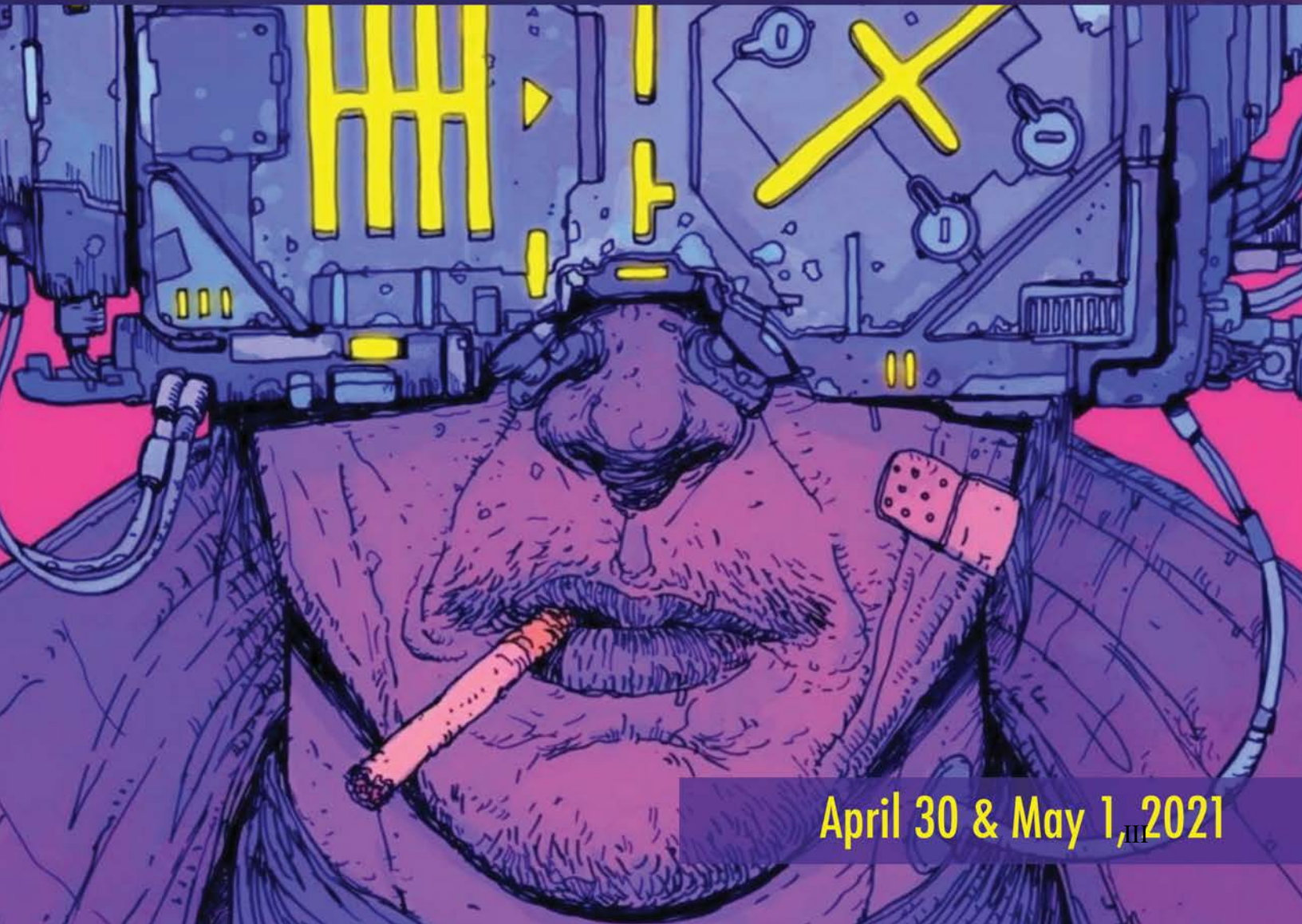


PSYCHFEST ZOZI

CYBER (PUNK) CHIC



April 30 & May 1, 2021

PROGRAM

FRIDAY, APRIL 30

- 10:00 am / Welcome
 - 10:10 am / Presentations
 - 11:00 am / Break
 - 11:30 am / Presentations
 - 12:20 pm / Break
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-

SATURDAY, MAY 1

- 10:00 am / Welcome
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day 1

FRIDAY, APRIL 30

10:00 am / Welcome

10:10 am / Presentations

10:10am / Will Jettinghoff (Supervisors: Kristin Laurin and Azim Shariff)
Playing with Fire: The Slippery Slope from Moralization to Polarization

