



Abstracts

Undergraduate Poster Presentations

Department of Psychology

McGill University

April 12th, 2018

WHAT'S THREAT GOT TO DO WITH IT? THE ROLE OF PSYCHOLOGICAL APPRAISAL ON RELATIONSHIP MAINTENANCE RESPONSES

Ahluwalia, C; Auger, E; Lydon, J

In today's world where modern romance has been reduced to swiping pretty pictures on screens, one of the most salient relationship threats is the presence of attractive alternatives. Past research suggests that individual levels of relationship identification and executive control (EC) predict how one responds to this threat. It has been shown that among highly identified individuals, those lower in EC tend to rate attractive others as less attractive, whereas those high in EC do not. We investigated whether the influence of EC on responses to attractive alternatives is due to different psychological appraisals of the situation. During an in-lab session, participants watched videos of attractive confederates and rated them. We also assessed their psychological appraisals using self-reports. We expect that among high identifiers, those low in EC will appraise the presence of an attractive alternative as a threat, whereas those high in EC will appraise it as a challenge.

RAPE-SUPPORTIVE ATTITUDES PREDICT SEXUAL AGGRESSION IN COLLEGE MEN ABOVE AND BEYOND PSYCHOPATHY

Zarnescu Artenie, D; Vachon, D.

Psychopathy and rape-supportive attitudes predict sexual aggression in college men. However, it is unclear whether such attitudes are inherent to psychopathy or pose an additional risk to perpetration. This study examined the incremental contribution of rape-supportive attitudes to the prediction of sexually aggressive behaviour. We assessed three attitudes: beliefs about the feasibility of committing sexually aggressive acts, beliefs about women's enjoyment of sexual aggression, and beliefs about the normalcy of engaging in sexual aggression. College men's (N=145) psychopathy, attitudes, and behaviour were measured by self-report. Results show that rape-supportive attitudes predict behaviour above and beyond psychopathic traits. Further, beliefs in the feasibility of sexual aggression made the largest independent contribution to behaviour. Since psychopathy is hard to treat, targeting additional risk factors may be an effective strategy to reduce the risk of sexual aggression in college men.

THE BLACK BOX EFFECT: REDUCING INTERFERENCE PROTECTS LONG-TERM MEMORY IN RATS

Askew, J; Grooves, I; Hardt, O

Hippocampal damage commonly leads to anterograde-amnesia. This has been suggested to arise from a disruption of memory consolidation processes. However, it is still unknown how hippocampal damage affects long-term memory consolidation. Here, we hypothesize that the hippocampus is critical for memory consolidation because of its role in preventing interference in cortical areas. In a pilot study conducted in our lab, we found that placing rats in a black box to reduce interference immediately after object-recognition learning indeed improves memory retention ("the Black Box Effect"). The current study aimed to replicate the Black Box Effect, and explore whether dim light also impairs memory. We failed to replicate the results of previous studies, in which exposure to a dark box after learning promoted long-term memory formation. Instead, rats placed into the bright box (20lux) showed a significant novelty preference indicating significant memory retention for the learned objects, while rats in the dark black box (0 lux) did not. Due to methodological short-comings, we will replicate the experiment in the future with modifications.

THE ROLE OF SOMATOSENSORY WORKING MEMORY IN MOTOR LEARNING

Bergeron, K, Sidarta, A, van Vugt, F, & Ostry, D

Learning a novel motor skill involves an exploratory phase, where one must use trial and error to find the correct state to achieve a goal. These correct movements are thought to be represented in somatosensory working memory. In this study, participants' memories were probed using a copy of their own active movements at random intervals during a motor learning task. A correlation between working memory performance and motor learning was found, but none was observed between working memory performance and movement variability and accuracy.

TESTING THE EFFICACY OF A BRIEF MINDFULNESS-BASED INTERVENTION FOR WEIGHT LOSS

Bernstein, I, Carrière, K, & Knäuper, B

Background: Research has demonstrated the efficacy of mindful eating programs in increasing interoceptive awareness, reducing overeating, and leading to significant weight loss. Although efficacious in clinical trials, these programs are inaccessible to the wider community. Their reach and impact on obesity has thus been limited. **Method:** To address these limitations, the present study examines the efficacy of a brief (nine sessions, 5-10 minutes each) mindful eating program for weight loss. Interoceptive awareness, mindful eating, overeating, and weight are assessed at baseline, post-program, and follow-up. Participants are adults with overweight or obesity. **Results:** Preliminary results ($N=44$) demonstrate statistically significant increases in interoceptive awareness and mindful eating, and significant decreases in weight and overeating. Results were maintained at follow-up. **Conclusions:** This is the first study to test the efficacy of a brief mindful eating program for weight loss. If supported, our results would identify a novel and affordable approach to obesity management.

OUTGROUP PREJUDICE AS A FUNCTION OF ATTRIBUTION TENDENCIES AND ESSENTIALIST BELIEFS

Bertin, J; Kachanoff, F; Kteily, N ;Taylor, D

To varying degrees, people hold essentialist beliefs that people are either fundamentally good or bad. Using a novel and interactive laboratory simulation of oppression ($n=326$), we examined how such beliefs impact the emotions and attitudes that oppressed group members hold toward their oppressors, as well as the attribution they make for the outgroup's oppressive behaviour. Disadvantaged group members who held essentialist beliefs were more likely to attribute their oppression to the oppressive outgroup's core nature (an internal "outgroup-blaming" attribution) rather than the societal context impacting the outgroup (an external "system-blaming" attribution). Regardless of attribution style, oppressed group members always felt anger towards the oppressive outgroup. Importantly however, oppressed group members who made an internal "outgroup-blaming" attribution were more prejudiced towards the oppressive outgroup than those who did not. Ultimately, having essentialist beliefs about people's good or bad nature led to greater outgroup prejudice with "outgroup-blaming" attributions having a mediating effect.

THE EFFECTIVENESS OF AN ANTI-HYPERVENTILATION INTERVENTION FOR EMOTIONAL FAINTING

Bertrand, C; Ditto, B

What is it that makes certain people faint at the sight of blood? Emotional fainting – or vasovagal syncope (VVS) – is often preceded by distressing symptoms such as dizziness and light-headedness, which can discourage people from invasive medical procedures. Changes in cardiovascular activity, such as decreased blood pressure, have been accepted as the fundamental underpinnings of VVS. However, recent evidence suggests that respiration-mediated reductions in cerebral blood flow may also contribute to the onset of VVS. Hyperventilation – a pattern of breathing which exceeds metabolic demands – causes a drop in blood CO₂, which in turn reduces blood flow to the brain, increasing risk for fainting. The present study investigated the effects of two breathing patterns – hyperventilation and hypoventilation – on the subjective experience of pre-syncopal symptoms while viewing of blood-related movie clips in a non-clinical sample. It was expected that hyperventilation would be associated with higher reports of emotional and physical symptoms.

LONELY IN LOVE: THE EFFECT OF LONELINESS ON POSITIVITY AND ACCURACY IN ROMANTIC FIRST IMPRESSIONS

Borenstein-Laurie, J; Gazzard, L; Human, L

Loneliness, the aversive experience associated with an unmet fundamental need to belong, acts as a powerful motivator for us to seek out fulfilling social relationships. Past work has demonstrated that increased levels of loneliness are associated with both a hypersensitivity to social cues and perceiving others with a negativity bias. These factors often fail to translate into effective social skills, and may contribute to a way of thinking that perpetuates loneliness. The present study used a speed-dating paradigm to examine how people reporting higher levels of loneliness perceive others in terms of positivity and accuracy in romantic first impressions. Though individuals experiencing higher levels of loneliness did report greater romantic interest toward their dates and perceived them as being more physically attractive, we did not see a significant difference in their formation of positive and accurate impressions relative to individuals experiencing lower levels of loneliness.

