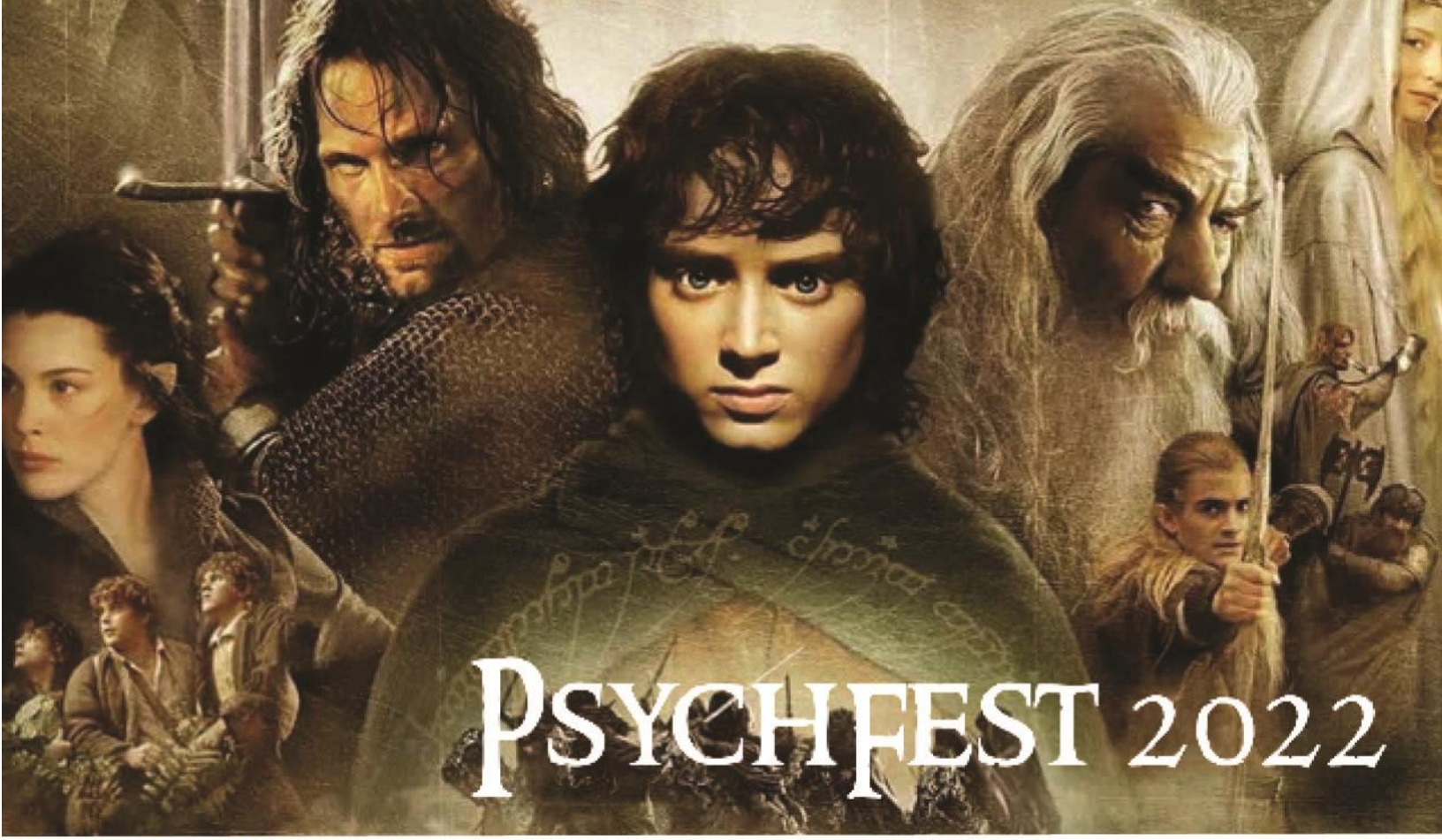
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