli, Alessia—Northeastern University; Satpute, Ajay B—Northeastern University

Descriptors: education, learning, methods, computational science

On Pubmed, there are 5216 studies published on Fear in 2018 alone. How are scientists able to develop their field expertise, given the volume of research being published? To acquire a comprehensive understanding of a field, researchers must be strategic in selecting their readings. Yet, there are no clear strategies on what to read. Here, we used graph theoretic measures to capture the literature's topology of fear. We first selected a landmark paper on fear, Davis (1992), "The Role Of The Amygdala In Fear And Anxiety". Then we identified the papers that cited this article directly (1st generation) or indirectly (2nd generation) and created a binary adjacency matrix of citations. This matrix was used to create a graph with nodes corresponding to papers and edges corresponding to connections via citation. We identified how many subcommunities were present in the literature by performing a community detection analysis, which revealed 51 modules. We also identified papers that tended to provide the shortest path to other papers as connected through citations (i.e. betweenness centrality), and thus are positioned more centrally rather than peripherally in the literature. Through node degree range filtering, we selected the top 20 articles with the highest degree. K-means clustering of the written content of these top 20 suggested two overall domains: stress and emotions. Our work contributes to highlighting relevant papers related to Fear since 1992, and, most importantly, it is a useful tool to create expertise in the field of Fear.

POSTER A-101

THE SOCIAL REGULATORY FUNCTIONS OF EMOJIS IN ROMANTIC ATTACHMENT RELATIONSHIPS

Jeffrey, Clayton M—Cornell University; Zayas, Vivian—Cornell University; Lee, Randy—Cornell University

Descriptors: close relationships, emotion regulation, personality, adult development

The goal of this project is to understand how emojis may be differentially perceived within romantic relationships due to adult attachment style when texting. Adult attachment style is defined by dimensions of anxiety and avoidance associated with attachment figures in adulthood (Brennan et al., 1998). Relationships between adult attachment style and communication differences have been consistently edified in the literature; however, there is a gap in research on how the perception of emojis is impacted by attachment preferences. Past studies have indicated that in romantic relationships, texting preferences are related to attachment style, such as response time to a text (Luo, 2014). Research on emoji use has also been edified in the context of relationship seeking, where individuals overwhelmingly use emojis in romantic endeavors (Gesselman et al., 2019). The proposed research will help identify what makes someone a compatible texting partner in the context of a romantic relationship. Variations of this study will be implemented with online surveys through qualtrics, as well as in-person experiments. By using an array of constructed text messages, this study will examine the immediate attributions that participants make regarding the quality of imaginary romantic relationships. It is hypothesized that those with higher ratings of anxiety in their attachments will rely more on emojis as an indicator of commitment and satisfaction by their partner; it follows that anxious attachment styles may be more likely to hyper-attentively refer to these signals for reassurance.

POSTER A-102

PERSONALITY FACTORS RELATED TO CONTINUED MINDFULNESS MEDITATION

Joseph, Annie-Lori C—Suffolk University; Duarte, Brooke A—Suffolk University; Falcone, Gina—Suffolk University; Jerram, Matthew—Suffolk University

Descriptors: personality, clinical

Mindfulness meditation has been found to be therapeutically effective for various disorders. Yet, many individuals who start a mindfulness meditation practice stop. We investigated personality and demographic factors that may predict continued meditation practice. Participants were recruited via Amazon Mechanical Turk and provided demographic information and were administered the Five Factor Model Rating Form on Inquisit software. Participants who endorsed having ever meditated were split into two groups: those who reported continuing to meditate at the time of the study (n=23) and those who reported having stopped meditating (n=21). Independent samples t-tests were performed for age and personality factors (narcissism, extraversion, openness, neuroticism, conscientiousness). Chi-square analyses were performed for categorical demographic variables (highest level of education, income, race, and gender). Individuals who still meditate (M=13.70, SD=4.68) were significantly lower on neuroticism than individuals who stopped meditating (M=18.00, SD=4.53), t(42)=3.10, p=.003. No other significant differences were present between groups on any personality or demographic factor. These results suggest that neuroticism is possibly an overlooked barrier to meditation practice adherence and should be considered when encouraging prolonged mindfulness practice relative to other demographic factors. This barrier may be due to the imperfect and varying nature of mindfulness meditation practice itself.

Suffolk University

POSTER A-103
PSYCHOMETRICS OF LOVE RESEARCH: CHALLENGES AND SOLUTIONS FOR CROSS-CULTURAL STUDIES

Karandashev, Victor N—Aquinas College

Descriptors: close relationships, culture, methods

Is love an emotion, emotional complex, relationship attitude? How love is related to other emotional concepts? What is the status of love in modern science? I will presents a review of the love scales that researchers of various disciplines have used in their cultural and cross-cultural research throughout recent fifty years with detailed analysis of their methodology and psychometrics. Among those ten have been the most popular. I will present analysis and psychometrics of these scales along the following methodological issues: 1. Conceptual definitions and multifaceted scope of love. Linguistic and cultural equivalency of scales. Interdisciplinary approach to empirical love research. 2. Operational definitions of love and their match to conceptual definitions. Cultural response bias of surveys. Quantitative and qualitative research. 3. Constructions of love scales, their dimensionality, and rating scales. Dimensional and typological approach. 4. Issues of samples: sample size, representativeness of samples, cultural variables. 5. Methodology of statistical analysis of love: Exploratory Factor Analysis, Confirmatory Analysis, Cluster Analysis, Multidimensional Scaling, Multiple Group Analysis. 6. Methodology of cross-cultural comparison: comparison of means, correlations, regression, etc.Interest for the studies of love in cultural and cross-cultural contexts is growing dramatically among researchers in many countries. I believe that methodological analysis of the scales, which have been used in the past, will be helpful for future cross-cultural researchers.

POSTER A-104
GRATITUDE ATTENUATES INTERGROUP BIAS IN COOPERATION

Kates, Shanyu—Northeastern University; DeSteno, David—Northeastern University

Descriptors: positive emotion, social

Group affiliation is often a determinant of exchange outcomes, as individuals prefer to cooperate with ingroup over outgroup members. Here, we investigated whether emotional states would moderate this general bias in cooperative decision-making. In particular, we focus on the role of gratitude, as it has been found to enhance trust and prosociality for both economic and social outcomes. Participants (N=161) were randomly assigned to work with an ingroup or outgroup partner via a minimal-group manipulation, and an emotion induction for gratitude, happiness, or neutral state. Participants then played the give-some-game, where cooperation was measured by the number of tokens allocated to their partner. Results indicated that perceived group affiliation of the partner predicted the number of tokens allocated for both the happiness ($'\_=.52$, SE=.13, p<.001) and neutral ($'\_=.38$, SE=.12, p=.009) conditions. However, this relationship was not observed for the gratitude condition ($'\_=.06$, SE=.12, p=.623). Similar patterns emerged for participants' expectations of how many tokens they would receive from their partner. This demonstration of gratitude's ability to mitigate intergroup bias offers initial evidence that this emotion may be useful for improving intergroup relations involving exchange.

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POSTER B-1
CAN DEFICITS IN EMOTION REGULATION PREDICT DEPRESSION RELAPSE AND RECURRENCE AFTER COGNITIVE BEHAVIORAL THERAPY?

Zimmermann, Verena—Heidelberg University; Timm, Christina—Heidelberg University; Miano, Annemarie—Heidelberg University; Barnow, Sven—Heidelberg University

Descriptors: clinical, emotion regulation

Cognitive behavioral therapy (CBT) has been shown to be effective in treating depressive disorders. Nevertheless, a large number of patients experience relapse or recurrence after having completed CBT. In order to improve existing CBT, it might be useful to identify predictors of relapse and recurrence. Deficits in emotion regulation have been shown to be associated with depressive symptoms and thus might also have an impact on depression relapse/recurrence after CBT. The aim of the present ongoing longitudinal study is to investigate whether the use of certain emotion regulation strategies or combinations of these strategies after CBT predicts depression relapse/recurrence in 100 fully or partially remitted depressive individuals who have recently completed CBT. Participants undergo nine assessments taking place immediately (no more than two weeks) after the last therapy session as well as every three months over a period of two years. At each assessment, participants complete online questionnaires measuring emotion regulation and depressive symptoms. Furthermore, the daily experience of emotions and the emotion regulation strategies used (e.g. rumination, reappraisal, acceptance, etc.) is assessed five times a day for a seven-day period with the help of smartphone-based ecological momentary assessment. Multilevel analyses will be used to investigate whether the use of certain emotion regulation strategies or combinations of these strategies can predict depression relapse/recurrence. The poster will give an overview over the study design and planned analyses.

POSTER B-2
MENTAL-HEALTH-RELATED CHINESE EMOTIONAL VIDEO DATABASE

Zhuoying, Zhu—Shanghai Mental Health Center; Xu, Yifeng—Shanghai Mental Health Center; Wang, Ting—Jiaotong University

Descriptors: clinical, culture, mental health

Investigation of the role of emotion in mental health requires reliable and effective emotion-eliciting materials. However, standardized emotional stimuli are mostly based on western contents, which might not be effective in eliciting emotion in other cultures. The present study used a large representative sample to establish a database of Chinese emotional video clips, which includes videos that target emotions central to mental health (happiness, sadness, anger, fear and awe). Three clips of each target emotion and two neutral ones (1-3 min) were selected from more than 300 videos. Four clips that elicit the highest level of the target emotions (except for awe), were chosen from the widely used Western database FilmStim as comparison. Three-hundred-thirty-three native Chinese participants (37.2% male and 61.8% female; age: range=16-74, M=25.8, SD=9.64; Education: elementary school-postdoc) viewed all 21 clips, and rated the intensity of five target emotions to each clip. The results showed that, in general, culturally-matching videos elicited more intense target emotions. We also investigated the relationship between levels of depressive symptoms and emotional reactivity, and found that responses to sadness, anger and awe were reduced among people with higher levels of depressive symptoms, but not for happiness and fear. The finding was partially consistent with the emotional-context-insensitivity hypothesis of depression (Bylsma et al., 2008). In sum, the database provides a culturally sensitive tool to study emotion and mental health among Chinese people.

POSTER B-3
DESIGN TO IMPRESSION: A THEORY OF DESIGNING EMOTIONAL EXPERIENCE ON THE IMPLICATIONS OF AFFECTIVE NEUROSCIENCE

Zhang, Qing—Arizona State University

Descriptors: neuroscience, close relationships, moral

Humans have unfortunately brought themselves to the tipping point in human history. The ongoing disastrous consequences resulting from climate change are increasingly abusing nature, threatening millions of animal and plant species and the ecosystems vital to both humans and nonhumans. More ominous images are warning us: it is urgent to facilitate a sense of connectedness between humans and nonhumans. What are the current implications of neuroscience research into emotion, if any, for how to promote the subjective experience of feeling connected with others and nonhumans? I propose a theory of designing emotional experience, Design to Impression. My theory is built on insights from the higher-order theory of emotional consciousness and the critique of impressionist aesthetics. Viewers can instantly grasp the gestalt of impressionist artwork from a distance without getting distracted by delicate details. The drawing principles coincidentally conform to the brain mechanisms of emotion. In the higher-order theory, emotional feelings are in the cognitive assembly of subjective experiences constructed by nonconscious lower-order inputs. For me, it is these various nonconscious inputs that build impression, which can become the launch pad of emotion and higher-order thinking. My vision is that attending to the notion of impression in design would be instructive to elicit emotional experience. The theory is a novel attempt building on the implications of affective science and impressionist aesthetics, aspiring to see humans develop greater conscientiousness to better the world.

POSTER B-4
THE ADVANTAGE OF IMPLEMENTATION INTENTION DURING EMOTION REGULATION AND NEURAL MECHANISMS

Yuan, Jiajin—Southwest University; Chen, Shengdong—Southwest University

Descriptors: emotion regulation, mental health, social neuroscience, intervention

Implementation intentions (II), which specify how to respond in a given situation based on the goal intention, is known for its validity of automatic emotion regulation. However, the neural mechanisms underpinning the II-related emotion regulation(ER), and how II differs from intentional regulation (IR) in emotional intense situations remain undetermined. Here, we performed one functional MRI (N=31) and one event-related potential study (N=75) to clarify this issue, with reappraisal as the ER strategy under disgust induction. In addition to replicating the ER effects in amygdala and insula activations without enhancing cognitive costs, we further showed that II compared to goal intention alone produced similar functional connectivity (FC) of vACC (ventral anterior cingulate cortex) to left insula and right precuneus, corresponding to the common goal component of both strategies. Furthermore, II relative to GI exhibited weaker FC in neural networks subserving effortful control (inferior-superior parietal lobe FC), memory retrieval (inferior-middle temporal lobes and lingual-putamen FCs), aversive anticipation and emotion-related motor planning (putamen-operculum and vACC-supramarginal gyrus FCs). On the other hand, the ERP data demonstrated that RII but not IR produced a reliable long-term LPP attenuation during unexpected stimulus reexposure, despite similar reductions of immediate emotional feelings. These results suggest an advantage of II over IR during ER, which is most likely mediated by reduced mobilization of neural systems underpinning online emotion coping.

POSTER B-5
BEING EMOTIONALLY UNDERSTOOD BY FAMILIES AND FRIENDS MATTERS DIFFERENTLY TO LIFE SATISFACTION AS PEOPLE AGE

Yuan, Jing—North Carolina State University; Grühn, Daniel—North Carolina State University

Descriptors: adult development, close relationships

One factor to determine one's subjective well-being is whether you perceive that you are understood by the other person in the relationship. However, little is known about the developmental trajectory of the relationship between perceived understanding of feelings and life satisfaction and whether it differs in relationships (i.e., spouse, children, friends, relatives). Using data from wave 2-8 (2004-2017) of the English Longitudinal Study of Ageing (ELSA, N=12860, age range: 18-61 years, mean=58.8, 54.4% Female), participants were asked to answer one-item perceived emotion understanding question for four targets and satisfaction with life scale. Multi-level modeling was used for analysis. As expected, being emotionally understood by different targets were strongly related to life satisfaction (p<.001), which was especially true for spousal relationship. As people got older (over the 14-year time span), being understood by children gradually mattered more to life satisfaction (p<.05), and this age-related change was more pronounced in middle-aged adults than in older adults (p<.05). In accordance with social convoy model and socio-emotional selectivity theory, the association was stronger for closer relationships. For children, the association also changed over time and differed in age (cohort) groups. As the first effort to investigate the longitudinal association, future research may benefit from using a multi-dimensional assessment of perceived understanding and investigating the underlying mechanisms such as relationship closeness.

POSTER B-6
EMOTIONS IN INTERGROUP INTERACTIONS: THE ROLE OF FEEDBACK AND MOTIVATIONAL ORIENTATIONS

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Descriptors: social, personality

This study examined how approach and avoidance motives moderate the links between feedback and emotions during intergroup interactions, and the implications of these emotion on perceptions of interaction quality and motivation to engage in a subsequent interaction. Since happiness and sadness are linked to approach motives, and relief and anxiety are linked to avoidance motives (Carver, 2004), we hypothesized that different emotions would mediate the links between feedback and outcomes. Data collection is ongoing with 161 non-Black participants (target n=250). Participants reported their emotions and perceptions of interaction quality after receiving success or failure feedback about their live interactions with a Black partner. Moderated mediation analyses found that for individuals with high (but not low) approach motives, success feedback increased happiness, ('_=-.152, p=.047), explaining individuals' perceptions of higher interaction quality (index=-.348, SE=.167, 95% CI=[-.712, -.048]) and facilitating performance in a second interaction. Avoidance goals showed a parallel pattern, such that we expect individuals with high (but not low) avoidance motives who received failure feedback to show increased anxiety, ('_=-.074, p=.364), hampering a future interaction (index=.143, SE=.155, 95% CI=[-.128, .476]). This study applies theoretical concepts in affective science to live intergroup interactions, suggesting that the trajectory of emotions may vary upon feedback and motivational orientations, influencing behavior in later intergroup interactions.

POSTER B-7
EXPLORING THE RELATIONSHIP BETWEEN EMOTION REGULATION STRATEGIES AND CARDIAC AUTONOMIC ACTIVITY

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Descriptors: emotion regulation, physiology, biomarkers, physical health

It is theorized that emotion regulation (ER), a process by which individuals modify their emotional experiences/expressions, as well as rumination, a maladaptive ER strategy where individuals compulsively focus on negative emotions, have an influence on cardiovascular health. Specifically, greater levels of rumination and ER difficulties have been associated with poorer autonomic nervous system (ANS) functioning, which can be indexed by cardiac autonomic balance (CAB) and regulation (CAR). However, few studies have linked CAB and CAR with self-report measures of ER and maladaptive ER strategies. Therefore, the current study examined associations between both CAB and CAR and difficulties in ER (DER) and rumination. Resting cardiac data was collected from 173 participants (120 females, mean age=19.15), who completed the DER and Ruminative Responses scales. Time-domain measures of cardiac activity were used to derive indices of CAB and CAR. Correlation results revealed poorer (lower) CAB was associated with greater DER (r=-.165, p=.036) and rumination (r=-.154, p=.05). Lower CAR was related to greater DER (r=-.279, p<.001) and rumination (r=-.158, p=.044). These associations were strongest in females (CAB: r=-.204, p=.032; CAR: r=-.316, p=.001). These data support theories that maladaptive ER is associated with poorer cardiovascular function. Furthermore, novel evidence revealed a potential stronger association with CAR compared to CAB; suggesting co-inhibition of the ANS branches may be particularly linked with maladaptive ER, especially in females.

POSTER B-9
AMBIGUITY, NOT THREAT, DRIVES TRAUMA-RELATED HYPERVIGILANCE

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Descriptors: neuroscience, physiology, biomarkers, clinical

One of the most insidious trauma-related symptoms is hypervigilance, or a constant state of alertness for potential threat that never comes. However, whereas much research shows amygdala reactivity to actual threat in trauma-exposed people, tests of neural hypervigilance for non-existent threat are scant. We hypothesized that persistent amygdala activation to familiar ambiguous (neutral), rather than familiar threat (unpleasant) information would index trauma-related hypervigilance.Trauma-exposed (n=24) and control (n=20) women completed an fMRI scan during which they viewed novel and familiar affective scenes for 3500 ms each. For each combination of novelty (novel v familiar) and affect category (pleasant, neutral, unpleasant), we estimated contrasts for condition versus fixation using a finite impulse response (FIR) function to capture differences in the shape of the hemodynamic response. A Timepoint x Group interaction in the right amygdala for familiar neutral images (p=.022, partial eta sq=.076), was driven by greater response to familiar neutral images at 2-4s post-stimulus, with a corresponding non-significant but moderate effect size trend in the left amygdala (p=.085, partial eta sq=.053). The groups did not differ in response to familiar pleasant or unpleasant stimuli; both groups showed habituation to these stimuli indexed by flat or lesser amygdala activation relative to fixation. These data support the role of ambiguity in hypervigilance, and also support the use of neutral stimuli rather than overtly unpleasant stimuli in testing trauma-related phenomena.

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POSTER B-10
AN INTERFACE WITH COMPUTER-GENERATED FACIAL EXPRESSIONS AS AN ALTERNATIVE FOR MOOD SELF-REPORTS IN AN EMA CONTEXT

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Descriptors: computational science, methods, mental health, cognitive

Traditionally numerical scales, colors, abstract representations or animations have been used for self-reporting mood. While working in practice, these methods either do not provide a universally stable representation between participants or are intrinsically not tuned to represent mood. Abstract representations or colors rely on subjective interpretation, while numerical scales or animations require mapping the subjective feeling or mood onto a scale. This may result in multiple interpretations, hampering the reliability of the scales. Using computer-generated facial expressions to span a scale may be a better alternative for mood self-reports, as they can be seen as a more direct reflection of a person's mood. A total of 30 participants assessed their mood with a VAS and the facial-expression sad to happy scale 5 times per day over 2 weeks. The results show a strong correlation of .85 between the assessments of both instruments. Overall, participants preferred using the facial expression-based interface. The required speed for assessments, took on average of 4.1 seconds to provide an assessment with the facial expression interface and respectively 1.9 seconds with the VAS scale. Albeit the faster assessment times provided with the VAS scale, most participants preferred the facial expression-based interface. We conclude that the computer-generated facial-expressions were easily interpretable and such an approach can be reliably used as an alternative method for capturing mood through EMAs.

POSTER B-11
THE INTRA- AND INTER-PERSONAL CONSEQUENCES OF EXPERIMENTALLY MANIPULATED CO-RUMINATION

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Descriptors: emotion regulation, close relationships, physiology, biomarkers, social

Co-rumination is an interpersonal emotion regulation strategy linked with negative mental and physical health outcomes and positive interpersonal outcomes. However, extant research has largely relied on indirect manipulations. This study used a direct manipulation of co-rumination to replicate previous work and clarify effects that are unique to co-rumination, not general problem-talk. 172 dyads were randomly assigned to a prompted or natural condition. In the prompted condition, dyads were explicitly instructed to co-ruminate (stay on topic, go over the problem again, speculate about causes and consequences, dig into negative emotions). In the natural condition, dyads engaged as they naturally would. One person (discloser) was randomly assigned to discuss a problem and their friend (responder) was told to respond. Mean arterial pressure reactivity (MAP Rx) was the primary health outcome. Also, participants completed self-reports of depressed mood and closeness with their friend before and after conversing. Multilevel models regressed MAP Rx and self-reports on condition, role, and their interaction. Results showed that those in the prompted condition had an increase in MAP Rx when in the discloser role (B=1.38, t=2.35, p=.002, r=.18), a greater increase in depressed mood (B=.18, t=2.99, p=.003, r=.22), and a marginal increase in closeness (B=.06, t=1.72, p=.087, r=.13). These results replicate previous findings using a direct experimental manipulation, revealing that extant, indirect manipulations may have resulted in conservative estimates of the effects of co-rumination.

POSTER B-12
THE RELATIONSHIP BETWEEN META-EMOTION, AS MEASURED WITH THE DISTRESS TOLERANCE SCALE, AND EMPATHY

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Descriptors: positive emotion, emotion regulation

Meta-emotion refers to the thoughts, feelings, and beliefs about one's emotional state. The present study was conducted to address the following questions: First, do meta-emotional views correspond to primary emotional experience? For example, do individuals who believe that uncomfortable emotions are intolerable also experience such emotions especially strongly? Second, do meta-emotional views correspond to differences in empathy? This study specifically focused on the meta-emotional construct distress tolerance when considering these questions. A total of 105 participants completed the Basic Empathy Scale (BES), the Discrete Emotions Questionnaire (DEQ), the Distress Tolerance Scale (DTS), and a demographic form online. Results indicated that increased total empathy was correlated with increased experiences of anxiety (r=.23, p<.05) and happiness (r=.21, p<.05) when reading emotional vignettes. Total empathy was also inversely correlated with distress tolerance (r=-.43; p<.05). Distress tolerance was inversely correlated with happiness (r=-.21, p<.05) and emotional contagion (r=-.50, p<.05), but was positively correlated with emotional disconnection (r=.33, p<.05), with the latter two constructs representing sub-scales of the emotional component of empathy. Overall, these data provide evidence that difficulty tolerating emotion is associated with stronger emotional experiences, and greater levels of empathy. These findings demonstrate the utility of studying emotion and related constructs, including empathy, through a meta-emotional framework.

POSTER B-13
INVESTIGATION OF THE ROLE OF WORKING MEMORY LOAD ON THE GAZE CUEING EFFECT IN HIGH ANXIOUS PARTICIPANTS USING ELECTROENCEPHALOGRAPHY

Tipura, Eda—Universtiy of Geneva; Fox, Elaine—University of Oxford

Descriptors: cognitive, clinical, neuroscience, mental health

The aim of the present study was to investigate the role of working memory load on the gaze cueing effect in high anxious participants, using electroencephalography. We used a modified version of the attentional cueing task where fearful and neutral faces with averted gaze predicted the location of a target. The target was a number that 20 high and 20 low anxious participants were asked to recall from a series encoded in each trial. Behaviourally, working memory load impacted cueing irrespective of emotion and anxiety, as reaction times were faster in incongruent trials in the low (versus high) load condition. Lateralized EEG components then showed that effects of emotion were only apparent in high anxious individuals, with an initial hypervigilance to target locations cued by fearful faces, followed by a difficulty to disengage from these locations when targets appeared at uncued sites (P1). Enhanced amplitude following fearful faces were observed, when discriminative processes leading to response selection are implemented (N1). Emotion therefore precedes working memory load in high anxious individuals. Conversely, all the effects of working memory load were independent of emotion in the low anxious group, where the shifting of attention directed by the gaze was only visible when enough resources were available in the working memory span, as suggested by EDAN and ADAN components. Moreover, working memory loads impacted the processing of gaze differently (P1) in low anxious participants, suggesting that top-down influence may play a role in this case.

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POSTER B-14
TWO-FACED: CONTEXTUAL DETERMINANTS OF EMOTIONAL EXPRESSION AND SUPPRESSION TO UNFAIR BEHAVIOR

Teoh, Yi Yang—University of Toronto; Hutcherson, Cendri A—University of Toronto

Descriptors: social, behavioral economics, emotion regulation

Research on the Ultimatum Game suggests that people often feel and express emotions like anger in the face of inequality, perhaps even to an exaggerated extent. A largely separate literature suggests that individuals sometimes suppress emotional expression. How do people decide to suppress, exaggerate, or express what they feel in economic interactions? To answer this question, we conducted a series of studies measuring how participants felt and what they expressed when an anonymous partner shared different amounts of money with them. Using Bayesian multi-level modelling, we observed that individuals (n=100) sometimes suppressed what they felt (M=1.16%, 95% HDI [0.64 1.80]) and sometimes expressed emotions they did not feel (M=4.56%. [3.02 6.42]). Participants were more likely to suppress anger when monetary allocations to themselves and their partner were less unequal (beta=-0.054, [-0.123 -0.013]). Participants were also more likely to exaggerate their anger by expressing disgust instead when inequality was greater (beta=0.058 [0.0180 0.117]). A second study confirmed that deviations in expression were not due to response-related errors or evolution of emotion over time (n=200; difference in expressive suppression: M=6.64% [3.88 9.84]; and switching: M=1.75% [0.89 2.84], compared to control). These findings suggest that individuals may strategically regulate their emotional expressions to balance social costs against the utility of communicating feedback to social partners.

POSTER B-15
THE ROLE OF PARENTAL SOCIOECONOMIC STATUS IN CHILD EMOTIONAL DEVELOPMENT

Tang-Tan, Angela M—University of California at Berkeley; Ugurlu, Ozge—University of California at Berkeley; Ayduk, Ozlem—University of California at Berkeley

Descriptors: child development, emotion regulation, cognitive, social

In the literature, higher family socioeconomic status (SES) has been linked with improved developmental and affective outcomes in children. Although previous studies have explored how parental SES affects children's emotional regulation, we know comparatively little about the relationship between SES and measures of empathy and cognitive processes. Does SES also impact children's working memory and their ability to recognize emotions in others? This study examined the effect of parental SES on a battery of child developmental measures. A sample of 143 local families with children between the ages of 5-8 were recruited. Each parent was asked to fill out a questionnaire evaluating SES through self-reported income and education level. A research assistant guided each child through various tasks, including the Reading the Mind in the Eyes Task measuring empathy and a digit span memory test. Higher parental SES was found to be positively correlated with child empathy (standardized beta coefficient=0.16, p<0.001). SES was also observed to be positively correlated with working memory (standardized beta coefficient=0.23, p<0.001). Findings remained stable when controlling for child age. These results suggest that parental SES affects child development of both empathy and cognitive processes such as working memory. This may have concerning implications for the generational transmission of socioeconomic inequality, suggesting that children from higher SES families have access to more resources impacting their social and cognitive functioning.

POSTER B-16
ARE SAD PATIENTS ALL THE SAME? SHEDDING LIGHT ON HETEROGENEITY BASED ON SELF-BELIEFS AND BRAIN ACTIVATION PATTERNS

Talmon, Anat—Stanford University; Dixon, Matthew L—Stanford University; Goldin, Philippe R—University of California, Davis; Heimberg, Richard G—Temple University; Gross, James J—Stanford University

Descriptors: mental health, clinical, neuroscience

Social anxiety disorder (SAD) is characterized by negative self-beliefs and altered brain activation in regions of the default mode network (DMN). We used latent class analysis (LCA) to cluster clinically diagnosed SAD patients (N=94) into two sub-groups based on a multivariate profile consisting of behavioral and DMN activation scores during a self-referential encoding task. The first cluster, compared to the second cluster, demonstrated higher levels of negative self-referential trait endorsement and lower levels of positive self-referential trait endorsement. The first cluster also demonstrated lower activation in DMN regions (medial prefrontal cortex and posterior cingulate cortex) during positive trait judgments and higher activation in these regions during negative self trait judgments. We next investigated the potential source driving these clustering patterns. We focused on childhood trauma given its high frequency in psychological disorders. Consistent with a role as a potential driving force, levels of childhood emotional abuse and neglect were significantly different between the clusters, with cluster 1 patients showing higher levels than cluster 2 patients. The clusters did not differ in sexual or physical abuse and did not differ in SAD symptom severity. This suggests that levels of childhood emotional abuse and neglect rather than symptom severity may play a significant role in defining different SAD subgroups and should be considered in therapy and research on SAD.

POSTER B-17
AFFECT AND HPA REACTIVITY IN YOUNGER AND OLDER ADULTS

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Descriptors: physiology, biomarkers, physical health

Age effects on hypothalamic-pituitary-adrenal axis (HPA) reactivity and affect were examined across manipulations expected to up-regulate (acute stress and exercise) or down-regulate (relaxation) the HPA system. Positive and negative affect as well as cortisol and blood pressure were measured before and after manipulations in younger (n=57) and older (n=67) adults. Negative affect increased after stress and decreased after exercise and relaxation. Positive affect increased after exercise (ps<.05) with no age differences in the effects (ps>.13). Stress increased cortisol and relaxation decreased cortisol as expected (ps<.02). Exercise decreased cortisol (p<.01), contrary to our hypothesis. There was minimal impact of age on cortisol (ps>.10), except for some evidence older females had a greater cortisol increase than younger females under stress (p=.04). Across conditions, greater increase in cortisol was associated with increase in negative affect similarly in each age group (younger: r=.37, p=.01; older: r=.31, p=.02), but was unrelated to positive affect (ps>.66). Older adults had a greater increase in pulse pressure under stress (p<.05). Cardiovascular response was unrelated to affect (ps>.10). There may not be a generalized reduction in flexibility of the HPA system with aging, but instead age effects may be more specific to stress-induced reactivity. Correspondence between physiological arousal and affective state may remain intact with advancing age, with cortisol changes perhaps a stronger determinant of negative affective responses than cardiovascular responsivity.

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POSTER B-18
TESTING SOCIAL EMOTION REGULATION IN A VIRTUAL-REALITY CYBERBALL GAME

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Descriptors: emotion regulation, social, methods

To test the efficacy of social emotion regulation (ER) in immersive virtual reality, we conducted a Cyberball task in a newly developed school environment, with a virtual agent offering emotional support in stressful situations.Twenty-nine individuals aged 18 to 32 (mean=23 years) played ball with other virtual agents in three conditions: inclusion, exclusion and exclusion with social support. Positive and negative emotion self-reports were assessed during each condition and after a delay in which, in the second exclusion condition, social support was offered by another agent. Skin conductance levels (SCL) were assessed throughout. RmANOVAs with the three conditions revealed a significant effect on positive emotions ($F(1.34,37.38)$=52.52, p<.01), negative emotions ($F(1.30, 35.16)$=46.98, p<.01) and mean SCL ($F(1.39,31.96)$=8.96, p<.01) with highest positive and lowest negative emotions as well as highest SCL in the inclusion condition. 2x2 rmANOVAs with the factors support (yes vs. no after exclusions) and time (during and after the game) uncovered a significant interaction on positive ($F(1,28)$=22.41; p<.01) and negative emotions ($F(1,28)$=10.11; p<.01), indicating higher positive and lower negative emotions after social support. These results show that our virtual cyberball task elicits differentiated emotional responses, and that social ER is efficacious in virtual reality with agents rather than real people. Thus, we have managed to create a rich and interesting task for further research on emotion reactivity and social emotion regulation.

POSTER B-19
SOCIAL SHARING OF POSITIVE AUTOBIOGRAPHICAL MEMORIES CHANGES HOW WE REMEMBER THE PAST

Speer, Megan E—Columbia University; Bonda, Fernanda M—Rutgers University; Garcia, Christine B—Rutgers University; Garcia, Vivien C—Rutgers University; Kashyap, Madhuri—Rutgers University; Delgado, Mauricio R—Rutgers University

Descriptors: positive emotion, social, cognitive

In our everyday conversations, we often retell our positive experiences to other people. While positive social sharing can bolster wellbeing, less is known about how it influences our later memory for shared events. That is, does our memory benefit from our conversations with other people? Here, we used a naturalistic social sharing paradigm whereby 40 participants took turns sharing positive memories with a close friend and also retold memories solo during audio recording. To examine memory change across time, participants wrote memory descriptions and made emotion ratings 3-7 days before and after. Compared to recalling solo or not at all, sharing preserved the positivity and vividness of memory across time (p=.013, p=.004). This was most pronounced when friends responded with positive feedback and new event details. Sharing also led to stronger feelings of closeness between friends (p=.002). Importantly, the strength of closeness was related to greater changes in the details of one's own future memory (p=.015), revealing a social context memory bias. When probing the dyadic interaction, memories for which pairs were more in-sync during sharing had the greatest convergence in memory content between friends for the same event (based on independent ratings of audio; p=.029). Thus, positive social sharing is not only adaptive for enhancing social bonds. It also preserves beneficial features and details of a memory that may otherwise fade with time, which may have clinical implications for individuals who face difficulty remembering the positive past (e.g., depression).

POSTER B-20
SULK 'TIL YOU HULK: AN EXAMINATION OF THE EFFECTS OF ANGRY FACIAL EXPRESSION POSES ON EMOTIONAL EXPERIENCE

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Descriptors: cognitive, social

The facial feedback hypothesis predicts that posing angry facial expressions should cause individuals to feel angrier. However, it is not clear if (1) angry poses can initiate angry feelings in neutral scenarios or only amplify ongoing angry feelings, (2) whether angry poses need to resemble prototypical expressions in order to influence angry feelings, and (3) whether these effects are robust when controlling for awareness of the hypothesis. We examined these questions through a meta-analysis and a pre-registered study.Meta-analysis provided evidence that angry poses can initiate (k=8, d=.64 p<.001) and modulate (k=15, d=.25 p<.03) angry feelings. In a follow-up study (n=202), participants posed angry and neutral facial expressions and then completed an emotion inventory. To manipulate expression prototypicality, participants were instructed to either (a) mimic the expressions of angry actors (high-prototypicality), or (b) move their eyebrows down and in towards their nose (low-prototypicality). During neutral trials, participants were instructed to maintain a blank expression. To examine whether angry poses could initiate and/or modulate angry feelings, some participants viewed angering images during the poses. Results provided evidence that angry poses can initiate (t(200)=3.05, p<.005), but not modulate (t(200)=0.50, p=.62) angry feelings. This initiation effect occurred both when participants engaged in high- (p<.05) and low-prototypicality (p<.0005) anger poses and was robust when controlling for awareness of the hypothesis (p<.0005).

POSTER B-21
AFFECT EXPERIENCED DURING RESTING WAKEFULNESS AND SLEEP

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Descriptors: cognitive, methods

We experience affect even when we seem to be doing 'nothing'—during resting wakefulness (i.e., mind-wandering or daydreaming) and sleep (i.e., dreaming). Such spontaneous affective experiences arguably reflect the processing of past memories and the simulation of possible future events. It has been suggested that subjective experiences during wakefulness and sleep are continuous and rely on shared brain mechanisms. However, it is unclear how similar or different mind-wandering and dreaming are with regard to affect experienced in these two states. Here, we investigated the prevalence and valence of affect experienced during resting wakefulness and night-time dreaming. We compared the affective ratings of 358 mind-wandering and 594 dream episodes from 33 healthy adults (21 females, mean age=27.9). Results showed that affect was experienced in almost all of the mind-wandering (98.6%) and in the majority of dream (85.8%) episodes. Participants experienced more positive (Wilcoxon Z=-3.721, p<.001, r=.66) and less negative (Wilcoxon Z=-2.365, p<.05, r=.42) affect during mind-wandering than during dreaming. Whereas mind-wandering was dominated by mild positive affect (Wilcoxon Z=-4.360, p<.001, r=.76), dreaming was characterized by a rather balanced affective tone (Wilcoxon Z=-552, p=.589, r=.09). The results were confirmed using multilevel regression models. These findings contribute to our understanding of the nature and possible function of spontaneous affective experiences and may shed light on the processes underlying psychological well-being.