Social psychologists have studied the impact of goals on cognition for decades, but have almost uniformly assumed that people think reasoning must always be in service of producing unbiased, evidence-based beliefs, embodying Epistemic Value. From this traditional perspective, while people may frequently engage in motivated reasoning they do not realize they are doing it and would not approve of it if they knew. I argue for a different possibility: that, unlike the scientists that study them, everyday people find it worthwhile to believe in service of non-epistemic goals, embodying other values. Based on a review of the motivated reasoning literature, I propose a non-exhaustive list of three non-epistemic values that might guide explicit reasoning: (1) Emotional Value (that beliefs can be valuable by supporting positive emotions), (2) Moral Value (that beliefs can be valuable by supporting a moral agenda), and (3) Affiliative Value (that beliefs can be valuable by supporting meaningful affiliations). In several studies, I develop a scale designed to measure the explicit endorsement of these values, assess the predictive validity of this scale, and discuss implications for motivated reasoning theory.

10:20am / Jin Wen (Supervisor: Nancy Sin)
Day-to-Day Associations Between Nightly Sleep and Next-Day Well-Being Amid the COVID-19 Pandemic in North America

Objective: Adequate sleep may be especially important for maintaining health and well-being in daily life amid the stress of the COVID-19 pandemic. This preregistered study examined the associations of sleep quality, duration, and efficiency with next-day physical symptoms, affect, and stressors during the COVID-19 pandemic in North America, in addition to evaluating individual differences in COVID-19-related stress as a moderator. Method: From mid-March to early August 2020, 1025 adults from Canada and the U.S. aged 18-91 reported COVID-19 stress at baseline and subsequently completed twice-daily diaries for one week about their sleep, negative affect, stressors, and physical symptoms. Results: Sleep was associated with more favorable outcomes at both the between- and within-person levels. People with more

adequate sleep, on average, had better daily well-being across the study week. Within-persons, better-than-usual sleep (i.e., higher quality and efficiency and longer duration) predicted fewer physical symptoms, lower negative affect, and fewer daily stressors on the next day. COVID-19-related stress moderated several of these associations, such that individuals with higher COVID-19 stress showed smaller within-person associations of sleep duration and efficiency with next-day well-being, compared to individuals with lower-to-moderate levels of COVID-19 stress. Discussion: Sleep was important for maintaining daily health and well-being during the COVID-19 pandemic, but the protective associations between sleep and next-day well-being were attenuated among those who reported higher COVID-19 stress. These findings highlight the importance of the context of heightened stress when considering the benefits of sleep on daily health and well-being.

10:30am / Vivian Qi (Supervisor: Amori Mikami)

Birds of Different Feather Flock Together: Associations between Cross-Racial/Ethnic Friendships and Children's Social and Academic Adjustment

As North American classrooms become increasingly diverse, it is important to examine children's friendships with cross-racial classroom peers. This study longitudinally examined bidirectional associations between cross-racial friendships and children's social and academic adjustment. Participants were 583 elementary school children in western Canada, or the midwestern United States (4-10 years; 48% female; 143 Asian, 88 Black, 65 Hispanic or Latinx, 171 White, 116 mixed). Children's adjustment (social preference, academic enablers, academic performance) and friendship nominations (reciprocated, received, given) were measured in fall and spring over one school year. Fall adjustment positively predicted spring reciprocated cross-racial friendships, but not vice-versa. Academic enablers and received cross-racial friendship nominations were positively and reciprocally related to one another. Fall same-racial friendships positively predicted spring academic performance and social preference. Findings are discussed in the context of a multi-racial society.

10:40am / Yoonseok Choi (Supervisor: Christiane Hoppmann)

Positivity Leads to Success? Cultural Differences in Emotional Experiences During Goal Pursuit

Previous research shows that compared to Westerners who want to maximize positivity, East Asians appreciate the utility of negative emotion. We predicted that this cultural differences in emotion valuation would lead to different emotional experiences during goal pursuit with Koreans experiencing more negative emotions and less positive emotions than US Americans. In support of this prediction, Koreans reported a higher proportion of negative emotions than US Americans when inferring others' emotional experiences while achieving success (Study 1) and also recalling one's own successful goal pursuit (Study 2). Furthermore, in Study 2, cultural differences were mediated by dialectical views of emotion (i.e., lower utility of positive emotions & higher utility of negative emotions). Specifically, Koreans held more dialectical views of emotions than US Americans, which in turn led to a higher proportion of

negative emotions during the pursuit of personal goals. The results suggest that one's emotional experiences during goal pursuit depend on culturally ascribed values to positive/negative emotions. Future studies should explore whether experiencing culturally valued emotions during goal pursuit improve actual goal progress.