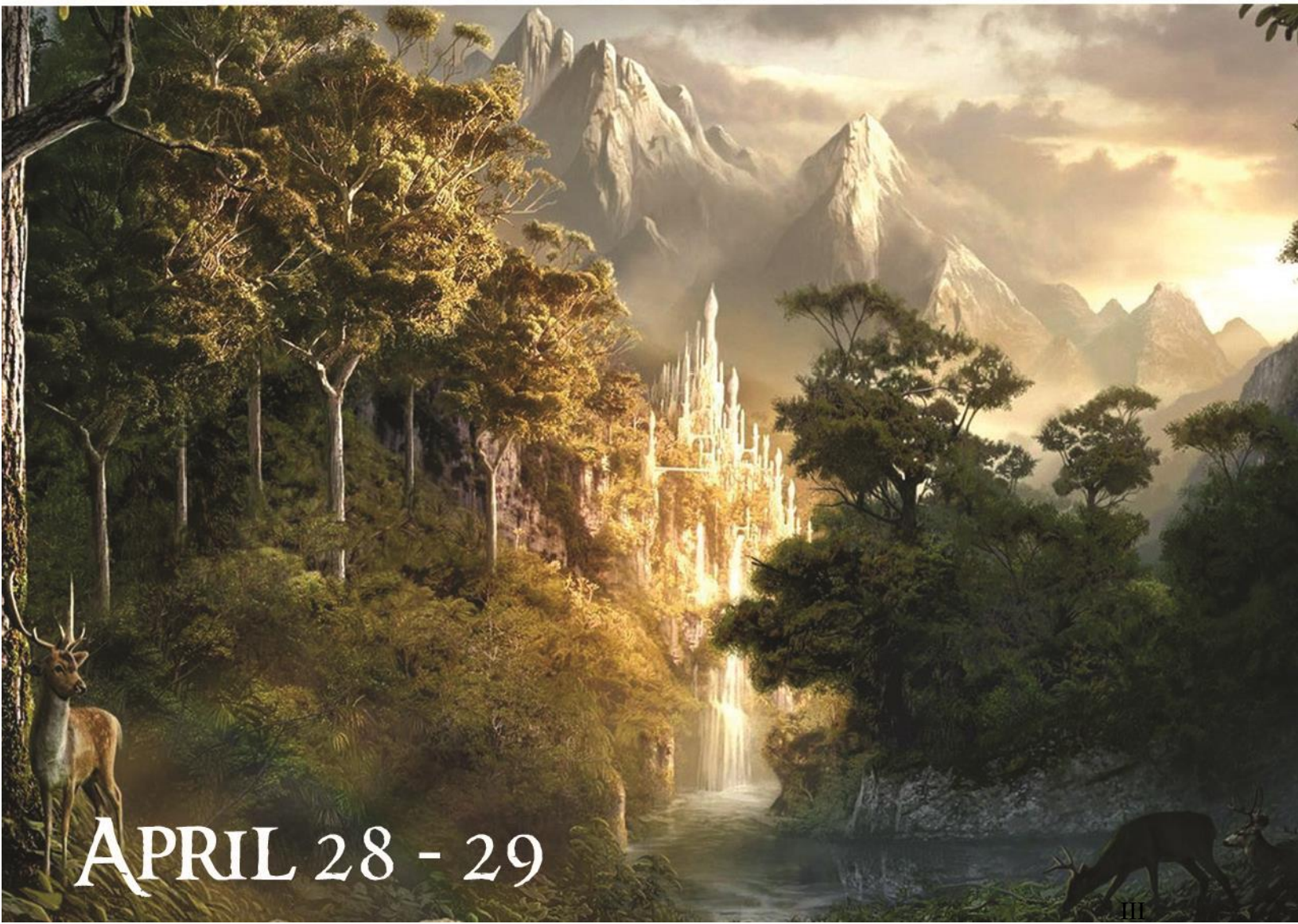