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POSTER B-22
META-ANALYSIS OF THE ASSOCIATION BETWEEN EMOTION DIFFERENTIATION AND BEHAVIORAL DYSREGULATION IN CLINICAL AND NON-CLINICAL SAMPLES

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Descriptors: clinical, emotion regulation, mental health

Behavioral dysregulation is central to the development and maintenance of several psychological disorders. However, less is known about factors that may protect against the engagement of maladaptive behaviors. Recent research suggests that negative emotion differentiation (NED) may be protective. The present investigation sought to conduct a meta-analysis examining the relationship between NED and maladaptive behaviors in clinical and non-clinical samples across 17 included studies obtained via electronic literature searches. Despite between-study methodological heterogeneity, the results of the overall meta-analysis indicated that NED was negatively associated with the enactment of maladaptive behaviors (r=-.15, p<.001). Additionally, no significant differences in effect size were observed between clinical (n=7; r=-.15, p=.017) and non-clinical (n=10; r=-.17, p<.001) samples. These findings suggest that NED is protective against maladaptive behaviors regardless of diagnostic status and have important clinical implications for understanding and treating psychological disorders involving behavioral dysregulation

POSTER B-23
FACIAL EXPRESSIONS OF SADNESS AND GUILT IN PRESCHOOL-AGE CHILDREN WHO STUTTER DURING A COGNITIVELY STRESSFUL SPEECH TASK

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Descriptors: child development, emotion regulation, cognitive

How and What emotions contribute to developmental stuttering is not well understood. There are contradictory findings from studies comparing emotional processes of children who do not stutter (CWNS) and children who stutter (CWS) which may be due to variability in measurement tools or experimental stimuli. Interestingly, stuttering researchers have not compared emotions of CWNS and CWS using behavioral coding of facial expressions. It's plausible that detectable group-differences will be present when CWNS and CWS are engaging in tasks that differentiate them (i.e., speech). Twenty-nine preschool-age children CWNS (n=17) and CWS (n=12), ages 38-68 months, completed a neutral and a challenging speech task, in counterbalanced order. Later, undergraduate volunteers viewed recordings of each child and provided ratings of facial emotions for both. Interrater reliability was good (mean '±=.71) and ratings were averaged across coders, by emotion, for each child within each task. Tests for group differences using ANCOVA were conducted. Although the findings were not statistically significant, descriptive review of the data suggested that the CWS, compared to CWNS, had relatively greater expression of maladaptive emotions (i.e., sadness, guilt) during the speech task, relative to the control tasks; this suggests the CWS, compared to CWNS, exhibited greater withdrawal from the challenging speech task. Findings of this nature contribute insight the role of emotions in the persistence of stuttering, which is relevant for provision of effective therapy and models of this disorder.

POSTER B-24
BELIEFS ABOUT THE UNCONTROLLABILITY OF EMOTIONS PREDICT MALADAPTIVE EMOTION REGULATION STRATEGIES AND EMOTIONAL DISTRESS IN THE LONG-TERM

Salguero, Josí M—University of Malaga (Spain); Arbulu, Ilynana—Complutense University of Madrid; García-Sancho, Esperanza—Univesity of Córdoba; Ramos-Cejudo, Juan—Complutense University of Madrid

Descriptors: emotion regulation, mental health, clinical, cognitive

The process model of emotion regulation (Gross, 2015) holds that individuals can use a huge range of different strategies to regulate their own emotions. There is evidence that individual emotion-regulation strategies vary in terms of their effectiveness (Webb et al., 2012), and theoretical models have highlighted specific strategies as adaptive (e.g., reappraisal) or maladaptive (e.g., rumination) (Aldao et al., 2010). An intriguing question that remains is why people decide to use maladaptive strategies. A possible explanation refers to beliefs about emotions. Recently, Ford & Gross (2018) provided a theoretical framework to understand how individual differences in two superordinate beliefs, beliefs about emotion goodness and controllability, may influence the emotion regulation process. A hypothesis derived from this perspective is that individuals believing their emotions are bad and uncontrollable will be more likely to select maladaptive strategies and, in turn, to show emotional distress. In this study, we examined this hypothesis. A total of 143 participants completed self-report measures, at baseline and 4 months after, assessing beliefs about emotions, maladaptive emotion regulation strategies, and emotional distress. Results showed that beliefs about the uncontrollability of emotions significantly predicted both the use of maladaptive emotion regulation strategies (standardized beta=.21; p=.002) and emotional distress (standardized beta=.15; p=.035). Our findings add evidence to the relevance of beliefs about emotions in understanding emotion regulation.

POSTER B-25
CAN EMOTION REGULATION ENHANCE EXECUTIVE FUNCTIONING? A LABORATORY-BASED STUDY OF HEALTHY OLDER ADULTS

Rompilla, David B—Northwestern University; Stephens, Jacquelyn E—Northwestern University; Hittner, Emily F—Northwestern University; Mittal, Vijay A—Northwestern University; Haase, Claudia M—Northwestern University

Descriptors: emotion regulation, cognitive, adult development

Emotion regulation and executive functioning recruit similar neural and autonomic physiological processes, and previous research has shown positive links between emotion regulation and performance on specific aspects of executive functioning (e.g., verbal fluency). However, we know little about whether regulating emotion in the moment can enhance performance on executive functioning tasks that immediately follow. The present laboratory-based study tested effects of emotion regulation on executive functioning in healthy older adults. Participants completed executive functioning trials that measured inhibition (Stroop, Simon effect), working memory (digit span, Corsi block, adaptive span), and verbal fluency (F-A-S). Each executive functioning trial occurred immediately after an emotion trial in which participants were assigned to watch a loss-themed film clip under either reactivity (i.e., "just watch") or cognitive emotion regulation (e.g., positive reappraisal) instructions. Results showed that emotion regulation enhanced subsequent executive functioning for verbal fluency (but not inhibition or working memory), with individuals who were tested after a regulation trial generating about 8 more words in comparison to those tested after a reactivity trial, p=.010. These findings converge with prior research showing considerable specificity in the link between emotion regulation and executive functioning and highlight emotion regulation as a possible avenue for enhancing more general executive functions (e.g., verbal fluency) in late life.

POSTER B-27
PATTERNS OF EFFECTIVE CONNECTIVITY IN THE MIDBRAIN UNDERLIE NATURAL SENSITIVITY TO SOCIAL CUES

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Descriptors: social, neuroscience, computational science

The ability to integrate dynamic bodily conditions with affective information, a process mediated by the salience network (SN), underpins sensitivity to one's own and others' emotions. Studies show mean SN connectivity, including both cortical (anterior insula, anterior cingulate) and subcortical nodes (amygdala, thalamus, periaqueductal gray [PAG]), predicts socioemotional sensitivity in healthy adults and patients. Though the PAG is an important pattern generator in the emotion system, it remains unclear how its intrinsic and inter-network connectivity contributes to differences in the ability to integrate socioemotionally relevant interoceptive information. We hypothesized that higher PAG self-connection would correspond to lower other-rated socioemotional sensitivity due to reduced efferent and afferent interaction with other SN nodes. We used dynamic causal modeling to examine SN connection couples and self-connections in 44 neurologically healthy older adults, and compared this to informant reports of participants' social sensitivity using the Revised Self-Monitoring Scale (RSMS). We identified a number of directional dynamic connections between cortical and subcortical nodes of the SN. However, only degree of self-connection of the PAG significantly predicted RSMS score (Left: p<.001, 95%CI=[2.07, 31.8]; Right: p=.003, 95%CI=[1.27, 27.9]). This suggests weaker PAG self-inhibition predisposes individuals to greater sensitivity to social cues, likely due to the special role the PAG plays in bringing to awareness interoceptive information important for social behavior.

POSTER B-28
PILOT OF A WRITTEN IMAGINAL DISCARDING EXERCISE FOR HOARDING BEHAVIORS

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Descriptors: clinical, mental health

Hoarding behaviors that lead to excessive clutter are common and debilitating, and the affective mechanisms that their treatment engages are not well understood. To better treat hoarding, we need novel augmentative approaches that engage target mechanisms. One novel approach is imaginal discarding, or envisioning a detailed script of one's worst case scenario about getting rid of a possession (e.g., "I threw out some mail that I now need for my taxes") to facilitate learning to tolerate the distress associated with it. Imaginal discarding has not been investigated in hoarding. The present exploratory pilot study administered a 20-minute written imaginal discarding exercise on 3 consecutive days to adults with hoarding disorder (n=8), who wrote about their worst case scenario about discarding a possession. Because this preliminary study is underpowered, we report descriptive statistics. From pre-exercise to one-week follow-up, per self-report, participants reported a mean 21.4% reduction in hoarding behaviors, 10.9% reduction in intolerance of uncertainty, and 19.8% reduction in avoidance of negative emotion. And, greater reductions in intolerance of uncertainty were correlated with greater reductions in hoarding behaviors, r=.51. In an open-ended debriefing, 7 out of 8 participants described the exercise as useful for confronting their negative emotions. Results from this exploratory study suggest that imaginal discarding merits further clinical investigation for this population and that it may engage underlying affective mechanisms maintaining hoarding behaviors.

POSTER B-29
MULTIFACETED EMPATHY DIFFERENCES IN AUTISM: NEGATIVE BUT NOT POSITIVE EMOTION RECOGNITION IMPAIRMENT

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Descriptors: social neuroscience, neuroscience, cognitive

Individuals with autism spectrum disorder (ASD) have historically been described as lacking empathy. Empathy involves an understanding of self and other's feelings (cognitive empathy, CE) and the experience of shared feelings (emotional empathy, EE). Evidence suggests differential gaze and neural activity patterns in response to faces depicting negative versus positive emotion. Yet, it's unknown how valence-specific phenomena relate to behavior. Here, we test the effects of ASD and emotional valence on 1) EE 2) CE, and 3) correlations between empathy and autism symptoms. 62 individuals (ASD=29, controls=38) of varied ages (8-38.30) took the multifaceted empathy test (MET) consisting of 32 still images of people in emotional conditions. CE was assessed by multiple choice emotion recognition. Emotional empathy was assessed by self-rating on a 0-9 scale. Comparisons for empathy scores were calculated using the Cliff's delta statistic. Spearman rank correlations were calculated between empathy and Social Responsiveness Scale scores. Groups did not differ in demographic variables. Groups differed significantly in their CE (delta=0.405, p=0.002) but not EE (delta=0.046, p=0.761). Further, group differences present in CE were driven by the negative (delta=0.368, p=0.008) but not the positive images (delta=0.237, p=0.09). No significant correlations were found between SRS scores and empathy measures. These findings suggest that there is intact EE but impaired CE in children and adults with ASD and extend previous knowledge by reporting an effect of valence.

POSTER B-30
THE ORIGINS AND ACTIVE INGREDIENTS OF REGULATORY FLEXIBILITY

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Descriptors: emotion regulation, physiology, biomarkers

Individual differences in the ability to remain flexible in the face of changing situational demands may be partially driven by Response System Coherence (RSC)-within-individual covariation between feelings and physiology-and autonomic flexibility. The developmental roots of the two are under-investigated. This study examined links among childhood adversity, aspects of regulatory flexibility, and reactions to common emotional stressors. Participants (n=305) from the current phase of the Harvard Study of Adult Development completed stressful public speaking and math tasks (TSST, Kirschbaum et al., 1993). Cardiovascular (CV) and emotional reactivity and recovery measures were collected throughout the lab visit. RSC was operationalized as the within-individual covariation over time between heart rate and self-reported negative affect. Autonomic flexibility was measured by resting heart rate variability (HRV). Self-reports of 28 adverse experiences were obtained prior to the lab visit. Individuals who experienced more adversity reported more negative affect and took longer to recover following the TSST. Early adversity was also linked to lower RSC, '_=-.22, 95% CI [-0.43, -.01], but it was not related to HRV, '_=.004, 95% CI [-.17, .17]. RSC significantly mediated the link between childhood adversity and CV recovery. Additional analyses and discussion focus on the links among regulatory flexibility, stress reactivity, and trait mindfulness, as well as on the implications of this work for the study of emotion regulation and mechanisms of childhood adversity.

POSTER B-31
EMOTION-RELATED IMPULSIVITY RELATES TO THE P FACTOR OF GENERAL PSYCHOPATHOLOGY

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Descriptors: clinical, mental health, personality

Researchers have established a broad p-factor that appears to be associated with diverse forms of psychopathology, including internalizing, externalizing, and psychosis dimensions. A central question remains about what underlying traits contribute to the p-factor. Potential constructs have included negative emotionality and response inhibition. We hypothesized emotion-related impulsivity, a trait-like tendency toward unconstrained behavior, speech and cognition in response to emotion, might underlie the p factor given its robust associations across forms of psychopathology and its integration of negative emotionality and response inhibition. In a sample of college undergraduates (N=658), we assessed emotion-related impulsivity and multiple indicators of internalizing, externalizing and thought symptoms by self-report. Using structural equation models, we replicated previous findings that the best fitting psychopathology model contains three dimensions (internalizing, externalizing, and thought) as well as a higher-order p-factor. Emotion-related impulsivity was highly correlated with the p-factor, with large effect sizes (standardized beta=.57). Results demonstrated divergent validity, in that effects only emerged for emotion related impulsivity and not general impulsivity. Findings indicate the trait-based vulnerability to respond impulsively to emotions may help account for the shared vulnerability for psychopathology characterized by the p factor.

POSTER B-32
IRRITABILITY AMONG OEF/OIF/OND VETERANS WITH A HISTORY OF BLAST-RELATED MTBI: ASSOCIATIONS WITH NEUROPSYCHOLOGICAL FUNCTIONING AND QUALITY OF LIFE

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Descriptors: clinical, mental health, cognitive

Irritability is commonly reported by Veterans with a history of mild traumatic brain injury (mTBI). However, little is known about the neuropsychological correlates of irritability following mTBI or its real-world impact. The current study examined these factors in a sample of 53 male OEF/OIE/OND-era Veterans with a history of one or more blast-related mTBIs, and 22 Veterans with no TBI history. Participants completed a comprehensive battery of neuropsychological measures, along with self-report inventories assessing mental and physical health, sleep, fatigue, and quality of social support. Irritability was measured using a composite score computed by averaging three items from the Neurobehavioral Symptom Inventory and PTSD Checklist-Military Version assessing irritable mood and poor frustration tolerance, Cronbach's alpha=0.89. Results indicated that Veterans with mTBI reported greater irritability compared to controls, t=7.19, p<.000. After adjusting for age and estimated premorbid IQ, irritability was negatively associated with prospective memory performance, standardized beta=-0.48, p=.005, but was not associated with performance on measures of attention, set-shifting, and retrospective memory. Greater irritability was also associated with poorer self-reported mental health, greater functional limitations due to daytime sleepiness and fatigue, and lower quality social support. Findings suggest that irritability may negatively impact prospective memory performance, and could have significant mental health and functional implications for Veterans with mTBI.

POSTER B-33
BETTER SAFE THAN SORRY: HOW FRAMING AND AFFECT INFLUENCE THE LIKELIHOOD TO TAKE MEDICAL TREATMENTS

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Descriptors: behavioral economics, positive emotion, medicine

The way medical information is presented can influence a person's decision making. For example, in a positive gain frame (e.g. 86% of people who took this medication did not experience rash outbreaks) individuals offer more favorable judgments of equivalent information compared to a negative loss frame (e.g. 14% of people who took this medication did experience rash outbreaks). Such framing may influence the likelihood that a person decides to take a medication. The present work examined how framing may influence the likelihood of taking a medication to treat four common health issues. For this study, 121 participants were presented with health pamphlets for hypothetical medications containing three unique side effects for each medication. Each side effect was presented in a gain or loss frame. Participants then rated the riskiness of taking the medication, how positively and negatively they felt about it, and their likelihood to take it. The results of a mediation analysis indicated that, compared to loss frames, gain frames led to more positive affect about the medications and as a result, participants in the gain frame indicated a greater likelihood to take the medication (Indirect Effect=.57, 90% CI: .28, .87, p<.01). In contrast, negative affect did not contribute to the likelihood to take the medication. This finding suggests that attribute framing specifically influences the likelihood to take a medication by changing positive feelings about the medication. Framing represents one way to impact judgments when making important health decisions.

POSTER B-34
COMPUTATIONS UNDERLYING AVERSIVE COUNTERFACTUAL CHOICES

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Descriptors: cognitive, computational science, neuroscience

Mentally simulating counterfactual scenarios is a uniquely human cognitive function underlying creativity, planning, and daydreaming. One example is the "would you rather" game, in which forced choices are made between outlandish negative counterfactuals. We measured behavioral and neural correlates while participants made 2 alternative forced choices framed as approaching or avoiding aversive counterfactual scenarios (eg. illnesses, car accidents). We found that participants were highly susceptible to framing effects when making these decisions, taking significantly longer to respond to approach vs. avoidance frames (t=6.1348, df=21, p<.0001). Computational modeling revealed that approach frames led to more conservative response bias (p<.001), increased decision boundaries (p<.001), and longer non-decision time (p<.001), but faster evidence accumulation(p=.002) than avoidance frames. Stronger network connectivity between limbic regions was associated with slower evidence accumulation during approach choices (left caudate-hippocampus, r=.62, p=.003; insula-left putamen, r=.7, p=.0005). Prefrontal-limbic connectivity was related to longer non-decision time (DLPFC-amygdala, r=.53, p=.01). For avoidance frames, prefrontal connectivity was related to non-decision time (DLPFC-mPFC, r=.61, p=.003). These results suggest that "would you rather" decisions about aversive counterfactuals differentially recruit limbic circuit connectivity based on choice frame. This behavior may represent a low-stakes form of exposure to aversive stimuli.

POSTER B-35
THE LINK BETWEEN EMOTION DIFFERENTIATION AND BINGE EATING: SIMILARITIES AND DIFFERENCES ACROSS MEASURES

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Descriptors: clinical, mental health, methods

Little research has investigated associations between emotion differentiation (i.e., the extent to which a person experiences different emotions as distinct) and binge eating despite links to related phenotypes (e.g., depression, emotion regulation). Different measures of emotion differentiation have also been used, impeding cross-study comparisons. We therefore examined associations between several measures of emotion differentiation and binge eating episodes (BEs) and emotional eating (EE) in women (N=482) from the Michigan State University Twin Registry. Participants completed the Positive and Negative Affect Schedule (PANAS) daily for 45 consecutive days. Three measures of negative/positive emotion differentiation (NED/PED) were created using the intraclass correlation coefficient (ICC), average interitem correlation, and average daily variance between emotion ratings on the PANAS. After controlling for affect intensity and BMI, lower PED was associated with greater odds of current or past BEs using the ICC (OR=.52, p=.008) and average interitem correlation (OR=.64, p=.045) measures and more EE using the average daily variance measure ('_=-.15, p<.001). Findings involving NED were less consistent; lower NED was associated with greater EE ('_=-.31, p<.001) and greater odds of BEs (OR=.39, p=.020) using the daily variance measure only. Overall, results suggest that low PED and some aspects of NED may be important correlates of binge eating, and highlight how different measures of emotion differentiation may relate to outcomes differently.

POSTER B-36
SOCIAL MODULATION OF FOOD PREFERENCE AND VALUATION: A COMPARISON OF CAPUCHIN AND RHESUS MONKEYS

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Descriptors: animal, comparative, behavioral economics

A large literature demonstrates that both capuchin monkey's and human's valuation of rewards are impacted by social context, such that they devalue previously valuable rewards when their partner concurrently receives a 'better' one. This effect has not been consistently demonstrated in rhesus monkeys which leads to evolutionary questions about valuation processes because we share a closer evolutionary history with rhesus than with capuchins. In an effort to understand the documented effects, we carried out a series of studies in which rhesus (N=12) and capuchins (N=8) were presented with a series of rewards in various quantities and pairings, either while alone or in proximity to a social partner. Initial testing established the value of food rewards (low, medium, or high), which were then paired in different quantities-selection frequencies were recorded. Data were analyzed using logistic regression models to predict the likelihood of a subject selecting the food reward which they most valued within a pair based on social condition, number and type of rewards in the pair, and species. There were no significant effects of social condition, but all animals were more likely to select the preferred food as the ratio of the more- to less-preferred increased (B=0.20, p<0.001). Rhesus were more likely than capuchins to shift their preferences based on available quantities (B=0.17, p<0.001). Both species were more likely to select their preferred reward in the high and low value reward pairing compared to the high and medium value or medium and low value reward pairings.

POSTER B-37
HUNGRY OR EMOTIONAL? A FUNCTIONAL NEUROIMAGING META-ANALYSIS OF THE SHARED AND DISTINCT NEURAL BASES OF HUNGER AND EMOTION

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Descriptors: neuroscience, social neuroscience, physiology, biomarkers

Constructionist theories suggest that emotions and physiological states (e.g., hunger) share neural substrates involving visceral, interoceptive representations. We conducted a functional neuroimaging meta-analysis on brain activity during induced hunger vs. satiety (84 studies 1998-2018; N=1024) and assessed shared vs. distinct neural activity with emotion (422 studies 1993-2018; N>8000). With multilevel kernel density analysis, we contrasted brain activity during hunger, satiety, and emotion (ps<.0001). Relative to emotion, hunger and satiety had more consistent activity within regions associated with physiology (e.g., thalamus, hypothalamus, posterior insula for hunger>emotion; pre/post-central gyri, posterior insula for satiety>emotion). Emotion (>hunger or satiety) had more consistent activity in the amygdala, fusiform gyrus, and the frontal, temporal, and occipital gyri. Emotion also had more consistent activity in the anterior insula (>hunger) and the thalamus and anterior cingulate (>satiety). Critically, neural correlates of hunger were most similar to negative and high arousal emotions (e.g., amygdala, thalamus), whereas the neural correlates of satiety were similar to positive and low arousal emotion (e.g., caudate). In sum, emotions, hunger, and satiety are associated with brain regions involved in visceral representations but emotions also involve cortical regions that support exteroception (vision, audition) and mentalization. These findings could help explain how hunger potentiates emotion and vice versa (e.g., emotional eating, feeling "hangry").

POSTER B-38
EMOTIONAL GRANULARITY REFLECTS CORTICAL THICKNESS IN VENTROLATERAL PREFRONTAL CORTEX

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Descriptors: emotion regulation, language, adult development, cognitive, neuroscience

Individuals with higher emotional granularity show greater precision in how they label their emotional experience. In fMRI studies, labeling one's emotional experience activates the ventrolateral orbital cortex, a region critical for emotion regulation. Whether individual differences in emotional granularity are related to structural brain anatomy is unknown. Additionally, the relations between sociodemographic characteristics and individual variation in emotional granularity are not well characterized. Fifty-four cognitively healthy older adults completed baseline measures of well-being, daily emotional experience surveys for eight weeks, and a structural MRI scan. Intraclass correlation coefficients across the daily emotional experience surveys were used to quantify emotional granularity; cortical thickness was computed from the MRIs. Results indicated that higher emotional granularity was associated with greater cortical thickness in the right orbital cortex (pFWE<.05). Higher negative emotional granularity was associated with greater subjective happiness (t=2.25, p=.029), and lower anxiety (t=-2.50, p=.016). Differences in context, age and/or gender had no impact on emotional granularity differentiation. These findings suggest that higher emotional granularity reflects normal variation in the cortical thickness of orbital cortex, a region that supports experience labeling and emotion regulation.

Society for Affective Science

POSTER B-39

ASSOCIATION BETWEEN WALKING AND DEPRESSION: A CORRELATIONAL STUDY WITH MEXICAN AMERICAN OLDER ADULTS

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Descriptors: positive emotion, adult development, physical health

The objective of this study was to examine the relationship between amount of time walking and depressive symptomology in Mexican American older adults. Participants' data was part of the Hispanic Established Populations for the Epidemiologic Study of the Elderly data collected between 2011 and 2012 in five states. The sample included 421 older adults who were predominantly female (60%) and had a mean age of 87. A bivariate correlation was conducted between the amount of time spent walking (minutes) and number of depressive symptoms reported as measured by the Center for Epidemiologic Studies Depression Scale (CES-D total score). Results showed a negative correlation between minutes walking and number of depressive symptoms endorsed (r=-.22, p=<.001). The findings of this study support previous research suggesting that physical activity (specifically walking) is associated with fewer depressive symptoms (Julien et al, 2015). Further, this study generalizes these findings to Mexican Americans and suggests that the effects of walking on depressive symptomatology previously identified in Caucasians and other ethnicities are also observed in a Hispanic population. Given the increased risk for depressive symptoms in older adults, important clinical implications of this study include the assessment of physical activity in this population by health professionals, as well as education on this topic and encouragement to engage in as much physical activity as possible. Future research should explore the effects of other physical activities on depressive symptomatology.

POSTER B-40

MODELING THE TEMPORAL AFFECT DYNAMICS OF SCHIZOTYPAL AMBIVALENCE

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Descriptors: clinical, mental health, methods

Ambivalence, broadly defined as the experience of contradictory emotions in temporal proximity, has been proposed as a fundamental symptom of schizophrenia since the initial formulation of the disorder. Despite its theoretical importance, schizotypal ambivalence has received limited empirical attention due to its conceptual ambiguity. Chiefly, ambivalence could arise from two distinct processes: (a) simultaneous co-occurrence of positive affect (PA) and negative affect (NA), and (b) rapid oscillation between PA and NA without them co-occurring. Thus, the current study examined co-occurrence and oscillation among individuals at risk for schizophrenia through modeling the temporal affect dynamics. Undergraduate participants with elevated perceptual aberration/magical ideation (PerMag; n=26), elevated social anhedonia (SocAnh; n=29), and controls (n=46) watched a bittersweet film clip while continuously rating their PA and NA. Multilevel modeling of the moment-to-moment affect ratings showed that relative to controls, PerMag displayed elevated oscillation of PA and NA (i.e., greater PA and NA instability, ps<.05, and lower PA inertia, B=-0.01, p=.01). On the other hand, SocAnh displayed a trend for elevated co-occurrence of PA and NA (i.e., less negative association between PA and NA, B=0.34, p=.05, and greater co-occurrence index MIN, B=0.12, p=.08). These results provide evidence that ambivalence may arise from distinct mechanisms in different at-risk groups and represent an initial step in clarifying the conceptualization of schizotypal ambivalence.

POSTER B-41

MORE THAN WORDS? SEMANTIC EMOTION LABELS BOOST BODY-FACE INTEGRATION

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Descriptors: language, cognitive, social, methods

While most work on facial expression perception examined isolated faces, accumulating evidence indicates that incongruent body context may alter the categorization of prototypical facial expressions. Following the increasingly recognized role of semantic emotional labels in the recognition of facial expressions, we hypothesized that semantic labels may preserve the emotional body-face integration, even when faces and bodies are spatially misaligned and temporally separated-conditions known to reduce integration. One hundred and forty participants categorized expressive faces presented with congruent or incongruent bodies. The compounds were presented as a whole person, or separated (either spatially or temporally). Participants responded either with semantic labels or by perceptually matching the expressions to other facial probes. Results showed that when presented together, incongruent bodies reduced the accuracy of facial expressions categorization. Importantly, a label dominance occurred: congruency effects were larger when participants used labels (M=0.27) than when using perceptual matching (M=0.18, p<0.01), indicating that facial expressions are more prone to contextual influence when categorized with labels. When presented separately, the integration was severely hampered (M=0.05, p<0.001). However, labels conserved the integration effect, which was more salient for spatial than for temporal separation. These findings suggest that body-face integration may be more conceptual than perceptual, emphasizing the role of labels in emotional perception.

POSTER B-42

EXAMINING ASSOCIATIONS BETWEEN MATERNAL EMOTION REGULATION DIFFICULTIES AND TODDLERS' EMOTION.

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Descriptors: child development, emotion regulation

Studies that have examined the associations between children's emotional responses and parental emotion regulation (ER) have focused on children ages 3-11. We examined the association between mothers' difficulties in ER and toddlers' emotion. We hypothesize that mother's ER difficulties is positively associated with maladaptive toddler emotional responses (i.e., greater distress and aggression) and negatively associated with adaptive toddler regulatory responses (i.e., mother orientation, self-comfort). A sample of mothers and their toddlers (N=52; toddler Mage=21 months) participated in a study examining parent-child relationships. Mothers reported on their ER difficulties and toddlers completed a toy removal behavioral task. After accounting for mother's depression and anxiety, mother's ER difficulties overall was not a significant predictor of child emotion. Because we initially thought that lack of access to strategies and nonacceptance of emotion may particularly be associated with child emotion, we conducted exploratory analyses of each subscale within the ER difficulties scale with child emotion. Exploratory analyses of individual factors within mother's ER difficulties revealed that greater lack of access to strategies [beta=0.51, 95% CI(0.21, 0.82), t(49) 3.37, p=.001] and goals in regulating [beta=0.55, 95% CI(0.22, 0,87, t(49) 3.40, p=.001] was associated with child distress. This study contributes to our understanding of toddlers' emotion development with their maternal caregivers given limited exposure to factors outside the home.

POSTER B-43
AN APPROACH TO UNDERSTANDING THE DYNAMICS OF BETWEEN-PERSON EMOTIONAL COORDINATION

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Descriptors: close relationships, computational science

The research presented here addresses whether average emotional experience and between-person emotional coordination predict wellbeing. Emotional coordination is the covariation between partners' emotional experience that follows three patterns: in-phase (emotions converging), anti-phase (emotions diverging), and uncoordinated (no meaningful covariation). Fifty-two romantic dyads had 20-minute conversations in the lab and then continuously rated how they recalled feeling during the conversation (very negative to very positive in 2 second units). The new R package, rties, was used to categorize couples into qualitatively distinct groups based on the dynamics of their emotional experience. The dynamic profiles and dyad average negativity were then used to predict individual-level wellbeing. Two groups of couples emerged: 1) profile-1 characterized as emotionally uncoordinated, and 2) profile-2 reflecting an in-phase coordination pattern of emotional experience. Profile-2 was associated with significantly higher self-reports of wellbeing compared to couples exhibiting an uncoordinated pattern of emotional experience (Beta=.066, p-value ä__ .043). Couples reporting less negative emotion also had higher emotional wellbeing (Beta=-.14, p-value ä__ .008). Between-partner emotional dynamics and average levels of negative emotion independently predicted romantic partners' wellbeing, suggesting that we need to consider both. In particular, a lack of meaningful emotional coordination between partners may either contribute to or arise from lower wellbeing.

POSTER B-44
UNDOING MIXED FEELINGS: THE COGNITIVE REGULATION OF MIXED EMOTIONAL STATES

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Descriptors: emotion regulation, physiology, biomarkers

The physiological effects of regulating emotions constitutes a central topic in affective science. Whereas prior research investigated the regulation of pure negative and positive emotions, little is known about the effects of regulating mixed emotions. To address this issue, we presented 48 women with 54 film clips that elicited pure negative, pure positive, or mixed emotions. Participants were instructed to either view the films naturally (all films) or to focus on their negative or positive aspects (mixed films only). We measured self-reported feelings after and facial electromyographic, cardiac, electrodermal, and respiratory activity during presentation of films. Focusing on negative (or positive) aspects of the mixed films increased negative and decreased positive feelings (or vice versa), increased corrugator and decreased zygomaticus reactivity (or vice versa), and increased respiratory gating and decreased cardiac sympathetic deactivation (or increased cardiac sympathetic deactivation). Regulated mixed emotions resembled the pure negative (or positive) emotion.

POSTER B-45
PREDICTION VS ACTION DURING PAINFUL STIMULATION: A PRE-REGISTERED FMRI STUDY

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Descriptors: neuroscience, clinical

The midcingulate cortex (MCC) has consistently been implicated in the processing of physical pain, and recent work suggests a specific role of the MCC in voluntary action; the greater the "urge to move" during pain, the greater the connectivity between the MCC and the insula. The aim of the present study was to further investigate the role of the MCC by distinguishing between brain areas that generally predict an upcoming painful event and those in which prediction specifically contributes to a relevant (motivated, voluntary) behavioral response. In a pre-registered fMRI study, participants (n=30) performed a task in which they responded to thermal stimuli of varying intensities. Each trial involved two stimuli: S1 was either painful or non-painful; S2 was either very painful or non-painful. During S1, a visual cue was briefly presented, and participants' task was to press a response button as fast as they could. On some trials, pressing the button within a given time window reduced the duration of S2; on other trials, pressing the button had no effect. A behavioral pilot study (n=21) showed a 3-way interaction (F=4.25, p=.053) suggesting that participants' response times were shorter when they could affect the duration of upcoming pain, especially when the predictive stimulus (S1) was also painful. Our fMRI analysis investigates how this behavioral pattern is reflected in neural activity in the MCC and insula; specifically, whether the insula is generally involved in processing and predicting upcoming pain, whereas the MCC is involved when action matters.

POSTER B-46
AMYGDALOSTRIATAL COUPLING UNDERPINS POSITIVE BUT NOT NEGATIVE COLORING OF AMBIGUOUS AFFECT

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Descriptors: neuroscience, cognitive

Humans routinely integrate affective information from multiple sources. Here, we describe the neural correlates of an affective computation that involves integrating multiple sources, by leveraging the ambiguity and subtle feature-based valence signals found in surprised faces. Using functional magnetic resonance imaging, 24 participants reported the valence of surprised faces modulated by positive or negative sentences. Amygdala activity corresponded to the valence value assigned to each face-sentence pair, with greater activity reflecting more negative ratings (MNI 21, 0, -21; t(23)=3.52, k=10 voxels, FWE-corrected p<0.05, d=0.76). Amygdala activity did not track the valence of the faces or sentences per se. Moreover, amygdala activity was functionally coupled with the nucleus accumbens only during trials with positive contextual cues (MNI 9, 15, -6; t(23)=4.16, k=13 voxels, FWE-corrected p<0.05, d=0.82). These data suggest 1) valence-related amygdala activity reflects the output of valence computation, rather than the valence values of each individual component, and 2) amygdalostriatal coupling underpins positive but not negative coloring of ambiguous affect. The present data shed light on the role of the amygdala in valence computation, which in turn offers a possible neural mechanism that may underpin how affective information from multiple sources are integrated and processed to guide our behavior.

Society for Affective Science

POSTER B-47
EMOTION CLARITY MODERATES THE ASSOCIATION BETWEEN CHILDHOOD SEXUAL ABUSE AND RESTING HEART RATE VARIABILITY

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Descriptors: emotion regulation, physical health, mental health

Emotional clarity (EC), an individual's ability to identify the type and source of their emotion, is critical for mental health, yet its relation to physical health is unclear. Childhood trauma, particularly childhood sexual abuse (CSA), has also been shown to negatively impact mental and physical health, yet the role of EC in this association is unclear. We examined whether EC moderates the association between CSA and heart rate variability (HRV), an indicator of heart health. Weight diverse adults (n=103; 57% F, M(SD) age=28 (8.4) yrs) completed demographic questions, the Childhood Trauma Questionnaire (including a CSA sub-scale), the Trait Meta Mood scale (measure of EC), and continuous heart rate recording during a paced breathing exercise (measure of resting HRV). Moderated regressions controlled for age and sex, with all of the childhood trauma sub-scales and EC entered as predictors of resting HRV in step 1, and the interaction between CSA and EC entered as a predictor in step 2. Both CSA ('_=-.19, p=.052) and EC ('_=.21, p=.04) predicted resting HRV. EC moderated the association between CSA and resting HRV ('_=1.56, p=.01), such that in individuals reporting higher CSA, higher EC was protective, with resting HRV levels nearly identical to those reporting lower levels of CSA. These findings suggest that therapy aimed at increasing EC may protect against the negative physiological factors associated with CSA.