EFFECTS OF ACUTE STRESS ON THE PROCESSING OF AMBIGUOUSLY THREATENING FACIAL EXPRESSIONS

Boyle, A; Banica, I; Weinberg, A

Stress promotes a hypervigilance towards threatening cues by inducing changes in neural connectivity that facilitate the activation of brain regions implicated in the analysis of threat. The present study investigated the impact of stress on the processing of ambiguously threatening cues by comparing neural correlates of attention and stimulus processing, the Late Positive Potential (LPP) and Vertex Positive Potential (VPP), and intensity ratings towards angry and fearful faces of various intensities before and after an in-lab stressor. Stress did not enhance the LPP or VPP towards ambiguous or explicitly threatening expressions, suggesting that immediately after acute stress the allocation of attentional and perceptual processes towards threatening cues of all intensities remain unchanged. Stress elicited increased intensity ratings towards faces of 75% intensity, suggesting that acute stress may enhance the subjective perception of intensity of threatening expressions of certain intensities that are less ambiguous.

INFLUENCES OF TECHNOLOGY USE AND RELATIONSHIP LENGTH ON EMPATHIC ACCURACY

Brown-Notargiacomo A, Heyman J, Human L

Previous research suggests that paying close attention to one's partner is important when trying to achieve empathic accuracy. Given the distracting effects that accompany technology use, how might the increasing use of technology influence accuracy? Furthermore, can knowing more about your partner, as measured by an increased duration of relationship length, compensate for lack of attention? The current study aimed to examine this by looking at whether relationship length served as a moderator between technology use and empathic accuracy. Romantic couples ($N_{dyad} = 31$) completed an online questionnaire assessing empathic accuracy, technology use, and relationship length. We found that as technology use increases, empathic accuracy also increases, but only for those in short relationships. For those in longer relationships, technology use is related to reduced empathic accuracy. These findings suggest that technology use may not influence the empathic accuracy of all couples equally.

DIFFERENCES IN GROUP SIZES IN TWO-ARM RANDOMIZED CONTROLLED TRIALS WITH UNRESTRICTED RANDOMIZATION PUBLISHED IN AMERICAN PSYCHOLOGICAL ASSOCIATION JOURNALS

Cañedo-Ayala, M; Rice, D.; Chiovitti, M; Thombs, B.

Randomized-controlled trials (RCTs) are the “gold standard” for assessing effectiveness of psychological interventions. Yet, previous research suggests that reporting of randomization procedures in trials is suboptimal, and some trials may not be truly randomized. This study aims to determine whether differences in numbers of participants randomized to trial arms in two-arm RCTs published by APA-affiliated journals are smaller than would be plausibly expected if simple, unrestricted randomization had been performed. PsycINFO was searched to identify RCTs published in APA-affiliated journals between 2007 and 2017. A total of 3474 title/abstracts were screened, 929 full-text publications were reviewed, and 265 reports were eligible and included. Full results will be presented at the poster session. Results will provide information on whether group sizes reported are plausible if trials were truly randomized. Overly similar group sizes could result from describing non-randomized processes as random or failure to report that restrictive randomization procedures were used.

THE EFFECTS OF FAT-SHAMING IN SOCIAL MEDIA ON ATTENTIONAL BIAS TOWARDS SOCIAL THREAT

Capuano, M; Ravary, A; Baldwin, M

Social media platforms contribute in transmitting anti-fat messages regarding body image, and young women are predominantly targeted. We were interested in examining whether fat-shaming in the media might elicit an attentional bias toward social threat. We recruited 79 undergraduate women. Participants were randomly assigned to an experimental or control condition, where they were exposed to fat-shaming Tweets or general negative Tweets, respectively. Participants completed a version of the widely-used dot probe dot probe measure of attentional bias, where some trials were cued with the word *obese*. We hypothesized that individuals who were primed with fat-shaming Tweets would show an attentional bias for frowning faces, especially on obese-cued trials. We also predicted that the experimental manipulation would negatively affect the vignette body image measures. These findings would imply that an attentional bias to social threat may feed and exacerbate body image insecurities when exposed to negative weight-related stimuli on social media.

THE EFFECTS OF COGNITIVE FATIGUE ON SUBSEQUENT PAIN PERCEPTION AND TASK PERFORMANCE

Chabot, B; Vogel, T; Tabry, V; Roy, M

In addition to their regularly experienced pain, chronic pain patients tend to experience cognitive impairments. That is, interruption by pain can hinder one's ability to focus on meeting a cognitive goal. Previous clinical evidence demonstrates that reduced cognitive functioning may predispose an individual to developing chronic pain. The present study aimed to investigate how acute cognitive fatigue affected one's ability to regulate subsequent pain while performing a cognitively demanding task. Healthy participants completed a high cognitive load task (2-back task) and a low cognitive load task (Left–Right arrow pointing task) while receiving painful thermal stimuli. The OSPAN Task was used to induce cognitive fatigue in the experimental group prior to the main task. Our findings indicated that cognitively fatigued participants showed less of an ability to use the cognitively demanding task to regulate their pain than non-fatigued participants, suggesting that cognitive fatigue may restrict one's ability to distract oneself from pain.

PERFECTIONISM AND DEPRESSIVE AND ANXIOUS SYMPTOMS OVER 1 YEAR: MODERATING EFFECTS OF EXPRESSIVE SUPPRESSION AND REAPPRAISAL

Chapados, P; Tobin, R; Dunkley, D

This study of community adults (Time 1: N = 152; Time 2: N = 114) examined the moderating effects of emotion regulation on the relation between the two higher-order dimensions of perfectionism, i.e. self-critical (SC) and personal standards (PS) perfectionism, and depressive and anxious symptoms over one year. Participants completed retrospective dispositional measures of perfectionism, as well as end-of-day and several within-day records for eight consecutive days to assess the emotion regulation strategies of expressive suppression (i.e., inhibiting one's behavioral expression of ongoing emotions) and reappraisal (i.e., reinterpreting a situation to neutralize its emotional impact) at Times 1 and 2. Hierarchical regression analyses showed that expressive suppression interacted with SC perfectionism to predict increases in depressive symptoms, whereas it did not interact significantly with PS perfectionism. Furthermore, reappraisal interacted with SC perfectionism to predict decreases in depressive symptoms, whereas it interacted with PS perfectionism to predict decreases in anxious symptoms.

INDUCING EMPATHY FOR STRANGERS BY BLURRING SELF-OTHER BOUNDARIES

Charles, K; Krol, S; Bartz, J

In the enfacement illusion, a participant watches a video of a target's face being stroked with a cotton swab while their own face is simultaneously stroked by an experimenter. This manipulation has been shown cause participants to include more of the target's facial features within their own facial recognition (Tajadura-Jiménez, Grehl, & Tsakiris, 2012). This inclusion of other in the self, known as self-other merging, has been shown to facilitate prosocial responding (Cialdini, Brown, Lewis, Luce, & Neuberg, 1997). The current experiment seeks to replicate and expand on our previous finding that the enfacement illusion also decreases prosocial responding to an unfamiliar target with whom participants had not experienced self-other merging. Unlike our previous experiment, this study was open to all races to examine if our findings generalize across racial groups.

COMPREHENSION OF SARCASM IN CHILDREN: THE ROLE OF SECOND ORDER THEORY OF MIND AND EMPATHY

Chowdhury, F; Caivano, O; Talwar, V

The comprehension of sarcasm can be very challenging for children. Previous studies have presented contradictory evidence for the role of second-order theory of mind (ToM) in the understanding of sarcasm. Past neuroimaging studies on adults have suggested that empathy and emotional processing occur in the right hemisphere of the prefrontal cortex and contribute to the ability to understand sarcasm. In this study, we propose that both second-order ToM and empathy uniquely contribute to the understanding of sarcasm in children ($N = 124$, 8-12 years, $M = 9.90$, $SD = 1.48$). Children watched a series of video clips and answered questions to assess their understanding of sarcasm. The results showed that second-order ToM understanding played an important role in children's ability to detect sarcasm, but empathy did not. These findings suggest that certain social cognitive factors may play an important role in children's ability to detect a speaker's true intention.