APRIL 28 - 29

PROGRAM

THURSDAY, APRIL 28

9:50 am / Welcome
10:00 am / Presentations
10:50 am / Break
11:10 am / Presentations
12:00 pm / Lunch Break
1:00 pm / Presentations

FRIDAY, APRIL 29

11:20 am / Welcome
11:30 am / Presentations
12:10 am / Break
12:30 am / Presentations
1:00 pm / Closing Remarks
4:00 pm / BOH!

Day 1

THURSDAY, APRIL 29

9:50 am / Welcome

10:00 am / Presentations

10:00am / Eloise West (Supervisor: Darko Odic)

Umm.. So like.. How do kids communicate about their confidence? The relationship between children's metacognitive judgments of knowledge and verbal disfluency.

When we [uhh] have everyday conversations, our speech is [um] littered with [like] spontaneous pauses and interjections known as "verbal disfluencies". In adults, verbal disfluencies are associated with a speaker's certainty or knowledge level in both speech production and speech comprehension. That is, adults rate both their own and others' confidence lower when they produce more verbal disfluency. Little work has explored whether and when children's verbal disfluency correlates with their own internal sense of confidence. Given that young children struggle with explicit ratings of their own confidence, these implicit cues may provide researchers a window into children's metacognitive awareness. This study examines the association between verbal disfluency and confidence in 4–9-year-olds' naturally produced speech. Children answered fact-based questions about animals and performed numerical comparisons. Then, they rated their confidence about these answers in a forced-choice metacognitive judgment paradigm. We examine the association between verbal disfluency and these explicit ratings of metacognitive confidence, showing that even our youngest children reliably produce more verbal disfluencies when they are feeling less confident.

10:10am / Francis Yuen (Supervisor: Kiley Hamlin)

Investigating the developmental origins of dehumanization

Humans are a cooperative species that tend to help others, and find harming others to be aversive. Yet, we continue to witness atrocious acts of violence in recent history. Psychological research offers an explanation in the form of the dehumanization hypothesis, positing that perpetrators of violent acts perceive outgroup members (e.g., different race) as "less human" than ingroup members, which then allows perpetrators to mentally justify violence. While some developmental work suggests that school-aged children may already engage in dehumanization, the developmental origins of this process remains unclear. The

current project investigates the origins of dehumanization using a classic paradigm that studies infants' understanding of goals and goal-directed actions. In three experiments, conducted in-person (Exp.1), virtually via Zoom (Exp.2), and asynchronously via Lookit.com (Exp.3), 11 months old monolingual-English infants were familiarized to videos in which an experimenter reaches for one of two objects. Afterwards, the locations of the objects switched, and infants saw events where the experimenter either reached for the same object or the other object. Critically, prior to the reaching events the experimenter first established themselves as either an English (ingroup) or Spanish speaker (outgroup). Preliminary results from Exp.1 show that infants expect ingroup members' actions to be goal-directed, but hold the opposite expectation for outgroup members. By contrast, preliminary results from Exp.2 and 3 suggest that infants did not perceive the reaching actions as goal-directed in either condition. Together, while Exp.1 suggests that 11-month-olds perceive actions of ingroup members (but not outgroup members) as goal-directed, Exp.2 and Exp.3 suggest that the effect may be fragile and susceptible to methodological differences.

10:20am / Ian Hohm (Supervisors: Jessica Tracy & Mark Schaller)

The psychology of followership: How does group conflict influence preferences for leaders?

An accumulating body of research suggests that humans may have evolved to use two strategies to acquire status: dominance and prestige. Dominance is characterized by the use of intimidation and aggression to induce fear, whereas prestige involves the display of expertise and knowledge in valued domains to gain admiration and respect. Studies suggest that both strategies are effective means to power and influence, despite being associated with divergent behaviors and personality correlates. Little is known, however, about follower preferences for these different kinds of leaders. Here, we examine this issue in the context of group conflict, testing the prediction that follower preference will vary on the basis of current group conflicts. Across several studies we support this prediction, finding that between-group (compared to within-group) conflicts promote preferences for leader dominance, whereas within-group (compared to between-group) conflicts promote preferences for prestige. We further test whether status seekers alter their leadership style depending on current conflict type to maximize follower support. Together, findings suggest that group conflict plays an important role in shaping follower preferences, and effective status seekers may flexibly alter their leadership style in accordance with those preferences.