POSTER B-48
USING MACHINE LEARNING TO HIGHLIGHT HOW MISINFORMATION SOURCES UTILIZE EMOTIONAL FACIAL EXPRESSIONS

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Descriptors: computational science, political

Misinformation on social media is among the most pressing issues of our time. Sources of news utilize highly emotionalized content to influence their consumers' opinions and ultimately shape policy agendas. Computational analysis of textual content of tweets has shown that misinformation sources include more fearful and angry vocabulary compared to mainstream news sources. Whether usage of emotionalized and biased facial expressions can also be used to detect agenda-setting and misinformation is unknown. In this study, we introduce the first dataset and machine learning model to investigate the extent to which facial imagery in news content distinguishes suspicious and trustworthy sources of news. Our dataset includes 28000 faces extracted from 300,000 images from 1,200,000 tweets scraped from 285 trustworthy and suspicious news sources (labeled by third-party organizations). We utilized this dataset to train a Convolutional Neural Network (CNN) classifier to predict the trustworthiness of the sources. Our CNN classifier achieves an overall accuracy of 0.69, with F1 scores of 0.70 for suspicious and 0.67 for trustworthy sources. These results improve on previous misinformation source classifiers that use visual information and highlight suspicious sources' tendency to introduce emotional biases in depicting individuals' faces. The combination of a novel dataset and machine learning model provides rich future possibilities for comprehensive studies on the affective aspects of visual misinformation which to date have been underexplored.

POSTER B-49
DIFFERENCES IN EMOTIONAL RESPONSES TO DAILY POSITIVE EVENTS BASED ON THE CHRONIC STRESS OF BEING A CAREGIVER

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Descriptors: positive emotion, mental health

Introduction: Chronic stress is linked to detriments in emotional well-being, including the ability to respond to positive events in daily life. Caregiving is an established model of chronic stress, yet it is unclear how the caregiving experience affects positive emotional responses compared to those not in a caregiving role. Method: We examined daily positive emotional responses at 3 time points over 1.5 years in a sample of mid-life women stratified by chronic caregiving stress (N=92) or not (N=91). Participants described a daily positive event for 21 days. They rated their global level of positive emotions in response to the event, specific emotions (interest, happiness, compassion, pride), how much they savored the experience, and whether they capitalized on the positive emotions by sharing the event with others. Data were aggregated and means and variability (standard deviations) for each measure were compared between groups. Results: Caregivers reported lower positive emotions in response to a positive event (t(181)=2.08, p<.05) and lower happiness in particular (t(181)=2.65, p<.01) compared to noncaregivers, and greater variability in both indices (positive emotions: t(179)=-2.67, p<.01; happiness: t(179)=-2.44, p<.05). There were no significant differences in interest, compassion, pride, savoring, or capitalization. Conclusions: Chronic stress may lead to less intense positive feelings in response to a positive daily event. Interestingly, being under chronic stress did not influence the amount of savoring or capitalization women did in response to a positive event.

POSTER B-50
TEST-RETEST RELIABILITY OF EMOTION REGULATION NETWORKS IN THE RESTING-STATE FMRI FUNCTIONAL CONNECTIVITY

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Descriptors: emotion regulation, neuroscience, cognitive, methods

Background: Emotion regulation (ER) refers to the control of emotions with the goal to start, stop or otherwise modulate the trajectory of emotional responses. Whereas multiple brain areas have been implicated in ER, relatively little is known about the functionally connected networks during rest that are related to ER and their reliability. The investigation of the reliability of metrics derived from resting-state (rs) fMRI repeat scans is a prerequisite for the development of biomarkers. Here, we examined the test-retest reliability of ER networks derived from rs-fMRI data. Methods: 28 healthy participants (23f, mean age=22.8 Œ± 3.1) underwent 3 rs- fMRI sessions (eyes open) with a 1 week test-retest interval. 258 rs-fMRI volumes were acquired using a CMMR multiband EPI sequence at ultra-high field (7T). Functional connectivity analysis was performed using the CONN Toolbox and by applying a seed-region approach. Seed regions were selected based on 4 previously defined networks implicated in ER (N1: attention & memory, N2: language, N3: emotion, N4: interoception) (Morawetz et al., under review). Results: Intra-class correlation coefficients revealed that the cortical networks implicated in ER (N1 & N2) are highly reproducible between all sessions, while the subcortical networks implicated in emotion generation (N3 & N4) are less reproducible. Conclusions: Our results support the idea of highly reliable networks involved in ER that could be used in future studies with the main scope to explore resting-state networks in both healthy and patient populations.

POSTER B-51
UNDERSTANDING THE ROLE OF SCHEMAS IN THEIR ASSOCIATION BETWEEN PARENTAL BONDING AND HOSTILE ATTRIBUTION BIAS IN YOUNG ADULT WOMEN

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Descriptors: close relationships, cognitive

Childhood maltreatment is associated with aggression and the tendency to develop a hostile attribution bias (HAB) in adulthood (Thompson, 2008). Parent-child relationship quality has been shown to play a crucial role in the development of early schemas: cognitive models used to decode the external world (Muris, 2006) which may have implications for the development of a HAB (Healy et al., 2015). The current analysis tested the hypothesis that 1) low childhood parental warmth is associated with a greater HAB in young adult women and 2) this association would be accounted for by internal schemas related to mistrust and emotional inhibition. Ethnically diverse young adult women (N=163), aged 18-35, completed the Parental Bonding Inventory Warmth Subscale; the Young Schema Inventory; and the Social Information Processing, Attribution and Emotion Response Questionnaire. A multiple mediator model was tested using SPSS PROCESS Macro. Results indicated that lower parental warmth was associated with mistrust (B=-.34, p<.001) and emotional inhibition (B=-.22, p=.004) schemas. There was no direct association between parental warmth and HAB; however, there was a significant indirect association between warmth and a HAB via greater endorsement of the mistrust schema [bootstrap 95% CI: -.08, -.01]. The emotional inhibition schema was not associated with a HAB. These results shed light on the experience of women and possible treatment plans for aggression by focusing on relational history with regard to cognitive thought patterns.

POSTER B-52
QUANTIFYING THE SWEET SPOT OF EMOTIONAL INTENSITY IN THE PERCEPTION OF VOCAL AFFECT

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Descriptors: cognitive, neuroscience, language, methods, social

Human vocalizations are one of the most potent sources of information to signal emotion. Listeners are, generally speaking, quite good at interpreting nonverbal affective vocalizations, such as laughter, crying, moans, or screams. One commonplace assumption, plausibly, is that the ability to infer expressed meaning increases the stronger the underlying affective state. Whether such a generalization is correct, however, is not clear. Remarkably, although the notion of emotional intensity has been a central aspect in innumerable theoretical accounts, the empirical basis remains rather underdetermined, and, critically, builds on diverging evidence. Here we show a more comprehensive and parametrically varied study of vocal emotion to disambiguate some foundational questions on expression and perception of positive as well as negative affective states. We first develop a new, ecologically valid database of 480 non-speech emotional expressions, ranging from low to peak emotional intensity, to be able to address the influence of intensity on perceptual evaluation. Next, in three experiments (n=30 each), we demonstrate, capitalizing on different designs, the interaction between emotional intensity, emotion judgements, affective ratings of valence and arousal, and perceived authenticity. Finally, we show how a more nuanced understanding of intensity has direct implications for our theories of emotion communication. We challenge the notion of diagnostic emotion expression and demonstrate how, among all, especially peak emotion is not the easiest human experience to be inferred.

POSTER B-54
EARLY PUBERTAL TIMING PREDICTS ONSET AND RECURRENCE OF DEPRESSIVE EPISODES IN BOYS AND GIRLS

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Descriptors: child development, mental health, clinical

Background: Recurrent depressive episodes during adolescence result in significant impairment and increased risk for subsequent adverse outcomes throughout the lifespan. Evidence suggests that early pubertal timing predicts the onset of depressive episodes (particularly for girls); however, it is not known if pubertal timing prospectively predicts recurrent depressive episodes in youth. Methods: At baseline, 603 youth (56% female, at baseline: mean age=12.09, standard deviation=2.35) reported on their pubertal development. Youth and their parents completed a semi-structured diagnostic interview at baseline, and then every six months for a period of 36 months. Results: Controlling for past history of depression, Cox proportional hazards models examined whether earlier pubertal timing predicted (1) days to first depressive episode from baseline and (2) days to a second (recurrent) depressive episode from the end of the first episode. For both boys and girls, early pubertal timing predicted the onset of the first depressive episode after baseline, as well as the second depressive episode from the end of the first depressive episode.Conclusions: This study adds to the understudied topic of risk factors for recurrent depression in adolescence and affirms the importance of examining pubertal timing as a risk factor for both depressive symptoms and the onset of depressive episodes. Our findings significantly advance the literature on depression recurrence in adolescence, and reinforce the importance of considering the impact of early pubertal timing on both girls and boys.

POSTER B-57
CULTURAL VARIATION IN SPONTANEOUS MENTAL INFERENCE

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Descriptors: social, culture, cognitive, language

Inferring the mental states of other people, including their emotions, is argued to be critical for social coordination, as it helps us understand and predict behavior. Yet evidence from emotion perception tasks in small-scale societal contexts suggests variation in this tendency. Here, we examine mental inference variation in large scale post-industrialized societies, building on prior findings that Chinese mothers use less mental state language with their children. We examined mental state inferences in three samples: 29 native Chinese participants in China, 20 Chinese students studying in the US, and 17 American participants in the US. Participants verbally described animated sequences of two triangles on screen, which varied in dynamics: moving randomly, moving in a goal directed manner (e.g., fighting), and moving interactively with implied mental states (e.g., surprising). Transcripts were manually coded for four types of language content, including references to mental states (e.g., "want", "think", "angry"). A Kruskal-Wallis test indicated that use of mentalizing words significantly differed between the three groups (H(2)=17.497, p=0.0001), with a mean rank of 9.11 for the American sample, 5 for the Chinese sample and, unexpectedly, 14 for the Chinese-US student sample. These results suggest there is variation between US and Chinese individuals in the tendency to spontaneously infer mind, hinting at culturally divergent pathways for social coordination. High mental state language use in Chinese students in the US suggests a contrastive acculturation effect.

Society for Affective Science

POSTER B-58
ATTENTIONAL CONTROL MODERATES THE EFFECT OF CHILDHOOD ADVERSITY ON PARENTING STRESS AND BEHAVIOR AMONG MOTHERS OF YOUNG CHILDREN

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Descriptors: close relationships, adult development, emotion regulation

For many, parenting a young child is a complex emotional experience. This can be further complicated for parents with a history of adverse childhood experiences (ACES) themselves, who are known to report more parenting distress and use harsher parenting behaviors. However, little work has investigated individual-level factors that may serve to buffer these high-ACES parents from such outcomes. Here, we present the results of a study designed to test one candidate factor: parent self-regulation ability. In a community sample of 89 biological mother-preschooler dyads, we assessed self-reported parent stress, observed nurturing parenting behavior during free play, and administered task measures of three different forms of self-regulation: emotion regulation, attentional control, and inhibitory control. Controlling for child age, sex, and externalizing behavior, mother ACES were positively associated with self-reported parenting stress, t=2.41, p=.018, and negatively associated with observed nurturing parenting behavior, t=-3.14, p=.002. Of the three candidate self-regulation forms, the associations between ACES and parenting stress and parenting behavior were both significantly moderated by lab measures of maternal attentional control (p-values<.037), but not emotion regulation or inhibitory control. These results suggest that attentional control may have a unique influence on both parenting affect and behavior among parents who experienced adversity in their own childhoods.

Society for the Study of School Psychology

POSTER B-59
FAMILY INTERACTIONS IN SCHIZOPHRENIA: THE EFFECT OF OXYTOCIN

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Descriptors: intervention, mental health, medicine

Family environments characterized by negative communication are a risk factor for poor outcome in schizophrenia and are an important intervention target. Few studies have directly assessed interactions between people with schizophrenia and their family members and none have examined drug interventions targeted toward the family environment. We investigated whether administering oxytocin, a hormone associated with social bonding and cooperation, to caregivers improves the quality of their in-lab interactions with a family member with schizophrenia. Dyads (N=22) of people with schizophrenia and a caregiver attended two study sessions one week apart. Caregivers were randomized to receive either intranasal oxytocin or placebo at the beginning of the first study session and received the other drug at the second session. The dyads were videotaped having conversations, including one about a point of conflict in their relationship. Research assistants coded the conversations on number of utterances contributing to either positive or conflictual communication. Oxytocin administration did not increase the proportion of positive and conflictual utterances out of total utterances (p's>.05). Symptoms, attachment style, and child-reported parental warmth or intrusiveness did not moderate the effect of drug (p's>.05). Results suggest that oxytocin may not acutely affect conversation quality in families of people with schizophrenia.

POSTER B-60
TESTING THE DIRECTIONAL INFLUENCE BETWEEN INTERPERSONAL RELATIONSHIPS AND EMOTION REGULATION: SUPPORT FOR A NEW APPROACH

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Descriptors: emotion regulation, close relationships

Existing research on affective experiences and interpersonal relationships focuses largely on how relationships influence emotions and how emotion regulation (ER) influences social outcomes. We aimed to extend this literature by studying how cognitive reappraisal (CR)—a prominent ER strategy—mediates the link between social relationships (SR) and positive emotions (PE). We examined three types of PE: high arousal PE (e.g., excited, inspired; HAPE), low arousal PE (e.g., calm, content; LAPE), and social PE (e.g., valued, connected; SPE). We conducted secondary data analyses on two existing databases. The first dataset included 4,822 high school students from Mexico (M=16, 54% female). They completed self-report measures of each construct at one time point. Mediation analyses using 5000 sample bootstrapping show that CR mediated the relationships between SR and HAPE, SR and LAPE, and SR and SPE with unstandardized indirect effects averaging .02. The second database included 107 undergraduate students from the U.S. (M=21, 47% female). They completed self-report measures of each construct across three time points. Analyses include SR at Time 1, CR at Time 2, and PE at Time 3, controlling for PE at Time 1. Mediation analyses using 5000 sample bootstrapping show that CR mediated the relationship between SR and LAPE (unstandardized indirect effect=.06), but not the relationships between SR and HAPE or SR and SPE. The findings have important implications for understanding the bi-directional influences of affective experiences and interpersonal relationships.

POSTER B-61
THE ROLE OF AFFECTIVE WORKING MEMORY IN AFFECTIVE FORECASTING AND EMOTION REGULATION

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Descriptors: cognitive, emotion regulation

The ability to accurately predict our future feelings, known as affective forecasting (AF), is important for effective decision making. Because these predictions are error prone, understanding the factors that contribute to individual differences in AF accuracy could improve the quality of decision making. We hypothesize that affective working memory (AWM), i.e. the ability to actively maintain and manipulate feeling states, is critical to the accuracy of affective forecasts. Initial findings from our group support this hypothesis: AWM was found to predict AF performance, whereas maintenance of non-affective information (e.g., visual working memory) did not. The present, pre-registered study (N=85) had two goals. The first was to replicate the selective association between AWM and AF using a multiple linear regression approach. The results indicate that better affect maintenance is related to more accurate predictions of future feelings (beta=.25, p=.022), whereas cognitive maintenance was unrelated to AF (beta=-.03, p=.802). The second goal was to investigate the relationships among AWM, AF, and emotion regulation (ER) strategies. While AWM was not associated with self-reported frequency of cognitive reappraisal or expressive suppression (ps>.05), a positive relationship was observed between cognitive reappraisal and AF (r=.29, p<.01). These results indicate that AWM contributes to the accuracy of affective forecasts and reveal a potential relationship between emotion regulation strategies and affective forecasting that warrants further research.

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POSTER B-63
A STATE MODEL OF NEGATIVE URGENCY: DO MOMENTARY REPORTS OF EMOTIONAL IMPULSIVITY REFLECT GLOBAL SELF-REPORT?

Feil, Madison—University of Washington; Halvorson, Max—University of Washington; Lengua, Liliana—University of Washington; King, Kevin M—University of Washington

Descriptors: personality, emotion regulation, methods, clinical

Negative urgency, the tendency to act on impulse when experiencing negative affect, is a personality trait that is a risk factor for a range of psychopathology. Although it is assumed that global self-report measures of trait negative urgency measure individual tendencies to act more impulsively when upset, little research has tested whether levels of trait negative urgency truly reflect individual differences in the association between real-world negative emotions and impulsive behaviors. In a sample of 222 high school and college students (age 16-21) assessed 3 times per day for 10 days, we tested whether momentary reports of negative affect were associated with three facets of impulsivity (acting on impulse, planning, and persistence), and whether the strength of that relation was stronger for those high on global self-reports of negative urgency. We then explored whether those effects differed depending on the type of impulsive behaviors or the specific negative emotion. Our findings suggest a robust within-person association between negative affect and acting on impulse (B=.16, p<.05), and to a lesser extent persistence (B=-.05, p<.05). However, the strength of this association was not predicted by global self-reports of negative urgency. Although preliminary, this suggests that global self-reports of trait negative urgency may reflect something other than a strong state-level association between negative affect and impulsive behaviors, such as a trait-level co-occurrence between emotionality and impulsivity.

POSTER B-64
NEGATIVE AFFECT AND SLEEP: A BIDIRECTIONAL STORY?

Eiroa Solans, Conrado—The College of St. Scholastica; ten Brink, Maia—Stanford University; Yan, Yan—Nanjing University; Schíne, Jonas—Oxford University; Bekir, Selin—Bogazici University; Manber, Rachel—Stanford University; Gross, James J—Stanford University

Descriptors: social, physiology, biomarkers

In this study, we tested whether the induction of negative affect would have a detrimental influence on sleep outcomes during an afternoon nap, and whether the nap would subsequently alter affect. Participants (N=44) were randomly assigned to watch either an immersive negative or a neutral video in a virtual reality (VR) environment, and then asked to take a 1-hour nap. Participants completed a baseline affect survey at the beginning of the study and affect surveys after the VR experience and the nap. We also collected ambulatory physiological and actigraphic data throughout the entire study. We found that although the manipulation induced differences in negative affect immediately post-VR (t=10.48, p<0.01), these differences did not impact sleep quality or total sleep time in either condition (p's>0.05). However, greater negative affect in the negative condition predicted longer time to fall asleep (B=0.36, p=0.03). Moreover, deep sleep (indexed by respiration) decreased by 8.7% in the negative compared to the neutral condition. In line with previous literature, we found that sleep reduced negative affect and increased positive affect, as well as cognitive and somatic calm after the nap for the negative relative to the neutral condition (all p's<0.01). Surprisingly, pre-sleep affect did not strongly influence other sleep outcomes, although sleeping respiration findings suggest that affect may influence subtler aspects of sleep architecture.

POSTER B-65
SURPRISING EFFECTS OF EMOTIONAL BUFFERING

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Descriptors: cognitive, mental health

In this study, we investigated the impact of positive emotions on stress. We hypothesized that inducing positive emotions following a stressful experience would mitigate stress, as it has been shown to facilitate recovery from stressful experiences in previous studies. First, college participants (N=120) were prompted to write about either a happy or neutral event in great detail. Afterwards, they were put through a social comparison stressor task in one of three levels of difficulty. Physiological measurements were taken before and after the emotion induction, as well as after the stressor. Findings show that happiness increases more for the positive condition than the neutral condition. A condition by difficulty ANOVA for frustration has shown significant effect for difficulty levels (F(2,114)=5.261,p=.007) but not for induction condition (F(1,114)=1.441,p=.232) or the interaction between the two (F(2,114)=0.746,p=.477). Additionally, further evidence contradicts our hypothesis: an increase in happiness during the induction is significantly associated with an increase in frustration during the stressor (r=.339, p<.001) collapsed across difficulty levels. Overall, we found that the buffering effect through emotional induction is weak and even counterproductive in mitigating stress. We hypothesize the induced happiness sensitize people toward emerging challenges through magnifying the stress for further exploration.

POSTER B-66
ROLE OF TOP-DOWN FACTORS IN EMOTION PERCEPTION: RELATIONSHIPS WITH POSITIVE SCHIZOTYPY

Donaldson, Kayla R—Stony Brook University; Larsen, Emmett M—Stony Brook University; Mohanty, Aprajita—Stony Brook University

Descriptors: clinical, cognitive

Predictive coding accounts of normal and abnormal perception emphasize the role of prior beliefs. Distortions of perception are often emotional in nature; however, the role of emotion-related prior knowledge on perception has not been examined in populations characterized by perceptual abnormalities, such as the schizophrenia spectrum. Hence, in the present study participants varying in positive schizotypy (N=88) completed a perceptual decision-making task in which cues provided information regarding salience (threatening or neutral) and probability (25, 50, or 75%) of upcoming threatening and neutral faces. Participants were told to use these cues to decide whether faces were threatening or neutral. Results revealed a cue-salience x cue-probability x positive schizotypy interaction (p=.02), such that at lower levels of schizotypy, higher probability threatening and neutral cues lead to better hit rate for identification of threatening and neutral faces. However, at higher levels of schizotypy, only higher probability neutral cues lead to better hit rate. Furthermore, higher probability cues lead to increased false alarm rate only for low, but not high, positive schizotypy (p<.01). Overall, results suggest an under-reliance on prior threat-related knowledge in perceptual decision making at higher levels of positive schizotypy. This study confirms the importance of top-down factors and emotion on perceptual decision-making, and demonstrates novel ways in which these processes may go awry in the schizophrenia spectrum.

POSTER B-67
LOWER NEED FOR COGNITION PROMOTES GREATER AUTONOMIC EMOTION REGULATION IN LATER-LIFE

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Descriptors: emotion regulation, adult development, physiology, biomarkers, cognitive

Socioemotional Selectivity Theory (SST) posits that as life is perceived as more time-limited, older adults tend to prioritize emotion regulation and de-emphasize learning from new challenges compared to younger adults (Carstensen, 2003). Older age (60+) is linked to a decreased desire to engage in intellectual challenges, (NFC; Need for Cognition-Cacioppo, Petty & Kao, 1984; Soubelet & Salthouse 2016), and interestingly, older age is also associated with reduced resting-state heart rate variability (HRV), a cardiac index of emotion regulation (De Meersman & Stein, 2007). However, the association between NFC and HRV across age has not been previously investigated. In this cross-sectional study, 37 younger and 34 older adults viewed a neutral film as resting-state HRV was collected (SD of frequency of NN intervals with differences across peaks>50 äó_ms), and later self-reported trait NFC. Results revealed a significant negative correlation between NFC and HRV for older adults, r(33)=-.38, p=.028, but not younger adults, r(36)=-.05, p=.781. While NFC has been suggested as a global protective factor promoting later-life positive outcomes (Stine-Morrow, 2007), our results support that lower NFC is associated with greater autonomic emotion regulation in older adults. This suggests that reliance on simpler emotion regulation strategies may perhaps be a compensatory mechanism supporting late-life well-being (Opitz et al. 2014). Future research should explore age-differences in HRV during use of specific emotion regulation strategies to clarify these preliminary findings.

POSTER B-68
AFFECTIVE VULNERABILITY REDUCES PERCEIVED SOCIAL NETWORK CONNECTIONS

Courtney, Andrea L—Stanford University; Zaki, Jamil—Stanford University

Descriptors: social, mental health, personality

How accurately do people identify their friends? To map social networks, we often ask people to explicitly identify their friends; but some affective characteristics can color social perception—sometimes in ways that accurately reflect reality (e.g., depressive realism) and sometimes in ways that discount social connections, as in loneliness. We incorporate personality and affective traits with network nominations to address whether these traits contribute to accuracy or bias in reported social connections. Students (N=191) nominated up to six close friends within their dorm and completed a battery of surveys. Factor analysis was used to reduce the set of traits to those reflecting affective vulnerability, social provisions, interpersonal approach, empathy, behavioral approach, social risk sensitivity, and narcissism. The affective vulnerability factor comprised a weighted measure of depression, anxiety, social anxiety, loneliness, self-esteem, intrinsic affect-worsening, personal distress, perceived stress, rejection concern, and emotional impulse strength. In a model predicting the number of outgoing friend nominations from the number of nominations received by dorm mates and each trait factor, only the factor reflecting affective vulnerability predicted outgoing nominations (beta=-0.22, t=-2.48, p=0.01). That is, affectively vulnerable individuals named fewer friends, when accounting for the number of people who named them as a friend. Affective vulnerability and negative self-views may bias social perception toward underestimating social connection.

POSTER B-69
AFFECT PREDICTS INTERTEMPORAL CHOICE IN DAILY LIFE

Cory, Liz—Northeastern University; Coleman, Matt—Northeastern University; Nielson, Catie—Northeastern University; Feldman, Mallory—University of North Carolina at Chapel Hill; Hoemann, Katie—Northeastern University; Khan, Zulqarnain—Northeastern University; Devlin, Madeleine—Northeastern University; Dy, Jennifer—Northeastern University; Barrett, Lisa F—Northeastern University; Massachusetts General Hospital/Martinos Center for Biomedical Imaging; Quigley, Karen S—Northeastern University; Edith Nourse Rogers Memorial Veterans Hospital; Wormwood, Jolie B—University of New Hampshire

Descriptors: behavioral economics, positive emotion

Recent studies suggest that an individual's valuation of immediate vs. future rewards changes with context, including current affective experience. To date, however, the influence of present affect on these valuations has been studied exclusively in the lab, where variability in affective experience is artificially constrained. In the present study, participants (N=50) completed a 14-day experience sampling paradigm in which they received multiple daily smartphone prompts triggered by sustained changes in heart rate. At each prompt, they rated their current valence and arousal and completed a temporal discounting question. We predicted that participants' in-the-moment discounting rates (i.e., how much their valuation of monetary reward decreases over time) would vary with their affective feelings in daily life. Using general linear mixed models, we found that current self-reported valence and arousal interacted to predict momentary discounting rates, controlling for delay length and immediate reward value, t(2470)=2.37, p=.018. For small and medium value rewards, higher arousal positive feelings were associated with lower discounting rates, whereas higher arousal negative feelings led to higher discounting rates. This pattern was reversed for large value rewards. These findings suggest that present affect can account for a significant portion of moment-to-moment variability in intertemporal choice in the real world. This research underscores the critical role of affect in a wide range of decisions and behaviors that rely on intertemporal valuation and impact well-being.

POSTER B-70
DISTRESS DECREASES PERCEIVED FUTURE VALUE OF SMALL REWARDS

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Descriptors: social, cognitive, behavioral economics

Prior studies have found that affective and emotional experiences can alter intertemporal choice. People experiencing gratitude preferentially choose larger future rewards over smaller immediate rewards, while people experiencing sadness or depressive symptoms prefer the opposite. Here, we examine whether psychological distress also influences intertemporal choice. Based on past findings, we predicted that participants would discount the future more following a stress induction compared to when in a more neutral affective state. As part of a larger study, participants (N=50) completed a temporal discounting task in two separate lab visits about 2-3 weeks apart. In the second visit, participants completed the mental arithmetic task from the Trier Social Stress Test prior to completing the temporal discounting task. In the discounting task, participants chose between immediate and future monetary rewards (e.g., $55 today or $75 in two months). As predicted, results indicated that the stress induction significantly increased temporal discounting rates, i.e., distress led to greater discounting of future rewards, F(1,47)=6.43, p=.02. We also found a marginal interaction between stress induction and monetary value, with distress having less impact on discounting rates when immediate monetary reward options were larger. These findings could clarify existing inconsistencies about the influence of distress on intertemporal choice, which has critical implications for making health-related decisions, pursuing long-term goals like investing, and regulating affect.

POSTER B-71
THE RELATIONS BETWEEN EMOTIONS AND INTERNALIZING SYMPTOMS: DISENTANGLING INTENSITY, FREQUENCY, AND GRANULARITY

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Descriptors: clinical, mental health

Empirical evidence shows that internalizing symptoms are associated with low pleasant emotion and high unpleasant emotion. The goal of the current study was to disentangle frequency, intensity, and granularity of both pleasant and unpleasant emotion, and to explore how each of these facets is associated with depression and worry. To address this goal, we conducted a 7-day daily diary study (n=309). When the facets of emotional experience were examined independently, both anhedonic depression and worry were significantly associated with intensity and frequency of both pleasant and unpleasant emotion. Anhedonic depression was not significantly associated with granularity of pleasant or unpleasant emotion. In contrast, worry was significantly associated with granularity of both pleasant and unpleasant emotion. When intensity, frequency, and granularity were examined simultaneously, anhedonic depression was significantly associated with intensity (standardized beta=-.24) (but not frequency; standardized beta=-.11) of pleasant emotion, and with both intensity (standardized beta=.33) and frequency (standardized beta=.38) of unpleasant emotion. In contrast, worry was associated with all facets of pleasant emotions (standardized beta's=-.17, -.14, and -.15), and with both intensity (standardized beta=.23) and frequency (standardized beta=.29) of unpleasant emotions. Results indicate that different facets of pleasant and unpleasant emotional experiences are differentially associated with depression and worry.

POSTER B-72
EMOTION DYNAMICS ACROSS ADULTHOOD IN EVERYDAY LIFE: OLDER ADULTS ARE MORE EMOTIONALLY STABLE AND BETTER AT REGULATING DESIRES

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Descriptors: emotion regulation, adult development, positive emotion

Older adults report experiencing improved emotional health, such as more intense positive affect and less intense negative affect. However, there are mixed findings on whether older adults are better at regulating emotion—a hallmark feature of emotional health—and most research is based on laboratory studies that may not capture how people regulate their emotions in everyday life. We used experience sampling to examine how multiple measures of emotional health, including affect intensity, dynamic fluctuations between affective states and the ability to resist desires—a common form of emotion regulation—differ in daily life across adulthood. Participants (N=122, ages 20-80) reported how they were feeling and responding to desire temptations for 10 days. Older adults experienced more intense positive affect less intense negative affect and were more emotionally stable, even after controlling for individual differences in global life satisfaction (p<.001). Older adults were more successful at regulating desires, even though they experienced more intense desires than younger adults (p<.001). In addition, adults in general experiencing more intense affect were less successful at resisting desires (p<.001). These results demonstrate how emotional experience is related to more successful emotion regulation in everyday life and provide unique evidence that emotional health and regulation improve with age.

POSTER B-74
TOUCH AS EMOTION REGULATION: A QUESTIONNAIRE TO ASSESS SOCIAL TOUCH AS A REGULATORY PROCESS

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Descriptors: emotion regulation, positive emotion, close relationships

Social touch is fundamental to social relationships; both theory and data suggest it can influence mood and stress responses. It is thought to regulate both subjective and physiological components of emotional responses, possibly by contributing to interoception. To test how individuals perceive and experience effects of social touch—whether it serves an emotion regulation function and enhances or inhibits other forms of regulation—we developed and tested a new measure, the Touch for Emotion Regulation Questionnaire (TERQ). We administered 90 items to 592 individuals in relationships. Exploratory factor analysis in this sample, item reduction, and confirmatory factor analysis in a second sample supported six 4-item subscales reflecting touch as regulation (seeking touch, giving touch, avoiding touch) and as contributing to other regulatory processes (suppression, reappraisal, distraction). TERQ subscales were associated with mental health indicators (depression, anxiety) and with emotion regulation strategies (reappraisal, suppression) in the expected directions, with positive attitudes toward touch associated with better regulation and less severe mental health symptoms. For example, the TERQ-enhances suppression subscale predicted depression (p=.001) and anxiety (p=.006) above and beyond general suppression (ps<.001) and reappraisal (ps<.001) per the Emotion Regulation Questionnaire. The TERQ will enable assessment of the degree to which individuals perceive and report interpersonal touch as a regulatory process and how touch intersects with other regulatory strategies.

POSTER B-75
CAREGIVERS' REACTIONS TO YOUTHS' NEGATIVE EMOTIONS: RELATIONS TO EMOTIONAL REACTIVITY AND EMOTION REGULATION

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Descriptors: emotion regulation, child development

Prior work suggests that caregivers' reactions to youths' emotions may relate to youths' emotion regulation (Eisenberger et al., 1998), but it is not clear if youths' emotional reactivity moderates this relationship. Here, we investigate how caregivers' non-supportive reactions (i.e. punishment) to emotions are associated with youths' emotion regulation and emotional reactivity using a novel behavioral task (hypotheses registered here: https://osf.io/3r6jq/). 227 youth (100% female) completed measures of emotion regulation (Gullone & Taffe, 2011) and emotional reactivity (Nock et al., 2008); their caregivers (92% female) completed a measure of reactions to their child's negative emotion (Magai & O'Neal, 2005). A subset of youth (N=131) completed an fMRI scan and cognitive reappraisal task (Oschner et al., 2004). Caregivers' global punishment scores were not significantly correlated with youths' self-reported emotion reappraisal, suppression, reactivity, nor reappraisal success (p's>.05), but reactivity on the behavioral task was correlated with suppression and reappraisal success (r=.228, -.203; p's<.05). Contrary to hypotheses, hierarchical regression results revealed that youth's reappraisal success was not associated with caregivers' punishment responses, youth's self-reported emotional reactivity, nor their interaction (p's>.05). While prior work linked caregivers' non-supportive responses to emotions and youths' self-reported emotion regulation (e.g., Buckholdt et al., 2014), our preliminary results suggest that it may not predict behavioral responses.

Society for Affective Science

POSTER B-76
GRATEFUL FOCUS: GRATITUDE INCREASES ATTENTION TO SOCIAL INFORMATION

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Descriptors: social, positive emotion

Gratitude is thought to play an important role in recognizing, building and maintaining social relationships (Algoe, et al., 2008; Barlett & DeSteno 2006; Wood et al., 2008). However, little is known about mechanisms that motivate these social effects of gratitude. One possibility is that gratitude increases an individual's attention to socially relevant information, leading to its downstream effects on social relationships. The present study examined gratitude's influence on social perception.Using a real-time emotion induction known to elicit gratitude (Barlett & DeSteno 2006), half of the participants (n=30 per condition) were made to feel grateful (Gratitude condition) while the other half were not (Neutral condition). After the emotion induction, participants completed a counting task that was surrounded by a series of social (biological motion) and nonsocial distractors (coherent motion or scrambled motion). Individuals' attention to distractor stimuli was calculated as errors on the counting task per type of distractor. A one-way MANOVA was conducted, which found a significant mean difference in errors between conditions (p=.032). Further tests revealed significantly more errors in the Gratitude than Neutral condition during biological motion (p=.021) but not for coherent or scrambled motion (both ps<.132). These results suggest that the experience of gratitude may increase the salience of social information, thereby turning an individual's attention to important aspects and opportunities in social relationships.

POSTER B-77
THE INFLUENCE OF EXPECTED REWARD, UNCERTAINTY, AND PREDICTION ERROR HISTORY ON MOMENTARY AFFECT AND DECISION MAKING

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Descriptors: behavioral economics, cognitive

The changes in affective experience influence decision-making under uncertainty. Here, using a risky-choice paradigm, we studied momentary affect as a function of recent rewards and prediction errors; and how affective fluctuations influence subsequent decision-making.In two studies (N=48 & 108), participants performed risky decisions (accepting or rejecting 50 mixed gambles each having 4 possible outcomes). They received feedback after every trial and then rated their momentary affective experience (valence & arousal). In a separate block, participants rated their anticipated affect if they would have played a given gamble in each trial. We used mixed models to predict risk-taking and momentary affect as a function of expected value (EV), uncertainty (U), and prediction error (PE). Risk-taking increased with increasing EV of the current gamble (log Odds Ratio=3.7, se=.17, p<.01). An increased PE in the previous trial led to a decreased risk-taking in the current trial (log Odds Ratio=-0.13, se=.05, p=.01). Increasing EV and a positive PE led to increased pleasantness, while U and the size of the PE were positively associated with arousal. Also, the effect of EV on risk-taking was partially mediated by anticipated positive affect; and the effect of the previous PE on risk-taking was partially mediated by experienced valence and arousal at the time of the decision.Taken together, we show that affect fluctuates with recent rewards and prediction errors, and then it influences behavior in the current decision context together with anticipated affective experience.