HOW MUCH THREAT IS ENOUGH? THE EFFECT OF HIGH THREAT ON EXPLICIT ATTITUDES IN HIGHLY MOTIVATED INDIVIDUALS

Cohen, Z; Thai, S; Lydon, J

Past research has shown that people who see their romantic relationship as somewhat important to their identity (i.e., moderately identified people) tend to devalue attractive alternatives (AAs) more readily even when they are automatically drawn to them (i.e., have positive implicit attitudes). In contrast, high identifiers do not devalue AAs: Those who are automatically drawn to AAs also express more positive explicit evaluations. It is possible, however, that they do not devalue because the threat level to relationships was not high enough in previous studies. In the present study, we examine if high identifiers will devalue AAs while under higher threat by making them compare their partner to someone superior (i.e., upward partner comparison). Using the affect misattribution procedure (AMP), we expect high identifiers to show the same response as moderate identifiers under regular threat. They will devalue AAs they were automatically drawn to.

EFFECTS OF PERSONALITY TRAITS UPON THE LINK BETWEEN AUTONOMY SUPPORT AND CHANGE IN AUTONOMOUS MOTIVATION IN EATING DISORDER PATIENTS

Cousineau, S; Steiger, H

In Eating Disorder patients, level of autonomous motivation is associated with good treatment outcome. Moreover, perceived autonomy support increases level of autonomous motivation. This ongoing study examines the possibility that personality traits influence the extent to which autonomy support builds autonomous motivation. Classifying our participants using dimensions derived from the Big-5, we expect three personality profiles to emerge: high-functioning, undercontrolled, and overcontrolled. We will test the effects of personality classification on the strength of the relationship between autonomy support and autonomous motivation in a sample of 198 females with an Eating Disorder. We hypothesize that "undercontrolled" patients will have a weak association between autonomy support and autonomous motivation and "high-functioning patients" a stronger association.

THE ASSOCIATION BETWEEN PERCEIVED INJUSTICE AND PRESCRIPTION OPIOID MISUSE: THE POTENTIAL ROLE OF OPIOID CRAVING

Coutu-Nadeau, E; Martel, M

Despite the potential benefits of opioid therapy for patients with chronic pain, opioids may be accompanied by many potential problems, including opioid misuse and addiction. To date, the contribution of psychological factors to prescription opioid misuse has not been fully elucidated. The primary objective of this study was to examine the contribution of perceived injustice to opioid misuse among patients with chronic pain prescribed opioid therapy. The second objective was to examine whether the association between injustice and opioid misuse varied as a function of patients' levels of catastrophizing and opioid craving. Results from this 14-day diary study revealed that perceived injustice was not significantly associated with prescription opioid misuse. However, on days of low catastrophizing, higher levels of injustice were associated with heightened opioid craving. Findings from the present study provide new insights into the contribution of psychological factors to problematic opioid use among patients with chronic pain.

CREATIVITY AND PERSONALITY TRAITS AS PREDICTORS OF MIND WANDERING

Crépeau-Hubert, F; Olson, J; Gentile, E; Albert, D; Raz, A

Mind wandering is characterised by a shift of attention away from an ongoing task and is commonly perceived as a hindrance to human potential. However, evidence shows that mind wandering fosters creative problem solving. Additionally, mind wandering was linked to personality traits: openness to experience, neuroticism, and conscientiousness. The present study aims to test whether such personality traits and baseline creative ability can predict mind wandering propensity. Participants (N=25) completed a creativity test, a personality questionnaire, and several behavioural tasks designed to measure mind wandering. Results showed that higher openness to experience scores negatively correlated with mind wandering on a vigilance behavioural task. No relationships were found for the other personality traits or creativity. Our findings suggest that individual differences can provide insight into one's likelihood to mind wander. With further investigation, predictors of mind wandering could help identify individuals inclined to mind wander and help reduce its negative consequences.

BILINGUAL IRONIC VS. LITERAL LANGUAGE PROCESSING

Deodato, F; Tiv, M; Rouillard, V; Wiebe, S; Titone, D

Irony is a common linguistic device that indirectly communicates one's attitude through humor or insincerity. Despite its ubiquity, little is known about the way individual differences in bilingual experience modulate irony comprehension. Thus, we were interested in investigating how bilingual adults, with varying second language (L2) proficiency and age of acquisition (AoA), understood irony when reading in their first language (L1). 48 English-L1 bilinguals read positive and negative scenarios and were required to make sensibility judgments to subsequent literal, ironic and anomalous statements as we recorded their reaction times. Results suggest that 1) bilinguals responded more slowly to ironic vs. literal statements, but faster to ironic vs. anomalous statements; 2) bilinguals were more likely to understand an ironic statement following a negative scenario than a positive scenario; 3) bilinguals were faster and more likely to find irony sensible as their L2 proficiency increases, though we found no effects for AoA.

ASSESSING THE EFFECTS OF RESOURCE DEPLETION ON THE INTERACTION BETWEEN PAIN PERCEPTION AND TASK PERFORMANCE

Desjardins, S; Vogel, T; Tabry, V; Roy, M

Background: Cognitive functioning and pain perception both appear to contribute to the development of chronic forms of pain, however, the properties of their interaction remain unclear. The present research aimed to investigate the sequentiality of this interaction by modulating the availability of resources, through induced acute pain, and its effects on the relationship between pain perception and cognitive effort. *Methods:* During the main task, participants performed a difficult cognitive task while receiving painful thermal stimulations. In the experimental group, participants were exposed to sustained pain, using the cold pressor task, prior to engaging in the cognitive task and receiving thermal pain. *Results:* Participants who were exposed to sustained pain prior to the main task experienced a significantly lower reduction of pain perception from engaging in cognitive effort, or task analgesia, than those who were not. *Conclusions:* These results suggest that prior pain impairs one's cognitive functioning, which further reduces one's ability to cope with additional pain.

DUAL-HORMONE APPROACH IN THE EFFECTS OF ACUTE PSYCHOSOCIAL STRESS ON EMPATHY

Diushekeeva, A; Nitschke, J; Bartz, J

Literature on the effects of acute stress on prosocial behaviour and empathy presents some inconsistent results. The dual-hormone hypothesis, which posits that an interaction between cortisol and testosterone regulates some behaviours, offers a new approach that may explain how acute psychosocial stress influences empathic responses. In the current study, we investigated the impact of acute psychosocial stress on empathy by drawing on the dual-hormone hypothesis to examine the implication of the interaction between cortisol and testosterone in empathic behaviour. 157 healthy men and women were recruited; half underwent the standardized stress task ($n=78$) and half a matched control condition ($n=79$). Baseline salivary cortisol and testosterone levels were measured prior to stress exposure. Empathy was assessed with a spontaneous helping behaviour task and a cognitive empathy task. We expect to see an interaction between baseline testosterone and cortisol reactivity that would result in differential empathic responses.

THE DYNAMIC RELATION BETWEEN TREATMENT-RELATED REDUCTIONS IN CATASTROPHIZING AND PTSD SYMPTOMS

Donayre, S; Sullivan, M

Post-traumatic stress disorder (PTSD) is the only major mental illness for which a cause is considered to be known: that is, an event that involves threat to the physical integrity of oneself or others and induces a reaction of intense fear, panic, or terror. Epidemiological studies have shown that while exposure to this sort of traumatic event is relatively common, the probability of developing PTSD is in fact low. As such, catastrophizing has been discussed as a cognitive precursor to the development of PTSD following the experience of stressful events. The present study will investigate the time-dependent relation between catastrophizing and PTSD in a sample of 73 work-disabled individuals with a diagnosis of PTSD enrolled in a 10-week multi-disciplinary pain rehabilitation program. Analyses will address whether reductions in catastrophizing precede reductions in the severity of PTSD symptoms, and whether this precedence in directionality is necessary for symptom alleviation.

IS SIGHING A MODULATOR OF DIZZINESS AND FAINTING?

Dubé C; Ditto, B

Recently the investigation into the causes of psychologically induced fainting and dizziness has yielded support for stress-induced hyperventilation as the trigger. Additionally, respiration has a strong link to psychological feelings. More specially, the research on sighing, indicates that a deep breath is both a physiological and psychological resetter. The present study aimed to investigate the modulating effects of sighing on severity of pre-fainting symptoms by subjecting participants to emotional stimuli in two different breathing conditions; sighing and normal breathing. The stimuli consisted of five video clips of which the open heart surgery and blood draw clips have been shown to evoke pre-fainting symptoms. The severity of the symptoms was measured with questionnaires and physiological indicators. We expect to find that sighing regularly will have a psychological resetting effect and this will manifest by less severe vasovagal symptoms. The results will have important implications in the research and in medical environments where sighing could be implemented.