10:30am / Caroline Miller (Supervisor: Amori Mikami)

Social Skill Deficit Profiles in Children with ADHD and Comorbid Disorders

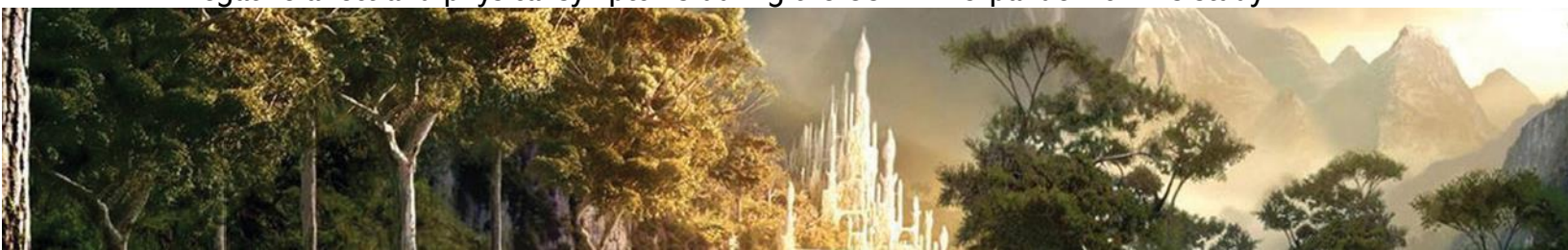
Children with attention-deficit/hyperactivity disorder (ADHD) show impairments in their social skill performance compared to their typically-developing peers. However, social skills are not merely a global construct that a child either does or does not possess; rather,

there are many individual social skills, and it is possible to master one skill and yet not another. ADHD also rarely occurs in isolation, with 25-49% of children having an internalizing disorder (anxiety or depression), 40-50% with an externalizing disorder (oppositional defiant disorder [ODD] or conduct disorder [CD]), and up to 22% of children with both. We sought to identify the overall and subdomain-specific social skill deficits associated with the presence of comorbid disorders among children with ADHD. Eight datasets from four research groups across the United States and Canada were compiled to create a sample comprising 1400 children with ADHD aged 7-12. Parents and teachers completed the Social Skills Improvement System (SSIS) or its predecessor, the Social Skills Rating System (SSRS), generating a global social skills score as well as subdomain scores for cooperation, communication, assertion, responsibility, empathy, engagement, and self-control. Parents rated children as having poorer social skills if they had either an externalizing comorbidity, an internalizing comorbidity, or both comorbidities, relative to ADHD alone. They rated different social skills as impaired for each group of children. In some cases, the interaction between internalizing and externalizing was significant, suggesting either that externalizing-related impairment overshadowed internalizing or that internalizing disorders buffered the impairment of externalizing. By contrast, teachers rated children as having poorer social skills if they had an externalizing comorbidity, but did not perceive an effect of having an internalizing comorbidity, relative to ADHD alone. This may inidcate that the types of social skill impairments that are associated with externalizing disorders are more disruptive and therefore easier to perceive in a classroom situation where teachers must manage many children. Overall, the pattern of parent-reported social skills deficits (including subdomain scores) associated with each comorbidity might allow social skills interventions to become more personalized, and by extension, more effective.