POSTER B-78
CAN REASON OVERCOME DISGUST? IT DEPENDS ON THE NATURE OF CONTACT

Armstrong, Thomas—Whitman College; Brown, Zoe—Whitman College; Danielson, Siri—Whitman College; Delgado, Nikki—Whitman College; Leong, Daniel—Whitman College; Antilla, Alissa—Whitman College; Weitzel, Ben—Whitman College

Descriptors: emotion regulation, clinical, intervention

Sensory qualities play an outsize role in eliciting disgust. For example, participants refuse to eat fudge shaped like dog poop, despite being aware of the illusion, leading some to argue that disgust is impervious to reason. In three experiments, we tested the extent to which corrective information about an object can reduce disgust. In Experiment 1 (N=240), we presented participants with images of fake poop and a fake rock that looked real. Participants in a treatment condition learned the objects were fake, whereas a control condition received no corrective information. Before and after the treatment, participants rated the objects and viewed them side-by-side while gaze was recorded, providing an implicit disgust measure. Corrective information reduced self-reported disgust to the fake poop and increased willingness to pick it up and look at it, Fs>11, ps<.001. Experiment 2 (N=525) sought to determine if disgust would show greater resistance to corrective information in relation to oral contact. Experiment 1 was replicated in an online sample, and participants reported how willing they were to touch, smell, or mouth the objects. Consistent with hypotheses, the effect of corrective information on willingness to contact the fake poop declined as contact moved from touching, to smelling, to mouthing the objects, F (2,1046)=109.2, p<.001. Together, these findings suggest that disgust may be more permeable to reason than previously believed. Critically, disgust may be "cognitively impenetrable" only in the realm of oral incorporation.

POSTER B-79
INVESTIGATING LINGUISTIC ABSTRACTION IN RELATION TO PSYCHOLOGICAL DISTANCING AND EMOTION REGULATION

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Descriptors: language, emotion regulation, mental health

Emotion regulation is crucial to mental health, motivating research on ways to facilitate this valuable affective skill. Prior work in our lab shows that "distancing" one's language (i.e., shifting word use to separate oneself from the here and now by reducing the use of "I" or present-tense verbs) is associated with more successful emotion regulation. However, construal-level theory (CLT) posits that increasing psychological distance should also shift mental representations to be more abstract (i.e., more focused on higher-order features rather than on concrete characteristics). Here, we revisited data from Nook, Schleider, and Somerville (2017) to test whether a linguistic measure of abstraction relates to psychological distancing and emotion regulation. In Study 1 (N=217), participants verbalized their thoughts during a classic cognitive reappraisal task; in Study 2 (N=464), participants wrote about negative images using either psychologically "close" or "distant" language. In line with CLT, we found that (i) linguistic measures of psychological distancing and abstraction are highly correlated (beta=.59, p<.001), (ii) linguistic abstraction increases when people regulate their responses to negative images (p=.001), (iii) instructing participants to distance their language by not using the word "I" increases linguistic abstraction (p<.001), and (iv) linguistic abstraction during regulation correlates with regulation success (beta=.14, p=.035). These results suggest that merely changing the abstraction of one's language may be a strategy for reducing negative affect.

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POSTER B-80
THE ROLE OF RACE IN DISCRIMINATION AND NEGATIVE AFFECT

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Descriptors: social, emotion regulation, mental health

Perceived discrimination refers to the subjective experiences of unfair treatment based on one's racial/ethnic affiliations or phenotypic characteristics. Many studies have linked experiences of discrimination to depression. However, a focus on specific affect outcomes such as depression ignore general emotional outcomes that may precede specific psychopathology. Further, it is worth teasing apart the unique effects of daily experiences of discrimination on emotionality from chronic exposure to discrimination. The current study examines the role of race as a moderator on the relation between perceived racial/ethnic discrimination type (lifetime vs. daily) and negative affect. The sample (n=5349) is drawn from the second wave of the Midlife in the United States (MIDUS). African Americans report greater instances of both lifetime and daily experiences of discrimination compared to Latinx and White Americans. There was an interaction effect between race and lifetime discrimination for African Americans [b*=-.34, t(10)=-6.07, p<.001]. Similarly, there was an interaction between race and lifetime discrimination for Latinx individuals [b*=.03, t(10)=2.26, p=.024]. Race did not moderate the relation between daily discrimination and negative affect for either racial group (ps>.10). The findings point to a more nuanced relation between type of discrimination experienced and negative affect such that race moderates the relation between perceived lifetime discrimination and negative affect.

POSTER B-81
WHAT REALLY MATTERS: LOWER CONTROL AMPLIFIES LIFE SATISFACTION FOR WOMEN IN RELATIONSHIPS WITH HIGHER PARTNER AFFECTIVE SOLIDARITY

Kellam, Heidi J—Claremont Graduate University

Descriptors: close relationships, emotion regulation, positive emotion, social

Research on married individuals has shown partner affective solidarity (solidarity), defined as high support and low strain from the partner, to significantly contribute to life satisfaction, especially for women. Sense of control (control), defined as high personal mastery and low perceived constraints, has also been positively associated with life satisfaction. It was predicted that high control would attenuate the relationship between lower solidarity and lower life satisfaction among women; however a different, surprising relationship was observed. Data from married women who participated in the third wave of the MIDUS study (N=922) were examined using a multiple linear regression to assess the degree to which control interacted with the association of solidarity with life satisfaction, with the combined effect of control and solidarity providing a better model fit, F(3,918)=172.87, p<.001, R squared=.36. A significant interaction was found, Beta=-.61, p=.003, such that the lower the control, the higher the life satisfaction when solidarity was high. There was no difference in life satisfaction amongst those with low solidarity. Thus, rather than high control attenuating low life satisfaction in low solidarity relationships, low control amplified life satisfaction for those in relationships with higher solidarity. Theoretical implications for these findings will be discussed.

POSTER B-82
MULTIPLE LARGE-SCALE NEURAL NETWORKS UNDERLYING EMOTION REGULATION

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Descriptors: emotion regulation, neuroscience, social neuroscience

Recent models suggest emotion generation, perception, and regulation rely on multiple, interacting large-scale brain networks. Despite the wealth of research in this field, the exact functional nature and different topological features of these neural networks remain elusive. Here, we addressed both using a recently developed data-driven meta-analytic grouping approach. We applied k-means clustering to a large set of previously published experiments investigating emotion regulation (independent of strategy, goal and stimulus type) to segregate the results of these experiments into large-scale networks. To elucidate the functional nature of these distinct networks, we used functional decoding of metadata terms (i.e. task-level descriptions and behavioral domains). We identified four large-scale brain networks. The first two were related to regulation and functionally characterized by a stronger focus on response inhibition or executive control versus appraisal or language processing. In contrast, the second two networks were primarily related to emotion generation, appraisal, and physiological processes. We discuss how our findings corroborate and inform contemporary models of emotion regulation and thereby significantly add to the literature.

POSTER B-83
THE EMOTIONAL REACTION TO SUICIDE

Kollareth, Dolichan Manuel—Boston College; Russell, James A—Boston College

Descriptors: moral, cognitive

We examined judgments made by someone reading about a person killing him or herself. As a paradigm case of self-harm, the act of self-killing has been hypothesized to be a violation of a distinct set of moral norms called purity and, as such, to elicit disgust. Participants indicated their emotional reaction to and immorality judgment of a story protagonist killing him or herself. Sadness, not disgust, was the modal emotional reaction. Individual differences in rated disgust, but not in grossed-out, predicted immorality judgments.

POSTER B-84
TIME OF DAY, SLEEP, AND DIFFICULTY INHIBITING IRRELEVANT AFFECTIVE STIMULI

Lam, Jovian C—University of Notre Dame; Yoon, K Lira—University of Notre Dame

Descriptors: cognitive, clinical

Sleep affects difficulty inhibiting irrelevant information (i.e., intrusion effect). However, the relations among sleep, time of day and intrusion effects for affective stimuli are poorly understood. As sleep debt accumulates during the day, dampening the benefits of recovery sleep, we predicted higher intrusion effects in the afternoon (vs. morning) for both negative and positive stimuli. Given that sleep loss is related to hypersensitivity to negative information, we further predicted intrusion effects for negative information to be higher in the afternoon (vs. morning).We recruited 24 adults to participate in an in-lab sleep study with baseline, sleep restriction, and recovery phases. On the last day of each phase, participants completed the modified Sternberg Task to assess intrusion effects in the morning and afternoon. A multilevel model examining the effects of phase, time of day, and valence on intrusion effects within each individual yielded a significant time x valence x recovery phase interaction (beta=93.97, t-value=2.33, p-value=.02). In the morning, intrusion effects for positive stimuli were lower in the recovery (vs. non-recovery) phase; intrusion effects for negative stimuli did not differ between the recovery and non-recovery phases. In the afternoon, intrusion effects for both negative and positive stimuli did not differ between the recovery and non-recovery phases. Results suggest that restorative sleep allows healthy individuals to exert better cognitive control over irrelevant positive information in the morning, but not in the afternoon.

POSTER B-85
SOCIAL EXCLUSION AS A SOURCE OF COLLECTIVE NARCISSISTIC HYPERSENSITIVITY

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Descriptors: social neuroscience, emotion regulation, social, political, neuroscience

Social exclusion impairs psychological and physical health, often eliciting an aggressive reaction. The experience of exclusion intensifies when resulting from one's group membership, yet its consequences and the potential interventive strategies are not well understood. Here, we aimed to understand the effects of group-based exclusion by identifying its neural correlates and by examining how its effects are influenced by collective narcissism, a belief in the unrecognized greatness of the ingroup, characterized by a resentment for the lack of recognition and linked to a hypersensitivity to exclusion. Functional MRI scans were obtained using a 3T scanner, where all participants observed games of intergroup-Cyberball creating the context of inclusion and exclusion. The results indicate an increased activation in the temporal parietal junction during exclusion in comparison to inclusion. This brain region is associated with social knowledge, perspective taking, and theory of mind. High scores on the collective narcissism scale were further related to significant BOLD signal changes in response to exclusion vs. inclusion in the ventral anterior cingulate cortex, an area related to the perception of distress during social exclusion. The implications of the present results and future directions are discussed.

POSTER B-86
PROMOTING RESILIENCE IN YOUNG ADULTS FROM MIXED LEGAL STATUS FAMILIES

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Descriptors: culture, mental health, positive emotion

Individuals from families that have members with different immigration statuses are at an increased risk of anxiety problems, potentially as a result of immigration-related stress (Alif et al., 2019). Less is known about protective factors that promote well-being in this population. Research has shown that higher social support from one's community may be protective for under-represented groups (Hurd et al., 2018), suggesting that social self-worth (i.e. perceptions of mattering or deservingness of social resources) may also be associated with lower anxiety. Engaging in coping efficacy, a form of resilience, has been found to buffer the effects of stress and has been linked to positive psychological outcomes among young adults (Smith et al. 2016). The current study tested this question in an ethnically-diverse sample of young adults from mixed status families. It was expected that low social self-worth would be associated with greater generalized anxiety and that coping efficacy would account for this association. Young adults (N=231; Mage=22; 78% Female; 65% Latinx) completed self-reported measures of social self-worth, coping efficacy, and anxiety. As expected, higher social self-worth was related to lower anxiety (B=-.21, p=.002) and greater coping efficacy (B=.32, p<.001). Coping efficacy partially accounted for the association between social self-worth and anxiety (95% CI: -1.58, -.32). Findings shed a light on the importance of the role of social self-worth and coping efficacy in promoting resiliency among young adults from mixed legal status families.

POSTER B-87
THE GOOD, THE BAD, AND THE PLEASANT: THE ROLE OF THE VMPFC IN HEDONIC AND EVALUATIVE EMOTION KNOWLEDGE

Lee, Kent M—Northeastern University; Lee, Alex S—Pomona College; Satpute, Ajay B—Northeastern University

Descriptors: neuroscience, emotion regulation

Emotion knowledge can guide the emotions a person cultivates or regulates. The ventromedial prefrontal cortex (vmPFC) has been implicated in emotion knowledge and hedonic and evaluative judgments. These two dimensions have often been conflated as valence but are distinct. For example, lust may be viewed as pleasurable but bad in some religious contexts. Given the role of the vmPFC in regulating activity in subcortical structures (e.g., the amygdala) during emotion regulation, we predicted that the vmPFC may be more involved in attending to the evaluative vs. hedonic dimension of emotion. We presented emotion words to participants (N=25) in the scanner. In one set of tasks, participants judged the pleasantness vs. unpleasantness of these emotions. In another set of tasks, participants evaluated the goodness vs. badness of these emotions. We found greater activity in the vmPFC when participants made evaluative vs. hedonic ratings, P<.05, FWE corrected. Response time did not differ by task, t (24)=.89, p=.38, suggesting that it is unlikely that task difficulty accounted for this effect. Consistent with its implication in evaluation, our findings suggest that activity the vmPFC is particularly sensitive to the evaluative (vs. hedonic) aspect of emotion knowledge. Attention to both hedonic and evaluative aspects of emotion likely are important when people are deciding whether to regulate emotion. Future work might further tease apart attention to hedonic vs. evaluative aspects of emotion during emotion regulation and their underlying neural correlates.

POSTER B-88
CULTURAL DIFFERENCES IN FACIAL ACTION UNITS FOR BASIC EMOTION CATEGORIES: A COMPARATIVE ANALYSIS BETWEEN KOREAN AND WESTERN FACE DATASETS BY USING AN AUTOMATED FACIAL ACTION CODING SOFTWARE

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Descriptors: culture, cognitive

It has been assumed that there are universal emotion-specific facial muscles and extracting facial action units has been widely used to estimate emotion expressed in faces. However, it is not clear whether facial action units are consistent across different cultures. Here, to answer this question, we conducted a comparative analysis between Korean and Western face datasets using an automated facial action coding system (FaceReader8, Noldus). We analyzed two published Korean face datasets (Kim et al., 2011, Lee et al., 2013), JACFEE (Matsumoto & Ekman, 1988) and KDEF (Lundqvist et al., 1998) for seven basic emotion categories (Happy, Sad, Fearful, Angry, Disgusted, Surprised, and Neutral). First, we found that the matching scores for the Korean datasets were very low for several emotion categories (64% for Disgusted, less than 50 % for Sad, Fearful, and Angry) compared to JACFEE and KDEF. Second, emotion such as Happy (AU 6, 12, 25) and Surprised (AU 1, 2, 5, 25, 26) activated the similar action units across different cultures. In contrast, action units activated by emotion such as Angry and Fearful were not consistent across cultures. Compared to JACFEE and KDEF, the Korean datasets activated strongly the lower parts of the face (AU 25, 26) and weakly the upper parts of the face (AU 4, 5). Our results suggest that there are cultural differences in facial action units expressed by negative emotions and call for a consideration of including culture-specific facial action units when estimating facial emotion.

POSTER B-89
DISENTANGLING THE ROLES OF ALEXITHYMIA AND INTEROCEPTION IN ACUTE STRESS

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Descriptors: physiology, biomarkers, social, mental health

Growing work seeks to disentangle the relation between alexithymia (difficulty understanding and expressing emotions) and interoceptive sensibility (self-reported awareness and comfort with bodily sensations; e.g., Zamariola et al., 2018). We tested whether higher alexithymia and lower interoceptive sensibility work together to exacerbate the stress experience. Young adults (N=250) completed the TAS-20 (Bagby et al., 1994; subscales: externalizing, difficulty describing, difficulty identifying) to assess alexithymia and also the MAIA assessing body attention vs. body trust (Mehling et al., 2012). In a second session, participants underwent the Trier Social Stress Test and self-reported their affect and appraisals. Hierarchical regressions showed that lower body trust (but not body attention) predicted higher negative affect and appraisals (ps<.05). However, when adding the TAS facets into the same model, greater difficulty identifying feelings was also associated with greater negative affect and appraisals (ps<.01). In a follow-up mediation, we found that difficulty identifying feelings was predicted by lower body trust (p<.0001) and that difficulty identifying feelings mediated the effects of low body trust on negative affect and appraisals (c': p=.001, total: p=.035). Altogether, findings suggest that people with low body trust also appear to have greater difficulty identifying their feelings, which in turn predicts higher subjective stress. Implications for emotion granularity, stress, and well-being are discussed.

POSTER B-90
THE RELATIONSHIP BETWEEN PREVIOUSLY EXPERIENCED TRAUMA AND AVOIDANCE/INTRUSION RESPONSES TO THE 2016 U.S. PRESIDENTIAL ELECTION: IS ATTENTION BIAS INVOLVED?

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Descriptors: mental health, clinical, political, intervention, cognitive

The 2016 U.S. presidential election was clinically distressing for many young adults, particularly women of color (Hagan et al, 2018). The current study explored a possible link between trauma history, and avoidance and intrusion responses to this event. Studies show that people with a negative attention bias (i.e. attention away from threatening stimuli) tend to experience trauma-related symptoms of avoidance (Ruiter & Brosschot, 1994) and intrusion (Elsesser et al, 2004). As such, this study hypothesized that higher severity of child trauma would be associated with greater intrusion and avoidance reactions to the election among those with a negative attention bias. Young adult women (n=151; Mean age=22; 58% Latinx, 45% Asian/Pacific Islander, 38% White) completed measures of child trauma and post-traumatic symptoms related to the 2016 election. Attention bias was measured using a Dot-Probe task (TAU/NIMH). Despite the fact that more than a third of the sample scored in the clinical range on avoidance and intrusion symptoms to the election, severity of child trauma was not found to be associated with intrusion (p=.459) or avoidance (p=.814) related to the election. There was also no evidence of moderation by negative attention bias. Although it might be inferred that individuals with a history of trauma would exhibit greater distress or post-traumatic symptoms following subsequent negative events, these findings suggest that interventions for event-related post-traumatic responses would benefit all of those affected, not especially those with previous trauma.

POSTER B-91
INTERPERSONAL MECHANISMS FOR THE MAINTENANCE OF SELF-CRITICISM: EMOTION EXPRESSION, EXPRESSIVE SUPPRESSION, AND SELF-CONCEALMENT

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Descriptors: mental health, positive emotion, emotion regulation

This paper focused on identifying patterns of emotional expression that may account for the relationship between self-criticism and social disconnection. In particular, the study examined whether self-criticism was related to three aspects of emotional openness and expressivity—increased expressive suppression, reduced expression of positive emotion, and increased self-concealment—and whether these variables, in turn, predicted lower levels of social belonging. Regressions and structural equation modeling were used to analyze self-report data from a general community sample (n=302). Results showed that self-criticism was associated with greater expressive suppression, more self-concealment, and reduced expression of positive emotion, even after controlling for depressive symptoms and the tendency to feel emotions intensely. Results were not supportive of our prediction that expressive suppression would mediate the relationship between self-criticism and reduced belonging. However, a multiple mediator model showed that self-concealment and reduced expression of positive emotion, combined, partially mediated the relationship between self-criticism and social belonging. Overall, results were strongest that reduced expression of positive emotion mediates the relationship between self-criticism and lower feelings of social belonging.

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POSTER B-92
MULTIMODAL AUTOMATIC EMOTION RECOGNITION FOR CONTENT CONSUMERS ASSESSMENT

Malygina, Mariya—National Research University Higher School of Economics; Neurodata Lab LLC; Perepelkina, Olga—Neurodata Lab LLC; Popenova, Polina—Neurodata Lab LLC; Churikova, Marina—Neurodata Lab LLC; Lomonosov Moscow State University

Descriptors: computational science, physiology, biomarkers, social

Emotion recognition based on video modality only is challenging when minor visual changes in facial expressions are observed. To detect complex states with low facial expressiveness, heart rate features were tested. Participants (N=14) were recorded while watching validated video for mood induction. As a case of content consumption, viewing video releases minimal changes in facial mimic despite elicits moderate felt affect. Photoplethysmography (PPG) and electrocardiography (ECG) signal was recorded synchronously with video for each subject. Valence-arousal continuous annotation of video records was obtained from participants and observers (N=5) with 364 minutes of annotated data in total. Automatic emotion recognition through facial expression was performed and compared with self-annotations and observers annotations. Extracted facial features are not enough for human observers (accuracy=0.60, ICC=0.41), as well as for automatic classifier (accuracy=0.39) to make a successful classification for positive, negative and neutral state, hence a mismatch between felt and perceived emotions was revealed. Classifier performed better if observers annotations were taken as ground truth (accuracy=0.52) compared to self-annotations (accuracy=0.39). There was a significant difference (t(28)=5.23, p<.001) between neutral records and records with mood induction on ultra low spectral frequencies of ECG. Since PPG and ECG signals are strongly correlated, remote heart rate monitoring by video is a potential technique for multimodal classification and state assessment in affective computing.

POSTER B-93
CHARTING MENTAL REPRESENTATIONS OF THE AFFILIATION SMILE: A DATA-DRIVEN APPROACH

Martin, Jared D—New York University; Niedenthal, Paula M—University of Wisconsin--Madison

Descriptors: computational science, methods, cognitive

There are at least three kinds of smiles, each of which is physically- and functionally-distinct: reward smiles reinforce desired behavior; affiliation smiles signal approachability; dominance smiles establish or maintain social hierarchies. Despite each smile type eliciting distinct physiological and behavioral responses, participants frequently mislabel affiliation smiles in perceptual tasks. To understand this, we combined machine learning with crowd-sourced data collection to chart mental representations of affiliation smiles. We collected six judgements (happy, fake, agreeable, polite, trustworthy, reassuring) of 103 affiliation smiles from over three thousand participants (N=3,039). In conjunction with automated facial expression analysis, we tested a) within-judgment facial movement associations, and b) between-judgment mental-representational similarity. Results indicate polite (p=.03), trustworthy (p=.01), and reassuring (p=.03) judgements are related to physical features of affiliation smiling, and these judgments are similarly mentally represented. We highlight the flexibility of our analytic approach, and recommend its use for challenging problems in research on facial expressions.

POSTER B-94
IT FEELS GOOD TO WANT NOTHING: LOW APPROACH MOTIVATION AND LOW AROUSAL POSITIVE AFFECT

McManus, Maria—Claremont Graduate University; Siegel, Jason T—Claremont Graduate University; Nakamura, Jeanne—Claremont Graduate University

Descriptors: positive emotion, emotion regulation

Arousal and approach motivation have long been considered independent dimensions of affect, though few studies have examined the relationship between them. We investigated this relationship in positive affect, in particular the relationship between low approach motivation (wanting nothing, avoiding nothing) and low arousal positive affect (LAPA: calm, relaxed, peaceful). Three studies (n=404, n=368, n=466) randomly assigned participants to high- and low-approach motivation inductions alongside a control. Levels of valence, arousal, high-arousal positive affect (HAPA: excited, enthusiastic, elated) and LAPA were then compared. The weighted mean effect size across three studies indicated that that high-approach motivation resulted in higher positive valence (d=.25, z=12.85, 95% CI [.21, .29]), higher arousal (d=.44, z=42.47, 95% CI [.42, .46]) and higher HAPA (d=.42, z=56.24, 95% CI [.41, .44]) than low approach motivation. Furthermore, low approach motivation resulted in higher LAPA (d=.25, z=32.29, 95% CI [.24, .27]) than high approach motivation. Associating HAPA with high-approach motivation and LAPA with low-approach motivation, adds dimension to the interpretation of prior studies involving HAPA and LAPA. Moreover, LAPA was higher in the low approach condition compared to the control condition (d=.27, z=31.13, 95% CI [.25, .28]), providing the first evidence that wanting nothing increases positive states such as calm, peacefulness, and relaxation.

POSTER B-95
STRESS RESTRICTS SOCIAL INTERACTION IN HUMANS: EVIDENCE FROM A NATURALISTIC MOBILE SENSING STUDY

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Descriptors: social, mental health, methods

Although mammals have a strong motivation to engage in social interaction, stress can significantly interfere with this desire. Indeed, research in non-human animals has shown that stress restricts social interaction, a phenomenon referred to as 'stress-induced social avoidance.' While stress and social disconnection are also intertwined in humans, to date, evidence for stress-induced social avoidance in humans is mixed, in part, because existing paradigms fail to capture social interaction naturalistically. To overcome this barrier, we combined experience sampling and passive mobile sensing methods with time-lagged analyses (i.e., vector autoregressive modeling) to investigate the temporal impact of stress on real-world indices of social interaction. We found that, across a two-month period, greater perceived stress on a given day predicted significantly decreased social interaction the following day. Critically, the reverse pattern was not observed (i.e., social interaction did not temporally predict stress), and the effect of stress on socializing was present while accounting for other related variables such as sleep, movement, and time spent at home. These findings help to substantiate the translational value of animal research on stress-induced social avoidance and lay the groundwork for creating naturalistic, mobile-sensing based human models to further elucidate the cycle between stress, sociality, and mental health.

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POSTER B-96
THE IMPACT OF FEEDBACK AND VAGAL FLEXIBILITY ON COOPERATION

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Descriptors: physiology, biomarkers, social

In a social environment, sensitivity to social cues may vary across individuals. Some individuals may be better at adapting their behavior accordingly following rejection cues, whereas others may be more rigid in their responses. Social sensitivity can help improve communication and increase cooperation. Vagal flexibility, a physiological predictor of social sensitivity, is characterized by a decrease in respiratory sinus arrhythmia from rest to tasks involving cognitive demand. To further understand the role of social sensitivity on cooperation, we examined how vagal flexibility and social feedback predict performance on a cooperative interaction task. Participants (N=152) received either accepting or rejecting evaluative feedback from a study confederate after giving a speech. Following social feedback, participants performed a cooperative task similar to the game Taboo. A moderated regression analysis showed there was no main effect with social feedback or vagal flexibility on cooperation task performance. However, there was an interaction effect of vagal flexibility by social feedback (p=.000) on task performance. Specifically, following rejecting feedback individuals with greater vagal flexibility had better performance, whereas participants who received positive feedback showed a negative association between vagal flexibility and performance. These findings suggest that social feedback moderates the relationship between vagal flexibility and performance on a measure of cooperative performance.

POSTER B-97
DEVELOPING BIVALENT NORMS FOR IAPS IMAGES

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Descriptors: methods, positive emotion, culture

The structure of affect remains a topic of heated debate. Although several recent models of affect endorse a bivalent structure, where positive and negative affect are independent, most commonly used databases of affective stimuli were normed using bipolar scales. Bipolar scales place positive and negative affect at opposite ends of a single continuum, and therefore limit participants from expressing mixed emotions, or co-occurring levels of positive affect (PA) and negative affect (NA). Evidence suggests this limitation results in conflating neutral and ambivalent images (Schneider et al., 2016). The current study is collecting new normative data for the widely used International Affective Picture System (IAPS; Lang et al., 2008) from a diverse sample. Participants rate each IAPS image separately for positivity and negativity on 9-point scales (1=not at all, 9=extremely). Preliminary results (n=145) suggest that some positive images (Mvalence>6) elicit co-occurring negativity (7/51 images MNA>2), while no negative images (Mvalence<4) elicited any levels of positivity (0/33 images MPA>2). "Neutral" images (5.5<=Mvalence<=4.5) showed large variation in positivity and negativity ratings, with some images eliciting moderate levels of negativity (e.g., 3/18 images MNA>3). Results will advance research on mixed emotions by identifying images that elicit co-occurring PA and NA. Further, new normative data will aid future researchers in developing truly neutral control conditions by identifying images that do not elicit either PA or NA.

POSTER B-98
HOW EMOTION REGULATION AFFECTS DIETARY CHOICE BY MODULATING VALUE SIGNALS IN THE VMPFC

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Descriptors: emotion regulation, cognitive, neuroscience

IntroductionEating "comfort foods" is often used as a strategy to cope with negative emotions. In this functional magnetic resonance imaging (fMRI) study, we tested how emotion regulation (ER) of incidental negative emotions affects subsequent food choices. Methods35 Participants (29f, mean age=23.1) first rated 140 food items on tastiness and healthiness. Participants were then tested using a standard ER task (conditions: Look and Reappraisal), followed by a food choice on each trial in which they rated their preference for eating food items after the experiment. We acquired 140 trials (in 5 runs) using a standard MRI sequence (3.0T). Additionally, machine learning was used to predict food preferences from food- and decision-maker attributes. ResultsParticipants chose healthy foods more often than unhealthy foods in both conditions (control: t(34)=5.70, p<0.001; Reappraisal, t(34)=8.44, p<0.001). This preference for healthy food was stronger after Reappraisal compared to control (t(34)=4.74, p<0.001). Food preferences were predominantly predicted by the food's palatability and ER success. Activity in the ventromedial prefrontal cortex (vmPFC) and striatum was parametrically modulated by preference and healthiness. Reappraisal modulated activity in these regions more strongly during consumption compared to rejection choices. ConclusionsER directly predicted food preference and modulated health- and preference related brain activity. In sum, ER had a positive effect on healthy dietary decisions.

POSTER B-99
LET'S CHILL OUT: HAPPINESS AND CALM DURING SOCIAL INTERACTIONS ARE RELATED TO SOCIAL MOTIVATION IN A DIGITAL HEALTH INTERVENTION FOR PEOPLE WITH SCHIZOPHRENIA

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Descriptors: intervention, mental health, clinical, social, positive emotion

While people with schizophrenia (SZ) report reduced social pleasure and motivation on clinical measures (e.g., interviews), they experience normative social pleasure in-the-moment (e.g., using experience sampling methods, or ESM). Few studies have examined the relationship between in-the-moment emotion experiences and social motivation in SZ. Twenty-four people with SZ participated in the Motivation and Skills Support (MASS) intervention, a smartphone-based intervention to help people with SZ work towards their social goals. Within the MASS application, participants received ESM survey questions related to their social experiences and social goal attainment twice daily for 2 months. Participants reported on emotions (happiness, excitement, calm, sadness, anger, anxiety) in the context of past social experiences, prior social goal progress, anticipated social goal progress, and social goal motivation. Participants reported more positive than negative emotion in social interactions (p<.001). Feeling calm during social interactions was related to more social goal progress (b=.13, p<.001). Sadness during social interactions was related to less social goal progress (b=-.11, p<.01) and less anticipated future social goal progress (b=-.09, p=.01). Happiness (b=.14, p<.01) and calm (b=.09, p<.01) during social interactions were related to more motivation to work toward one's social goal in the future. These results suggest that improving specific positive emotions during social experiences may help people with SZ improve their social motivation.

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POSTER B-100
SKIN CONDUCTANCE RESPONSE TO CONDITIONED THREAT CUES PREDICTS CHILDREN'S LATER COOPERATION DURING AN ITERATED PRISONER'S DILEMMA GAME

Mullins, Jordan L—University of California, Riverside; Glenn, Dana E—University of California, Riverside; Chita-Tegmark, Meia—Tufts University; Blake, Peter R—Boston University; Michalska, Kalina J—University of California, Riverside

Descriptors: child development, physiology, biomarkers, social, behavioral economics

Elevated autonomic reactivity has been shown to correlate with children's prosocial behavior. However, the few studies measuring autonomic response and prosocial behavior focused mainly on group differences. Little is known about the association between children's threat-evoked autonomic reactions and individual differences in the propensity to engage in prosocial behavior, including cooperation. The current study examines the relationship between children's skin conductance response (SCR) during threat conditioning and the degree to which they cooperate during a strategic game. Twenty-two pre-adolescent females to date (MAge=9.75, Œ±1.24yrs) completed a differential threat conditioning and extinction paradigm, during which one of two faces was paired with a scream. Averaged SCR across conditioned cues and phases was used to index conditioned responding. Following extinction, participants played three 10-round games of a Repeated Prisoner's Dilemma (PD) game, ostensibly against another child. When both parties cooperate in the PD game, combined payoff is maximized. However, players have an incentive to defect on partners with the possibility of achieving a higher individual payoff. Overall, higher SCR predicted higher cooperation (OR=1.51, SE=.20, 95% CI [1.12,1.90]). Lower SCR predicted more strategic responses and, in particular, cooperation after mutual defection. Our results suggest that individual differences in autonomic reactivity are an important component of cooperative behavior in repeated peer interactions.

POSTER B-101
CHILDHOOD ADVERSITY MODULATES MOTIVATION CIRCUITS AND REWARD EXPLORATION

Mullins, Teagan S—University of New Mexico; Romero, John—University of New Mexico; Eversole, Elizabeth—University of New Mexico; Costa, Vincent D—Oregon Health Sciences University; Hogeveen, Jeremy—University of New Mexico

Descriptors: neuroscience, child development, mental health, computational science, physiology, biomarkers

Adverse childhood experiences (ACEs) have been linked to psychopathology in adulthood, yet the mechanisms driving this relationship remain underspecified. Given the importance of reward processing in facilitating mental health, we examined the impact of ACEs on the motivation circuits that drive reward-guided behavior. Specifically, we collected fMRI data during a Bandit task used to study the neural circuits underlying reward exploration (choosing novel stimuli to reduce environmental uncertainty) and exploitation (choosing familiar stimuli with a known reward probability). Behaviorally, ACEs did not impact reward-value learning, and increased one's propensity to exploit stimuli by making decisions primarily based on 'immediate expected value' (IEV; probability that choosing a stimulus will lead to reward). Conversely, ACEs were associated with a reduced propensity to explore uncertain novel rewards based on their 'exploration bonus' (gain or loss in future rewards resulting from reward exploration). Model-based fMRI analyses revealed aberrant motivation circuit recruitment in participants with increased ACEs: including increased striatal activation as a function of IEV and decreased parahippocampal activation as a function of BON at the time of choice, and decreased activation of ventral and dorsal striatum at reward receipt. ACEs may cause aberrant development of the motivation circuits responsible for balancing the explore-exploit tradeoff, leading to an increased tendency to exploit familiar rewards and a decreased tendency to perform adaptive reward exploration.

POSTER B-102
THE INFLUENCE OF DAILY EVENTS ON EMOTION REGULATION AND WELL-BEING IN DAILY LIFE

Newman, David B—University of Southern California

Descriptors: emotion regulation, social, positive emotion

The present research examined within-person relationships among daily events, daily well-being, and the use of emotion regulation strategies. Participants (N=292) in two studies provided data at the end of each day for two weeks (3,701 daily reports). They reported the extent to which they reappraised and suppressed their positive and negative emotions, the types of daily events they experienced, and their well-being. Multilevel modeling analyses found that the number of daily positive events was positively related to reappraising positive (b=.38, t=6.31, p<.001) and negative emotions (b=.41, t=6.92, p<.001) and suppressing negative emotions (b=.22, t=3.52, p=.001) and was negatively related to suppressing positive emotions (b=-.12, t=2.40, p=.017). The number of daily negative events was positively related to suppressing positive (b=.30, t=5.02, p<.001) and negative emotions (marginally; b=.15, t=1.84, p=.067). Relationships between well-being and reappraisal of positive and negative emotions and suppression of negative emotions were stronger on days when more vs. less negative events occurred and when less vs. more positive events occurred. These results suggest that most emotion regulation strategies are employed when a day is going well but are most beneficial for people's well-being when a day is not going well. This work advances theoretical and empirical research in affective science by situating the effectiveness of particular emotion regulation strategies within the context of common daily events.

POSTER B-103
I GET HIGH (AROUSAL) WITH A LITTLE HELP FROM MY FRIENDS: THE EFFECT OF SOCIAL CONTEXT ON SELF-REPORTED AFFECT

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Descriptors: social, physiology, biomarkers

Context is a critical ingredient in the construction of emotional experience in everyday life. In a social context, other people signal salience and increase both attendance toward, and clarity for, emotion. However, scientists have rarely examined how social context influences experiences of valence and arousal in daily life. In the present study, participants received prompts on a smart phone triggered by significant changes in heart rate (in the absence of posture change or movement). During each prompting instance, participants provided their current self-reported valence, arousal, and social context. Based on previous research, we predicted that individuals would report higher arousal and greater positivity in social contexts compared to when alone. Multi-level models suggested that participants (N=50) reported significantly higher arousal in social contexts (B=2.06, SD=0.628, t(51.12)=3.28, p<0.002). However, valence did not differ within-person as a function of social context (B=0.283, SD=0.585, t(51.12)=0.484, p<0.631). These results suggest that the presence of other people produces greater felt activation, potentially due to the uncertainty that social agents introduce into the environment. These findings are consistent with a constructionist perspective and demonstrate the importance of social context in subjective emotional experience.