10:50am / Ray MacNeil (Supervisor: Jim Enns)

Tracking the closed eye using electrooculography calibrated with pupil-corneal reflection

There are several areas in the study of visual cognition—including memory, imagery, and human-machine interaction—where researchers are interested in how the eyes move when the eyelids are closed. However, reliably and affordably measuring closed-eye movements has proven elusive. Electrooculography (EOG) offers a low-cost solution to monitoring closed-eye gaze position, but it is not without its challenges. To determine the direction and amplitude of eye movements, the electrical potentials measured by EOG somehow must be calibrated with the angular displacement of the eye. EOG is also susceptible to noise arising from various sources, such as electromyographic activity and electrode impedance. Here we describe a method for estimating a corrected EOG signal by calibrating it with an industry-standard, pupil-corneal reflection (PCR) eye tracker. First, data were collected while simultaneously using both eyetracking techniques as participants performed a simple horizontal saccade task with their eyes open under conditions of normal illumination and complete darkness. The EOG signal, when using only a standard calibration procedure, was less precise than that of PCR and tended to overestimate saccadic amplitude. We applied robust regression methods to the EOG and PCR data recorded in normal illumination to estimate a calibration factor to adjust the EOG signal acquired in darkness. This adjustment yielded an EOG-based measure of saccade end-points that was more comparable—in both accuracy and precision—to that obtained from the PCR data. Having validated this calibration procedure, we applied it to compute an adjusted EOG measure of saccadic amplitude in another condition where participants' eyes were closed. This adjustment likely improved our measurement of how accurately participants were able to execute closed-eye movements to remembered target locations. We propose that the refinement and application of this methodology can advance research under conditions where researchers would like to measure the kinematics of closed-eye movements.

— 30 MINUTE BREAK —

11:30am / Patrick Klaiber (Supervisor: Nancy Sin)

Personality differences in engagement and responsiveness to daily positive events

Neuroticism predicts exposure and reactivity to daily stressors (Bolger and Zuckerman, 1995). Zautra and colleagues (2005) extended this work with positive events and positive affect. Building on these frameworks, we examined the Big Five personality traits as

predictors of engagement and affective responsiveness to daily positive events. Participants (N = 2697, aged 25-84 years, 56% women, 85% white) from the National Studies of Daily Experiences reported daily positive events, emotions associated with the events, and daily positive and negative affect for 8 consecutive days. Adjusting for other personality traits, Extraversion and Openness to Experience (but not Neuroticism, Conscientiousness, or Agreeableness) predicted engagement in more frequent daily positive events. All Big Five traits were associated with one or more discrete emotions experienced during positive events. Extraversion and Neuroticism moderated the link between positive events and end-of-day positive but not negative affect, such that people lower in Extraversion or higher in Neuroticism showed greater increases in positive affect on days with higher-than-usual positive events, compared to people higher in Extraversion or lower in Neuroticism. The Big Five personality traits were each important for understanding individual differences in engagement and responsiveness to daily positive events.

11:40am / Leilani Forby (Supervisor: Alan Kingstone)

Gaze behavior and peer assessment comparison between neurotypical and individuals with autism spectrum disorder

Individuals with autism spectrum disorders have difficulty understanding verbal and non-verbal cues, and display atypical gaze behaviour during social interactions. The aim of this study was to examine differences among groups of individuals with high, medium, and low levels of autistic traits with regard to their gaze behaviour and their ability to assess peers' social status. 54 university students who completed the 10-item Autism spectrum quotient (AQ-10) were eye-tracked as they watched six 20-second video clips of individuals ("targets") involved in a group decision-making task. The specific experimental instruction to the participants was to "think about who you would want to work with on a subsequent task". The video clips included moments of debate, humour, interruptions, and cross talk, simulating natural, everyday social interactions. Fixations were labelled by region of interest (body, face, or eyes). Participants then completed the Dominance and Prestige Peer Rating Scales, which asked them to rate the video targets in terms of status, prestige, and dominance. High-scorers on the AQ-10 (i.e., those with more autistic traits) did not differ from the low- and medium-scorers in the status, prestige, and dominance ratings they gave the video targets. Unlike the low- and medium-scorers, high-scorers attended to the body of high dominance targets significantly more than they attended to the low and medium dominance targets, suggesting high-scorers found the high dominance target far more compelling than the medium and low dominance targets. In all other cases, high-scorers did not differ from low- and medium-scorers in either their ability to evaluate social status or in gaze behaviour. This suggests that deficits exhibited by individuals with autistic traits in reading social cues may be reduced in tasks probing certain social skills abilities.