SPACE, THE FINAL FRONTIER?

Dutemple, E; Gurguryan, L; Sheldon, S

When we go about our day, we spend little time thinking about how we remember our experiences. However, the way our brains encode these experiences is crucial to how well we remember them. According to Event Segmentation Theory, our brain monitors for salient environmental changes that could indicate a boundary, causing our hippocampus to encode experiences occurring at opposing sides of this boundary as separate event memories. Previous research has explained memory segmentation as a spatial phenomenon. In this study, we endeavoured to explore how non-spatial context shifts influence memory. Participants studied a series of celebrity faces associated with a specific concept (type of dessert) and were tested on their memory for temporal order. We found that the presence of conceptual boundaries creates a deficit in remembering the order of faces studied across boundaries, pointing towards a theory of segmentation which generalizes to a wide range of perceptual experiences.

ARE THERE GENDER DIFFERENCES IN STRESS TO 3M2H EXPOSURE?

Dutra, G., Bouchard, S.M., Mogil, J.S.

Background: Natural formulae of odorants contributing to human sweat aroma, such as 3M2H, are found in the amniotic fluid, colostrum, and milk, but the effects of odor exposure are uncertain. **Aim:** The aim of the current study was to investigate the association between exposure to 3M2H molecule and stress in a sample of young adults ($N=96$), as measured by saliva cortisol levels. **Methods:** It was hypothesized that cortisol levels would be increased in females but not males, following 3M2H exposure, because of previous literature showing this gender difference in rodents. **Results:** A two-way between-subject design ANOVA was performed to identify gender differences in stress to 3M2H exposure. Statistical analysis indicated no significant differences in cortisol levels, overall, following 3M2H exposure in females versus males. However, a small significant result of gender differences in cortisol levels was found in the 3M2H above threshold condition. **Conclusions:** The study results are limited by a small sample size. Future research will examine the association between stress and 3M2H in larger samples, and by contrasting it to other non-invasive measures.

WHAT IS THE PLACE OF PERCEIVED SUPPORT AND EMPATHY IN THE PROVISION OF SOCIAL SUPPORT?

Ebsary, C; Khullar, T; Dirks, M

Social support can protect against the development and worsening of many mental health problems. The prevalence of psychological disorders during emerging adulthood is increasing, making it critical that we map factors contributing to provision of high-quality support during this period. We hypothesized that empathy and both perceived (i.e., a person's subjective belief about the availability of support in their lives) and received (i.e., self-reported account of acts of support received in the last month) social support would each be associated with emerging adults' ability to provide high-quality support to a friend. We recruited 25 female friendship dyads (ages 18-25 years), who completed self-report measures of empathy and social support and participated in an interaction in which they discussed a problem each was having. The ability to provide support was operationalized as friends' reports of the quality of the support they received during the observed interaction. Results and implications are discussed.

IMPACT OF ANTICIPATED PAIN ON RESPONSE TIMES IN A PAIN & MONEY DECISION-MAKING TASK

El Sabban, L; Slimani, H; Gosse, P; Rainville, P; Roy, M

Pain has an important motivational function, opposite to that of pleasure: while we seek pleasurable rewards, we avoid things that could cause us harm. However, when rewards come at the cost of pain, we must weigh the pros and cons of our different options before taking the optimal decision—a process accounted for by the instrumental decision-making system. By contrast, Pavlovian responses automatically drive behavior regardless of the value of alternative behaviors. While Pavlovian-instrumental interactions have been extensively studied in the appetitive domain, little is known of pain-related Pavlovian-instrumental interactions. Our study implicated 90 healthy participants to examine response times (RTs) in a pain & money decision-making task to see if predicted pain intensity influenced the decision process beyond what would be expected from the participant's choices. Our research confirmed that Pavlovian avoidance of pain reduced RTs when pain & money offers were rejected, and increased RTs when pain & money offers were accepted.

ANOREXIA NERVOSA, ARE THEY MORE DEFICIENT IN MICRONUTRIENTS?

Fang X; Thaler L; Steiger H

Malnourishment, due to restriction of energy intake, is a common consequence of Anorexia Nervosa (AN). The current study explored whether individuals with AN display altered levels of micronutrients, including choline, folate, betaine, vitamin B₁₂ and methionine, compared to healthy controls and those remitted from AN. The five micronutrients were of interest because they are cofactors involved in DNA methylation, one of the widely studied epigenetic mechanism implicated in the etiology of AN. Using whole blood samples, the mean plasma levels of each micronutrient from 103 female participants were obtained. Results showed that AN participants had significantly higher plasma levels of B₁₂ and betaine than healthy controls. AN-Remitted participants exhibited significantly higher levels of B₁₂ than NED-controls. Folate and B₁₂ increased significantly from pre-to-post treatment in AN-Active patients. Our preliminary results suggest that people with AN show elevations on some nutrient levels--increases that are paradoxical given their state of malnutrition.

VARIATION IN OPRM1 IS ASSOCIATED WITH MODULATION OF FELT SECURITY IN CLOSE RELATIONSHIPS

Feng, T., Sadikaj, G., Moskowitz, D.S., Zuroff, D.C., Bartz, J.A.

Opioids are thought to modulate pain from social rejection. We examined whether A118G, a single nucleotide polymorphism within the μ -opioid receptor gene (OPRM1), moderated the association between felt security and perceived quarrelsomeness in a romantic partner. A hundred and twenty members from 75 community couples were genotyped. They were part of a sample of 92 couples who had previously completed an event-contingent recording (ECR) procedure over 20 days. During the ECR procedure, participants reported their felt security and perception of their partner's quarrelsome behaviour in their daily interactions. Results suggested that, relative to men who were homozygotes for A alleles, men who were G-allele carriers were more sensitive to their partner's behaviour such that their felt security was more strongly associated with their partner's perceived quarrelsomeness. The findings suggest that A118G may moderate the person's sensitivity to social rejection, but this effect may be specific to males.

ASSOCIATIONS BETWEEN MATERNAL STRESS, PROSODY & INFANT OUTCOMES

Giannis, I.; Morningstar, M.; Dirks, M.

Infant-directed speech (IDS) is an exaggerated vocal pattern characterized by high pitch, greater pitch range and slow tempo. The use of IDS has been shown to benefit the parent-child relationship, children's language and behavioural outcomes, and may partly mediate the associations between parenting interventions and children's outcomes. High parental stress, which has been linked to increased child symptomatology, may reduce parents' use of IDS prosodic cues when speaking to their child. The present study examines the possible relationship between stress and IDS, and whether IDS mediates the association between parental stress and subsequent infant outcomes. Data came from a four-wave longitudinal study following 35 mother-infant dyads. We extracted mothers' vocal cues during a 5-minute interaction with their child. Mothers also provided self-reports of their stress and their child's symptomatology. Maternal stress was associated with greater pitch range and child externalizing symptoms. No mediation through vocal cues was found.

STRESSING THE DIFFERENCES: THE EFFECTS OF STRESS ON MEMORY RETRIEVAL

Giorgio, L., Sheldon, S. & Nitschke, J.

The way that we remember is distinctly influenced by our current mental states. In particular, research has demonstrated that stress affects memory in highly nuanced ways by both facilitating memory performance during encoding and impairing memory during retrieval (Gagnon & Wagner, 2016). The current study aims to further investigate what particular computations are affected while retrieving information under stressful conditions by examining discrimination between novel, old, and related information, which is pattern separation. The between subjects' design had participants (N=48) study a set of images of objects. After a 24-hour delay, participants did either a stress or control task before a recognition memory test for the studied images, new images, or related images. The results of the study showed that participants in the stress condition had impaired accuracy in distinguishing old from related items, which is linked to poor pattern separation. The findings provide evidence that the specific memory mechanism that stress affects during retrieval is discrimination.