10:40am / Qiao Hui (Lydia) Ong (Supervisor: Nancy Sin)

Everyday Discrimination, Daily Affect, and Physical Symptoms During the COVID-19 Pandemic

Abundant evidence has linked everyday discrimination with health risks. Since the COVID-19 pandemic has increased exposure to discrimination (e.g., based on age and race), it is important to understand the day-to-day implications of discrimination experiences with well-being. Furthermore, daily positive events were examined as a moderator due to their potential for mitigating the associations between everyday discrimination and health. From March to August 2020, 1,212 participants aged 18-91 in the U.S. and Canada (84% women, 75% White) completed surveys for seven consecutive evenings about everyday discrimination, positive events, physical health symptoms, and positive and negative affect. Data were analyzed using multilevel models and controlled for sociodemographic factors. Everyday discrimination was reported on 9.3% of days when in-person or remote social interactions occurred. Within-persons, positive affect was lower and negative affect and physical symptoms were higher on days when discrimination occurred vs. on days without discrimination. Positive events mitigated the within-person association between everyday discrimination and same-day negative affect, but not for positive affect or physical symptoms. Everyday discrimination was related to lower daily positive affect and higher negative affect and physical symptoms during the COVID-19 pandemic. This study



provides initial evidence that daily positive events partially offset the increased negative affect associated with same-day discrimination.

— 20 MINUTE BREAK —

11:10am / Dunigan Folk (Supervisor: Elizabeth Dunn)

Chatbots as alternative sources of social connection

Around the world, hundreds of millions of people have used social chatbots designed to provide companionship to their users. But can people reap genuine feelings of social connection and happiness from interacting with chatbots? Across four studies (all pre-registered; $N = 1201$), participants shared good news with an interaction partner whom they believed was either a chatbot or a human. The conversation partner responded in either a highly responsive or less responsive manner. Interacting with a highly responsive chatbot was more rewarding than interacting with a less responsive human. Participants who believed they interacted with a highly responsive chatbot felt more rapport, were more socially connected, felt better about their own positive experience, and were in a better mood than participants who interacted with a less responsive human. In a final pre-registered study ($n = 401$), we identified a critical boundary condition by examining whether participants derived similar benefits when the chatbot partners shared their own experiences. Taken together, our results suggest that despite their inherent lack of agency, chatbots that are programmed to respond in an optimal manner may deliver greater social benefits than suboptimal human conversation partners.

11:20am / Alannah Wallace (Supervisor: Todd Handy)

Executive Functioning and Study Strategies in United Kingdom and Canadian University Students

Executive functions help us to manage distractions, focus our attention, set goals and prioritize tasks. Students can develop cognitive strategies to help regulate their use of executive functions and optimize control of attention to cope with the demands of a university setting. Previously, exploratory factor analysis of the Strategy Awareness and Use Questionnaire (SAUQ) suggested a seven-factor model was optimal to measure different domains of strategy use in university students: Comprehension Monitoring, Planning/Organization, Self-Reward, Self-Regulation, Organization with Mobile Phone, Regulating Technology, and Organization of Materials. The current study evaluates this model of strategy use in 223 students from the University of British Columbia and 198 students from the University of Bristol with the use of confirmatory factor analysis. Results confirm moderate to high factor loadings and sufficient goodness of fit statistics for each group. The current study supports utilization of the SAUQ to evaluate strategic use of executive functions in both students from Canada and the United Kingdom.

11:30am / Lucas Palmer (Supervisor: Luke Clark)

The Near-Miss in online slot machine gambling: a series of conceptual replications

Given the influence of gambling studies on public policy, the field must pay attention to replicability and robustness of findings. The effects of 'near-miss' outcomes are one of the most studied structural characteristics of gambling products. This study was designed as a conceptual replication of Clark L et al (2009 Neuron 61: 481-490) using an online slot machine game to test two pre-registered hypotheses: do near-misses, compared to full-miss outcomes, (1) increase motivational ratings, and (2) decrease ratings of pleasure? This study was conducted with a crowdsourced sample (n = 169) who scored < 7 on the Problem Gambling Severity Index. An online deployment of a three-reel slot machine task delivered three possible outcomes: wins, near-misses, and full-misses. After each outcome, participants provided a 7-point Likert rating of pleasure associated with the outcome, and motivation to continue playing. As a pre-registered hypothesis, we confirmed that participants reported near-misses as more motivating relative to full-misses ($p < 0.001$. $d = 0.55$). On the pleasure ratings, we also found a significant difference between near-misses and full misses (NM > FM), but in the opposite effect to the original study ($p < 0.001$, $d = 0.63$). Near-misses and full-misses are functionally identical outcomes, but our data suggests these events have differential psychological effects. The motivational effects of near-misses have implications for regulatory attention to these events within modern gambling products. However, the contrasting effect on pleasure ratings indicates some boundary conditions to the effects, which we will consider in future experiments.