11:50am / Michelle Hunsche (Supervisor: Connor Kerns)

Social Functioning and the Presentation of Social Anxiety in Children with Autism Spectrum Disorder

Social impairment, including deficits in social ability and poorer quality peer relationships, is elevated among children with autism spectrum disorder (ASD) and anxiety disorders, and may influence the presentation of anxiety symptoms experienced by these children, particularly social anxiety. Most research to date has investigated this topic using only single-informant, broad measures of social functioning, limiting our understanding of how different aspects of social functioning relate to one another and to anxiety in this population. The current study sought to extend prior work by using a novel network analytic approach to examine how different facets of social ability (e.g., social communication, social motivation) and peer relationships (e.g., friendships, bullying) relate to one another and to anxiety severity and comorbidity in a large treatment-seeking sample of children with ASD and anxiety disorders. Additionally, this study sought to clarify the role of social functioning in the presentation of social and non-social anxiety symptoms in children with ASD. A sample of 200 children with ASD and anxiety disorders and their caregivers completed a clinical interview and a multi-informant battery of standard and clinically-informed measures of social functioning. The network analysis demonstrated strong connections among the core social deficits of ASD (i.e., social motivation, social communication), and among measures of social integration (i.e., conflict with peers, bullying), though there was little overlap between these two communities. Theory of Mind (ToM), or the ability to understand the thoughts and feelings of others, was positively associated with nearly every measure of social ability and peer relationships in the network, suggesting that this social-cognitive skill may play a central role in the social well-being of children with ASD and comorbid anxiety. ToM also appeared to play a role in the presentation of anxiety symptoms, whereby greater ToM impairment was associated with a distinct presentation of social anxiety (i.e., social fears without fear of negative evaluation). Findings suggest that difficulties in one area of social ability or peer relationships may be associated with difficulties in other, related areas of social functioning—particularly ToM, which may represent an optimal target for psychosocial treatments for children with ASD and anxiety disorders.

12:00pm / Natalie Brown (Supervisors: Lori Brotto and Alan Kingstone)

Seeking to Understand the Cognitive Processing of Sexual Cues in Asexual Individuals and Heterosexual Women with Sexual Desire/Arousal Difficulties

Asexuality is defined as a unique sexual orientation characterized by a lack of sexual attraction to others. This has been challenged, with some experts positing that it is better explained as a sexual dysfunction. Sexual Interest/Arousal Disorder (SIAD) is characterized by absent/reduced sexual interest/arousal paired with personal distress, with two subtypes: acquired and lifelong. Research suggests that while asexuality and acquired SIAD are distinct entities, there may be overlap between asexuality and lifelong SIAD. Findings from studies using eye-tracking and implicit association tasks suggest that these methodologies might differentiate these groups on the basis of their neural mechanisms. However, no study has

compared their cognitive processing of sexual cues, and the literature on lifelong SIAD is minimal. The current study tested differences in the cognitive processing of sexual cues between asexual individuals and women with SIAD (lifelong and acquired). Forty-two asexual individuals and 25 heterosexual women with SIAD (16: acquired; 9: lifelong) completed three study components: a visual attention task, a Single Category-Implicit Association Task, and the sex semantic differential. ANOVAs examined group differences in: 1) visual attention to erotic cues, 2) implicit appraisals of sexual words, and 3) explicit appraisals of sex. Women with SIAD displayed a controlled attention preference for erotic images and areas of sexual contact, with longer dwell times to these areas relative to asexual individuals, who did not gaze preferentially at erotic cues. For implicit appraisals, all groups demonstrated negative - neutral implicit associations with sexual words. For explicit appraisals, women with acquired SIAD reported more positive evaluations of sex relative to asexual individuals and women with lifelong SIAD. This project sheds light on key differences between asexuality and low desire, and has implications for best clinical practice guidelines for the assessment of lifelong SIAD.

12:10pm / Faith Jabs (Supervisors: Paul Hewitt & Lori Brotto)

Examining the treatment utility of the Approach-Avoidance Motivation Model for Sexual Interest/Arousal Disorder in women and non-binary individuals

Sexual wellbeing is an integral part of overall physical and mental health. Yet sexual problems affect up to 50% of cisgender women, with low sexual desire being the most common sexual concern, and 8% of these women meet the diagnostic criteria for Sexual Interest/Arousal Disorder (SIAD). Research on sexual concerns among transgender women and non-binary individuals is also scarce and requires further investigation to better inform clinical practice. Here I will describe a study that tested the treatment utility of the Approach-Avoidance Motivation Model for SIAD on a sample of cis- and transgender women, and non-binary individuals. Specifically approach or avoidance sexual motivation was experimentally manipulated and the impact on sexual desire, sexual satisfaction, relationship satisfaction, and sexual behaviours was assessed. We also explored how manipulating sexual motivation affected participants' attention to sexual cues.