THE EFFECTS OF STRESS AND DEPRESSION ON REWARD SENSITIVITY

Hodzic-Santor, B; Ethridge, P; Weinberg, A

The precise mechanism by which stress is linked to the onset and maintenance of depression is not well understood, however some evidence suggests it may be explained in part by a reduced sensitivity to reward. The reward positivity (RewP) is an event related potential thought to be a neurological marker of reward responsiveness. This study examined the extent to which stress and depression independently affect the magnitude of the RewP. Forty-seven women with and without a history of depression were administered the UCLA Life Stress Interview and completed a computerized task in which they received monetary reward on a fixed number of trials. Results revealed trends towards significance in which chronic stress and depression were negatively related to the RewP. This suggests that individuals with a history of depression or high chronic stress may be less responsive to rewarding events, which may contribute to the onset and maintenance of depression.

ACCURACY AND MEMORY IN PERCEIVERS UNDER THREAT: THE CONSEQUENCES OF RELATIONSHIP MAINTENANCE FOR IMPRESSION FORMATION

Jenkins, R; Tissera, H; Lydon, J

For individuals in romantic relationships, encountering other potential mates (*attractive alternatives*) can present a threat to one's current relationship. To attenuate this threat, romantically-involved individuals rely on relationship maintenance strategies – for example, they display decreased attention and provide less positive ratings for attractive alternatives. The present study examined two domains of relationship maintenance strategies: accuracy about personality traits and recall and evaluation of behaviors. Participants (N=121) watched a video of an attractive alternative and rated her/his personality. They also read a list of her/his behaviors and later had to recall and evaluate these behaviors. We expect that individuals in relationships (when compared to single individuals) will 1) perceive attractive alternatives' personalities less accurately, 2) recall more negative behaviors of attractive alternatives, and 3) evaluate behaviors of attractive alternatives more negatively. Such findings will allow for a deeper understanding of relationship maintenance strategies pertaining to social perception and memory.

EXAMINING CAREGIVING INTENSITY AND PERCEIVED BURDEN OF INFORMAL CAREGIVERS TO PERSONS WITH CHRONIC MEDICAL CONDITIONS: A SYSTEMATIC REVIEW

Carboni Jiménez, A; Rice, D; Thombs, B

Informal caregivers provide assistance to a friend or family member with a health condition without receiving financial compensation or formal training. The objective of the present study is to compare caregiving intensity and burden of informal caregivers in different chronic medical conditions. Cochrane Central, CINAHL, EMBASE, MEDLINE, and PsycINFO databases were searched from inception through October 11, 2017 to identify original studies that included the Level of Care Index (caregiver intensity) or the Zarit Burden Interview (perceived burden) among caregivers for people with chronic diseases. 2700 unique title/abstracts were identified from the systematic search. After the title/abstract and full-text screening, 72 eligible articles were left. Demographic information of care-recipients and caregivers, and relevant means and standard deviations from the two outcome measures will be extracted and compared between different chronic medical conditions. Findings from this systematic review will improve the understanding of how caregiving may vary based on chronic diseases

IT'S ALL IN YOUR HEAD: IMPORTANCE OF PROBLEM SEVERITY AND FRIENDSHIP QUALITY IN PERCEPTIONS OF SOCIAL SUPPORT QUALITY DURING EMERGING ADULTHOOD

Klein, N; Khullar, T; Dirks, M

Peer social support during emerging adulthood may be protective against the negative mental health outcomes that can develop during this stressful developmental period. To date, little research has examined factors that influence emerging adults' perceptions of the quality of the support they receive. In this study, we examined whether emerging adults' perceptions of the quality of support provided to them by a friend ($N = 23$ friendship dyads) during an observed interaction varied as a function of (a) the provider's perception of how severe the problem was and (b) the provider's evaluation of the quality of the friendship. We hypothesized (a) as provider-rated problem severity increases, recipient perceptions of support quality will decrease, (b) as provider-rated friendship quality increases, recipient perceptions of support quality will increase, (c) recipients will perceive high quality support, regardless of provider-rated problem severity, when provider-rated friendship quality is high. Results and implications are discussed.

DIFFERENCES IN REMEMBERING: FROM BRAIN TO BEHAVIOUR

Le Duc, W; Gurguryan, L; Sheldon, S

It has been shown that individual differences in memory ability and approach can be assessed not just through task-based measures, but as traits. Reliable links have been found between trait-level mnemonic abilities and use of visual imagery processes. The processes of object and spatial imagery, have been linked to episodic and semantic memory respectively. There's further evidence that these memory processes are supported by different regions of the hippocampus. Our work seeks to replicate previous findings linking different visual imagery processes with individual differences in trait-level memory abilities. We test the relationships between episodic memory and object imagery and between semantic memory and spatial imagery. From there, we investigate how trait semantic and episodic memory abilities are reflected in individuals' anterior and posterior hippocampal volumes.

MOTIVATIONAL CORRELATES OF ACQUISITIVE AND PROTECTIVE SELF-MONITORING

Lemay-Gaulin, M; Sadikaj, G; Moskowitz, D

Self-monitoring is the tendency to adapt one's behaviour to features of the situation in pursuit of desirable interpersonal outcomes. Acquisitive self-monitoring (ASM) is associated with the pursuit of personal goals and social status, while protective self-monitoring (PSM) is associated with the pursuit of social appropriateness and avoidance of rejection. We expected those higher in ASM, as compared to those higher in PSM, (a) to perceive their behaviour to be more autonomous across situations, and (b) to be less influenced by features of interpersonal interactions in their experience of autonomy. Using an event-contingent recording procedure, 266 university students reported their behaviour, motivation (i.e., intrinsic vs. extrinsic) underpinning their interpersonal behaviour, and types of interaction partners in daily social interactions over 20 days. Findings will examine the bivariate model of self-monitoring by investigating differences in motivational correlates of ASM and PSM.

THE ROLE OF PERCEIVED STRESS IN THE ACCURACY AND POSITIVITY OF PEER FIRST IMPRESSIONS

Libenstein, J; Gazzard, L; Human, L

As accurate impressions may be beneficial in forming relationships (e.g., Hall, Andrzejewski & Yopchick, 2009), one may ask what may impede forming accurate and positive impressions of others. Perceived stress is defined as the extent to which one is experiencing stress in their life situations (Cohen, Kamarck & Mermelstein, 1983). Due to its relationship with negative affect, social skills and attention, perceived stress may affect how we view others. The current study aimed to investigate the association between perceived stress and accuracy and positivity in peer first impressions. Participants completed self-report questionnaires on their personality and the perceived stress scale and rated each of their interaction partner's personality. Higher perceived stress was associated with viewing others less accurately but was not significantly associated with viewing others positively. Thus, perceived stress may be detrimental to forming accurate first impressions of peers however, it may not play a role in perceiving peers positively.

PHYSICAL ACTIVITY, SUBJECTIVE VITALITY AND ARTERIAL STIFFNESS

Liu, M, Horsley, K, Ditto, B.

Background: Physical activity level and subjective vitality are two factors that influence cardiovascular health. Previous studies demonstrate a significant association between lack of physical activity and increased arterial stiffness in older population. Research also shows that subjective vitality is associated with reduced negative cardiovascular outcomes. Whether the same associations exist in younger adults remains unclear. *Aim:* To investigate the association between physical activity, subjective vitality and arterial stiffness in early adulthood. *Methods:* Arterial stiffness was indicated by pulse wave velocity and measured using a non-invasive, optical method in a sample of young adult women ($N=36$). Physical activity and subjective vitality were measured by self-report questionnaires. *Results:* Physical activity was not associated with increased arterial stiffness, though the results approached statistical significance. Subjective vitality is not associated with increased arterial stiffness in young adults. Future research with larger sample size is needed.