POSTER B-104

fMRI-READY VIRTUAL REALITY ADAPTATION OF CYBERBALL PARADIGM INCREASES SENSE OF SOCIAL PRESENCE AND OSTRACISM AND PERMITS MANIPULATION OF CONTEXTUAL SOCIAL CUES THAT MODULATE THE OSTRACISM EFFECT

Noor, Samantha—University of Southern California; Jayashankar, Aditya—University of Southern California; Aziz-Zadeh, Lisa—University of Southern California

Descriptors: social neuroscience, methods, social

Virtual Reality (VR) for social affective neuroscience research must: (1) be compatible with neuroimaging; (2) elicit a sense of social interaction; and (3) improve upon traditional paradigms. Our study aims to test the ability of VR to meet these conditions by directly comparing ostracism elicited by the classic cyberball ball toss paradigm compared to VR Cyberball. Sixteen adults completed: Inclusion and Exclusion runs in both traditional Cartoon and VR formats, and an additional exclusion condition in VR—Gaze Exclusion—in which the other players turned and considered the subject before rejecting them. The VR Cyberball game was designed to be compatible with fMRI: the subject's view is headlocked during the ball toss portion of the game. Despite restriction of haptic feedback, subjects reported an increased sense of spatial presence ($p=0.0004$), engagement ($p=0.001$), and ecological validity ($p=0.0004$) in VR Cyberball. Regarding social presence, subjects felt they were playing with a computer more in Cartoon Cyberball ($p=0.005$) and with a person in VR Cyberball ($p=0.008$). Within each modality, subjects felt more ignored in all Exclusion compared to Inclusion conditions ($p<0.01$), felt more excluded in the VR Gaze Exclusion versus VR Exclusion ($p=0.096$), and felt a lower sense of belonging ($p=0.02$) and self-esteem ($p=0.03$) in the VR Gaze Exclusion relative to Cartoon Exclusion. Future work will test the neural response to social ostracism as modulated by our VR Gaze Exclusion condition.

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POSTER C-1
HIGHER SOCIOECONOMIC STATUS PREDICTS LESS RISK OF DEPRESSION IN ADOLESCENCE: SERIAL MEDIATING ROLES OF SOCIAL SUPPORT AND OPTIMISM

Zou, Rong—Wuhan Sports University; Yuan, Jiajin—Southwest University; Xu, Xia—Wuhan Sports University

Descriptors: child development, mental health, personality, positive emotion

Family socioeconomic status (SES) is known to have a powerful influence on adolescent depression. However, the inner mechanisms underlying this association are unclear. Here, we explore this issue by testing the potential mediating roles of social support (interpersonal resource) and optimism (intrapersonal resource), based on the predictions of the Reserve Capacity Model (RCM). Participants were 652 adolescents (age range: 11-20 years old, Mean(age)=14.55 years, Standard Deviation=1.82; 338 boys (51.80%)) from two junior and two senior high schools in Wuhan, China. They completed questionnaires measuring family SES, perceived social support, trait optimism, and depression. Results showed, as predicted, (1) SES negatively predicted adolescent depression, (2) social support and optimism serially mediated the relations between SES and depression, consistent with the predictions by the RCM. Specifically, higher SES predicted greater social support and increased optimism, which in turn contributed to reduced depression. Our study provides important practical implications to the prevention and interventions of adolescent depression. Programs focusing on promoting adolescents' social support and the development of their optimism, together with efforts to provide material resources, may help make a difference in improving the mental health of adolescents confronting disadvantageous circumstances in early life.

POSTER C-2
INFLUENCE OF THREAT BIASES ON PERCEPTUAL DECISION MAKING IN ANXIETY: EVIDENCE FROM COMPUTATIONAL MODELING

Zhang, Xian—Stony Brook University; Imbriano, Gabriella—Stony Brook University; Jin, Jingwen—The University of Hong Kong; Mohanty, Aprajita—Stony Brook University

Descriptors: clinical, cognitive, computational science

Anxiety is characterized by its anticipatory nature clinically. However, our understanding of perceptual and attentional biases in anxiety is almost entirely based on behavioral or neural responses to stimuli. According to the predictive coding theory, human brain generates context-based predictions about incoming sensory information. Under this framework, anticipatory anxiety can be studied in terms of prediction-related biases. We used hierarchical drift diffusion modeling (HDDM) to determine measures by which threatening cues bias perceptual decisions regarding upcoming threatening and neutral targets. Furthermore, we examined whether intolerance of uncertainty (IU), a dispositional characteristic of anxiety disorders, relates to these measures of bias transdiagnostically across a sample of individuals diagnosed with generalized anxiety disorder (N=23), social anxiety (N=24), panic disorder (N=3), and no anxiety disorder (N=34). Participants performed a decision-making task in which they used threatening or neutral cues to discriminate between threatening and neutral faces. Our best fitting model (DIC=18644) showed that threatening cues biased the response towards a threatening face decision and reduced the decision-making threshold compared to neutral cues. IU was associated with an increased decision-making threshold, especially following highly predictive threatening cues (r=.22, p<.05). Our results clarify the computational mechanisms by which prior knowledge of threat biases perceptual decision making in anxiety.

POSTER C-3
INTEGRATIVE AND SUPPRESSIVE EMOTION REGULATION DIFFERENTIALLY STUDENTS' DAILY EMPATHY AND PROSOCIAL BEHAVIOR

Zaidman, Yael—Ben Gurion University of the Negev, Israel; Segalovitch, Chen—University of Haifa, Israel; Benita, Moti—Ben Gurion University of the Negev, Israel

Descriptors: emotion regulation, child development, positive emotion, education, learning

This study is based on self-determination theory's (Ryan & Deci, 2000) conception of adaptive emotion regulation, defines adaptive emotion regulation as integrative emotion regulation (IER; Roth, Vansteenkiste, & Ryan, 2019). In this emotion regulation style, people take interest in their emotions and explore them volitionally. It is often contrasted with emotional suppression (ES), in which people hide or avoid their emotions (Benita, Benish-Weisman, Matos, & Torres, 2019). Recently, in a cross-sectional study, Benita, Levkovitz, and Roth (2017) showed that IER, but not ES, was related to young adolescents' prosocial behavior through the mediation of empathy. The present study used a diary method to examine whether students' IER (vs. ES) is associated with daily reports of empathy and prosocial behaviors. Participants were 85 Israeli sixth grade students (55.4% girls, mean age=11.88 years) and their homeroom teachers. Students filled in a general survey reporting on their habitual emotion regulation styles. Then, on 10 consecutive days, they completed daily reports of their prosocial behavior and empathy. Teachers also reported on students' general prosocial behavior. Results from multilevel analyses demonstrated that children's habitual IER, but not ES, was positively associated with daily reports of empathy and prosocial behavior, and with teachers' reports of prosocial behavior. This study joins the growing evidence showing the benefits of IER and suggest that taking interest in one's emotions may be crucial to the ability to take interest in the other's emotions.

POSTER C-4
BOARD GAMES ON EMOTIONAL COMPETENCES FOR SCHOOL-AGE CHILDREN

Zaharia, Alexandra—Swiss Distance University Institute & University of Fribourg; Dell'Angela, Linda—University of Geneva; Lobel, Adam—University of Geneva; Sander, David—University of Geneva; Samson, Andrea C—Swiss Distance University Institute, University of Fribourg, University of Geneva

Descriptors: emotion regulation, child development, education, learning, positive emotion

Board games are a particular type of play with the potential to promote the development of emotional competences (EC). Our study aimed at developing and testing three theory-driven board games for children, each focusing on one EC: emotion recognition, differentiation, and regulation. We first explored the players' game experience during EC versus off-the-shelf games. Second, we investigated whether children's EC would predict the perceived game experience (e.g., difficulty, effort).Children (N=177, age range: 8-12) completed the Geneva Emotion Recognition Task and self-reported questionnaires on emotion awareness and regulation, assessing their EC. Then, they were assigned to a 3-session protocol comprising either EC games or off-the-shelf games. After each session, a game experience questionnaire was administered. Results revealed that the game experience (e.g., immersion, positive emotions) in EC games versus off-the-shelf games were not significantly different. Interestingly, children with better emotion recognition skills reported lower effort during the Recognition Game (F(2,80)=4.09, p<.01) and those with better emotion differentiation skills reported lower effort (F(2,79)=7.83, p<.01) and difficulty (F(2,79)=4.83, p<.01) during the Differentiation Game.The current findings suggest that EC games succeeded to challenge the intended EC in two of the three EC games and that children's EC level accounts for their board game experience. Future research should examine the effect of playing the EC games in interventional designs aiming at improving emotional competences.

POSTER C-5
AFFECTIVE INFLUENCES ON RISK TAKING DEPEND ON FLUCTUATIONS IN POSITIVITY.

Young, Nathaniel A—DePaul University; Nievera, Madeline A—DePaul University; Vaughn, Risha—DePaul University; Mikels, Joseph A—DePaul University

Descriptors: positive emotion, behavioral economics

The affect heuristic suggests that feelings are used as information to guide risky choice. Specifically, positivity is associated with perceptions of benefits and negativity is associated with perceptions of risks. Importantly though, affect is marked by fluctuations from moment to moment. The influence of affective fluctuations on perceptions of risks and benefits and the choice to take risks is unknown. The current work examined how fluctuations in affect can impact the relationships between feelings, perceptions of risks and benefits, and risk taking. Ninety-nine participants completed 40 total trials of the Balloon Analogue Risk Task. For each trial, subjects pumped up a balloon to increase its monetary value and could decide when to stop pumping and collect the money. If the balloon popped before collecting, they lost the money the balloon was worth. For each trial, subjects rated their state positive and negative affect as well as their perceptions of the risks and benefits of pumping the balloon. A series of moderated regressions showed that fluctuations in positivity, but not negativity, influenced risk taking. Larger increases in positivity from the prior trial to the current trial enhanced the relationship between positivity and the perception that pumping the balloon on the current trial is beneficial (Beta=.04, SE=.008, p<.001) and enhanced the relationship between positivity and risk taking (Beta=.18, SE=.07, p<.01). The results support the idea that fluctuations in affect impact risk taking by shaping valence's impact on risk behavior.

POSTER C-7
VARIABILITY AND ADAPTIVENESS OF EMOTION REGULATION IN CURRENT AND REMITTED DEPRESSION

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Descriptors: clinical, cognitive, emotion regulation, mental health

Depression is characterized by frequent use of maladaptive emotion regulation (ER) strategies and infrequent use of adaptive ER strategies. However, the efficacy of ER strategies may be context dependent. Hence, inflexible ER, reflected by low variability in the use of ER strategies, may be a vulnerability factor in depression. Research on the link between depression and ER variability (ERV) using measures of perceived ERV and indices computed from frequency measures of ER strategy use contained methodology issues and produced mixed findings. The current study examined the relation between depression and indices of ERV and proposes a novel measure-the diversity index. Currently depressed (CD; n=58), remitted depressed (RD; n=65), and healthy control participants (HC; n=55) completed a diagnostic interview and rated their use of ER strategies on the Cognitive Emotion Regulation Questionnaire. As predicted, the statistical model using the diversity index was a better fit to the data than that of other ERV indices. Contrary to the hypothesis, both the CD and RD participants had higher diversity index scores than NC participants. Interestingly, the diversity index computed using only the adaptive strategies was higher in HC participants than RD and CD participants. These findings provide evidence for the diversity index as a more valid measure of ERV than existing indices. Importantly, the results suggest that both variability in ER strategy use and the adaptiveness of the ER strategies should be considered in research examining the relation between depression and ERV.

POSTER C-8
DAILY EMOTIONAL EXPERIENCES MAY HELP EXPLAIN THE LINK BETWEEN ADVERSE CHILDHOOD EXPERIENCES AND ADULTHOOD DEPRESSIVE SYMPTOMS

Wells, Jenna L—University of California, Berkeley; Roubinov, Danielle S—University of California, San Francisco; Crosswell, Alexandra D—University of California, San Francisco; Gordon, Amie M—University of California, San Francisco; Mendes, Wendy, Berry—University of California, San Francisco

Descriptors: mental health, child development, clinical

Early adversity is a robust social determinant of depression in adulthood. Research often studies the cumulative impact of numerous adversities, potentially masking unique pathways underlying specific types of adversities. We collected data from 1609 adults on distinct subtypes of early adversity exposure (i.e., childhood threat and deprivation) and current depressive symptoms. Participants also rated their current affective state daily for 28 days from which average positive and negative affect intensity scores were derived. Results showed that daily positive and negative affect intensity partially mediated the relations between childhood threat (physical and emotional abuse) and deprivation (physical and emotional neglect) exposure and depressive symptoms in adulthood (all indirect effect ps<.05). Greater threat exposure predicted increased positive (Beta=.14) and negative (Beta=.09) affect intensity, whereas greater deprivation exposure only predicted decreased positive affect intensity (Beta=-.17). Positive affect intensity was then associated with decreased depressive symptoms (Beta=-.17) while negative affect intensity was associated with increased depressive symptoms (Beta=.18). Findings support the greater salience of emotion-related processes in the context of childhood threat exposures and extend current work by highlighting the role of positive emotions for both threat and deprivation. Interventions that target unique emotional mechanisms, such as increasing positive affect, may improve efforts to reduce depression in those exposed to early adversity.

POSTER C-9
THE ASSOCIATION BETWEEN NEED FOR AFFECT AND DYADIC COPING IN ROMANTIC RELATIONSHIPS

Veziris, Christina R—UCSF; Alkusari, Haneen—SFSU; Holley, Sarah R—SFSU

Descriptors: close relationships, social

Romantic partners can be a great source of comfort when stress arises. When one person is stressed, the partner might show empathy, express support, or help to assess and reappraise the situation. This partner assistance with coping efforts is known as supportive dyadic coping (SDC). But not all people are effective at providing SDC. One factor that may influence the ability to provide SDC is the individual's outlook toward emotional experiences. Specifically, people with a tendency to approach emotions might react more adaptively to partner stress signals, whereas those who avoid emotions may be less effective. The present study evaluated the association between tendencies to approach or avoid emotions and the provision of SDC. Undergraduate students in a romantic relationship (N=627) were administered an online survey. SDC was assessed with the Dyadic Coping Inventory (Levesque et al., 2014); tendencies to approach or avoid emotions were assessed with the Need for Affect measure (Maio and Esses, 2001). A regression analysis was conducted, controlling for gender, sexual orientation, age, and relationship length. Results showed a positive association between the tendency to approach emotions and SDC (B=.13, p<.01), and a negative association between the tendency to avoid emotions and SDC (B=-.18, p<.001). The interaction between these variables was not significant, indicating independent effects on SDC behaviors. Findings indicate that a person's outlook toward emotions has important implications for his/her ability to support a romantic partner during times of stress.

Society for Affective Science

POSTER C-10
CROSS-CULTURAL AND GENDER INVARIANCE OF EMOTION REGULATION IN THE UNITED STATES AND INDIA

Van Doren, Natalia—The Pennsylvania State University; Zainal, Nur Hani—The Pennsylvania State University; Newman, Michelle G—The Pennsylvania State University

Descriptors: culture, emotion regulation, methods

The ability to effectively regulate one's emotions has been established as an important mechanism in determining mental health and well-being outcomes. To date, much of the research on emotion regulation (ER) has been conducted in White, Educated, Industrialized, Rich, and Democratic (WEIRD) samples. Specifically, there is a dearth of cross-cultural construct equivalence studies on measures of ER. Establishing measurement equivalence is an important first step to facilitate future research on ER in culturally diverse samples. The present study sought to validate the latent structures of three commonly used ER measures: the Emotion Regulation Questionnaire (ERQ), Rumination-Reflection Scale (RRS), and Acceptance subscale (AS) of the Five-factor mindfulness questionnaire. Measurement equivalence was examined across 123 American and 121 Indian participants (Mage=36.60). Cross-cultural confirmatory factor analyses revealed configural equivalence (i.e., same factor structures) in both cultural groups across all three measures. However, only the ERQ met weak invariance across cultures; factor loadings were not equal across the two samples for the RRS and AS. Compared to Americans, Indians had higher factor loadings for the RRS, and lower factor loadings for the AS. Across gender, full invariance was found on all measures except the AS. Findings suggest that the structure of ER processes differs across these two cultural groups, the pattern of which suggests that Indians may engage in more suppressive, ruminative, and lower acceptance strategies than Americans.

POSTER C-11
PRECURSORS OF EMPATHY: PARENT'S OPENNESS AND CHILD EMOTION RECOGNITON PREDICTS MORE EMPATHY IN CHILDREN

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Descriptors: positive emotion, child development, intervention, personality, education, learning

People who are able to understand thoughts and respond with caring emotions to circumstances (empathy) demonstrates several elements of social competence related to interpersonal relationships (Davis, 1994). Previously, theorists argued that children were too egocentric or not cognitively able to experience empathy (Freud, 1958). However, some studies have provided evidence that very young children can, in fact, display empathy-related behaviors (Zahn-Waxler et al., 1979). However, precursors predicting empathy still remains less clear. With 145 5 to 8 year-old children and parent dyads, we investigated the precursors of empathy looking at parent personality and an array of emotion recognition tasks in different modalities. Parent's openness was a significant predictor of children's perspective taking skills (standardized beta=0.12, p=<0.1) and marginally significant predictor of empathy (standardized beta=0.14,=0.06). Furthermore, recognizing emotions from non-verbal vocal cues (standardized beta=.19, p<0.05) and false belief tasks (standardized beta=0.17, p<0.05) were significant predictors of empathy for 5-8 year-olds. All results hold true when controlling for age. The results of the current study are informative to develop interventions to increase empathy in children and inform parental practices.

POSTER C-12
NATURE ISN'T ALWAYS BETTER: THE EFFECT OF EXERCISE ENVIRONMENT ON AFFECT AND COGNITION

Trammell, Janet P—Pepperdine University

Descriptors: cognitive, positive emotion

Although the benefits of exercise on cognition and of nature on well-being are well-established, many questions remain unanswered. The aims and novel contributions of this research are to 1) provide clarity on inconsistent exercise effects on working memory and executive function and 2) to test the cognitive and affective effect of exercise in a natural vs indoor environment, which has not yet been directly tested together. In two sessions one week apart, participants completed affective (PANAS, happiness, and stress) measures and cognitive tests (working memory: digit span forwards (DSF) and backwards (DSB); executive function: trail making; and memory: short term recall and long term recognition) a total of four times: before and after both a 20 minute indoor treadmill run (TR) and an outdoor scenic run (SR). All measures were within participants, with location order counterbalanced. Initial results (N=15 (complete data collection, expected N=40, will be completed by February)) indicate that, as predicted, exercise reduced stress (p<.01) and negative affect (P<.10) and increased positive affect (p=.001). Interestingly, the SR location resulted in both lower positive (p=.06) and negative affect than the TR location. Likewise, nature also differentially affected cognition, such that working memory (DSF p=.02) and executive function performance (p=.07) were better in the SR location, but short term memory recall showed a larger improvement due to exercise in the TR location (p=.02). Results are discussed in terms of attention restoration theory.

POSTER C-13
ATTENTIONAL BIAS TO AFFECTIVE OUTCOMES

Toyama, Asako—Nagoya University; Katahira, Kentaro—Nagoya University; Ohira, Hideki—Nagoya University

Descriptors: cognitive, methods, personality

How do we treat positive and negative outcomes when they appear simultaneously? Individual attentional bias to affective events can be a crucial factor to characterize the individual learning process and lead to various decision making. It has been reported that we preferentially learn from more informative outcomes. However, it is still unclear what can interfere with appropriate attentional biases and which individual differences determine the direction and strength of the biases. To address this question, we used a variation of information bias task (IBT), which has two blocks that are different in the volatility of the win and loss outcomes: win-informative block and loss-informative block. Participants (N=241) were recruited online using a crowdsourcing platform, conducted the IBT, and completed self-reported questionnaires relevant to psychiatric disorders, including depression and anxiety. The behavioral data were analyzed by statistical methods and also fitted using reinforcement learning models. Only in the win-informative block, the participants showed higher learning rates for win outcomes than that for loss outcomes [mean difference=.08, t(215)=3.3, p=.001]. Moreover, the performance was greater in the win-informative block than in the loss-informative block [t(215)=3.9, p<.001]. We also tested the relationship between the learning and attention characteristics in the IBT and self-reported depression scores. In addition, our study proposes some approaches to avoid erroneous data interpretation by comparing the results of statistical and computational analysis.

POSTER C-14
IN SEARCH OF MEMORIES PAST: CORE RELATIONAL THEMES AND AFFECTIVE EXPERIENCES

Tharaud, Jessica B—Bryn Mawr College; Petrova, Kate—Bryn Mawr College; Waldinger, Robert J—Massachussetts General Hospital; Schulz, Marc S—Bryn Mawr College

Descriptors: cognitive, emotion regulation, adult development

Lazarus's (1991) core relational themes, theorized to capture the personal meaning underlying discrete emotions, may be of particular relevance in the context of written narratives (Lazarus, 2006). This study extracts core relational themes (e.g. irrevocable loss) from 301 narratives of emotionally challenging life events written by participants in the Harvard Study of Adult Development. The narratives were carefully coded for core relational themes (kappas range from .59 to .93, p<.001). Following the writing task, participants reported their emotional experience and the extent to which they recalled the event from a self-distanced or observer's perspective (Ayduk & Kross, 2010). Participants whose narratives were predominantly about demeaning offense (n=38) reported significantly higher levels of anger (M=2.79, SD=2.13) than all other participants (n=259, M=1.51, SD=1.07), Wald's W=15.52, p<.001, d=1.02. Reported shame was marginally greater among participants who wrote predominantly about a failure to live up to an ideal (n=46, M=2.28, SD=1.91) as compared to other participants (n=249, M=1.75, SD=1.35), W=3.82, p=.051, d=.37. Results support Lazarus' theoretical framework by indicating that underlying cognitive appraisals relate to experiences of corresponding emotions. Additional analyses focus on time since the event and self-distancing during the writing as moderators of the relationship between predominant theme and reported emotions. Implications for emotion theory and for narrative reconstructions of past events are discussed.

POSTER C-16
PSYCHOPATHY RELATED LEARNING DEFICITS VARY AS A FUNCTION OF ATTENTIONAL LOAD

Temple McCune, Alexander James—University of Oxford; Fox, Elaine—University of Oxford; Murphy, Robin—University of Oxford; Dutton, Kevin—University of Oxford

Descriptors: cognitive, education, learning, mental health, personality, emotion regulation

Psychopathic personality traits are a constellation of interpersonal, impulsive, and affective unresponsive dimensions that are normally distributed across the general population. High levels of psychopathy have been associated with an impaired ability to integrate affective content into social decision making and learning. Yet, the processes underpinning these deficits are not fully understood. This may be due to the downstream consequences of low-level deficits in attentional capacity. We tested this hypothesis across two experiments by presenting the Psychopathic Personality Inventory (PPI), a measure of psychopathy specifically designed for use within the general population, alongside an associative learning task. During this task, we manipulated attentional load in a novel way by using consistent stimuli that varied in their informational content. In both lab-based, (n=110, beta=.22, p=.033) and on-line (n=201, beta=.14, p=.022) experiments we found support for the hypothesis that higher levels of psychopathy predicted poorer performance when learning took place under high attentional load. This provides the first experimental evidence for the role of cognitive load in psychopathy related learning, generating a novel explanation for the affective deficits associated with psychopathy.

POSTER C-17
DOES DISPOSITIONAL MINDFULNESS PREDICT ALTRUISTIC ACTION

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Descriptors: social, positive emotion

Research has shown that mindfulness and its training predict helping behavior toward people in need, but the motivation for helping is unclear. It is possible that, however, people help for altruistic reasons or to alleviate their own discomfort. This study sought to understand if dispositional mindfulness predicts altruistic helping behavior. Participants (N=87) observed a worker over a live webcam (pre-recorded) who was showing discomfort while completing a performance task and receiving ostensible shocks. Participants were randomized so that leaving without helping was either difficult or easy. Participants self-reported their state compassion and distress to the event and were offered the opportunity to switch places with the worker. Unexpectedly, ease of escape did not predict willingness to switch places with the worker (X2(1)=.34, p=.56). Consistent with previous research, higher scores on and perspective taking predicted higher compassion (r(39)=.33, p=.04) willingness to switch with the victim in the easy condition (OR=1.2, p=.04). However, trait mindfulness did not predict compassion (r(39)=-.11, p=.48) or helping in this condition (OR=1.1, p=.86). State distress (r(39)=.34, p=.03) was a more reliable predictor of switching than state compassion (r(39)=.25, p=.12). These results indicate that it is not merely that we pay attention to others in need, but how we pay attention that motivates altruistic prosocial behaviors. A follow up study is being conducted to examine whether being in a state of mindfulness can increase altruistic helping.

POSTER C-18
DIFFERENTIAL EFFECTS OF HIGH- AND LOW-AROUSAL POSITIVE EMOTIONS ON HELP-SEEKING FOR DEPRESSION

Straszewski, Tasha—Claremont Graduate University; Siegel, Jason T—Claremont Graduate University

Descriptors: positive emotion, emotion regulation, mental health, social, intervention

Expanding on prior research, the current studies tested the effects of savoring a memory associated with a high-arousal (excitement) or a low-arousal (calm) positive emotion on help-seeking intentions among individuals with heightened depressive symptomatology who had not yet sought help. Considering depression is associated with a state of under-arousal, those who savored a time they experienced excitement were predicted to report greater help-seeking intentions than those who savored a time they felt calm and neutral control participants. Studies 1 (N=218) and 2 (N=193) demonstrated that the writing tasks induced patterns of arousal and emotion in line with existing research: the excitement task elicited high-arousal, high positive emotion; the calm task elicited low-arousal, high-positive emotion; and the neutral control elicited low-arousal, low positive emotion (ps<.001). Study 3 (N=1,238) tested the effects of the three writing tasks on help-seeking intentions. Results indicated that the excitement condition led to significantly greater help-seeking intentions than the neutral control (p=.021, 95% CI of difference [-.342, -.027]). Highlighting the importance of mental health literacy and symptom recognition, an exploratory analysis revealed that among those who perceived to be experiencing depression, the overall effect size, although small, more than doubled ('‡p2=.004 to .010), with the excitement task again being associated with greater help-seeking intentions than the neutral control (p=.002, 95% CI of difference [-.464, -.102]).

POSTER C-19
CAN DAILY EMOTION REGULATION PREDICT CHANGES IN DEPRESSIVE SYMPTOMS OVER THE SEASONS? AN AMBULATORY ASSESSMENT STUDY

Strakosch, Ana-Maria—Heidelberg University; Barnow, Sven—Heidelberg University; Schulze, Katrin—Heidelberg University; Miano, Annemarie—Heidelberg University

Descriptors: emotion regulation, clinical, mental health

Deficits in emotion regulation have been linked to depression, but longitudinal studies are scarce. To examine emotion regulation as a precursor of depression, we used the naturally occurring changes in depressive symptoms over the seasons. We investigated whether daily rumination and reappraisal of negative affect in the summer predict changes in depressive symptoms in the winter. This could provide insight into how depressive symptoms develop.A German-speaking community sample (N=136) with a mean age of 27.2 (SD=5.77; 73.5% female) reported their depressive symptoms and daily use of rumination and reappraisal. In summer as well as in winter, both emotion regulation, using smartphone-based ecological momentary assessment over seven days, and depressive symptoms, using the Beck Depression Inventory-II, were assessed. Depressive symptoms increased significantly from summer to winter, t(135)=-2.37, p=.02. Preliminary regression analyses showed that the extent to which rumination was used to regulate negative emotions in the summer significantly predicted increases in depressive symptoms in the winter when controlling for baseline depressive symptoms (beta äÅæ=.78 , p=.04). A similar, but non-significant trend was observed for reappraisal (beta=.68, p=.07). These results support previous findings on the important role of rumination in depression by showing that daily rumination can predict changes in depressive symptoms over time. More generally, this highlights the relevance of emotion regulation in the assessment and treatment of depressive disorders.

POSTER C-20
META-EMOTION IN BIPOLAR SPECTRUM PSYCHOPATHOLOGY: AN EXAMINATION OF GRANULARITY, CLARITY, AND ATTENTION TO EMOTION

Sperry, Sarah H—Medical University of South Carolina; Kwapil, Thomas R—University of Illinois at Urbana-Champaign

Descriptors: clinical, emotion regulation, mental health, positive emotion, computational science

The experience and regulation of emotion is influenced by meta-emotion (emotional clarity, attention to emotion, and emotional granularity). Although bipolar spectrum psychopathology (BSP) is associated with emotion dysregulation, few studies have examined the extent to which meta-emotion is related to BSP. The present study examined a) whether BSP is associated with deficits in meta-emotion, and b) whether meta-emotion moderates the relationship between BSP and altered emotion dynamics in daily life. Young adults (n=233), oversampled for BSP completed self-report questionnaires and 14 days of experience sampling assessing negative (NA) and positive affect (PA). Emotion dynamics (reactivity and instability) were modeled using participants individual time-series. BSP was associated with low emotional clarity (r=-.22, p<.001) as well as low NA and PA granularity (r=.20, p<.01). Furthermore, the interaction of being high in BSP and low in attention to emotion predicted greatest levels of NA instability (gamma=-.16, p=.008). The interaction of being high in BSP and low in PA granularity predicted greater levels of PA reactivity (gamma=.03, p=.01). Although the interaction of BSP and emotional clarity was not significant, low emotional clarity (gamma=-.16, p=.006) and high BSP predicted greater NA instability. These results highlight that bipolar spectrum psychopathology is associated with deficits in meta-emotion and that important individual differences exist in the extent to which meta-emotion influences emotion dynamics in bipolar spectrum psychopathology.

POSTER C-21
GREATER PREFERENCE TO IMAGES OF YOUR PARTNER A SIGN OF LOWER RELATIONSHIP SATISFACTION?

SO M Vijayakumar, Kamalakannan—University of California, Irvine; MacLeod, Colin—University of Western Australia; Liu, Jean—Yale-NUS College

Descriptors: cognitive, social neuroscience, close relationships, social

This study examined attentional biases in romantic couples as predictors of relationship satisfaction. 85 participants recruited in the first phase of the study reported attitudes and beliefs about relationships, as well as relationship satisfaction levels. From the 85 participants, 26 couples continued to participate in a second phase of the study, consisting of three dot-probe tasks. Task 1 measured response times on presentation of attractive against unattractive images of their partner; Task 2 measured response times on presentation of images of their partner against a romantic alternative; Task 3 measured response times on presentation of images of them and their partner, against them and their friends. Each task also had target exposures set at 500ms and 1000ms. Participants were also contacted nine months after, for information on their relationship status. Factor analysis showed the six conditions clustered in two major clusters corresponding to the exposure. The results of a mixed model analysis showed that the 500ms but not the 1000ms cluster demonstrated a significant relation to relationship satisfaction. Our findings indicated that those with a stronger preference for (attractive) images of their partner had lower relationship satisfaction on average than those who showed less of a preference to images of their partner. While there have been many studies on romantic relationships and satisfaction, this study tackled attentional biases, and thus a novel approach to understanding romantic relationships.

POSTER C-22
CLIMATE CHANGE ALTERS THREAT RESPONSIVITY IN A MARINE MOLLUSK

Smart, Ashley C—University of California, Davis; Bliss-Moreau, Eliza—University of California, Davis; Todgham, Anne E—University of California, Davis; Gaylord, Brian—University of California, Davis

Descriptors: animal, comparative, neuroscience, physiology, biomarkers, methods

Rapid and efficient integration of exteroceptive and interoceptive information is critical for animals to survive and thrive. While studies of affective experience often focus on interoceptive processing and physiological condition, environmental factors can also modify affect through their influence on physiology. In this experiment, we investigated how threat processing can be altered by one pervasive feature of climate change—elevated environmental carbon dioxide (CO_2). We exposed the California sea hare, Aplysia californica, a marine mollusk commonly used as a neurophysiological model system, to current-day ambient seawater conditions (n=10, pCO2 average=584 Œµatm) and elevated CO_2 conditions (n=10, pCO2 average=2230 Œµatm). We then conducted a series of behavioral evaluations to assess responsivity to threat. Animal body position following an aversive stimulus was recorded, and the time for it to return to an extended normal position ('neck relaxation') was quantified. Time to neck relaxation decreased over successive trials in the ambient treatment (p<0.05), whereas response time did not differ over trials in the elevated pCO2 treatment (p>0.60). That is, sea hares in elevated pCO2 seawater failed to habituate to an aversive stimulus following repeated exposure to that stimulus. This finding suggests that elevated CO2-a mounting environmental stressor globally-induces behavioral dysregulation consistent with impaired affective processing.

POSTER C-23
EMOTION REGULATION CHOICE AND COGNITIVE CONTROL

Schulze, Katrin—Heidelberg University; Holt, Daniel V—Heidelberg University; Barnow, Sven—Heidelberg University

Descriptors: cognitive, emotion regulation

The link between successful emotion regulation and cognitive control is still elusive as previous research results are heterogeneous. Addressing this research gap, we conducted two studies investigating the relation of individual differences in cognitive control and the effective application of predetermined or self-selected emotion regulation strategies in response to emotionally negative pictures. In study 1, a total of 173 participants regulated their emotions by implementing predetermined emotion regulation strategies (acceptance, suppression, or reappraisal). Initial results indicate no notable correlations (rs<.12) between regulatory effectiveness and three facets of cognitive control (working memory updating, shifting, inhibition). Because context-dependent emotion regulation choice, as part of emotion regulation flexibility, might require a higher level of cognitive control, we asked 124 participants to implement either predetermined or self-selected regulation strategies in study 2. Preliminary analyses suggest a small positive relationship between shifting ability and acceptance (r=.19) and suppression (r=.25) effectiveness, as well as between working memory updating ability and suppression effectiveness (r=.26), for self-selected strategies. As in study 1, no notable correlation was observed if participants implemented a predetermined strategy (rs<.14). Our results indicate that cognitive control is partially involved in context-dependent emotion regulation choice, supporting a dynamic adaptation of regulatory strategies according to contextual factors.

Excellence initiative Field of Focus 4

POSTER C-24
POLITICAL EMPATHY AVOIDANCE: UNDERSTANDING THE ATTITUDES BEHIND PREFERENCES FOR PAROCHIAL EMPATHY

Santos, Luiza—Stanford University; Voelkel, Jan—Stanford University; Willer, Robb—Stanford University; Zaki, Jamil—Stanford University

Descriptors: political, social

Research has shown that, in political conflicts, people's desire to feel empathy toward outgroup members impacts how much empathy they in fact experience (Porat et al, 2016). Although these findings highlight the importance of emotional preferences, we still don't know what could be underlying motivations to approach or avoid empathy. To this end, we developed the Political Empathy Avoidance Scale (PEAS): a 7-point scale that assesses partisans' lay theories about the disutility of empathizing with the outgroup. In this study, 304 Mturk participants (49% Democrat) completed a series of measures including PEAS, the Interpersonal Reactivity Index (IRI), preferences for empathizing more with the ingroup vs the outgroup (ie. parochial empathy), experiences of parochial empathy, and political attitudes. Endorsement of PEAS significantly predicted preferences for parochial empathy (b=.52,p<.001) even after controlling for political ideology, IRI, and relevant demographics. The model that includes PEAS as a predictor of parochial empathy preference reduces 40% of the error compared to the model that doesn't. Moreover, controlling for parochial empathy, partisans' endorsement of PEAS predicted their levels of political intolerance (b=.25, p=.006), affective polarization (b=.32,p<.001), and desire to cooperate with the outgroup (b=-.50,p<.001). These findings show that people's emotional preferences, emotional experiences, and political attitudes are strongly impacted by their lay theories about empathy, positing a new direction for conflict alleviation research.