– 1 HOUR BREAK –

1:20pm / Ellie Zambrano (Supervisor: Christiane Hoppmann)

Partner Contributions to Goal Pursuit: Findings from Repeated Daily Life Assessments with Older Couples

This study focuses on the role of spouses for facilitating goal progress during a phase in life when individual resources for goal pursuit are particularly limited. Specifically, we examined the moderating role of relationship characteristics for time-varying partner involvement-goal progress associations as older couples engaged in their everyday lives. We also assessed

time-varying associations between everyday goal progress, effectiveness of partner contributions, and spousal satisfaction with this contribution. Our results shed light on the benefits of partner involvement for goal progress, which might depend on characteristics of the relationship as well as what partners actually do in everyday life.

1:30pm / Bita Zareian (Supervisors: Frances Chen and Joelle LeMoult)
Coping with Stress: The Contribution of Cognitive Biases to Rumination

Rumination is a pattern of passive and repetitive thoughts about symptoms of one's distress, as well as its causes and consequences. While rumination has been linked to onset and exacerbation of depression, recent research suggests that only one subtype of rumination, brooding, and not the other type, reflection, is responsible for these effects. Theoretical perspectives and empirical evidence suggest that biases in inhibition, shifting, and updating information in working memory underlie rumination. However, to date, we do not know which cognitive bias contributes the most to rumination, and more specifically, to brooding and reflection. In this study, I aimed to address this gap in the literature using an experience sampling methodology. To this end, I invited 267 undergraduate students to the lab for a baseline session. During this session, they rated their level of depression, their tendency to ruminate, and their affect. They also completed three cognitive tasks, Emotional Stroop Task, Affective Switching Task, and Emotional 2-Back task, that assessed their inhibition, shifting and updating biases, respectively. Next, participants rated their level of brooding, reflection, and negative affect at nine different time points within 48 hours of their most stressful midterm exam. I hypothesized that updating bias would be the main cognitive control bias to predict the level and trajectory of brooding after the exam. I further hypothesized that the level of brooding, and not reflection, at each time point would predict the intensity of negative affect at the following time point. I also conducted additional exploratory analyses to examine (1) the association of inhibition, shifting, and updating biases with reflection; and (2) the bidirectional association between rumination and negative affect. Contrary to my hypothesis, inhibition and shifting biases predicted brooding after the exam. Inhibition also played a role in reflection. Furthermore, brooding, and not reflection, predicted negative affect at the next time point. In addition, negative affect predicted both brooding and reflection at the next time point. The role of cognitive control biases in brooding and reflection, and its implications, are discussed.

1:40pm / Ashley Battaglini (Supervisor: Joelle LeMoult)
Intra- and Interpersonal Emotion Regulation

The process by which emotional experiences are managed is known as emotion regulation. Two types of emotion regulation strategies are commonly compared: rumination (focusing on one's problems and feelings) and distraction (focusing away from one's problems and feelings). Whereas rumination typically increases negative affect, distraction typically decreases negative affect. Past research has focused on emotion regulation as an intrapersonal endeavor (managing one's own emotions), whereas interpersonal emotion

regulation (IER; receiving support from another person to regulate one's emotions) lacks the same degree of investigation. This study sought to compare the effects of intrapersonal emotion regulation (rumination, distraction) and IER (co-rumination, co-distraction) on affect and relationship quality and closeness. Participants completed the Fast Friends paradigm; following, participants privately recalled a stressful event. Finally, participants were randomized into one of four emotion regulation conditions: rumination, distraction, co-rumination, or co-distraction. Affect and relationship quality and closeness measures were completed throughout the study session. I predicted that rumination and co-rumination would increase negative affect compared to distraction and co-distraction. I also predicted that co-distraction would decrease negative affect more than distraction. Finally, I predicted that co-rumination would provide the highest relationship quality and closeness compared to all conditions. Results showed that negative affect did not differ after the emotion regulation conditions. However, negative affect decreased significantly more for participants in the distraction condition compared to participants in the rumination and co-rumination conditions. Finally, there were no differences in relationship quality and closeness across conditions. The limitations and implications of this study are discussed.