SERIAL ORDER MEMORY IN RATS

Martakis, K; Petrides, M

To complete daily tasks such as preparing a recipe or keeping track of one's schedule requires the ability to monitor the order of events in working memory. Previous research on macaque monkeys and human subjects has demonstrated the critical involvement of the mid-dorsolateral prefrontal cortex in serial order processing. However, it is unknown whether rats possess this ability. In the present study, eight rats were tested in operant conditioning chambers on a serial order memory task. A sequence of lights is presented and then two of these lights appear in a test trial. The rats had to indicate which light appeared earlier in the sequence. At this point in testing, criterion was successfully met for a sequence of two lights which demonstrates the ability to distinguish recent from less recent events in working memory, but is not sufficient to demonstrate serial order processing in working memory.

REFINING OUR UNDERSTANDING OF EATING DISORDERS BY INVESTIGATING THEIR UNDERLYING MOTIVATIONAL PROCESSES AND (CORRESPONDING) PSYCHOPHYSIOLOGY

Martel, S; Schell, S; Racine, S

Patients with eating disorders show varying degrees of binge eating and restrictive eating. One possibility is that individual differences in binge eating and restrictive eating are due to individual differences in reinforcement sensitivities. The current study used self-report and physiological measures to assess appetitive and avoidance motivational responses to emotional and food images in participants who varied on binge eating and restrictive eating. A self-report questionnaire was used to assess the Fight-Flight-Freeze System and the Behavioral Approach System, which relate to avoidance and appetitive motivation, respectively. The startle blink reflex and the postauricular reflex were used as physiological indicators of aversive and appetitive motivation, respectively. Analyses examined whether self-report and physiological measures of appetitive and avoidance motivation to emotional images and food correlate in people with disordered eating symptoms and whether binge eating and restrictive eating symptoms moderate the association between self-reported reinforcement sensitivities and physiological responses to food images.

THE ROLE OF ACCUMBAL D2 NEURONS IN CONSUMMATORY PLEASURE

Mattuck, S; Yang, A; Britt, J

Mu opioid receptor (MOR) agonist administration in the nucleus accumbens (NAc) has been shown to promote behavioural indices of pleasure in rodents consuming food. However, the neural circuits responsible for this effect have yet to be elucidated. In the present study, we investigated whether enkephalin-containing medium spiny neurons (ENK-MSNs) in the NAc modulate consummatory pleasure in mice. We operationalized pleasure as the number of licks per bout, which research indicates is independent of total consumption. We stimulated ENK-MSNs at low, intermediate, and high frequencies while mice had free access to 10% sucrose solution. The results of this experiment fail to support our hypothesis by demonstrating that high frequency stimulation produces a decrease in licks per bout and total consumption, while low frequency stimulation only increases total consumption. These results suggest that local ENK release from soma in the NAc is not responsible for MOR mediated pleasure.

SOL CALPAIN AND MEMORY MAINTENANCE

Ni, A; Zha, C; Sossin, W

Calpains are Ca^{2+} -dependent proteases that are involved in many cellular processes, including memory. SOL calpain (SOL) structurally diverged from well-known classical calpains and interestingly, are required for a form of non-associative memory in *Aplysia californica* contrary to classical calpains, which are involved in a form of associative memory. Here, we examine how SOL is regulated in the brain. *Aplysia californica* SOL was cloned for cleavage assays to test dependency for Ca^{2+} in casein cleavage, and for GST pull-downs to test presence of protein-protein interactions with SOLH domain. Results from both assays were negative and suggested that our constructs were unstable. We thus aligned calpain sequences to establish clear boundaries between SOL domains and built new constructs, but the data showed similar results for the cleavage assay. The bioinformatics work however allowed us to find conservation of a C2-like domain in SOL that could be involved in its regulation.

WHO ARE YOU? DOMINANCE AND ITS IMPLICATIONS IN ACCURATE PERCEPTION FORMATION

Pelletier, Y; Mignault, MC; Human, L

In an interaction, two roles are fulfilled, the judge, who perceives the target, and the target, who is perceived by the judge. ‘Good targets’ are high in expressive accuracy (transparent), they are viewed in line with how they view themselves by judges. Human and Biesanz (2013) demonstrated that targets who are dominant have greater expressive accuracy. Moreover, dominance levels of judges have been shown to affect the level of expressive accuracy of targets to display emotions (Hall, Rosip, LeBeau, Horgan, & Carter, 2006). This study examined how targets’ and judges’ levels of dominance interact to affect targets’ expressive accuracy. We hypothesized that dominant targets will have higher levels of expressive accuracy, and judges who have high levels of dominance will hinder the expressive accuracy of targets low in dominance. Results demonstrate that judges low in dominance do not perceive dominant targets more accurately, while dominant judges perceived dominant targets the most accurately.

THE BLACK BOX PROBLEM: ATTRIBUTE SUMMATION PROCESSES IN VALUE-BASED CHOICE

Pilgrim, M; Pelletier, G; Otto, R; Fellows, L

Most ecological value based choices between whole-objects are not well represented by current multi-attribute decision making models, while studies that do use whole-object stimuli often make no assumptions about the underlying attributes of the choice alternatives. Here, we ask by what process subjects integrate the values of attributes to form overall value signals for their choice options when deciding between objects. Subjects made choices between stimuli that were composed of artificial geometric object features whose monetary values were learned previously. We compared the fits of a variety of simple softmax choice-probability models and manipulated the summation process by which the models calculated choice-option values. It was found that a model assuming weighted linear summation of option attributes lead to the most accurate choice estimates. While this is an important first step, future work should aim to provide a dynamic account of multi-attribute choice while still incorporating whole-object stimuli.

AFFILIATIVE PREFERENCE AS A MEDIATOR FOR THE RELATION BETWEEN CATASTROPHIZING AND PAIN BEHAVIOR

Pomaki E, Sullivan M

The purpose of this study was to examine whether affiliative preference underlies the relation between pain catastrophizing and pain behavior. A sample of healthy participants completed a measure of pain catastrophizing and were exposed to an experimental pain stimulus. They also completed a measure of affiliative preference. Results showed that indeed affiliative preference mediates the relationship between catastrophizing and pain behavior.

OVERCOMING UNCERTAINTY: HOW ATTENTION SHAPES METACOGNITION

Pudelko, A; Adil, N; Da Silva Castanheira, J; Landry, M; Raz, A.

Previous studies highlight how several factors influence perceptual decisions and metacognition, which allow us to navigate our noisy environment. Here, we investigated how two such factors, signal strength (i.e., quantity) and signal variability (i.e., reliability), influence perceptual decision-making and metacognitive judgments as a function of attentional resources. Twenty-five participants completed a perceptual dual-task under two attention load conditions (i.e. no load and high load), where they indicate the average orientation of an array of Gabors targets and then provide their confidence regarding this decision. We manipulated both the signal strength (i.e., the mean orientation) and signal reliability (i.e., the variance) orthogonally. Our results confirm the influence of evidence strength and reliability on perceptual decisions and metacognition. Critically, while attentional load had a marginal effect on perceptual decisions, decreased attentional resources reduced metacognitive sensitivity as a function of evidence reliability. This highlights the importance of attentional resources for accurate metacognitive judgements.

The Effect of Methylphenidate on Smooth Pursuit in ADHD-Inattentive: A Double-Blind Trial

Rappel, J; Douglas V; O'Driscoll, G

Attention Deficit/Hyperactivity is a disorder of attention and motor control that is commonly treated with methylphenidate. Smooth pursuit eye movements rely on attention and motor control and, in hyperactive boys, improves on methylphenidate. No study has assessed the effects of methylphenidate on pursuit in boys who are Inattentive only(ADHD-I). Nine ADHD-I boys completed a double-blind placebo-controlled crossover trial of 0.5mg/kg of methylphenidate on smooth pursuit (4 conditions: speed hi/lo, target change detection/not). An Eyelink2 recorded eye movements. Methylphenidate improved pursuit gain more to the left than right($P<.013$). Effects depended on target speed and detection condition, with the largest effects at high target speed with target detection(Drug x Freq x Detection, $P<.026$). Catch-up saccade amplitude improved on methylphenidate, but only in the detection condition(Drug x Detection, $P=.009$). Conclusion: MPH improves pursuit in ADHD-I in higher demand conditions. Lateralized effects are consistent with studies showing selective effects of MPH in left hemisphere.