POSTER C-27
ASSOCIATIONS AMONG DAILY POSITIVE EVENTS AND BIOLOGICAL AGING

Sagui-Henson, Sara J—University of California, San Francisco; Jujjavarapu, Shilpa—University of California, San Francisco; Gill, Justine—University of California, San Francisco; Vaccaro, Julie—University of California, San Francisco; Crosswell, Alexandra D—University of California, San Francisco; Coccia, Michael—University of California, San Francisco; Prather, Aric A—University of California, San Francisco; Epel, Elissa S—University of California, San Francisco

Descriptors: positive emotion, physiology, biomarkers

Introduction: Positive events may convey salutary health benefits, yet the biological mechanisms through which characteristics of a positive event (e.g. intensity of event and affective response) promote better health are unknown. We examined associations among daily positive events and two biomarkers of aging: telomere length (the protective caps on chromosomes) and telomerase (an enzyme that repairs telomeres). Methods: Mid-life women (N=183) completed a diary for 7 days in which they identified a positive event. They rated the amount of positive emotions experienced (interest, compassion, happiness, pride) and how much they savored those emotions after the event. Independent raters coded event intensity from qualitative statements. Results: Regressions controlling for age, BMI, and chronic stress revealed that more intense positive events (beta=.24, 95% CI [.09, .39], p<.01), greater positive emotions (beta=.16, 95% CI [.01, .31], p<.05), and greater savoring (beta=.17, 95% CI [.02, .32], p<.05) were associated with higher telomerase. Neither positive event intensity nor responses to the event were associated with telomere length. Conclusions: Telomeres and telomerase play a significant role in aging. It is important to understand how day-to-day emotional experiences associate with these indices of biological health. We found that experiencing more intense positive events and having more positive emotions in response, including savoring them, were related to higher levels of telomerase, providing potential targets for interventions aimed at healthy biological aging.

POSTER C-28
FROM FEELING TO CHOICE: THE TIME COURSE OF TRANSFORMATION FROM VALENCE TO VALUE

Roberts, Ian D—University of Toronto; HajiHosseini, Azadeh—University of Toronto; Hutcherson, Cendri—University of Toronto

Descriptors: social neuroscience, cognitive, behavioral economics, computational science

How do emotions determine the value of a stimulus during choice? Intuitively, positive affect should make a stimulus more valuable. Yet research suggests that people sometimes value negative affect more highly, raising the question: if affect and value are not synonymous, when and how does the brain transform one into the other? Are extra processes required to transform negative affect into positive value? To address these questions, we recorded EEG as participants (N=50) completed a novel choice paradigm in which affective pleasantness and decision value were orthogonalized. Single-trial regression analyses revealed an early affect-related component emerging in parietal channels (~200ms) (p<0.01) followed by a later value-related component (~500ms) in fronto-central channels (p<0.001). Moreover, we found evidence that the transformation of affect to value takes place more anteriorly when affect and value are positively related (starting ~350ms in fronto-central channels; p<0.001) compared to when they are negatively related (starting ~450ms in parietal channels; p<0.001). Multivariate analyses (e.g., representational similarity) as well as a novel computational model fitted to participant's choice and response time data provided additional support for a temporal progression from affect to value. Our research supports the notion that affect and value are different constructs, and provides new insight into the computations necessary to transform emotions into choice behavior.

POSTER C-29
RUMINATION MEDIATES THE EFFECTS OF COGNITIVE REAPPRAISAL SELF-EFFICACY FOR LONG-TERM DEPRESSIVE SYMPTOMS

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Descriptors: emotion regulation, mental health, cognitive

Depression is among the most prevalent psychological disorders in the general population. Despite the existence of empirically-supported psychological interventions for depression, several challenges remain (e.g., relapse-rates). Recent research has suggested that individual differences in emotion regulation may predict this vulnerability. Rumination is thought to be a risk factor for depression, whereas cognitive reappraisal, considered to be an adaptive strategy, is thought to be a protective factor. One enduring puzzle, however, is why people use rumination and fail to use reappraisal. One potential explanation hinges on emotion regulation self-efficacy, which refers to a person's beliefs about their ability to engage in particular forms of emotion regulation. Deficits in cognitive reappraisal self-efficacy (CR-SE), which refers to the belief that one can successfully implement cognitive reappraisal when one wishes to regulate one's emotions, have been documented in both children and adults with emotional disorders, however, the mechanism by which CR-SE influences outcomes is not clear. In this longitudinal study, we examine the relationship between CR-SE, rumination, and depression indicators. A total of 182 participants completed measures at baseline and 5 months after. Our results show CR-SE predicts negatively both clinical depression (standardize beta=-.14, p=.026) and rumination (standardize beta=-.13, p=.010) and that rumination partially mediate the effect of CR-SE for long-term depressive symptoms. We discuss the utility of this construct.

POSTER C-30
THE SURPRISING ASSOCIATIONS OF SURPRISE FACIAL EXPRESSIONS WITH CARDIOVASCULAR ACTIVITY

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Descriptors: emotion regulation, physiology, biomarkers, mental health, physical health, neuroscience

Polyvagal theory asserts that facial expressions play a role in emotional regulation by acting on vagal tone, which directly influences parasympathetic function. This work, however, has generally ignored the effects of surprise expression. Thus, we examined whether expressions of surprise were associated with vagal tone. Participants rested for 5 minutes as cardiovascular activity was continuously monitored. We calculated the means of heart rate variability in terms of Root Mean Squared Successive Differences (RMSSD) and Respiratory Sinus Arrhythmia (RSA). Facial expressions were recorded and categorized into neutral or surprised expressions (i.e., average levels on a scale of 0 to 1 and time duration of expression) using Noldus FaceReader. We examined sex (66 Males, 202 Females), body mass index (M=24.60 Œ± 5.65), and age (M=20.58 Œ± 3.27) as covariates but none were related to variables of interest. Correlational analyses revealed that higher average expression of surprise (M=.23 Œ± .20) was associated with higher RMSSD (M=50.22, Œ± 25.63), r(268)=.128, p=.036. Duration of surprise (M=51.93 Œ± 61.00) was also associated with higher RMSSD r(269)=.173, p=.004. Increased intensity of surprise (M=.23 Œ± .20) was associated with higher RSA (M=6.74 Œ± .92), r(268)=.159, p=.009, as was the duration of surprise r(268)=.196, p=.001. Neutral expressions were not linked with any of these indicators. These results suggest a possible physiological and health benefit of surprise expression on cardiovascular function in uncertain (i.e., laboratory) contexts.

POSTER C-31
PURPOSE PREDICTS AFFECT BEYOND REAPPRAISAL AND SUPPRESSION USE

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Descriptors: personality, emotion regulation, positive emotion

Purpose, or the extent to which one feels that they have goals and directions guiding them through life (Ryff, 1989), has consistently been a predictor of affect. Research has found purpose to be positively associated with positive affect (PA) as well as negatively associated with negative affect (NA) and stress reactivity (Bronk et al., 2009; Burrow, O'Dell, & Hill, 2010; Hill et al., 2018; Sumner, Burrow, & Hill, 2015). Using cross-sectional data with 2,243 adults (age: range=18-91, M=52.25, SD=16.05; 42.98% female), the current study considered whether emotion regulation (ER) strategies were a potential mechanism that may explain this relationship.Using the reappraisal and expressive suppression subscales from Gross and John (2003), the current study evaluated whether these two ER strategies explained the shared variance between purpose (Scheier et al., 2006) and PA and / or NA (NA; Watson, Clark, & Tellegen, 1988). Purpose predicted reappraisal (beta=.37, p<.001) and suppression (beta=-.19, p<.001), but only reappraisal predicted PA (beta=.20, p<.001), and purpose actually predicted PA beyond both (beta=.55, p<.001; beta=.48, p<.001). For NA, reappraisal and suppression were not strong predictors (beta=-.02, p=.214; beta=.08, p<.001, respectively), while purpose remained a stronger predictor of NA beyond both ER strategies (beta=-.51, p<.001; beta=-.48, p<.001). This work is initial evidence that shows that these ER strategies are likely not the mechanisms through which purpose finds a path to predict affective well-being.

POSTER C-33
HEIGHTENED PARASYMPATHETIC TONE PREDICTS INCREASED CARDIAC DECELERATION TO SOCIAL STIMULI IN CHILDREN WITH DEVELOPMENTAL DYSLEXIA

Palser, Eleanor R—University of California, San Francisco; Morris, Nathaniel—University of California, San Francisco; Roy, Ashlin R K—University of California, San Francisco; Holley, Sarah R—San Francisco State University; Gorno Tempini, Maria Luisa—University of California, San Francisco; Sturm, Virginia E—University of California, San Francisco

Descriptors: child development, physiology, biomarkers, social

Developmental dyslexia is a neurodevelopmental condition characterized by persistent difficulties in learning to read. Although little is known about socioemotional functioning in dyslexia, our recent work has suggested that elevated visceromotor emotional reactivity correlates with greater parent-reported social skills in children with dyslexia. Here, we examined whether resting activity in the parasympathetic nervous system, which plays an essential role in social behavior, is also elevated in dyslexia. We measured heart rate and respiratory sinus arrhythmia (RSA) in children with dyslexia (n=24) and matched neurotypical children (n=24) during a resting baseline period and while viewing video clips depicting others' emotions. Results indicated that children with dyslexia had higher resting RSA than neurotypical children. Across the entire sample, higher RSA predicted greater cardiac deceleration while watching the video clips, with greater deceleration in dyslexia. These results suggest that elevated parasympathetic nervous system activity in children with dyslexia may promote heightened social sensitivity. Future work should investigate whether tonic and phasic autonomic differences in dyslexia relate to specific types of social strengths.

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POSTER C-35
HOW THE CONCEPTUALIZATION OF FEELINGS CAN BE A SHORTCUT TO THE INTEGRATION OF THE COMPONENT PROCESS MODEL AND THE PSYCHOLOGICAL CONSTRUCTION APPROACH

Muto, Sera—Ochanomizu University

Descriptors: physiology, biomarkers, cognitive, language, neuroscience, methods

This theoretical study presents a shortcut to the integration of Scherer's Component Process Model (CPM) and Barrett's psychological construction approach to emotion. Although the CPM (e.g., Scherer, 2009) and the psychological construction approach (e.g., Barrett, 2006, 2017) are regarded as major emotion theories alternative to the basic emotion theory (e.g., Ekman & Cordaro, 2011), there have been serious theoretical conflicts between the CPM and the psychological construction approach (e.g., Barrett, 2006, 2017; Scherer, 2009, 2012). It is important to explore whether there are ways to integrate these two theories to further the future of affective science research. Thus, this study focuses on the feeling component of emotion in order to challenge theoretical integration. A theoretical review found similarities and differences of theoretical assumptions between Scherer's and Barrett's theories. When verifying whether Scherer's Venn diagram (2009), which is a set of three overlapping circles that represent the different aspects of feelings, can be applied to Barrett's theory, one important similarity and yet one difference difficult to resolve were found: while (a) both emotion theories can be depicted by a similar Venn diagram that includes three circles, (b) the representation of each circle differs. This argument boils down to the fundamental question of what feelings are, but results suggest that how feelings are conceptualized can be a shortcut to integrating different emotion theories, which is crucial to more fruitful theoretical development in affective science.

POSTER C-37
INVESTIGATING THE EFFECTS OF ADVERSE CHILDHOOD EXPERIENCES ON SOCIAL SUPPORT AND ANXIETY AMONG YOUNG ADULTS FROM MIXED STATUS FAMILIES

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Descriptors: child development, clinical, mental health, social, close relationships

Potentially traumatic events, known as adverse childhood experiences (ACEs) have detrimental effects on the mental health of young adults coming from mixed status families, or having family members with an unstable or insecure legal status who reside in the United States (Vaughn et al., 2019, Mersky et al., 2013, Alverez et al., 2019). Social support, defined as the perception and availability of caring and support given by an individual or social network, has been shown to mediate the relationship between ACEs and anxiety (Muhammad et al., 2019). There is a dearth of evidence regarding the relationship between ACE and anxiety, and the role that social support plays between such relationship within this population. The current study aimed to address this gap in the literature by testing the hypotheses that a) greater ACEs would lead to greater anxiety in young adulthood, and b) ACE-related reductions in social support would account for this association. Data was obtained via self-report from undergraduate student participants identifying as having a "mixed status family" (N=208, Mage=30.64, 64.5% Latinx, 78% female) using measures of ACEs, social support, and generalized anxiety. Mediation analyses were conducted using the SPSS PROCESS Macro. As expected, greater ACEs lead to greater anxiety (b=-.58, p=.0313, SE=.27, 95% CI [-1.1123,-.0528]). Social support also mediated this association, showing an indirect effect (95% CI [.0011, .1535]). Results highlight the significance of how ACEs affect mental health among this at-risk and underserved population.

POSTER C-38
EVALUATING A PERSONALIZABLE, INCONSPICUOUS VIBROTACTILE (PIV) BREATHING PACER FOR IN-THE-MOMENT AFFECT REGULATION

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Descriptors: emotion regulation, intervention, methods

Industry and academia have responded to the demand to support negative affect regulation by designing several interventional technologies, mostly vibrotactile-based, to provide an inconspicuous way to assist the technology's user, in the course of their everyday lives. Unfortunately, few of these technologies have been well evaluated for efficacy either in the lab or in the field, and none have been tailored to individual differences among neurotypical populations. We developed PIV, a Personalizable, Inconspicuous Vibrotactile breathing pacer to guide users through slow-paced breathing to reduce anxiety. We evaluated PIV's efficacy, through a mixed-design study, in the presence of two sets of stressor tasks of compound remote associates. The sample size was N=97 with 44 in the treatment group and 53 in the control group. We demonstrated that PIV is a successful technological intervention for anxiety reduction (STAI-6) with effect size of d=.33 (mean=40.0, '_=ä_[3.19, p=.019). We further trained a machine learning model and analyzed the contribution of individual difference features to predict who might benefit most from PIV. Our results suggested that individuals who are low on Openness (score<33) and within-study reappraisal usage (score<71) are more likely to benefit from PIV. This is a first step towards allowing potential users of PIV to predict, based on their traits and experience with the technology, whether they would benefit from PIV or not. Guidelines in this paper can be applied for designing and evaluating other affect regulation technologies.

POSTER C-39
TESTING A DISTINCTION BETWEEN THE THREAT AND VALENCE PROCESSING OF SUBOPTIMAL STIMULI

March, David S—Florida State University

Descriptors: social neuroscience, physiology, biomarkers, social

The Dual Implicit Process Model (DIPM; March, Gaertner, & Olson, 2018) suggests that the implicit processing of threat (i.e., whether stimuli can inflict immediate bodily harm) is unique from the implicit processing of valence (i.e., whether stimuli are evaluatively positive/negative) and outputs from both processes can subsequently influence explicit processing. The validity of the model relies on the assumption that threat is a functionally distinct component of negativity (i.e., threatening things are negative but not all negative things are threatening), and hence is processed unique from valence. To further test that assumption, I conducted three studies assessing participants' skin-conductance response (N=111), startle-eyeblink amplitudes (N=106), and self-reported evaluations (N=81) to the subliminal presentation (12-14ms) of 4 classes of pilot-tested stimuli: (1) threatening-and-negative (e.g., gun, snarling predator), (2) nonthreatening-and-negative (e.g., cockroach, excrement), (3) positive (e.g., puppy, cake), and (4) neutral (e.g., stapler, fan). As predicted, threatening-negative stimuli elicited stronger electrodermal responses and startle-eyeblinks than the other stimulus types, which did not differ. Self-reported ratings of the threatening stimuli were more negative than the other stimulus types, which again did not differ. Importantly, participants were not able to differentially identify any stimulus class. Such data are consistent with the DIPM argument that threat processing requires less information to produce output than does valence processing.

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POSTER C-40
ASSOCIATIONS BETWEEN PARENTAL COREGULATORY RESPONSES TO ADOLESCENT DISCLOSURES AND PHYSICAL AND MENTAL HEALTH IN LATINX ADOLESCENTS WITH TYPE 1 DIABETES

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Descriptors: close relationships, physical health, physiology, biomarkers, child development

Type 1 diabetes management often deteriorates in adolescence (King et al., 2014), with rates rising among Latinx youth (Mayer-Davis et al., 2017). Adolescent disclosure to parents predicts better diabetes management in Latinx youth (Main et al., 2014), but no studies to our knowledge have examined how real-time parent responses to adolescent disclosures are associated with mental and physical health. The present study examined parent coregulatory responses to adolescents' disclosures in Latinx adolescents with type 1 diabetes (N=71, Mage=12.68 years) and their parents. Parent-adolescent conversations were coded for adolescent disclosure and parent coregulation and adolescents reported on their depressive symptoms, adherence to their diabetes regimen, and quality of life. Glycemic control was obtained through medical records. We hypothesized that parental Validation, Problem-Solving, and Reappraisal responses would predict better adolescent physical and mental health, whereas Problem Definition (stating the problem without attempting to solve it) would be associated with worse physical and mental health. Consistent with hypotheses, hierarchical regression analyses revealed that when parents responded to adolescent disclosures with Validation, adolescents had better glycemic control (beta=-.32, p<.05), adherence (beta=.32, p<.05), and quality of life (beta=.27, p<.05). Conversely, when parents responded with Reappraisal, adolescents had more depressive symptoms (beta=.36, p<.05), suggesting that parent-adolescent emotion dynamics are important for physical and mental health.

POSTER C-41
RCBF IN AN OBSESSIVE-COMPULSIVE DISORDER SAMPLE AND ITS RELATIONSHIP TO SHYNESS AND SELF-ESTEEM IN CHILDREN: A SPECT STUDY

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Descriptors: neuroscience, positive emotion, child development, clinical, emotion regulation

To investigate brain activity as measured by SPECT scans of children diagnosed with Obsessive-Compulsive Disorder (OCD) whose parents rated their level of shyness and self-esteem. Parents of the OCD participants completed a symptom checklist that included ratings for shyness and self-esteem, while children received SPECT scans. The sample (N=144) was divided into two extreme quartiles depending on the scores in the shyness and self-esteem scale: below the 25th (N=74, Male=75.67%, Mean age=12.6 years) and above the 75th quartile (N=70, Male=60%, Mean age=13.2). An independent-sample-t-test (p is less than .05) was conducted to compare high and low self-esteem and shyness scores. The results showed that the high shyness and low self-esteem group had greater perfusion in the limbic system (Mean=47.11, Standard Deviation=9.46); however, the low shyness and high self-esteem group showed greater blood flow in the parietal area (Mean=52.70, Standard Deviation=8.29). The limbic system functions include emotion and affect, compared to the parietal functions which are associated with visual-constructive and controlled fluency abilities. In order to carry out their compulsions, children may avoid social interactions. Consequently, these children may have difficulties developing self-esteem and confidence. Clinical implications include taking into consideration the different levels of emotionality and extraversion as health professionals develop treatment plans for children with the disorder.

POSTER C-42
SOCIAL DYSFUNCTION IS RELATED TO ODOR IDENTIFICATION IMPAIRMENT

Lipnos, Brooke—University of Dayton; Walsh-Messinger, Julie—University of Dayton

Descriptors: social neuroscience, social, social neuroscience

Background: Research suggests that olfactory impairments and social dysfunction are related in psychiatric disorders (e.g. autism, schizophrenia), but it is unclear whether olfactory function is related to social function in non-clinical samples. The purpose of this study was to investigate associations between social function and olfaction in university students. Methods: 44 undergraduate students completed self-reported questionnaires regarding social preferences, social experiences, social anhedonia, and the importance of olfaction in daily life. Additionally, participants underwent a battery of olfaction tests that assessed odor detection sensitivity, identification, and hedonic response to odor. Pearson correlations were used to examine associations between olfaction importance and the social and olfaction measures. Linear multiple regression analyses were performed to examine whether social bonding, group interaction, and social anhedonia predicted the olfaction measures. Results: Daily life aggravation in response to odor was correlated with social bonding and connection (p=.005). Controlling for odor aggravation, less social bonding (p=.039) and less social anhedonia (p=.015) predicted odor identification accuracy, while more group interaction predicted increased unpleasantness odor ratings (p=.035). Discussion: Results indicate that odor identification, which relies heavily on limbic circuitry, is independently related to less social bonding and social anhedonia. It may be that amygdala hyperreactivity contributes to impaired social bonding and greater anhedonia.

POSTER C-43
EXPLORING CULTURAL DIFFERENCES IN MUSIC EMOTIONS BETWEEN THE EAST AND WEST

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Descriptors: culture, computational science, positive emotion

Music preference differs across cultures, but few research exists in understanding the phenomenon. We combined computational and psychological approaches over 4 studies to examine this area. In Study 1, we fitted a GBM model on a database of musical features (N=890910 Japanese and Western songs), to predict (classify) their cultural membership as Japanese or Anglo-Western (AUC=0.80). An interpretation of the model revealed that certain features related to arousal and valence showed notable effects on culture classification. Study 2 extended these findings to songs (N=800) compiled from Top-50 lists from 8 East-Asian and Western countries. A significant difference was found for danceability (t=-7.5, p<.001), suggesting that Western music preferences had higher arousal levels. To test the generalizability of this finding, Study 3 used a sentiment analysis on English lyrics (N=165) from Singaporean and US lists in Study 2. Scores for negative, high-arousal emotion tags (e.g., anger, U=2185, p<.001; fear, U=2657, p=.023) were higher in the US. Finally, we conducted a survey on undergraduate samples (Study 4, N=268) from Singapore and the US, to rate imaginary playlists on several music/emotion tags. The US had significantly higher ratings for high arousal-related emotion tags, and Singapore had higher ratings for low-arousal emotion tags. Overall, these results suggest that East-West musical preferences differ on arousal, with Western music preference tending towards higher-arousal music, and East-Asian music preference tending towards lower-arousal music.

POSTER C-44
CARDIOVASCULAR HEALTH MEDIATES THE LONGITUDINAL ASSOCIATION BETWEEN POSITIVE AFFECT AND COGNITIVE FUNCTIONING

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Descriptors: cognitive, positive emotion, physiology, biomarkers, physical health

Positive affect is associated with cognitive functioning, but few studies have examined underlying biological pathways. Drawing from a US national sample of middle-aged and older adults (N=451), the present 9-year longitudinal study examined cardiovascular health (i.e., composite score of waist-to-hip ratio, pulse pressure, non-high-density lipoprotein cholesterol, triglycerides, and blood glucose, adapted from guidelines by the National Heart, Lung, and Blood Institute) as a mediator of the association between positive affect (i.e., feeling enthusiastic, active, proud, and attentive in the past 30 days, '±=.85) and changes in cognitive functioning (i.e., composite of executive functioning and episodic memory scores, '±=.42-.75). Positive affect was assessed at baseline, cardiovascular health was assessed during a laboratory-based visit after the baseline assessment, and cognitive functioning was assessed at baseline and 9 years after baseline. Mediation analyses using PROCESS revealed that cardiovascular health partially mediated the association between positive affect and higher cognitive functioning 9 years later (b=.01, SE=.01, 95% CI=[.001, .022]), controlling for age, gender, race, and baseline cognitive functioning. Follow-up analyses showed that mediating associations did not emerge for any individual index of cardiovascular health and were driven by feeling enthusiastic and active. These results illuminate cardiovascular health as one biological pathway underlying the link between positive affect and cognitive functioning in mid- and late life.

POSTER C-46
EXAMINING THE LINK BETWEEN INTERPERSONAL SUPPRESSON AND ROMANTIC RELATIONSHIP QUALITY

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Descriptors: emotion regulation, close relationships, social

Others often play a part in managing our emotions (i.e., interpersonal emotion regulation; IER), and the particular strategies they employ may impact our feelings and relationships. Interpersonal suppression involves the inhibition of another person's emotion expression (e.g., telling a sad partner to stop crying), which may impede closeness in relationships as emotion expression is critical to building and maintaining social bonds. Thus, we hypothesized that habitual use of interpersonal suppression would be associated with lower relationship satisfaction. We tested this prediction in 172 romantic couples (N=344, Mage=21) who completed an online survey. Using the actor-partner interdependence model, we found that one partner's use of interpersonal suppression was negatively associated with not just one, but both partners' relationship quality (p<0.05). Results held when controlling for intrapersonal suppression (i.e., inhibition of one's own emotion expression). While consistent with past research showing relationships may suffer when emotions are suppressed, our analyses extend this idea beyond the individual to the dyad. These findings highlight the importance of considering the role of IER in relational outcomes.

POSTER C-47
GOAL-DIRECTED EMOTION REGULATION IN OLDER AND YOUNGER ADULTS

Krueger, Sydney M—Columbia University; Colombo, Shane; Rodrik, Odile—University of Wisconsin; Zhang, Sky—Columbia University; Zhang, Yi—Columbia University; Ochsner, Kevin N—Columbia University

Descriptors: emotion regulation, social neuroscience, adult development

The distinction between pro-hedonic goals (i.e. minimizing negativity and maximizing positivity) and contra-hedonic goals (i.e. maximizing negativity and minimizing positivity) with regard to the regulation of emotion is important when considering life-span changes in emotion processing, since older adulthood is marked by a shift towards a more pro-hedonic outlook in daily life. Aging is also accompanied by deficits in brain structure and function, which likely impair older adults' abilities to implement cognitive change-based regulation. To test whether there are age-related differences in goal-directed regulation, in the present study-while in the fMRI-we instructed 40 younger adult and 40 adult participants to reinterpret positive images to be both more and less positive, and negative images to be both more and less negative. We constructed a multilevel linear model with trial type (look naturally, enhance, and minimize) interacting with age as predictors for emotion ratings, and allowing individuals to have random slopes and intercepts for each trial type. With regard to both negative and positive images, both age groups are successfully able to execute goal-directed regulation of negative and positive emotions respectively (ps<.0005), and there is an interaction such that older adults demonstrate less emotional flexibility than younger adults, independent of valence (ps<.05). This suggests that age differences in daily life affect are unlikely to be an outcome of reappraisal behavior. Neuroimaging results for each of the regulatory strategies will be discussed.

POSTER C-48
EXPLORING EMOTION REGULATION FLEXIBILITY: HRV AND EFFECTIVENESS OF INSTRUCTED EMOTION REGULATION STRATEGIES

Kobylinska, Dorota—University of Warsaw; Kastendieck, Till—Humboldt University; Lewczuk, Karol—Kardinal Stefan Wyszynski University; Hess, Ursula—Humboldt University

Descriptors: emotion regulation, personality

The topic of emotion regulation flexibility (ERF) is given more and more attention in psychological research. However there are almost no studies checking the situation x strategy x personality interaction on effectiveness on emotion regulation. In our experiment we manipulated emotion regulation strategies (distraction, reappraisal, suppression versus "just watch" control condition) by verbal instructions given to participants before watching negative IAPS photographs. The intensity of pictures served as manipulated situational variable (high versus low). We measured individual differences in baseline Heart Rate Variability (HRV). Previous studies have shown that higher HRV was connected to better capacity for regulating emotional responses as well as adaptive coping strategies and may serve a bio marker for emotion regulation. Sixty nine participants (only female) rated the negativity of photos as well as subjective effectiveness of the applied strategy. Additionally they filled in Psychological Well-Being and Difficulties in Emotion Regulation scales. The results showed a strong main effect of negative photos intensity. Emotion regulation strategy influenced photos' ratings and regulation effectiveness only in highly negative photos condition. Moreover, as hypothesized, we found the interaction of baseline HRV with instructed emotion regulation strategy (F=(3,186)=4.18; p=0.009). This last result supports the postulated ERF concept by proving that personality-like factor interacts with strategy in predicting emotion regulation success.

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POSTER C-49
GENDER DIFFERENCES IN AGGRESSION: A MULTIPLICATIVE FUNCTION OF ANGER EXPRESSION

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Descriptors: clinical, social, methods, emotion regulation, mental health

Tendency to express anger does not differ by gender, but men exhibit more aggression than women. Greater tendency to express anger may translate to greater aggression in men than in women due to differing gender norms, posited by the social learning theories. That is, at higher levels of anger expression, men (vs. women) may exhibit proportionately more aggression; at lower levels, they may exhibit similar levels. To test this, a multiplicative model was applied to aggression and anger expression in male and female undergraduate participants (N=203) using the Taylor Aggression Paradigm (TAP). In TAP, participants were falsely told that their objective was to respond faster than their opponent in another room and that the faster participant would administer a noise burst to the opponent and choose its intensity. Aggression was measured by the intensity of the noise administered by the participants. Whether the participants responded faster depended on their condition: smaller or larger ratio of losses. The multiplicative (vs. additive) model, F(3, 199)=7.00, p<.001, AIC=505, was a better fit. Controlling for anger expression and condition, women displayed 81 percent of aggression displayed by men, beta=0.22, t(199)=3.03, p<.001. Men (vs. women) with higher levels of anger expression exhibited proportionately more aggression, whereas aggression did not differ by gender at lower levels. Thus, aggression is learned and should be studied with a multiplicative model; its treatment should also consider the differential impact of anger expression and gender.

POSTER C-50
THE EFFECT OF EMOTION WORDS ON VISUAL AWARENESS USING A DIVIDED VISUAL FIELD PARADIGM

Kelleher, Victoria—University of Massachusetts, Dartmouth; MacDonald, Cameron J—University of Massachusetts, Dartmouth; Fugate, Jennifer MB—University of Massachusetts, Dartmouth

Descriptors: language, social

Many studies show that emotion words have an effect on emotion perception, although whether they direct selective attention is less explored. We primed participants with either an emotion or a control word before presenting two emotional faces in a divided visual field. Emotion words matched either the face in the right or left visual field (R/LVF). After the presentation of faces, participants indicated whether a dot appeared in the R/LVF. In a previous experiment, we found that participants were slower to indicate a dot in the RVF when primed with an emotion word congruent to the emotional face on that side. This suggested that emotion words are processed quickly and selectively allocate attention to congruent emotional faces. In this study, we trained participants ahead of time with either the same or different emotional faces to assess whether familiarity with the stimuli eliminated the slowed reaction time to the primed emotional faces. All training conditions produced the same pattern of results. There was a significant interaction between dot-side and prime type (emotion vs. control word), F(1,73)=3.793, p=0.023. There was no effect in the RVF for primed faces between emotion and control words, but the same previous effect for the unprimed trials in the RVF. Participants' attention was now allocated to the unprimed face because they had already linguistically-encoded the congruent face during the training. These results have important implications for the relationship between language and emotion perception.

POSTER C-51
SEX DIFFERENCES IN ASSOCIATIONS BETWEEN ANHEDONIA AND UNPLEASANTNESS RATINGS OF ODOR

Kaouk, Sahar—University of Dayton; Lee, Michael A—University of Dayton; Walsh-Messinger, Julie—University of Dayton

Descriptors: emotion regulation, mental health, clinical, personality

Background: Social and affective dysfunction are prominent symptoms of personality disorders, which likely result from altered limbic circuitry. The neural processing of odor is heavily influenced by limbic circuitry, and past research suggests that affective response to odor varies by sex. The present study investigated sex differences in associations between pathological personality traits and olfaction. Methods: 163 University students (71 males; 92 females) completed a self-report measure of personality pathology and underwent a battery of olfaction tests that assessed odor detection sensitivity, identification, and hedonic response. Separate sex-stratified multiple linear regression analyses were performed with six select personality pathology facets predicting each olfaction measure. Results: Females had higher odor unpleasantness ratings compared to males (p=.008). In males, less Anhedonia (p=.001), more Depressivity (p=.004), and greater Restricted Affectivity (p=.029) predicted odor unpleasantness ratings, while in females, unpleasantness ratings were associated with more Anhedonia (p=.051). Less Emotional Liability (p=.040) and Restricted Affectivity (p=.036) predicted odor peasantness ratings in males, whereas less Anhedonia (p=.028) and more Depressivity (p=.011) predicted odor pleasantness ratings in females. Discussion: The sex divergent associations between anhedonia and negative affect in response to odor suggest that the limbic abnormalities which contribute to the absence of pleasure may be sexually dimorphic.

POSTER C-52
ABSORBED IN MEDITATION: THE IMPACT OF DISSOCIATIVE TENDENCIES ON MINDFULNESS PRACTICE

Jerram, Matthew W—Suffolk University; Falcone, Gina—Suffolk University; Duarte, Brooke A—Suffolk University; Joseph, Annie-Lori C—Suffolk University

Descriptors: clinical, emotion regulation, mental health

Research has shown that dissociation is related to trait mindfulness facets, with generally negative correlations. Little is known about the impact of dissociation on engagement in mindfulness practice. We investigated differences in dissociation based on practice of meditation. 187 participants were recruited via Amazon Mechanical Turk; they provided mindfulness practice information and were administered the Dissociative Experiences Scale (DES-II) and Five Factor Mindfulness Questionnaire (FFMQ) on Inquisit software. Independent samples t-tests were performed for the DES-II overall score and three subscales. DES-II and FFMQ scores were correlated. Individuals who ever meditated (M=2.99, SD=1.47) scored significantly higher on the DES-Absorption scale than individuals who had never meditated (M=2.36, SD=1.83), t(185)=-2.34 , p=.021. No other significant differences were present. The correlations between FFMQ and DES-II scores were consistent with previous research, and no significant differences were observed in these correlations in those who had ever meditated and those who had not. Among those who had ever meditated, no significant differences were observed on DES-II subscales between those who continued to meditate at the time of the study and those who had stopped. These results suggest that a trait tendency to become absorbed in activities, considered the least problematic dissociative experience, predisposes a willingness to engage in mindful activities.

POSTER C-53
THE ROLE OF PERCEPTUAL AND CONCEPTUAL PROPERTIES IN AFFECTIVE HABITUATION

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Descriptors: physiology, biomarkers, emotion regulation

The attenuation of response to repeated stimuli is termed 'habituation', and it is considered the most primitive form of learning. A key factor in the ability of repeated exposure to contribute to the attenuation of emotions is whether habituation can be generalized from the repeated event to the entire semantic category. The goal of the study is to examine whether habituation can stretch beyond perceptual features of the repeated stimulus and generalize, based on semantic knowledge, to the entire category. This question relates to a family of research endeavors that suggest a strong link between the hierarchical structure of categorical knowledge and low-level affective processes. We conducted two experiments (N=60), in which we asked whether in the process of repeated exposure, affective habituation occurs for perceptual, conceptual and/or affective properties of the stimulus. Participants were repeatedly presented with an affective image, followed by a set of test images that shared perceptual, conceptual, or affective properties with the repeated stimulus, allowing us to compare the degree to which habituation can be generalized across different levels of stimulus abstraction. Results demonstrated that habituation across different components of the emotional response (self-reported feelings, facial expressions) were generalized up to the conceptual level of the repeated stimulus for pleasant, but not for unpleasant stimuli. These findings suggest that the conceptual system plays a role in affective learning for pleasant stimuli.

POSTER C-55
MINDSETS ABOUT STRESS IMPACT PAIN-RELATED OUTCOMES AND CORTISOL REACTIVITY IN YOUTH WITH CHRONIC PAIN

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Descriptors: physical health, medicine, physiology, biomarkers

We are in the midst of a global pain crisis, accompanied by an epidemic of opioid misuse. The International Association for the Study of Pain (IASP) defines pain as an unpleasant sensory and emotional experience, yet pain has been somewhat neglected by the affective science community. One opportunity to define affective components of pain is by understanding the interconnection of pain and stress. Pain is an evolutionarily-primed stressor, and pain and stress share significant conceptual and physiological overlaps. Recent findings indicate that our mindsets about stress as either debilitating or enhancing can moderate the impact of a stressor on health outcomes; this has not yet been studied in the context of chronic pain. In Study 1, 110 youth (8-18 years) with chronic pain completed a pediatric version of the Stress Mindset Measure, with higher scores indicating a stress-is-enhancing mindset. We found that a stress-is-enhancing mindset was significantly associated (p's ä__.002) with lower perceived distress (r=-.47), fear of pain (r=-.38), pain catastrophizing (r=-.38), pain vigilance (r=-.29), and functional disability (r=-.28). In Study 2 (51 youth, 49% with chronic pain), we found that a stress-is-debilitating mindset was associated with higher cortisol reactivity in a threat-learning task, while those with a stress-is-enhancing mindset did not show this cortisol response. This effect emerged regardless of pain status. Together, these studies suggest that a stress-is-enhancing mindset may be a resilience factor in both youth with and without chronic pain.