1:50pm / Mikayla Pachkowski (Supervisor: David Klonsky)

Examining the Relationship of Dissociation to Suicide Ideation and Suicide Attempts

Suicide is a leading cause of death worldwide and has been for decades. In the aftermath of suicide, people often find it difficult to understand why a person would choose to die by suicide. Indeed, recent research suggests that factors often associated with suicide (e.g., hopelessness, depression) predict who will think about suicide, but fail to predict who will go on to act on their suicidal thoughts. This distinction is crucial, as most people who think about suicide will never make a suicide attempt. Interestingly, theoretical work suggests that a dissociative state (i.e., feelings of unreality and disconnection from one's self and the world) may dampen experiences of fear and pain that are barriers to making a suicide attempt, thereby playing a unique role in facilitating the transition from suicidal thoughts to attempts. In other words, dissociation may act as a buffer, allowing a person to overcome the natural instinct for self-preservation that typically prevents them from attempting suicide. The current research aimed to test this theory and examine whether greater dissociation is indeed linked with suicide attempts over and above suicidal thoughts. A sample of 754 young adults completed measures assessing clinical variables including dissociation, suicide risk, and other forms of psychopathology. Main findings show that, as predicted, dissociation was elevated among individuals who had attempted suicide compared to those who had only thought about suicide. Further analyses suggest that the link between dissociation and suicide attempts may be accounted for by other forms of psychopathology (e.g., nonsuicidal self-injury, symptoms of borderline personality disorder) that frequently co-occur with both dissociation and suicide attempts. This work builds on an emerging literature that seeks to understand the factors that facilitate the progression from suicidal thoughts to suicide attempts.



SATURDAY, MAY 1

10:00 am / Welcome

10:10 am / Presentations

10:10am / Erica Dharmawan (Supervisor: Geoff Hall)

Convertibles and Corvettes: The development of subordinate-level categorization

In our daily lives, we encounter countless manufactured objects (e.g., cars, shoes), which may be subcategorized according to their kind (e.g., convertibles, clogs), defined by the maker's intended function, or their brand (e.g., Corvette, Crocs), defined by the maker's identity. Prior research has left it unclear whether – and if so when – children understand kinds and brands as two distinct types of subcategories. In three studies, 408 4- to 8-year-olds and adults participated in a forced-choice task in which they extended a novel label from one manufactured household object (the target) to another object that shared either the maker's intended function (its kind) or the maker's identity (its brand). By five years, participants who heard a novel noun for the target's kind were significantly more likely to select the object that matched in terms of the maker's intended function than those who heard a novel name for the target's brand. Additionally, by six years, participants who heard a kind label systematically chose the object that shared the maker's intended function. By age eight, participants who heard a brand label systematically chose the object that shared the maker's identity. These findings indicate that children as young as five years understand kinds and brands as distinct ways of subcategorizing manufactured objects.

10:20am / Zahra Kheradmandsaadi (Supervisor: Debbie Giaschi)

Linguistic/cognitive function modulation by brain stimulation: Neuroimaging and behavioral evidence

The overall goal of my research is to apply neuroimaging and neuromodulation techniques to improve human linguistics and cognitive functions. Recently, brain stimulation has been applied as a new and promising technique to study language functions in human brain. Brain stimulation can provide a more comprehensive picture of language neurophysiology through stimulating a brain area and then exploring the contribution of the area to a language-based activity (Hartwigsen, 2015). In my previous degree at Shiraz University, Iran, I applied transcranial direct current stimulation, a non-invasive brain stimulation method, over Broca's area of 32 healthy adults with normal cognitive-verbal abilities for 8 sessions. Resting-state

quantitative electroencephalography (qEEG) findings revealed that brain stimulation-induced changes resulted in decrease in theta activity and increase in current density for beta power (25 Hz) in left-lateralized language networks and as a result, improved performance on cognitive-verbal tests. I concluded that transcranial direct current stimulation over Broca's area may increase cognitive-verbal performance by modulating brain electrical activity in language-related regions. The correlation between behavioral enhanced performance and neurophysiological changes has resulted in the introduction of brain stimulation techniques for treating dyslexia, a neurobiological reading disorder. My aim is to search for an optimal neuromodulatory treatment for dyslexia. Mapping abnormal functioning of brain hubs in dyslexia is a primary step towards this aim. Structural and functional magnetic resonance imaging (MRI) can provide a deep understanding of the neural correlates and structures of dyslexia hub regions. For my current research at UBC, I am using resting-state functional MRI to examine functional connectivity before and after an individualized reading intervention program. Data have been collected from a group of English-speaking children with dyslexia (8–9 years old) who received small group instruction or intensive reading intervention over 3 months at elementary school, and from a group of classroom peers with at least average reading ability. I predict this project will identify brain hubs that can be used for subsequent neuromodulation studies.