BALANCING THE SCALES: SOCIAL JUSTICE ACTIVISTS AND PUNITIVE BEHAVIOUR

Renault, H; Kachanoff, F; Kteily, N; Taylor, D

While some media outlets and political figures depict activists as striving to achieve equality, others portray activists as punitive revenge seekers. Using a novel simulation approach (N=326, N=111 groups) we empirically tested how activists versus non-activists treat a formerly oppressive group when given power over them. We manipulated whether low-power groups (1) were treated equally or unequally and (2) had their collective autonomy supported or threatened by a high-power group. We then gave formerly low-power groups the power to take punitive action on the formerly high-power group. While all groups who experienced inequality or collective autonomy threats believed the formerly high-power group should be punished on a **self-report** scale, only groups who experienced both types of threats actually wanted to **behaviourally** punish the formerly high-power group. Critically however, activists did not differ from non-activists in their punitive intent or behaviour across conditions. These results challenge both popular portrayals of activists.

EVALUATING A SELF-REPORT MEASURE TO ASSESS NUTRITIONAL STATUS IN ANOREXIA NERVOSA

Resendes, T; Thaler, L; Kahan, E; Burdo, J; Steiger, H

Anorexia Nervosa has a high mortality rate due to complications caused by starvation. Epigenetic research on AN has pointed to the effects of nutrition on genetic expression, controlled by 1-carbon micronutrients, and has proven higher levels of global methylation among this population. Measuring nutritional status through blood samples led to varying results, but recent new self-report measures seem promising. This study aims to use the food frequency questionnaire, modified to suit the particularity of an undernourished population, and compare the reported levels of micronutrients with those found in whole blood plasma. A one way ANOVA will compare intergroup differences, while Pearson's correlation test will demonstrate the link between both methods. If correlations are significant, both methods could be used simultaneously to deepen knowledge of compensatory mechanisms of AN's consequent starvation.

WHAT WORKS FOR WHOM: INVESTIGATING THE ROLE OF BEHAVIOURAL REPUTATION ON THE ASSOCIATION BETWEEN VICTIMIZATION AND ADOLESCENTS' ASSERTIVE RESPONSES TO PEER PROVOCATION

Robillard, C, Farrell-Reeves, A, Dirks, M

Although antibullying programs often encourage adolescents to respond assertively when provoked by peers, it remains unclear whether assertive strategies are associated with low victimization for all adolescents. Thus, in a sample of adolescents ($N=42$; $M=12.60$, $SD=.43$; 71.4% female), we used a novel, daily-diary paradigm to examine (1) the associations between both peer and self-reported victimization and reported use of assertive strategies to manage real-world experiences of peer victimization, and (2) whether these associations were moderated by peer-nominated aggression and withdrawal. We expected victimization to be negatively associated with assertive strategies for youth low on peer-nominated aggression and withdrawal. Results indicated the relation between peer-nominated victimization and assertive strategies was moderated by peer-nominated aggression and withdrawal, although not in the direction hypothesized. Overall, these findings suggest that assertive strategies are not a panacea for victimization; rather, reputation among peers influence whether these strategies are associated with low victimization.

“PROFESSOR, CAN I EXPLAIN THAT BETTER?” COVERT SEXISM IN UNDERGRADUATES’ USE OF LANGUAGE TOWARDS PROFESSORS

Romanelli, S; Khullar, T; Dirks, M.; Lydon, J

People's use of language reflects their individual beliefs about their own status and that of their interaction partners. Ambivalent Sexism Theory proposes that implicit sexist attitudes lead most individuals to regard women as having less inherent authority than men, even when they are equal in professional status. We investigated this proposition, and predicted that undergraduate students would use less informal language when writing to an assistant professor versus a student, but that they would use more informal language with a female assistant professor than with a male assistant professor, due to implicit sexist beliefs. Students were asked to describe their best and worst experiences at McGill University in an online writing task. They were led to believe they were writing to a student or an assistant professor, and to a male or a female. Participants' written responses were analysed using Pennebaker and colleagues' (2015) Linguistic Inquiry and Word Count software.

EXPLORING UNCONSCIOUS MENTAL PROCESSES USING INSTRUMENTAL HYPNOSIS

Sandra, D. A; Landry, M; Raz, A

Several theories of hypnosis emphasize the role of the unconscious mind in the emergence of hypnotic phenomena with hardly any evidence to back it up. The current research project directly addresses this assumption by testing whether hypnotic suggestion can alter subliminal processes. We tested our participants on a battery of cognitive tasks. In one task, they had to either focus on the color of the word presented (Stroop task). In another task they had to focus on the magnitude of the digit presented (Subliminal Number Task). While hypnotized, the participants received a suggestion of suppressing automatic reading. Interestingly, we find that hypnosis interferes with the unconscious processing of information and allows for blocking automatic processing of reading by reducing Stroop effect and cognitive conflict in the Subliminal Number Task.

THE μ -OPIOID RECEPTOR SYSTEM AND SOCIAL NEED: THE EFFECTS OF NALTREXONE

Schwartzman, E; Tchalova, K; Bartz, J

Social connection is a basic human need affecting well-being, but the neurobiological underpinnings of the social affiliation motive remain unclear. The present study investigates the role of the μ -opioid receptor (MOR) system in regulating social need in humans. In this double-blind, randomized study, participants were assigned to receive either 50 mg oral naltrexone (a MOR antagonist) or matching placebo prior to completing two tasks designed to measure social motivation: 1) a lexical decision task assessing cognitive accessibility of attachment-related thoughts, and 2) a task assessing perception of animacy in faces varying in the level of human vs artificial characteristics. We hypothesize that participants in the naltrexone condition will show faster response times to attachment words and will require a lower minimum level of human characteristics to perceive a face as alive. This greater orientation towards social stimuli is interpreted as an increased motivation to affiliate, indicating elevated social need. Preliminary results are presented.

ACCURATE PERCEPTION IN FIRST IMPRESSIONS: THE MEDIATING ROLE OF SELF-CONCEPT CLARITY

Seewooruttun, P; Mignault, M C; Human, L

Being accurately perceived during first impressions has been strongly linked to psychological adjustment. Indeed, well-adjusted individuals display an abundance of cues for perceivers leading to accuracy of distinctive traits. This study investigated why psychological adjustment is linked to greater cue relevance by looking at whether self-concept clarity (SCC), having a clear and consistent sense of one's personality, helped well-adjusted individuals be perceived more accurately. A sample of 111 university students completed self-reports of their personality and rated each other's personalities after brief interactions. Our results showed that psychological adjustment was positively associated to SCC, which was in turn positively associated to greater accuracy. Additionally, we found that the link between adjustment and expressive accuracy was significantly reduced when SCC was included in the model suggesting that SCC partially mediated the relationship. Thus, SCC, an indicator of self-knowledge of one's own traits is beneficial for greater accuracy in first impressions.

DO SELF-REPORT AND PHYSIOLOGICAL MEASURES OF EMOTIONAL RESPONSES TO FOOD CONVERGE IN INDIVIDUALS WITH DISORDERED EATING?

Suissa-Rocheleau, L; Racine, S. E.

Disordered eating symptoms have been associated with both positive and negative emotional responses to food, although this may result from a lack of association between self-report and physiological measures of emotion. Women were recruited, based on the presence or absence of binge eating and dietary restriction ($N = 82$). The startle blink reflex magnitude, an index of defensive (negative) motivation, was correlated with their self-reported ratings of valence, arousal, and craving in response to emotional and food images. Binge eating and restrictive eating symptoms were examined as moderators of self-report/physiology correlations. Valence ratings to emotional images were correlated with startle blink reflex magnitude, with more negative ratings related to greater startle blink reflex. Craving ratings related to lower startle blink reflex magnitude to food images, suggesting an approach motivation to food in our sample. Binge eating and dietary restriction did not moderate the relationship between self-report ratings and startle blink magnitude.