POSTER C-56
EMOTION IDENTIFICATION ERRORS AND AGGRESSION IN YOUNG CHILDREN

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Descriptors: child development, cognitive, social

Deficits in emotion understanding are associated with aggressive behaviors in young children. However, few studies have examined the emotion-specificity of these associations or the impact of these deficits on the development of aggression over time. We examined the relationship between errors in identifying specific emotions and aggression in 235 children followed from kindergarten to 1st grade. Emotion understanding was measured in kindergarten using a vignette-based emotion identification task (Ribordy et al., 1988). Vignettes depicted situations expected to cause happiness, sadness, anger, or fear. Scores were calculated for children's over- and under-identification of each discrete emotion. Teachers reported on students' aggression in kindergarten and 1st grade. We observed that children who over-identified anger (B=0.14, p=.021) or under-identified sadness (B=0.17, p=.003) were rated as more aggressive in kindergarten, when controlling for age and gender. Children who under-identified sadness were also rated as more aggressive in 1st grade (B=0.19, p=.002). Under-identification of sadness was uniquely associated with 1st-grade aggression when controlling for over-identification of anger, age, and gender (B=0.20, p=.01). Furthermore, under-identification of sadness predicted increases in aggression from kindergarten to 1st grade (B=0.12, p=.03). These results were not moderated by gender. These data support the importance of socio-emotional learning as a strategy for reducing aggressive behavior in children.

POSTER C-57
EXPECTED AFFECT FOR ANTICIPATED DECISIONS IN CURRENT AND REMITTED MAJOR DEPRESSIVE DISORDER: AN EXPERIENCE SAMPLING STUDY

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Descriptors: clinical, mental health, behavioral economics, cognitive

Affective disturbances, in the form of low positive affect (PA) and high negative affect (NA), are a hallmark of major depressive disorder (MDD). These disturbances include expected affect—predictions about one's future affect. However, because most research has focused on people with current MDD, it is unclear whether these disturbances represent trait- or state-like effects, which has implications for prevention and treatment. In the current study, we focused on expected affect in the context of anticipated decisions, because decision-making difficulty is a symptom of MDD associated with functional impairment. In an experience-sampling design, participants with current MDD (cMDD; n=48), remitted MDD (rMDD; n=80), or no psychopathology (CTL; n=87) completed surveys five times a day for two weeks. At the first survey of each day, participants described a decision that they planned to make that day and rated their expected PA and NA for two options under consideration; at subsequent surveys, participants indicated whether they made their decision. Using multilevel modeling, groups differed for expected NA (ps<.05; cMDD>rMDD>CTL) but not for expected PA for anticipated decisions (ps>.65). Further, higher expected NA was associated with making anticipated decisions less frequently for the cMDD group (p<.05) but not the rMDD (p=.35) or CTL groups (p=.19). Findings suggest that high expected NA represents a trait-like effect in MDD but has different functional consequences for decision-making: High expected NA may be a barrier to decision-making in current but not remitted MDD.

POSTER C-58
POSITIVITY'S DARK SIDE: CHILDREN OF POSITIVE PARENTS PERCEIVE NEGATIVE CONSEQUENCES FOR EXPRESSING ANGER

Hagan, Courtney A—North Carolina State University; Halberstadt, Amy G—North Carolina State University

Descriptors: positive emotion, child development

Parents are important socializers when it comes to children's emotional development, and they do not always recognize the complexity of the messages they convey to their children. In this study, we were interested in the direct and cross associations between parents' modeling of positive and negative emotions and their children's expectations and understanding of consequences associated with their own emotionality. Specifically, we assessed whether parents' expressive styles become incorporated into their children's understanding of and use of display rules for anger in home and school contexts. As part of a larger study, 31 parent-child dyads (N=62) participated; parents at home completed the Self-Expressiveness in the Family Questionnaire (SEFQ); and children in school reported on their display rule knowledge and behavior in three situations. We did not find associations between parents' expressiveness and how much children would show their anger either at home or at school. But we did find that parents' positive expressiveness was associated with children's report of how much trouble they would get in for expressing their anger, r=.53, p=.002, suggesting that parents who are high in positive expressiveness might implicitly send messages to their children for expressing negative emotions, such as anger. This result fits with some of the interesting work on the "dark" sides of positivity.

POSTER C-59
ALTERED EMOTION EXPRESSION IN PSYCHOSIS RISK: DETERMINING THE PROMISE OF ULTRA-THIN SLICING AND COMPARING HUMAN AND AUTOMATED CODING METHODS

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Descriptors: clinical, mental health, methods, intervention

Recently, our group employed automated emotion expression analysis methods and observed that youth at clinical high-risk (CHR) for psychosis exhibited alterations in facial expressions of emotion during thin slices (5-minute observations) of structured clinical interviews. However, it is unclear (1) whether analyzing ultra-thin slices of behavior (i.e., 1-minute observations) can replicate the same results and (2) whether automated approaches converge with traditional, human coding techniques. In the present study, ultra-thin (i.e., 1-minute) slices of video-recorded clinical interviews from 42 CHR youth and 42 controls were analyzed by trained human coders for facial expressions of emotions using the Emotional Expressive Behavior Coding System and these same segments were submitted into automated analysis of facial expressions of emotions (using 2 different software packages). Results indicated ultra-thin slices were sufficient to reveal alterations in facial expressivity, specifically blunting in joy expressions (human coding: p=.002; automated analysis: p=.001) in CHR vs. control youth. Furthermore, both automated analysis programs converged in the ability to detect these alterations and were consistent with human coding. Together, these data suggest that ultra-thin slices of behavior can yield important clues about emotive dysfunction and lay foundation for new studies to explore convergence between automated and human coding of facial expressions of emotion.

POSTER C-60
LET'S GET FLEXIBLE! CAN WE MAKE ATTENTION TO AFFECTIVE MATERIAL FLEXIBLE IN DEPRESSIVE STATES?

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Descriptors: emotion regulation, positive emotion, clinical

The ability to flexibly shift between changing goals is crucial to develop an adaptive response to life stressors. Accordingly, lower affective flexibility, i.e. ability to shift flexibly between affective and non-affective goals, is associated with dysfunctional emotion regulation, and lower levels of resilience. However, altering affective attentional flexibility with current training procedures has produced no long-term improvements in flexibility, or changes in psychopathology. In the current study, we tested a novel attention flexibility training paradigm wherein dysphoric participants (N=101) had to switch between different context-dependent goals. Attention towards goal-relevant positive and negative faces was reinforced using music and harsh sound. We found that participants who underwent the training, compared to a control condition, became faster in switching attention from negative to positive goal-related faces on an attention flexibility task (p=.002). On a transfer task where participants had to switch between goals during a speech task, we found that participants in the training condition displayed a more flexible pattern of attending to positive and negative faces depending upon which goal was activated (p<.02). Comparatively, participants in the control condition remained rigidly attentive towards negative faces despite the goal activated (p>.1). These findings provide evidence for context-based modulation of attention flexibility towards affective material in depressive states, and also indicate scope for novel clinical applications.

POSTER C-61
GOING WITH YOUR GUT: HOW DOES BELIEVING EMOTIONS ARE HELPFUL VS. HARMFUL SHAPE THE DECISION-MAKING PROCESS?

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Descriptors: social, political, emotion regulation

What we believe about emotions shapes how we approach emotions in our lives. Such beliefs should have broad consequences, including on the emotional processes underlying our decisions. We propose that people vary in their beliefs about whether emotions are helpful vs. harmful for decision making and that these beliefs crucially shape how people make decisions: those who believe emotions are helpful should be more likely to listen to their emotions when making decisions. The present studies sought to first validate a new scale to assess these emotion beliefs. First, in two samples, we found the scale was internally consistent (Study 1 '±=.73; Study 2 '±=.77) and stable within people across time (Study 2 test-retest correlation across 6 months, r=.64, p<.001). Next, in a political decision-making context, we tested whether people who believe emotions are helpful for decisions had a stronger link between negative emotion (e.g., anger) about a political event and the likelihood of engaging in political action (e.g., protest). Negative emotion was found to be a strong predictor of political action (rs=.51, .25, ps<.001). Importantly, we found that people who believe emotions are helpful (vs. harmful) had a stronger link between negative emotion and political action (Study 3a interaction '_=.09, p=.030, Study 3b interaction '_=.14, p=.005). These data suggest that people's beliefs may be an important driver of how they make decisions: for people who believe emotions are helpful (vs. harmful), the emotions they experience when making decisions were stronger drivers of their decisions.

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POSTER C-62
FOLLOW YOUR HEART: EMOTION REGULATION, DECISION STYLES, AND DECISION-MAKING QUALITY

From, Annika N—University of California at Berkeley; Karnilowicz, Helena R—University of California at Berkeley; Ford, Brett Q—University of Toronto; Lam, Phoebe H—Northwestern University; John, Oliver P—University of California at Berkeley; Mauss, Iris—University of California at Berkeley

Descriptors: emotion regulation, social

Humans make countless decisions every day, many of which have significant impacts on our own and others' wellbeing. Thus, knowing how to make good decisions is paramount. But the role of emotions in decision-making has been debated for centuries. Is it better to lead with one's heart when making decisions? Or to lead with pure rationality and control one's emotions? We assessed the link between emotion regulation and decision-making quality as well as decision-making styles in a sample of 160 community adults. The avoidant style involves procrastination in decision-making and is associated with worse decision-making quality. Therefore, we hypothesized that it would be associated with avoiding one's emotions in the form of suppression. The intuitive style, on the other hand, involves gut feelings and is associated with higher decision-making quality; we hypothesized that it would be associated with knowing how to effectively manage one's emotions (less suppression and more reappraisal). Our hypotheses were partially supported; we found that the avoidant style was related to more use of suppression (r=0.34, p<.001) and lower decision-making quality (r=-.21, p<.001), although the mediation was not significant (indirect effect: -.0009, 95% CI [-.05, .05]). The intuitive style was related to greater use of reappraisal and, in turn, better decision-making quality (indirect effect: .048, 95% CI [.003, .119]). Our findings suggest that having the tools to manage and utilize one's emotions is related to better decision-making quality.

POSTER C-63
INVESTIGATING AFFECTIVE DIVERSITY: UNCOVERING UNIQUE PATTERNS IN SOCIAL AFFECT VIA LATENT PROFILE ANALYSIS

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Descriptors: positive emotion, methods, social

Individual differences in patterns of affective experience abound. Yet, affective scientists often test hypotheses using only the affect means calculated for the total study sample. In this study, we ran latent profile analyses (LPAs) on five social affect states (inclusion, isolation, shame, compassion, and gratitude) to: 1) test for the presence of social affect subgroups (called 'profiles'), and 2) test whether profile membership predicts emotional health. Working adults took an online survey twice 4 months apart (N=410), including the Social Affect facet of the Human Affect Scale (HAS; 'α=.69 to .88), Positive and Negative Affect Schedule (PANAS; PA and NA factor: 'α=.78 and .73), and Teacher Stress Scale (TSS; 'α=.88). LPAs indicated a 3-profile model best fit the HAS data (entropy=.86). Profile 1 reported high positive and low negative social affect. Profile 2 reported high positive and high negative social affect. Profile 3 reported low positive and high negative social affect. T1 membership in Profile 3 vs. Profile 1 predicted T2 PANAS PA (B=-.61) and NA (B=.43) scores (ps<.001), not TSS scores. Total sample social affect means did not predict any outcomes. We examined whether subgroups ('profiles') exist in social affect, and if so, whether profile membership predicts emotional health. Three affect profiles were found, and membership in one profile versus another yielded greater predictive validity than the total sample means. LPAs may facilitate the discovery of meaningful individual difference patterns in affective experience.

POSTER C-64
THE POWER OF PREDICTION: BODY-BELIEFS MATTER ABOVE AND BEYOND PHYSIOLOGICAL REACTIVITY AND INTEROCEPTIVE ABILITY IN PREDICTING AFFECT DURING ACUTE STRESS

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Descriptors: physiology, biomarkers, cognitive, mental health

Longstanding research in affective science reveals that both peripheral physiology and beliefs about situations matter for emotional experience. Only recently however, has research also begun to test a role for beliefs about peripheral bodily signals. Here, we consider how beliefs about the body might matter above and beyond physiological changes (e.g., heart rate) or interoceptive ability (i.e., sensitivity to bodily signals like heart rate) to predict affect during acute stress. Across two sessions, 250 healthy young adults completed a heartbeat detection task to assess interoceptive ability, body-belief questionnaires to assess their attention toward and trust of bodily sensations, and later, the Trier Social Stress Test (TSST) followed by ratings of affect (PANAS). We also measured continuous physiological changes (e.g., heart rate) at baseline and throughout the TSST. Multiple regressions revealed that body beliefs were the most robust predictors of self-reported affect during the TSST (above and beyond effects of heart rate reactivity, interoceptive ability, sex, and BMI). Higher attention predicted more positive affect during the TSST (b=.16, p=.04), whereas higher trust predicted lower negative affect and negative appraisals of the situation (bs=-.16, ps=.04, 02). Results are in line with active inference and constructionist accounts of emotion whereby a priori beliefs and knowledge shape the construction of sensations into subjective experience.

POSTER C-65
A COMPARISON OF CONTEXT MODULATION EFFECTS BY A PRECEDING EMOTIONAL FACE AND AN EMOTION WORD FOR THE JUDGEMENT OF TARGET FACES

Eom, SangHyeon—Pusan National University; Lee, Jeongsoo—Pusan National University; Yang, Hyeonbo—Pusan National University; Lee, Donghoon—Pusan National University

Descriptors: cognitive, language

When we see an angry face, do we automatically retrieve a concept of anger as we see a word 'angry'? From the view of basic emotion theory, the answer is YES because we have innate knowledge of basic categories of emotion. On the contrary, the answer is No from the view of constructed emotion theory because the meaning of the face is constructed by sociocultural knowledge of perceivers. In the present study, we compare contextual modulation effects by an emotion word ('Happy' or 'Angry') with those by a stereotypical Happy and Angry face on the category judgment for target faces. In experiment 1, a group of participants performed a two-alternative forced choice task for the gradually morphed target faces from angry to happy in 6 levels by 20% just after seeing a stereotypical (100%) Angry or Happy face, and the other group performed the same task but just seeing a word ('Angry' or 'Happy'). Result from experiment 1 shows that the word context produces assimilation effects while the face context produces contrast effects, F(2,130)=22.73, p<.001. In experiment 2, we manipulate the length of SOA (stimulus onset asynchrony) between context and target stimuli. Interestingly, while the assimilation effect by the word context is not modulated by SOA, F(2,72)=0.48, p=.95, the contrast effect by the face context (Angry or Happy face) is differently influenced by the SOA, F(2,92)=4.13, p<.05. Our results suggest that stereotypical faces for angry and happy emotion may provide perceptual information rather than conceptual information.

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POSTER C-66
EMOTIONAL CLARITY, EMOTION REGULATION, AND PROBLEM SOLVING IN DAILY LIFE

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Descriptors: emotion regulation, mental health

Cross-sectional research has found that emotional clarity is associated with emotion regulation and coping strategies (e.g., problem solving), but far less is known about the dynamics of these processes in daily life. The current studies aimed to examine associations between emotional clarity, emotion regulation, and problem solving in daily life. We conducted two 7-day daily diary studies (n=172 in Study 1; n=211 in Study 2). Data in both studies were analyzed using multilevel modeling. In Study 1, we found trait emotional clarity was not associated with daily use of reappraisal, acceptance, or meaning making. However we found evidence of a small association between trait emotional clarity and problem solving. In Study 2, we focused on problem solving and also measured daily levels of emotional clarity. We found a link between trait emotional clarity and problem solving in daily life (Beta=.24, p=.03), as well as a link between daily emotional clarity and problem solving (Beta=.17, p<.001). Across both studies we found evidence that problem solving may be facilitated by understanding one's emotions. Implementing and gaining benefits from cognitive strategies, such as reappraisal, may be less dependent on explicitly understanding exactly what one feels. Since emotional clarity is often targeted in clinical interventions, these studies highlight the potential for augmenting problem-solving therapies in particular with emotional clarity training. Future work should focus on specific mechanisms connecting one's understanding of emotions to problem solving capacity.

POSTER C-67
FANTASY PRONENESS, DISSOCIATION, AND EMOTION REGULATION STRATEGIES

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Descriptors: emotion regulation, clinical, personality

Dissociation and fantasy proneness (FP) are associated with psychopathology (Merckelback et al., 2001), daydreaming, counterfactual thinking (Bacon, et al., 2013) and the arts (Thomson et al., 2009). These processes are thought to operate as emotion regulation (ER), in particular, suppression of emotional experience. Limited research has explored this or compared thought and expressive suppression as separate processes. This study examines FP and dissociation in relation to thought suppression, expressive suppression, and cognitive reappraisal. Subjects (N=187), recruited via Amazon's Mechanical Turk, completed the Creative Experiences Questionnaire (CEQ), Scale of Dissociative Activities (SODAS), White Bear Suppression Inventory, and Emotion Regulation Questionnaire. Multiple regression was used to test the impact of the SODAS and CEQ on ER strategies. Dissociation was significantly correlated with thought suppression (pos.), expressive suppression (pos.) and reappraisal (neg.). FP was significantly correlated only with thought suppression (pos.). Multiple regression controlling age and sex indicated that dissociation accounted for 34% of the variance in thought suppression, and FP explained a further 3%, F(3, 178)=35.24, p<.001. No other significant results were found. While dissociation may impact suppression globally, the relationship between dissociation and FP impacts an internal process (thought suppression) rather than an external process (expressive suppression). Findings suggest a need to examine factors contributing to unique components of suppression.

POSTER C-68
PARENTAL EMOTION REGULATION INFLUENCES PARENTING PRACTICES AND DEVELOPING CHILD EMOTION REGULATION

DeLoretta, Laura C—University of California Riverside; Davis, Elizabeth L—University of California Riverside

Descriptors: emotion regulation, physiology, biomarkers, child development

Emotion regulation (ER), automatic (implicit) and effortful (explicit) attempts to change/maintain an emotional experience, is an important skill that begins to develop in childhood and is largely shaped by parents. Parents socialize child ER directly (coaching ER strategies) and indirectly (emotion expression, reacting to child's emotions). Little is known about how parental ER abilities relate to socialization practices and children's developing ER. In this study, psychophysiology-specifically, patterns of respiratory sinus arrhythmia (RSA)-was used to measure parent and child dynamic ER across phases of an emotional challenge. This study is novel in evidencing the use of physiology as a marker of implicit ER and describing the role of parent socialization in developing implicit ER. 181 4-to-11-year-old children with 1 parent completed a disappointing task in which children unexpectedly receive a broken toy instead of a prize. Children's responses to the task were assessed while with an experimenter, alone, and with their parent. Behavior was coded offline to assess parents' use of supportive/unsupportive ER strategies. RSA was acquired continuously. Results suggest that parent RSA suppression was associated with use of supportive strategies during the emotional challenge. There was a positive association between the direction of parent and child RSA reactivity during the task. Later analyses will examine directionality of physiological reactivity and associations between parent and child ER to describe the role of parent socialization in developing child implicit ER.

POSTER C-69
POSITIVE REAPPRAISAL IMPROVES DECISION-MAKING IN WOMEN, BUT IMPAIRS IT IN MEN

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Descriptors: emotion regulation, personality, culture

Research shows that in real-life decision-making, emotional and cognitive processes must work together to achieve success. Previous studies using the Iowa Gambling Task (IGT) indicate that women learn more slowly and are ultimately less successful on the task compared with men, however, the emotional and cognitive mechanisms for this gender difference are unknown. In the current study, we examine gender as a moderator of the effect of positive reappraisal on IGT performance in 40 men and 40 women. We observed an interaction between gender and condition on emotion on IGT performance, F (1,72)=20.01, p<.001, '‡2=.22. Namely, -as expected- in the non-reappraisal condition men outperformed women on the IGT (t=4.48; p<.001; 95% CI=5.91, 15,37). Conversely, in the reappraisal condition, no differences in IGT performance between men and women were observed, because reappraisal significantly impaired IGT performance in men but significantly improved it in women. These results together clearly demonstrate that the use of positive reappraisal affects men and women differently. Additionally, we used an Expectancy Valence Model to examine the candidate mechanisms of this moderation by gender, and find that only when reappraising, men tended to respond more to rewards (relative to punishments), compared with women (t=3.01; p=.004; 95% CI=-0.48, -0.097). These results indicate that engaging in positive reappraisal has different effects by gender on downstream process which require integration of emotion and cognition, such as decision-making.

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POSTER C-70
TRAIT AFFECT PROFILES PREDICT CLINICAL PRESENTATION AND FUNCTIONAL OUTCOME IN SCHIZOPHRENIA

Cowan, Henry R—Northwestern University; Mittal, Vijay A—Northwestern University; Allen, Daniel N—UNLV; Gold, James M—UMBC; Strauss, Gregory P—University of Georgia

Descriptors: mental health, clinical, positive emotion

Background: The current study examined whether subgroups of individuals with schizophrenia could be identified based on their profiles of trait positive and negative emotional experience, and whether those subgroups differed in their symptom presentation and functional outcome.Methods: Participants included 192 outpatients diagnosed with schizophrenia or schizoaffective disorder (SZ) and 149 demographically matched healthy controls who completed the trait version of the Positive and Negative Affect Scale, as well as symptom and functional outcome assessments. Cluster analysis determined whether patients could be separated into meaningful subgroups based on their trait emotional experience profiles, and discriminant function analysis was determined whether these groups were valid and adequately separated. Results: Forty-two percent of the patients fell into an "affectively normal" cluster, while 28% and 30% fell into low positive affect (PA) and high negative affect (NA) clusters. These subgroups differed significantly on positive symptoms, negative symptoms, medication, DSM diagnoses, and functional outcome, positive symptoms.Conclusions: Trait emotional experience is heterogenous in outpatients with psychotic disorders, and meaningful subgroups of patients with different profiles of PA and NA can be identified. These subgroups show meaningful differences in clinical presentation, which may necessitate different treatment approaches.

POSTER C-71
THE IMPACT OF SLEEP QUALITY AND OUTGROUP SOCIAL STRESS ON AFFECTIVE RESPONSES

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Descriptors: social, positive emotion

Experiencing social stress can have negative impacts on health and well-being. Previous work has shown that health behaviors like trait sleepiness may also influence how rejection is experienced. Here, we examined if sleep quality the night before experiencing an in-group or out-group social stressor impacts affective responses to the stressor for both Black (N=173) and White (N=196) participants. Participants arrived at the lab and first reported on their sleep quality the night before. Subjects were then randomly assigned to received either accepting or rejecting feedback from a confederate of either the same or different race. Affective responses were recorded pre- and post-stressor. We performed a linear regression analysis to test if (1) participant race, (2) confederate race, (3) prior night sleep quality, (4) feedback type and (5) participant x confederate race predicted affect post-stressor controlling for baseline affect. Analyses revealed that poor sleep quality (b=0.047;p=.023) and receiving rejecting feedback (b=0.235;p=.001) from your outgroup (b=-0.073;p=0.03) led to less positive affect after the stressor. However, for negative affect, receiving rejecting feedback (b=-0.105;p=.008) was the only significant predictor, with rejecting feedback increasing negative affect post-stressor. These findings elucidate the significance of the role of sleep in acute psychosocial stress, especially within the context of intergroup interactions.

POSTER C-72
BETA AMYLOID IN COGNITIVELY NORMAL OLDER ADULTS IS ASSOCIATED WITH LONGITUDINAL EMPATHIC CONCERN CHANGES AND GRAY MATTER VOLUME

Chow, Tiffany E—University of California, San Francisco; Veziris, Christina R—University of California, San Francisco; La, Joie, Renaud—University of California, San Francisco; Bourakova, Viktoriya—University of California, San Francisco; Rankin, Katherine P—University of California, San Francisco; Kramer, Joel H—University of California, San Francisco; Miller, Bruce L—University of California, San Francisco; Seeley, William W—University of California, San Francisco; Rabinovici, Gil D—University of California, San Francisco; Sturm, Virginia E—University of California, San Francisco

Descriptors: clinical, social neuroscience, social, positive emotion

In Alzheimer's disease, there is decline in cognitive functioning but enhancement of affective empathy. Abnormal deposition of beta amyloid (AB), a pathological hallmark of Alzheimer's disease, may begin at least a decade prior to clinical symptoms. It is unknown whether empathy changes during this early stage. We assessed whether AB was associated with longitudinal affective empathy trajectories in 87 healthy older adults who were cognitively normal at a baseline research visit. Amyloid PET scans were used to identify 24 AB positive (AB+; M=69.4 years; SD=5.2 years) and 63 AB negative (AB-; M=70.0 years; SD=7.3 years) individuals. AB positivity indicates abnormal AB accumulation and signifies the presence of preclinical Alzheimer's disease. Informants rated participants' current empathy at annual research visits using the Interpersonal Reactivity Index. The empathic concern subscale measures a type of affective empathy involving other-oriented feelings of concern and compassion. Although there were no initial baseline differences in empathic concern between the AB+ and AB- groups (p=.68), longitudinal analyses indicated that AB positivity was linked to greater increases in empathic concern across time (p=.03). Voxel-based morphometry analyses demonstrated that in AB+ participants, increases in empathic concern were associated with smaller right hippocampal gray matter volume (pFWE<.05). These results suggest elevations in affective empathy occur in the preclinical phase of Alzheimer's disease and reflect atrophy in vulnerable brain regions.

POSTER C-73
EMOTIONS IMPACT ENGAGEMENT AMONG SMOKERS DURING A QUIT ATTEMPT

Carpenter, Stephanie M—University of Michigan; Yap, Jamie—University of Michigan; Lam, Cho—University of Utah; Wetter, David—University of Utah; Nahum-Shani, Inbal—University of Michigan

Descriptors: intervention, physical health

Tobacco use is the leading preventable cause of disease, disability and death in the United States, yet evidence suggests that 70% of smokers who attempt to quit lapse within the first two weeks. Identifying ways to increase real-time intervention engagement during the early phase of a quit attempt is crucial for preventing smoking lapse and promoting long-term abstinence. Capitalizing on an individual's emotional state may provide useful information about what factors drive real-time engagement, as emotions direct attention either toward a focal stimulus that may promote engagement, such as a study assessment, or away from a focal stimulus to reduce engagement. In two observational studies, smokers (N=200) were prompted to complete approximately four ecological momentary assessments (EMAs) per day that assessed current emotions for the 10 days following their quit attempt. Preliminary analyses suggest that experiencing specific high intensity negative emotions (e.g., angry, irritable) reduced the likelihood of completing an EMA delivered within the next 3 hours (e.g., Irritable: beta=-0.315, SE=.138, p<0.05). These findings suggest that proximal emotions critically impact engagement among smokers during a quit attempt.

POSTER C-74
SPECIFICITY OF HIDING FEELINGS AND RELATIONSHIP SATISFACTION AMONG LAW ENFORCEMENT OFFICERS

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Descriptors: emotion regulation, close relationships

Job stress and emotion suppression can have a considerable impact on partner relationships and relationship satisfaction. This may be particularly true for law enforcement officers (LEOs) who experience both job stress and a LEO culture that emphasizes emotion suppression. We surveyed 147 married or partnered LEOs to test whether hiding negative feelings from one's partner and perceiving that the partner lacks understanding of the LEO's job (using questionnaires developed in our laboratory) were associated with lower relationship satisfaction. As hypothesized, results of linear regression demonstrated that greater reports of hiding negative feelings (including pretending to feel positive emotions) from one's partner and reporting the feeling that one's partner does not understand the LEO's job each were associated with lower relationship satisfaction (both p<0.001), even after controlling for LEO job stress, negative affect (per the PANAS), and general use of emotion suppression (per the Emotion Regulation Questionnaire). Surprisingly, more frequent use of emotion suppression in general was not associated with lower relationship satisfaction after accounting for job stress and negative affect. In addition, LEOs who endorsed to a greater extent that emotion control was valued in their relationship reported higher marital satisfaction (p=.006). Taken together, results point to the importance of the specific emotion regulation context of a LEO's relationship in understanding possible consequences of suppression.

POSTER C-75
JUDICIAL EMOTIONAL EXPERIENCE AND ITS REGULATION

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Descriptors: emotion regulation, law, methods, physical health, social

Judges experience a wide range of emotions in connection with their work, and expend effort to regulate those emotions. This reality stands in contrast to the traditional notion of judging as "dispassionate" (Maroney 2011a, b). An ongoing nationwide study of U.S. federal judges (pilot phase n=20) using semi-structured, in-person, in-depth interviews, analyzed through an iterative qualitative process on the Dedoose research platform, reveals novel data on the range of judicial emotional experience and its regulation and a novel analytic frame within which to understand those phenomena. For example, interviewed judges do not invariably seek to down-regulate emotion, as expectations of dispassion would predict; indeed, they at times regard their emotions as informational, motivational, and decisionally relevant. Subject judges also deploy a wide range of known regulatory strategies, including behavioral suppression and cognitive reappraisal (Maroney and Gross 2014), in pursuit of their professional goals, such as projecting objectivity and reaching accurate and fair decisions. Subject judges also report significant variation on wellness-relevant experiences such as stress, isolation, and burnout, a growing concern to which empirical inquiry increasingly is directed (Bornstein, Hullman, & Miller 2013; Schrever, Hulbert, & Sourdin 2019), as well as variation on wellness-promoting behaviors, including behaviors not previously described in the literature, such as spiritual practice. Our pilot data point to a fundamental reorientation in popular and academic accounts of judging.

POSTER C-76
CAN WE RELIABLY MEASURE EMOTION REGULATION WITH FMRI?

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Descriptors: emotion regulation, neuroscience, methods

Background: Given the importance of emotion regulation (ER) in affective disorders, it becomes a growing priority to identify brain biomarkers of disease risk and treatment response. However, the ability to identify biomarkers is fundamentally limited by measurement reliability. Here, we aimed to systematically evaluate the test-retest reliability of task-based fMRI activity within the ER network. Methods: 25 healthy participants (21f, M=22.8 Œ± 3.3 yrs) performed a well-established ER task (decrease and look) during 3 scanning sessions separated by 1 week. We acquired 4 runs/session and 80 trials/session using the CMRR multiband EPI sequence at ultra-high field (7T). We conducted region-wise and whole-brain, voxel-wise reliability analyses by computing intercorrelation coefficients (ICCs) for previously defined Regions of Interest (ROIs) that are implicated in 4 ER networks (N1: attention & memory, N2: language, N3: emotion, N4: interoception) (Morawetz et al., under review) and whole-brain ICC-maps. Results: Participants felt less negative after ER compared to control over all 3 sessions (F(1,24)=51.04 , p<.001). The ER task showed excellent group level reliability and robust between-subject reliability for region-wise and voxel-wise analyses. Reliability was dependent on the respective ROI and ER networks with cortical networks (N1 & N2) resulting in higher ICCs than subcortical networks (N3 & N4). Conclusions: The highly reliable cortical networks might constitute promising candidates for biomarkers.

POSTER C-77
PERCEIVED POLITICAL THREAT PREDICTS NEGATIVE PERCEPTIONS OF OUTGROUP FACIAL EXPRESSIONS

Basyouni, Ruby—University of Nebraska-Lincoln; Harp, Nicholas R—University of Nebraska-Lincoln; Haas, Ingrid J—University of Nebraska-Lincoln; Neta, Maital—University of Nebraska-Lincoln

Descriptors: political, social, emotion regulation

When the emotional content of a facial expression is ambiguously valenced, individuals' tendency toward a positive or negative interpretation can reveal biases in affective processing. The current study demonstrates the effect of group membership on perceptions of negative valence (i.e., negativity bias) in an ambiguous facial expression (i.e., surprise). In a within-subjects design, participants identifying as Democrats (n=42) or Republicans (n=53) viewed happy, angry, and surprised faces belonging to political ingroup members, political outgroup members, and individuals whose political affiliation was unspecified (baseline). Participants rated each face as positive or negative in a dichotomous, forced-choice, mouse-tracking task. Consistent with our predictions, ratings of ingroup surprised faces were not significantly different from baseline ratings (p>.99), but ratings of outgroup surprised faces were significantly more negative than both ingroup (p=.003) and baseline ratings (p<.001). In addition, the extent to which participants viewed outgroup members as threatening to the ingroup was a significant predictor of change in ratings: when the outgroup was perceived as more threatening, ratings of outgroup surprised faces were increasingly more negative than ratings of ingroup surprised faces (p=.025). These findings demonstrate the susceptibility of ambiguous emotional content to the influence of group membership and highlight the utility of ambiguous stimuli in examining biases in facial affect processing.

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POSTER C-78
IMPACT OF PREDICTION ERROR ON THE LONGITUDINAL NETWORK STRUCTURE OF AFFECT

Baez, Lara M—University of Miami; Villano, William—University of Miami; Jaso, Brittany A—University of Miami; Heller, Aaron S—University of Miami

Descriptors: emotion regulation, mental health, methods

Research suggests that the extent to which an outcome deviates from one's expectation impacts the valence, intensity, and dynamics of one's emotions. This deviation is known as prediction error (PE). One way to model the multivariate structure of emotion is to create networks where nodes represent emotions and edges represent lagged associations between emotions. The current study sought to examine how affect unfolds in the wake of a personally meaningful event—receiving an exam grade. Grade predictions were elicited from students in a psychology course. PE was the difference between the predicted and the actual grade. When students viewed their exam grades online, SMS surveys were sent every 45 minutes for up to 8 hours assaying intensity of 5 positive affect (PA) and 3 negative affect (NA) items. Multilevel vector autoregressive network models were estimated in three groups: negative PE (-PE<-1,N=113), neutral PE (nPE [-1-1],N=141), positive PE (+PE>1,N=111). Expected influence (EI), the importance of a node, was computed for each network. Correlations between nPE and -PE/+PE edges and EI were calculated to assess network similarity. The +PE network more strongly connected (S=5.5) than the nPE (S=4.6) and -PE (S=4.8) networks. EI differed between nPE/-PE (r=-.5) and to a lesser degree nPE/+PE (r=.2) PE networks such that PA items were lower and NA items greater in EI in the -PE PE network compared to the +PE and nPE networks. Results suggest that the network structure of affect is fundamentally different in the wake positive, neutral, and negative PE events.

POSTER C-79
WHAT EMOTION REGULATION STRATEGIES ARE RELATED TO ANXIETY SYMPTOMS? AN ECOLOGICAL MOMENTARY ASSESSMENT STUDY.

Alawadhi, Yasmeen—University of Washington; Smith, Michele R—University of Washington; King, Kevin M—University of Washington

Descriptors: emotion regulation, clinical

Maladaptive emotion regulation (ER) strategies prolong experiencing negative emotions and may increase anxiety symptoms. Prior studies generally used retrospective self-report measures to examine the association between anxiety and ER strategy use. This study examines this association in real time via ecological momentary assessment (EMA). Baseline surveys captured participant self-reported anxiety symptoms using the PROMIS-Anxiety scale (N=155 college students). We measured ER through EMA-adapted prompts from the Cognitive Emotion Regulation Questionnaire, which participants received on their cell-phones 3 times daily for 10 days. In preliminary analyses, baseline anxiety symptoms were positively correlated with adaptive ER strategies: acceptance r=.13 [.09, .16], problem solving r=.11 [.07, .14], and reframing r=.17 [.13, .21]. Distraction (r=.21 [.17, .24]). Maladaptive strategies were positively correlated with anxiety: avoidance r=.17 [.14, .21], rumination r=.25 [.21, .28], and suppression r=.19 [.15, .22]. Using no ER strategy (r=-.27 [-.30, -.24]) was negatively associated with anxiety. To formally analyze these associations, we will use generalized estimating equations. We will include age, gender, signal, and observation number as covariates in all models and use the Benjamini-Hochberg procedure to control for false discoveries. These findings suggest that anxiety symptoms may be differentially associated with ER strategies. Tracking ER strategies in a natural environment can further inform our understanding of how anxious individuals attempt to regulate emotions.