10:30am / Maria (Joey) Manaligod (Supervisor: Beck Todd)

Attentional Biases to Everyday Objects

How do each of us come to view the world uniquely? An emerging theory of microvalence proposes that subtle feelings of reward and punishment derived from individualized experiences with basic everyday objects help determine how we later attend and behave towards them. These objects that are part of our more mundane experiences are thought to be given attentional priority similar to objects that evoke stronger emotional responses. However, this relationship between preferences guided by daily experience and attention has not been tested. I introduced a novel paradigm to induce microvalences by simulating real life experience paired with an interocular suppression technique (bCFS) to explore its role in attention. Consistent with the theory of microvalence, affective ratings indicated that our novel shapes possessed pre-existing affective properties by which they are evaluated, giving rise to preferences. Unexpectedly, we observed a unifying effect of experience, blurring perceived differences between novel shapes, thus collapsing initial preferences (feelings of like or dislike). Results showed, however, that microvalences were not prioritized in attention. Our findings place emphasis on the role of experience in shifting automatic preferences to create unbiased representations of the world.

10:40am / Oliver Jacobs (Supervisor: Alan Kingstone)

Heading in a new direction with attention and VR research.

People naturally move both their heads and eyes to attend to information. Yet, little is known about how people use their head and eyes to coordinate due to the difficulty of



simultaneously measuring head, eye, and gaze behaviour. In the study I will be presenting on, participants were asked to view fully immersive 360-degree scenes using a virtual reality headset with a built-in eye tracker. Though there was a high degree of coordination between head and eye movements, there were several key demonstrations of asymmetries in how people used their head and eyes to explore scenes. This suggests that real-world orienting may be more head-based than previously thought. This work also highlights the utility, ecological validity, and future potential of unconstrained head and eye tracking in virtual reality.

10:50am / Jackson Schumacher (Supervisor: Stan Floresco)

You got to risk it to get the biscuit: Mesocortical dopaminergic modulation of cue-guided risk/reward decision making

When seeking reward, we are often faced with decisions between options that pay out often but yield low rewards and those that are relatively more risky but more profitable when they pay off. Human behavioral paradigms used to study this type of decision making often give participants explicit cues associated with the probability of reward. Conversely, rodent decision-making paradigms generally require the animal to develop internal representations of reward contingencies to guide decision-making in the absence of explicit cues. Human and rodent studies have uncovered a role for dopamine transmission in the medial prefrontal cortex (mPFC) in risky decision making, however, it is unclear if cortical dopamine serves the same purpose in cue-guided and non-cue-guided decision-making contexts. Our group has recently developed a rodent decision-making assay to bridge this gap named the “Blackjack task”. In this task, rats choose between a small/certain option that delivers 1 sugar pellet 100% of the time and a large/risky option that delivers 4 sugar pellets, probabilistically. The chance of the large/risky option being rewarded is signaled by two distinct auditory cues (signaling either 50% or 12.5% chance of reward). Previously, using this task, we have shown that the dorsal mPFC facilitates risk taking when the odds are favorable whereas the ventral mPFC inhibits risk taking when the odds are poor. Our lab has also demonstrated dissociable roles for cortical dopamine D1 and D2 receptors during un-cued risk reward decision making, however, the role for dopamine receptors in the mPFC during cued risk/reward decision making remains unknown. Here, we assess the effect of blockade of dopamine D1 and D2 receptors in the dorsal and ventral mPFC in male rats. Dopamine D2 (but surprisingly, not D1) receptors in the dorsal mPFC promote risky choice when the odds are favorable by promoting flexible responding to dynamically changing reward contingencies. Conversely, ventral mPFC D2 (but again, not D1) receptors inhibit risky choice when the odds of reward are poor. These data highlight a role for prefrontal dopamine receptors in cue-guided risk/reward decision making that is distinct from other types of risk/reward decision making, sub-region dependent and specific to D2 receptors.

— 30 MINUTE BREAK —



11:30am / Jason Zheng (Supervisor: Anita DeLongis)

Psychological distress during COVID-19: The role of pandemic-related stressors

The COVID-19 pandemic has wreaked havoc on lives around the globe. In addition to the primary threat of infection, widespread secondary stressors associated with the pandemic have included social isolation, financial insecurity, resource scarcity, and occupational difficulties. The current study examined the associations between these stressors and depressive symptoms during the early pandemic period in North American participants (N = 2463). This longitudinal study involved participants completing weekly surveys during the early months of the pandemic; the first two assessments were used for this analysis. All primary and secondary stressors assessed at baseline were found to independently predict greater depressive symptoms at follow-up. The results held up after controlling for sociodemographic factors, baseline depressive levels, and perceived health threats. This study adds to the body of work emerging on the mental health impact of the pandemic and addresses a gap in the literature pertaining to the specific conditions that leave individuals at risk.