THE TRAVELING WAVE ILLUSION: DYNAMICS OF EXCITATORY WAVE PROPAGATION IN HUMAN VISUAL CORTEX

Li, T; Ruiz, T; Farivar, R

The traveling wave paradigm is a psychophysics task that reflects the dynamics of signal propagation in our visual cortex. When two eyes are seeing two different stimuli, the two groups of monocular neurons mutually inhibit each other and battle for perceived dominance. By partially incrementing the contrast of the suppressed stimulus, a strong wave of excitation signal is initiated, overcoming binocular inhibition, creating the perceptual effect of the suppressed stimulus gradually sweeping the dominant stimulus out of consciousness. Previous research demonstrates that wave propagation is interfered by gaps in the stimulus. We hypothesize that wave propagation dynamics is dependent on both spatial frequency and external contrast noise. Our results show both the number of success and the speed of propagation are reduced by low spatial frequency and contrast noise.

ARE MOVEMENT TRAINING STRATEGIES EFFECTIVE FOR REDUCING MOTION DURING MRI SCAN?

Vochin, A; Amir, S,

During structural and functional MRI scanning, movement is known to disrupt the signal and to cause artifacts, which distort the data and lead to erroneous diagnoses or research conclusions. With the advent of ultra high-field MRI scanners, highly sensitive to motion, eliminating movement becomes crucial for gathering reliable data. Presently, several strategies are used such as restraints or general anesthesia. However, they are often inconvenient because they increase patients' anxiety or, in the case of anesthesia, may have side effects or may confound functional MRI results. The objective of our study is to develop and test strategies for reducing movement during acquisition of brain imaging data by using a mock-scanner, equipped with real-time motion tracking.

NEURAL AND BEHAVIOURAL CORRELATES OF MUSICIANS' NATURAL FREQUENCIES IN MUSIC PERFORMANCE

Wang, Y; Zamm, A; Palmer, C

Many spontaneous human actions, from walking to music performance, are inherently rhythmic. The intrinsic rate at which individuals spontaneously produce these movements, or natural frequency, is thought to represent optimal temporal coordination that is most efficient. Previous studies found most stable and least variable performance at natural (spontaneous) rates relative to other rates. The current study measured behavioral and neural (electroencephalography; EEG) responses as musicians performed a simple melody at their spontaneous rate and at faster and slower self-paced rates. Behavioural results confirmed most stable (least variable) performance at spontaneous rates. EEG results indicated higher spectral power at individuals' natural frequencies relative to other self-paced frequencies. Finally, higher spectral power was associated with lower temporal variability at individuals' natural frequencies, suggesting that optimal performance is supported by neural entrainment.

TOP-DOWN ATTENTIONAL MODULATION OF THE SPEED OF VISUAL PROCESSING USING TMS OVER THE FRONTAL EYE FIELDS

Weill, S; Ruiz, T; Khayat, P; Farivar, R.

The detection of a visual stimulus is achieved through multiple stages of cortical processing, from the primary visual cortex up to the frontal cortex. The speed of such detection can be determined by cognitive processes such as visual attention. Previous studies showed that manipulating spatial attention using transcranial magnetic stimulation (TMS) of the posterior parietal cortex modulates visual detection speed. Here, we investigated if the frontal eye fields (FEF), an area involved in visuomotor transformation and spatial attention, influences the speed of visual detection, using a Temporal Order Judgement task. Subjects were asked to detect which of two visual stimuli appeared first while they received a single-pulse TMS over the left FEF. Trials with TMS over the FEF delayed the detection of stimuli in the visual field contralateral to the stimulation site. These results indicate that FEF stimulation disrupts visual detection, likely through top-down attentional modulation of sensory processing.

THE EFFECT OF RELATIONSHIP STATUS AND IDENTIFICATION LEVELS ON RESPONSE BIASES TOWARDS ATTRACTIVE POTENTIAL DATING PARTNERS

Wu, Y; Cohen, A; Auger, E; Lydon, J

The abundance of attractive potential dating partners in modern society is beneficial for singles seeking a partner but threatening for those who are romantically-involved. Research has shown that romantically-involved individuals have devised strategies to cope with this threat, and the activation of these strategies is determined by the level of threat they perceive. Using the implicit manikin approach and avoidance task (AAT), we investigated whether romantically-involved individuals would protect their relationship by automatically avoiding attractive alternatives and whether this response is moderated by how much they identify with their relationship (i.e., relationship identification). We expected that all participants would show an approach bias towards attractive stimuli than control stimuli because of the natural tendency to approach physically attractive people. However, because looking at attractive faces is considered a low threat, we predicted that low identifiers would show an approach bias, whereas high identifiers would still show an avoidance bias.

THE EFFECT OF VALUE LEARNING ON VISUAL OBJECT REPRESENTATION

Yan, X; Pelletier, G; Fellows, L

When making decisions, such as a consumer choice, we identify available options and evaluate how much they are worth to us in the current context. Surprisingly little is known about the interactions between subjective valuation and visual representations of objects. To better understand the valuation process and how it interacts with sensory processing, particularly object perception, we use a set of artificial objects (fribbles) and manipulate the attribute-value associations through value-learning. We ask whether pairing value to single attributes or a conjunction of attributes affects the degree of viewpoint dependence as measured by reaction times during value ratings after learning. Following our hypothesis, value ratings of stimuli learned in the conjunction condition are expected to rely on higher-order object representations that are thought to be viewpoint independent, whereas single attributes-value learning are expected to lead to a comparatively greater viewpoint dependence effect

THE RELATIONSHIP BETWEEN SLEEP DURATION AND BEHAVIOURAL AND EMOTIONAL REGULATION IN YOUTH

Zhang, Yujie; Keskinel, Deniz; Santisteban Lopez, Arturo; Gruber, Reut

Introduction: Healthy sleep is crucial to psychological health. However, the nature of the association between sleep duration and psychological functioning is unclear as studies show that short and long sleep durations were both associated with poor outcomes. This study aims to examine the association between sleep duration and psychological functioning in youth. We hypothesized that a curvilinear relationship characterizes this association such that moderate amount of sleep is associated with optimal outcomes whereas either short sleep or long sleep are associated with poor outcomes. **Methods:** Participants were 63 typically-developing children (21 males, $M=11.43$, $SD=4.01$). Sleep was measured using actigraphy. Daytime functioning was measured by Teacher's Report Form. **Results:** Curvilinear associations were found between sleep duration and "Internalizing" scores. Positive linear relationships were found between sleep duration and "Happy", "Somatic Complaints", and "Externalizing" scores. **Conclusions:** The relationship between psychological functioning and sleep duration may differ between behavioural and emotional domains.

LOVING INTELLIGENTLY IN AN AGE OF SMARTPHONES

Zhao, S; Heyman, J; Human, L

With the ubiquity of social media like Facebook, users are exposed to numerous potential romantic partners with ease. But how might this be affecting relationship closeness for those already in romantic relationships? The purpose of this research was to determine whether social media use moderates the relationship between quality of alternatives and relationship closeness. Participants completed self-report questionnaires assessing the frequency of social media use, their perceptions of alternatives to their relationship, and perceived relationship closeness. A linear mixed model will be used to analyze the results. It is predicted that greater quality of alternatives would decrease relationship closeness, especially for those who use social media more. This investigation will shed light on the nature of social media use on the ways through which people relate to each other romantically.

**THE RELATIVE PREDICTIVENESS OF PHYSIOLOGICAL CHANGES ON SUBJECTIVE
EXPERIENCE OF VASOVAGAL SYMPTOMS**

Zhou, L; Ditto, B

The vasovagal response is an emotion-related stress response that is usually triggered during threatening or painful situations, such as medical procedures involving blood loss or injury. The mechanisms of vasovagal reactions remain largely uncertain. While vasovagal research has traditionally focused on cardiovascular changes that decrease cerebral blood flow, recent evidence suggests cerebral vasoconstriction in response to changes in respiration can also trigger vasovagal symptoms. Given that interest in hyperventilation induced cerebral vasoconstriction is quite recent, a major limitation to previous studies is the lack of comparison between cardiovascular and respiratory changes that may mediate vasovagal reactions. To address the gap in knowledge, the present study aimed to determine the set of physiological changes—cardiovascular or respiratory—that best predict participants' subjective experience of vasovagal symptoms.