POSTER C-80
THE ORIGINS OF INDIVIDUAL DIFFERENECS IN EMOTIONAL AND COGNITIVE EMPATHY

Abramson, Lior—The Hebrew University of Jerusalem; Toccaceli, Virgilia—Italian National Institute of Health; Knafo-Noam, Ariel—The Hebrew University of Jerusalem

Descriptors: social, personality, physiology, biomarkers

Empathy is crucial for individuals' social development. To understand the factors influencing individual differences in empathy, we meta-analyzed behavioral genetic twin studies of emotional empathy-sharing others' emotions (k=13), and cognitive empathy-understanding others' emotions (k=15). Across the literature, heritability accounted for 48% of individual differences in emotional empathy, whereas cognitive empathy showed lower heritability, 27%. Moreover, cognitive empathy as examined by emotion recognition tests was affected also by shared environment, 12%, suggesting that it is influenced, to some degree, by environmental factors that have similar effects on individuals beyond their genetic relatedness. In the talk, we will suggest a multivariate genetic approach to test possible mechanisms through which genes and environment affect empathy. We will demonstrate this approach with data of twin adolescents, in which personality traits and empathy showed overlapping genetic effects. For example, heritability of emotional (but not cognitive) empathy, 41%, was partially explained, 6%, by heritability of the personality trait neuroticism, suggesting that genes contributing to the tendency to experience self-unpleasant emotions also contribute to the tendency to feel others' emotions. Such findings indicate that neurophysiological and personal characteristics are differentially involved in emotional and cognitive empathy. By that, they set the ground to investigate the complex relations between genes, brain, and empathic behaviors.

POSTER C-81
THE ROLE OF EMOTIONAL CONTEXT IN 2-YEAR-OLDS' WORD LEARNING

Ogren, Marissa—University of California, Los Angeles; Sandhofer, Catherine M—University of California, Los Angeles

Descriptors: child development, language, cognitive

Previous research has indicated that the physical context in which a word is spoken (e.g., location or background) can influence how well young children learn the word. However, it is unclear how variability in social contexts, such as emotion, may impact word learning. To assess this, the present study had 2-year-old children participate in a novel noun generalization task in which they overheard one experimenter labeling a novel object to another. Participants were randomly assigned to one of four emotional labeling conditions: consistently angry, consistently happy, consistently sad, or variable (one label in each emotional tone per trial). We investigated whether the number of times the child correctly identified the labeled object at later test (out of 8 possible trials) varied by emotional condition. Preliminary data from 52 participants (Mage=2.49 years, 29 female) revealed no statistically significant difference among the four conditions (F=0.61, p=.660), with the average number of correct responses by condition as follows: Angry=4.75; Happy=4.62; Sad=4.64; Variable=5.46. It is possible that with continued data collection, the results may reveal an advantage for the variable condition, similar to the advantages shown in learning in a variety of physical contexts. If so, these results would suggest that the advantage of young children learning words in a variety of contexts may extend to social contexts such as emotional tones of voice. Ultimately, this study holds implications for how emotional contexts may or may not influence children's ability to learn new words.

POSTER C-82
COGNITIVE EMOTION REGULATION AND NEGATIVE PAST TIME PERSPECTIVE IN EXPLAINING LINK BETWEEN NEUROTICISM AND NEGATIVE AFFECT

Padun, Maria A—Institute of Psychology, Russian Academy of Scinces, Moscow, Russia; Gagarina, Maria A—FSEE HE "Financial University", Moscow, Russia; Zelyanina, Anna N—Northern (Arctic) Federal University named after M. V. Lomonosov, Arkhangelsk, Russia.

Descriptors: emotion regulation, cognitive

Neuroticism is a higher-order temperamental trait associated with the development of emotional disorders. Emotion regulation (ER) has emerged as an important construct in studies of psychological well-being.Problems on ER constantly relying on maladaptive cognitive emotion regulation strategies have been pointed as a risk factor for mental disorders. Negative past time perspective (TP) is stable negative beliefs about the past which are likely to bias appraisal of present life events.The research question was whether the relation between neuroticism and negative affect is mediated by emotion regulation and negative past perspective. The participants of the study were 295 Russian undergraduate students. We used self-reported measures to assess neuroticism (NEO FFI), negative affect (PANAS), cognitive emotion regulation strategies (CERQ), time perspectives (ZTPI). Structural equation modeling was used to examine the mediational role of ER and negative past TP in linking neuroticism and severity of negative affect. The relation between neuroticism and negative affect is mediated by individual differences in the use of maladaptive cognitive ER strategies, but not by negative past perspective. Respectively, the use of Rumination, Catastrophizing, Self-blame and Other-blame partly mediates the association between neuroticism and the severity of negative affect. We found out that negative past TP loses its influence on negative affect if neuroticism and maladaptive cognitive ER are included into the model.

POSTER C-83
INDIVIDUAL VARIATION IN THE WHITE MATTER MICROSTRUCTURE OF THE FORNIX/STRIA TERMINALIS AND UNCINATE FASCICULUS IS RELATED TO BETTER RECOVERY FROM NEGATIVE STIMULI

Pedersen, Walker S—UW Madison; Schaefer, Stacey M—University of Wisconsin-Madison; Dean, III, Douglas C—University of Wisconsin-Madison; Gresham, Lauren K—University of Wisconsin-Madison; Lee, Seungbeum D—University of Wisconsin-Madison; Kelly, Michael P—University of Wisconsin-Madison; Adluru, Nagesh—University of Wisconsin-Madison; Mumford, Jeanette A—University of Wisconsin-Madison; Davidson, Richard J—University of Wisconsin-Madison

Descriptors: neuroscience, emotion regulation

The stria terminalis, fornix, and uncinate fasciculus white matter pathways connect brain regions important for emotion. The stria terminalis contains fibers connecting subcortical regions including the amygdala, bed nucleus of the stria terminalis (BNST), and hypothalamus. Connections facilitated by the fornix include the hippocampus, BNST, and hypothalamus, while the uncinate fasciculus connects the prefrontal cortex with regions of the temporal lobe, including the amygdala. These pathways may modulate stress, threat, and emotional responses. We tested whether DTI based white matter microstructure of these pathways was associated with differences in emotional recovery, a form of automatic emotion regulation, measured with corrugator supercilii electromyography in response to negative, neutral, and positive images in 108 participants from the Midlife in the US (MIDUS; midus.wisc.edu) Refresher study. Corrugator activity is linearly associated with changes in affect, and differentiated negative, neutral, and positive emotional responses. Mean fractional anisotropy (FA) was computed from fornix/stria terminalis (FX/ST) and uncinate fasciculus tracts to obtain an estimate of the microstructure from these regions of interest. Higher FX/ST and uncinate fasciculus FA was associated with lower corrugator activity 4-8 seconds after negative image offset, indicating better recovery from negative provocation. This suggests that the microstructural features of FX/ST and uncinate fasciculus may be important for emotion regulation and indicative of healthier affective functioning.

POSTER C-84
AUTOMATIC EMOTION AND APPRAISAL DETECTION FROM VOICE

Qian, Weiqiang—Vanderbilt University; Smith, Craig A—Vanderbilt University; Kirby, Leslie D—Vanderbilt University

Descriptors: cognitive, computational science, physiology, biomarkers

The study of appraisal and emotion is limited by self-report accuracy. We describe progress in developing emotion and appraisal detectors that use vocal information, and can convergently supplement self-reports. The emotion detector predicts emotion based on voice features including frequency, intensity, jitter, etc., extracted from 5-second speech samples. We trained this detector using 3 speech enactment datasets containing short speech samples, each expressing a particular emotion. They contain 8149 samples, involving 114 actors, and depicting 5 emotions. Currently, the emotion detector can predict the emotions from the voice features with an average cross-validation accuracy of 60%. To infer appraisal information from the voice, a neural network is trained, with a dataset containing 7 appraisal dimensions and the 5 emotions, to predict the appraisal dimensions from the emotions. In research settings, the participant's speech will be segmented into samples, which then feed into feature extractors. The emotion detector predicts the probability of each emotion from the features. The appraisal detector then calculates appraisals based on the emotion probabilities.

POSTER C-85
(NOT) EXPRESSING EMOTIONS AND LINKS WITH ANXIETY AND DEPRESSION: A LABORATORY-BASED STUDY OF ADOLESCENT-CAREGIVER CONVERSATIONS

Rodosky, Sophie E—Northwestern University; Stephens, Jacquelyn E—Northwestern University; Gupta, Tina—Northwestern University; Mittal, Vijay A—Northwestern University; Haase, Claudia M—Northwestern University

Descriptors: child development, mental health

Adolescence is a time often marked by elevations in symptoms of anxiety and depression. Research suggests that anxiety and depression are linked to alterations in facial expressions of emotion, but few studies have examined these associations in the context of adolescent-caregiver conversations. The present laboratory-based study examined whether facial expressions of emotion were associated with symptoms of anxiety and depression in a sample of 25 adolescents (Mage=14.88, SD=2.39). Adolescents engaged in 10-minute videotaped conversations about conflictual and pleasant relationship topics with their caregivers (i.e., parents, legal guardians). Noldus FaceReader 8 software was used to determine frequency and intensity of facial expressions of emotion, including neutral expressions. Symptoms of anxiety (21 items, alpha=.93) and depression (21 items, alpha=.86) were measured with the Beck Depression and Anxiety Inventories, respectively. Results revealed that more frequent neutral facial expressions in the conflict conversation were correlated with anxiety symptoms (r=.41, p=.043), and more frequent neutral facial expressions in the positive conversation were correlated with depressive symptoms (r=.43, p=.028). These findings support the utility of using facial expressions during adolescent-caregiver interactions as behavioral psychopathology markers and show that adolescents who do not express emotions in these contexts may be at heightened risk for anxiety and depression.

POSTER C-86
SOCIAL SUPPORT BY A VIRTUAL AGENT FOR THE REGULATION OF EMOTIONS IN A NOVEL VIRTUAL CLASSROOM TASK

Samson, Andrea C—Swiss Distance University Institute; Stallmann, Lina—University of Fribourg; Tran, Michel—Swiss Distance University Institute; Dukes, Daniel—Swiss Distance University Institute; Rudrauf, David—University of Geneva

Descriptors: emotion regulation, social, methods

The goal of the current study was to examine the efficacy of social support offered by a virtual agent in a stressful encounter in a newly developed, immersive environment at school. Twenty-nine individuals (aged 18 to 32, mean=23 years) participated in a virtual classroom task. In three separate conditions, the teacher either scolded the participant, another pupil, or, ambiguously, either the participant or the other pupil. Negative and positive self-reported emotions as well as psychophysiological markers were assessed before and after social support, offered by another pupil. 3x2 rmANOVAs on the emotion reports both uncovered main effects of social support (neg: $F(1,28)=54.41$, $p<.001$, eta squared=0.66 and pos: $F(1,28)=48.87$, $p<.001$, eta squared=0.64), a main effect of condition for positive emotions only ($F(2,56)=8.67$, $p=.001$, eta squared=0.24), and significant interactions (neg: $F(2,56)=4.803$, $p=.012$, eta squared=0.146 and pos: $F(2,56)=5.31$, $p<.01$, eta squared=0.16). An ANOVA on skin conductance levels during the three conditions showed a significant effect ($F(1.42,35.49)=14.58$, $p<.001$, eta squared=0.37).Thus our manipulation of the three conditions has successfully elicited emotional responses by the participants, and social support by a virtual agent has been shown to lead to less negative and more positive emotions.The task seems a promising start to further examining social emotion regulation in virtual reality and could be used in various settings to examine people's susceptibility to social support to regulate their emotions.

POSTER C-87
SOCIAL SHARING AND DURATION OF EMOTIONAL EXPERIENCES

Sanchez Hernandez, Hugo—University of California, Irvine; Hovasapian, Arpine—Ghent University; Campos, Belinda—University of California, Irvine; Levine, Linda J—University of California, Irvine

Descriptors: social, culture, close relationships

Research findings are mixed as to whether, and how, social sharing prolongs positive and negative emotion, and this research has focused primarily on European Americans. We explored this issue with European Americans and two collectivistic cultures-Latinx and East Asian Americans. College students (N=260) who received an exam grade that they considered positive or negative reported their sharing experiences and the duration of their emotional response (min) to their grade. A 2 (shared, not shared) x 2 (positive, negative grade outcome) x 3 (ethnic group) ANCOVA, adjusting for initial emotion intensity, showed that across ethnic groups and for both positive and negative outcomes, participants' emotional response lasted longer for those who shared than for those who did not, $F(1,247)=11.46$, $p=.001$, partial eta squared=.04. Emotional responses also lasted longer following a negative than a positive outcome, $F(1,247)=18.82$, $p<.001$, partial eta squared=.07. Regression analyses further showed that the more students' primary sharing partner made them appraise their grade as important, the longer their emotional response lasted. For a positive outcome only, the greater the number of people students shared with, the longer their feelings lasted. We found no ethnic group differences. These findings further contribute to our understanding of social sharing, suggesting that sharing may lead people to reappraise the importance of outcomes and prolong positive emotion and, unfortunately, negative emotion, although sharing with more people only prolongs positive emotion.

POSTER C-88
BEHAVIORAL AND NEURAL CORRELATES OF AGING AMONG YOUNG ADULT TO MIDDLE-AGED RHESUS MONKEYS

Santistevan, Anthony C—University of California, Davis; Wu, Chongyang—Harvard University; Bliss-Moreau, Eliza—University of California, Davis

Descriptors: adult development, animal, comparative, emotion regulation, neuroscience, evolutionary

Aging can be detrimental to physical and psychological wellbeing, evidenced by an increased incidence of disease in older adults and decline of cognitive ability and shrinking social networks as age advances. Seemingly paradoxically, research into the positivity effect shows that older adults evidence a cognitive and motivational bias towards positive affect and exhibit improved emotion regulation. Understanding the degree to which rhesus monkeys (Macaca mulatta), arguably the best comparative model for human affect, evidence similar aging trajectories to humans is crucial for establishing the rhesus as a model of human aging. Here, we tested the hypothesis that age was associated with behavioral reactivity to a threatening stimulus in N=20 male rhesus monkeys (Median age=5.8 years, range: 3.8-14.9; approximately 16-60 human years). Age was negatively associated with reactivity to the threatening stimulus (p=0.03). Further, a whole-brain voxelwise analysis of the association between age and grey matter density showed similar patterns of aging in rhesus compared to humans. Like humans, there was relatively preserved grey matter density in the amygdala and subgenual anterior cingulate (all p>0.05, adjusted for multiple comparisons) coupled with significant decline in voxels in the insula and dorsolateral prefrontal cortex (p<0.05, adjusted) These results suggest that rhesus monkeys undergo similar trajectories of behavioral and neural aging to humans, thus providing some evidence the rhesus monkey may be used to understand components of human affective aging.

POSTER C-89
THE ASSOCIATION BETWEEN PRE-DRINKING SHAME AND DAILY ALCOHOL USE

Schallert, Macey R—University of Washington; Feil, Madison C—University of Washington; King, Kevin M—University of Washington

Descriptors: clinical, emotion regulation, mental health, moral

There is a growing interest in the emotion of shame as a predictor for numerous negative outcomes, including alcohol misuse. Further, prior studies suggest that shame motivated drinking may be of particular interest in men, due to their higher likelihood to drink to cope with negative emotions and perceived failures of masculinity. Although feelings of shame are proposed to increase the risk for alcohol use, prior studies have investigated the relations between shame and alcohol use using global self-report measures, rather than testing within-person associations. The current study aims to use Ecological Momentary Assessment (EMA) to measure within-person associations between feelings of shame and alcohol use. Further, we aim to examine gender differences with respect to theories suggesting that men may be more likely to experience drinking to cope with shame in particular. Our sample consisted of undergraduate students in the Pacific Northwest who reported drinking at least once a week (N=100). Participants completed five brief cell-phone surveys a day for two weekends (Thursday-Sunday, 85% completion, ~3400 observations). We will use multilevel models to test our hypotheses that daily shame will predict same-day total drinking and unplanned drinking at the within-person level, including gender as a moderator. A better understanding of how shame and drinking are related could further aid in the development of effective treatments for substance use disorders.

POSTER C-90
THE IMPACT OF DISCRIMINATION ON NEGATIVE AFFECT AND CARDIOVASCULAR ACTIVATION

Semko, Sierra R—University of California, San Francisco; Whitehurst, Lauren—University of California, San Francisco; Gordon, Amie—University of California, San Francisco; Mendes, Wendy, Berry—University of California, San Francisco

Descriptors: physiology, biomarkers, social, physical health

For both the mind and the body, discrimination hurts. Experiences of discrimination are known to evoke negative affective states and contribute to chronic elevated blood pressure (BP) by eliciting repeated cardiovascular stress responses. Autonomic nervous system responses are differentially influenced by positive versus negative emotions. Here, we investigated the mediating effect of negative affect on discrimination and cardiovascular activation in a daily diary study. Participants (n=1659; 70% White, 6% Black, 26% Other; 81% female, 17% male, 2% other; age range: 18-90 years) reported on the frequency of day-to-day discrimination encounters and recorded BP and heart rate (HR) using a built-in smartphone optic sensor. Participants also reported daily momentary affect. We tested (1) the effect of everyday discrimination on BP and HR and (2) whether this effect was mediated by negative affect. Discrimination predicted HR, b=1.93, p=<.001 and diastolic BP, b=0.97, p=<.001, such that higher discrimination was associated with elevated HR and diastolic BP. Further, negative affect partially mediated the effect of discrimination on both HR, b=0.367, SE=.07, 95% CI=[0.222, 0.516] and diastolic BP, b=0.381, SE=.11, 95% CI=[0.169, 0.607]. There was no effect of discrimination on systolic BP. These findings suggest that discrimination influences cardiovascular activity through increased negative emotions, such as anger or sadness, which could have important implications for long-term cardiovascular health.

POSTER C-91
CROSS-CULTURAL NOMOLOGICAL NETWORK OF GRATITUDE: FINDINGS FROM MIDLIFE IN THE UNITED STATES (MIDUS) AND JAPAN (MIDJA)

Srirangarajan, Tara—Stanford University; Oshio, Atsushi—Waseda University; Yamaguchi, Ayano—Rikkyo University; Akutsu, Satoshi—Hitotsubashi University

Descriptors: culture, positive emotion, personality

Gratitude enhances prosocial behavior and is considered a positive trait in most cultures, yet relatively little is known about its relationship to other psychological constructs, nor how it varies across diverse cultural contexts. To investigate the cross-cultural consistency of the benefits of having a grateful disposition, the current study examined the nomological network of gratitude in the United States and Japan, using data from two longitudinal studies: the Midlife in the United States (MIDUS II-Biomarker Project) and Midlife in Japan (MIDJA). Results showed significant positive bivariate associations between trait gratitude and positive psychological functioning (Satisfaction with Life, Sympathy, Anger Control, Cognition Control, and Support/Affectual Solidarity Given to Relational Networks) in both the U.S. and Japan. On the other hand, trait gratitude was negatively correlated with constructs associated with maladaptive psychological processes (Perceived Stress, Social Anxiety, Loneliness, and Anger-In) in both countries. The present findings provide valuable guidance for the development and implementation of future interventions that may lead to positive outcomes in individuals from diverse cultural and ethnic backgrounds.

POSTER C-92
CULTURAL DIFFERENCES IN AFFECTIVE STYLES AND ITS IMPACT ON ANXIETY SYMPTOMS

Strickland, Megan G—Saint Joseph's University; Skolnick, Alexander J—Saint Joseph's University

Descriptors: mental health, culture, emotion regulation

Hofmann et al.'s (2012) theory of emotion dysregulation posits that affective styles establish the experience of positive and negative affect, contribute to maladaptive emotion regulation and in turn maintain internalizing symptoms. Cross-cultural examinations of these affective style-anxiety relationships might help pinpoint possible mechanisms. We tested whether similar cultural differences in affective styles would emerge (India vs. USA) and whether these differences impact the experience of trait anxiety differently by culture. 330 participants (44.5% US, 52.4% India); primarily males (56.8%) completed online surveys through Amazon's Mechanical Turk. Significant cultural differences were evident in concealing affective style, (India>US) F(1,173)=5.06, p=.026, and on adjusting affective style, (India>US) F(1,173)=4.26, p=.041; tolerating affective style did not differ (India=USA). The overall model for those that grew-up in the US, affective styles strongly predicted trait anxiety, r-squared=.53, F(1,75)=26.51, p<.001, accounting for 51% of the total variance compared to for those who grew-up in India, r-squared=.30, F(1,81)=11.25, p<.001, accounting for 28% of the total variance. The overall model examining affective style based on where the participants currently reside was not significant. Growing up in India compared to the USA resulted in differences in affective style and its relationship to trait anxiety. Examining the emotional mechanisms contributing to these differences may reveal important aspects of anxiety.

POSTER C-93
REWARD SENSITIVITY AND COGNITIVE BIASES DURING ACUTE DEPRESSIVE EPISODE WITHIN MAJOR DEPRESSIVE AND BIPOLAR SPECTRUM DISORDERS

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Descriptors: clinical, cognitive

Altered reward sensitivity and cognitive biases are present in major depressive disorder (MDD; periodic depressive mood states) and bipolar spectrum disorder (BSD; depressive and elevated mood states). However, it is unknown whether a laboratory task measuring reward anticipation distinguishes depressed vs. non-depressed individuals or how the content and pattern of cognitive biases may differ in MDD versus BSD. MDD (n=51; 77% female; mean age=44), BSD (n=11; 55% female; mean age=34) and healthy control (HC; n=30; 52% female; mean age=34) participants completed (1) a novel incentive delay task measuring sensitivity to anticipated and obtained reward, (2) a facial emotion recognition task measuring bias and sensitivity towards emotional facial expressions and (3) a self-referential processing task measuring self-attribution and memory of positive and negative traits. The HC group was more sensitive to anticipated reward than the MDD, p=.001, d=1.00, but not BSD, p=.848, d=0.23, group. The HC group endorsed fewer negative traits than the MDD, p<.001, d=2.68, and BSD, p<.001, d=3.41, groups. The MDD group endorsed fewer positive traits than the BSD, p=.008, d=-1.04, and HC, p<.001, d=-1.95, groups. The BSD group endorsed fewer positive traits than the HC group, p=.044, d=-1.00. The HC group recalled a smaller proportion of negative traits than the MDD, p=.026, d=0.58, but not BSD, p=.171, d=0.63, group. These findings provide evidence for common and dissociable aspects of reward sensitivity and cognitive biases in MDD and BSD with potential diagnostic and clinical relevance.

Society for Affective Science

POSTER C-94
INVESTIGATING THE NEURAL PATTERN STRUCTURE OF MIXED EMOTION

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Descriptors: neuroscience, methods

How do we judge the valence of mixed emotional experiences? Previous behavioral data from 282 participants, who reported their emotional responses to short video clips, suggest that people's tendency to report an emotional response to pure-positive and pure-negative clips separately predict their tendency to call mixed-valence experiences "positive" vs. "negative". What neural patterns might underlie these single vs. mixed valence experiences? We are currently investigating this by showing participants (current N=12, planned N=80) a series of short video clips designed to elicit positive, negative, or mixed emotion during fMRI. Participants report their emotional response to each video as "negative" or "positive". We are using representational similarity analysis (RSA) to quantify the distance between multivoxel response patterns for positive, negative, and mixed emotion clips in putative affect-processing brain regions of interest. Preliminary RSA results in insula and dorsal anterior cingulate cortex indicate that patterns for pure-positive and pure-negative clips may be more similar to each other than they are to patterns for mixed-emotion clips (estimated difference in correlation=0.06 +- .02). These results suggest that brain regions previously implicated in general affective processing may track certainty of valence. Future analyses will probe individual differences in these neural patterns for single and mixed valence experiences.

POSTER C-95
CHILDREN'S AND ADULTS' AFFECTIVE FORECASTING

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Descriptors: child development, adult development

Adults exhibit an impact bias: They expect to react more intensely to future emotional events than they actually do. Little work, however, has tested whether children also demonstrate this forecasting error. Adults and 8- to 10-year-olds (N=92) viewed boxes, each containing varying combinations of winning and losing colored pom-poms (probability=.0, .1, .2, .3, .4 .5, .6, .7, .8, .9, 1.0, mystery). Participants learned that they would pick a pom-pom from each box (eyes closed), with the goal of selecting a winning one (each win earned candy). Before playing, participants predicted how they would feel if they won and lost each game (100-point scale: from very bad to very good). After playing, participants reported how they felt about the outcome (same scale). Initial analyses focused on certain outcomes: certain loss (.0) and certain win trials (1.0). We conducted two separate 2 (age: 8/10-year-olds, adults) x 2 (time: forecast, outcome) repeated-measures ANOVAs on emotion ratings. The certain loss analysis resulted in an Age x Time interaction, F(1, 90)=4.58, p=.035, Np2=.05: Eight- to ten-year-olds overestimated how bad a certain loss would feel (forecast: M=46.4, outcome: M=59.4, p<.001), but adults' projections were relatively accurate (forecast: M=49.0, outcome: M=53.4, p=.101). The certain win analysis yielded a main effect for time, F(1,90)=9.86, p=.002, Np2=.10: Children and adults expected winning to feel better than it actually did (forecast: M=75.2, outcome: M=69.6). Additional analyses will assess predicted versus actual reactions to the uncertain outcome trials.

POSTER C-96
WITHIN-PERSON ASSOCIATIONS BETWEEN DAILY SLEEP AND AFFECT IN ADOLESCENCE: EVIDENCE FROM ACTIGRAPHY AND ECOLOGICAL MOMENTARY ASSESSMENTS

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Descriptors: mental health, physical health, child development, methods

Adolescence is characterized by substantial changes in sleep behavior and heightened risk for internalizing problems like anxiety and depression. Although sleep disturbances are consistently associated with internalizing psychopathology, the direction of their associations remains poorly understood, especially at the within-person level and in real time. The current intensive longitudinal study examined daily associations between objective sleep behavior and self-reported affect. A community sample of 30 female adolescents aged 15-17 years completed single-item reports of multiple affective states via ecological momentary assessments three times daily for a total of 12 weeks, and wore an actigraphy wristband for continuous monitoring of sleep. Multilevel models disaggregated between-person and within-person effects and examined the bidirectional associations of sleep duration with affect. Within-person fluctuations in affect were associated with changes in sleep such that when participants felt more anxious and depressed than typical for them in the evening, they got less sleep that night (b=-.08, p=.02; b=-.11, p=.01). Furthermore, when participants slept less than normal, they felt more anxious the next day (b=-.04, p=.02). These findings provide new insights into the timing and direction of associations between sleep and affect, and suggest that interventions aimed at increasing consistency in sleep duration may play an important role in mitigating risk for internalizing psychopathology in adolescence.

POSTER C-97
TEMPORAL COURSE OF REAL-WORLD EMOTION IS MORE STRONGLY LINKED TO PREDICTION ERROR THAN OUTCOME

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Descriptors: computational science, emotion regulation

A substantial body of theoretical work suggests that human emotions are driven by outcomes that deviate from our expectations. Recent computational modeling demonstrates that deviations from expectation (i.e., prediction errors [PEs]) drive emotional responses more than outcomes themselves. However, no work to date has assessed these drivers of emotion using personally meaningful events, or measured emotion on realistic timescales over which real-world human emotion tends to unfold. To address this gap, we developed an event-triggered ecological momentary assessment (EMA) paradigm in which we asked university students to predict their grades on major exams, then measured positive and negative affect (PA; NA) immediately after they received their exam grades. We split data into exploratory (N=93) and confirmatory samples (N=156), and built computational models to predict the time course of PA and NA following the release of exam grades. Here, we demonstrate that models with separate terms for exam grade outcomes and grade PEs better account for the time course of affect than models with only a grade outcome term. Using these models, we also demonstrate that grade PEs were more robust predictors of PA (Outcome: B=0.21, SE=0.21, p=0.38; PE: B=3.10, SE=0.43, p<.001) and NA (outcome: B=-0.69, SE=0.27, p=0.037; PE: B=-2.69, SE=0.48, p<.001) than grade outcomes. These data suggest that deviations from expectations are critical predictors of the temporal course of real-world emotion.

POSTER C-98
MODELING DISTRIBUTED NEURAL CORRELATES OF FEAR USING NEURAL TOPOGRAPHICAL FACTOR ANALYSIS

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Descriptors: computational science, neuroscience, methods

Fear experiences arise from combinations of variabilities across individual and stimulus content. There is considerable debate over how localized or distributed the neural correlates of fear experience are. To enable the analysis of fMRI data without an implicit assumption of uniformity, we proposed a novel approach referred to as Neural Topographical Factor Analysis (NTFA). NTFA models the spatial and temporal patterns of fMRI signals and results in a lower-dimensional embedding space to represent variability across individuals and stimulus content. We simulated multiple datasets using different activation patterns varying along the scale from a localized to a distributed neural model of fear experiences. We compared the performance of the standard analyses and NTFA on activation patterns under these different neural architecture assumptions. The results showed that the standard univariate analysis and NTFA both detected the activation pattern in the localized activity dataset wherein one brain region showed higher activation for the high fear condition than the low fear condition in all participants. When there was more heterogeneity of the distributed neural activity pattern, the univariate analysis failed to capture the effect and showed no significant activity. NTFA was able to recover participants and stimuli embeddings that distinguish different groups and different stimuli types. Our study suggests that NTFA has promising potentials to uncover the distributed neural correlates of fear experiences and perhaps other psychological processes more broadly.

POSTER C-99
CAN LEUKOCYTE BASAL GENE EXPRESSION IN ADULTS RAISED IN LOW-SES HOUSEHOLDS BE IMPROVED THROUGH MEDITATION INTERVENTIONS?

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Descriptors: positive emotion, physical health, intervention

People raised in low socio-economic status (SES) households are at an increased risk for mental and physical problems in adulthood. Shifts in gene expression profiles in the immune system is one biological mechanism thought to account for elevated disease susceptibility. The Conserved Transcriptional Response to Adversity (CTRA) is one such genetic profile, characterized by increased expression of pro-inflammatory genes and decreased expression of antiviral and antibody-related genes. Research suggests positive emotions may promote health through biological pathways, including reduced inflammation. The present study investigated, in a group of at-risk mid-life adults, whether improved positive emotions, through loving-kindness meditation would 'reverse' CTRA gene expression, compared to a mindfulness group. The present study randomized those raised in low SES households (N=89) to a 6-week meditation intervention: Loving-Kindness or Mindfulness. Results show the opposite of the hypothesized effect. Participants in the mindfulness intervention group showed significant 'reversal' of their CTRA gene expression profile, b=-.15, p=.02, whereas the loving-kindness group showed no change. Daily emotion reports, provided over nine weeks spanning the workshops, showed increases over time in positive emotions, b=.02, p<.001 and decreases over time in negative emotions for both groups b=.01, p=.018. Emotion changes neither differed by group nor mediated the group effect on CTRA. Replication is needed as are further search for underlying mechanisms of action.

POSTER C-100
USING 1H MRS NEUROIMAGING TO UNDERSTAND HUMAN EMOTION

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Descriptors: neuroscience, personality, positive emotion, physiology, biomarkers, social neuroscience

Proton magnetic resonance spectroscopy (1H MRS) measures brain compounds that exhibit substantial heterogeneity in healthy groups. Identifying emotional phenotypes associated with this heterogeneity will improve our understanding of brain-behavior relationships involved in emotion. Methods. We investigated two emotional constructs, agency and flexibility, and their relationship with glutamate-containing compounds (Glx), N-acetylaspartate (tNAA), choline (Cho), creatine (tCr), and myo-inositol (Ins) in the dorsal anterior cingulate cortex (dACC) in healthy volunteers (N=26). The dACC is an integrative hub involved in multiple networks of emotion, cognition and behavior. The Multidimensional Personality Questionnaire Brief Form (MPQ-BF) was used to evaluate positive and negative agency (Social Potency, Aggression), emotional and behavioral flexibility (Absorption, Control-reversed), and positive and negative affect (Social Closeness; Stress Reaction, Alienation). Findings. The concentration of tNAA in the dACC was robustly positively correlated with trait Absorption (r=+.56, p=.005), moderately positively correlated with trait Social Potency (r=+.42, p=.03), and robustly inversely correlated with trait Aggression (r=-.59, p=.003). Absorption and Aggression accounted for substantial variance in tNAA (R2=.31,.35), and survived multiple comparisons correction (Holm-Bonferroni adjusted p=.032, .021). Impact. Our findings provide novel, robust evidence that 1H MRS compounds contribute to emotional range, positive agency, and resilience to aggression in healthy individuals.

POSTER C-101
FACIAL MUSCLE RESPONSES AND PARTICIPANT AFFECTIVE RATINGS IN RESPONSE TO SOCIAL INTERACTIONS

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Descriptors: social, personality, positive emotion

Prior research has shown responses in facial musculature to affective stimuli. However, facial muscle responses to social interactions are rarely investigated. The goal of this study was to test the involvement of the zygomatic and corrugator muscles, measured via facial electromyography (fEMG), and self-reported affective response, to a series of videos showing naturalistic social interactions. These videos vary in interaction quality, as indexed by the social-emotional expertise (SEE) of the individuals shown in the video. This study was designed to test whether videos depicting higher quality interactions will elicit more zygomatic activity and more positive affective ratings than videos depicting lower quality interactions. Conversely, low quality interactions were predicted to elicit more corrugator activity and more negative affective ratings than higher quality interactions. To test these hypotheses, we recorded facial muscle activity of 47 young adults (18-23 years old) as they watched a set of nine, 30-s videos showing social interactions that vary in self- and observer-reported SEE. During each video, participants provided continuous ratings of their own affective response using a valence-based scale (from 0 to 100), the overall quality of the interaction, and social skills of the participants. Results of multiple-comparisons ANOVA showed greater positive affect rating for high-SEE videos compared to average-SEE (diff=24.25, p<0.001), and low-SEE videos (diff=26. 40, p<0.001), but not for average compared to low-SEE videos (diff=2.15, p=0.78).

POSTER C-102

SOCIAL GOALS SHAPE EMOTIONAL FACE PERCEPTION

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Descriptors: cognitive, methods, social

People judge others' faces by their social context—such as body postures—but individuals' goals for emotion perception may also shape their judgments. Here, we used eye-tracking to test whether individuals perceive ambiguous facial expressions differently when they seek to detect distinct emotions. Participants viewed faces that morphed either from happy to angry, or from fearful to angry, and rated whether faces were angry, fearful, or happy. This design targeted participants' goals for emotion perception by manipulating which emotion they rated. We tested whether different face morphs and goals for emotion perception influenced how participants viewed and judged facial expressions. In Study 1 (N=53), as happy and fearful faces morphed into angry faces, participants showed a later but more sudden shift towards rating happy-angry (vs. fearful-angry) morphs as angry, b=28.05, 95% CI [8.77, 45.38]. Participants also rated happy-angry morphs as fearful, despite these morphs containing no fearful expressions, b=-16.57, 95% CI [-26.40, -2.95]. Study 2 (N=73) replicated these effects and found that participants gazed more at the mouth as happy faces morphed angry, whether they rated if faces were angry, b=-.47, 95% CI [-.83, -.01]; or fearful, b=.49, 95% CI [.13, .86]. Critically, the more participants gazed at the mouth, the more likely they were to rate happy-angry morphs as angry, b=.035, 95% CI [.017, .053]; and fearful, b=.016, 95% CI [.00, .032]. Implications will be discussed for how emotion perception goals may influence interpersonal emotion regulation.

POSTER C-103

EMOTION DYSREGULATION MEDIATES THE EFFECTS OF CHILDHOOD TRAUMA ON SUICIDAL BEHAVIOR

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Descriptors: emotion regulation, mental health

Suicidal behavior, which includes ideation and attempt (Osman et al., 2001), is increasingly common among young adults (American Foundation for Suicide Prevention, 2017). Childhood trauma, such as maltreatment, is strongly associated with suicidal behavior (Serafini et al., 2015), but less is known about the factors that account for this association. Given that emotion dysregulation is associated with suicidal ideation among college students (Arria et al., 2009), we hypothesized that difficulties in emotion regulation (e.g., lack of impulse control, awareness, and clarity) would account for the association between childhood trauma and suicidal behavior in young adults. The current study tested this hypothesis in a large, racially diverse sample of young adults attending a state university (N=853; 76.2% Female; 36.7% Latino). Participants completed validated measures of childhood trauma, emotion dysregulation, and suicidal behavior. Mediation analysis was conducted using SPSS PROCESS. The rate of suicidal behavior was high: 4.1% reported attempt with an intent to die. As expected, higher levels of childhood trauma were associated with greater endorsement of suicidal behavior (B=.27, p<.001), and this association was partially accounted for by emotion regulation difficulties, 95% CI [1.01, 1.75], with greater difficulties associated with greater suicidal behavior (B=.35, p<.001). Findings of this study suggest that, for individuals with childhood trauma, it is particularly important to address emotion regulation difficulties to reduce the risk of suicide.