11:40am / Matthew Billett (Supervisors: Ara Norenzayan & Mark Schaller)

Ecospirituality (and why it matters)

There is a growing view that the current cultural beliefs about the human-nature relationship are failing us, and that the achievement of a sustainable future is predicated on a cultural shift in how we view the natural environment. Currently, nature and its resources are viewed as instruments for human use and consumption, but this is not a universal. Various religious and spiritual traditions understand humans and the natural world to be spiritually interconnected. Across 6 samples, this work addresses the content and correlates of spiritual beliefs about nature—or ecospirituality—as well as its ability to incrementally predict moral concern for nature. Findings suggest that ecospirituality may be particularly useful in motivating concern for nature across the political spectrum because—unlike other environmental psychological constructs—it is only weakly associated with political orientation.

11:50am / Manlu Liu (Supervisor: Jim Enns)

Are you looking at me? An objective state of mind reduces sensitivity to other's emotional expressions

An objective state of mind refers to a mental state in which people perceive themselves as the object of another's observation. Previous research has shown that this state affects people's metacognitive process, emotional experience, and social behavior. An objective mental state often arises during everyday social interaction, but few studies have investigated how it influences one's social perception during an encounter. Here we examine how the perception of others' emotion is influenced by triggering an objective state of mind. We developed an online experiment using webcams, questions, and pre-programmed conversations to manipulate participants' mental states. We then measured their accuracy in reading the



emotional expressions of people they believed they were interacting with. Three conditions were compared. In the Evaluated condition, participants were asked to classify the emotional expressions of two study assistants, after being informed that one of the assistants might select them as a partner in a competitive game. In the Evaluating condition, different participants classified the emotional expressions of the same assistants, but this time believing that they would be able to select one assistant as a game partner. In the Neutral condition, the same emotion classification task was performed, but participants were not given any other instructions. The results showed that participants in the Evaluated condition were significantly less accurate in classifying emotions than in the other two conditions. This finding suggests that an objective mental state reduces the ability to read other's emotional cues. We discuss possible mechanisms by which this may occur, including increased stress, divided attention, and the role of latent imitation in forming empathy for others.

12pm / Aria Petrucci (Supervisor: Daniela Palombo)

Effects of environmentally-induced emotion on item and temporal memory for a naturalistic experience

Memory for emotional stimuli (e.g., words, images) is typically enhanced, while the remembered duration of negative emotional experiences is overestimated. However, little is known about how emotion affects temporal order memory or how memory is influenced by an environmentally-induced emotional state (without any overtly emotional occurrences). In the present study, a sample of $N=595$ participants was randomly divided into discovery ($N=297$) and replication ($N=298$) subsamples using a split-half cross-validation approach. Participants viewed a 15-minute video of a first-person virtual world experience which contains neutral test stimuli and induces diverse emotional responses. Participants then completed tests of item, temporal order, and duration memory, and rated emotion and arousal induced by the virtual world experience. We hypothesized that greater reported arousal and negative emotion would be related to enhanced item memory, impaired temporal order memory, and longer duration estimates. A partial least squares correlation analysis produced one significant latent variable in both the discovery ($p=.039$) and replication samples ($p<.001$), revealing small but significant positive correlations between subjective threat and anxiety and item and temporal order memory ($p's<.05$; bootstrap ratios >1.96). Duration memory and memory bias did not contribute to this pattern. The replication sample yielded additional contributions of arousal and fear to the latent variable. These findings demonstrate that an environmentally-induced state of negative emotion corresponds with enhanced "what" and "when" memory.



12:10pm / Chantelle Cocquyt (Supervisor: Daniela Palombo)

Retroactive effects of emotion and conceptual relatedness on memory for preceding events

Emotion has the potential to enhance memory for neutral events that precede an emotional one. We investigated whether this effect is modulated by the conceptual relatedness of the preceding information. In this study, participants sequentially encoded object and scene images, where each object preceded a scene that was either negative or neutral. The objects were either conceptually related or unrelated to the scene. We hypothesized that we would observe an enhancement for objects preceding negative scenes and that this enhancement would be most pronounced if the object and negative scene were conceptually related. Consistent with our hypothesis we observed a memory enhancement for objects preceding negative scenes in the related condition and further observed a memory impairment for objects that preceded negative scene in the unrelated condition, although the former did not replicate in a separate sample. Our findings demonstrate that the effect of emotion on memory for preceding events may be dependent on the conceptual relationship between them.

– 70 MINUTE BREAK –

1:30pm / Awards presented by Anita DeLongis