11:40pm / Alexander Cook (Supervisor: Deborah Giaschi)

Involuntary and Voluntary Attention for Low-level and High-level Vision

Attention is an important aspect of vision, but it can also seem to shift on its own. My master's thesis, before arriving at UBC, used the Reflexive Imagery Task (RIT) to examine how low-level visual features influence attention and high-level imagery both voluntarily and involuntarily. The RIT was designed to investigate the nature of involuntary conscious imagery by independently varying the task set and stimulus conditions. Participants are asked to suppress subvocalizations of the names of to-be-presented stimuli. I created a novel variant of this task which combines multiple images in an array to examine the effects of visuospatial characteristics. Two experiments using this paradigm were conducted to show how specific arrangements of low-level features influence the results of the RIT. The first experiment used equivalent instructions as the original RIT. However, the stimulus was either an array of images in one color or an array with a singleton image of a different color. The second study reproduced the involuntary condition of the first experiment, but the stimuli included both singleton arrays and arrays with one image discriminable by a conjunction of low-level features (color and motion). The results of these studies replicated effects from the literature on the RIT, visual search, and attention. This paradigm can be used in neuroimaging experiments, such as EEG, to study brain processes involved in the production of high-level imagery under varying task and stimuli conditions.

For my doctoral research, I plan to investigate how attention influences the development of visual perception using psychophysics and neuroimaging techniques. It is known in patients with amblyopia that motion perception develops abnormally. It is possible this could be related to a deficit in attention. How attention contributes to these deficits is still unknown and will be the focus of my future investigation.

11:50pm / Brandon Forys (Supervisors: Rebecca Todd & Alan Kingstone)

Gender moderates the relationship between mood disorder symptoms and effortful avoidance performance

We must often decide how much effort to exert to avoid undesirable outcomes or obtain rewards, or whether we should withhold effort altogether. However, mood disorders such as depression can drive a tendency for excessive avoidance or insufficient reward-seeking. Furthermore, the cost of effort deployment to avoid aversive outcomes or obtain reward is believed to be overweighted given depressive symptoms. Yet understanding how such dimensional behaviours in depression arise is hampered by outstanding questions about the links between motivated action and inhibition and depressive symptoms, and whether these differ between men and women or with comorbid anxiety. The present study used a task back-translated from rodent studies to examine whether effort deployment on active and inhibitory avoidance (Study 1) vs. reward seeking (Study 2) predicts depressive symptoms, and whether these relationships are moderated by gender. Undergraduates and paid online workers from non-clinical samples (N_{Avoid} = 545, N_{Reward} = 310; N_{Female} = 368, N_{Male} = 450, M_{Age} = 22.58, $Range_{Age}$ = 17-62) were assessed on the Beck Depression Inventory (BDI-II) as well as the Beck Anxiety Inventory (BAI) to control for anxiety comorbidity and performed an online instructed avoidance or reward-seeking task. Participants had to make multiple presses on active trials and withhold presses on inhibitory trials to avoid an unpleasant sound (Study 1) or obtain points towards a monetary reward (Study 2). Physical effort on active trials (number of presses) increased every 20 trials on a progressive ratio schedule. In the avoidance task, gender moderated the relationship between anxiety symptoms and inhibitory trial accuracy. Men had higher accuracy overall on active trials across tasks; women with more anxiety symptoms had lower inhibitory avoidance trial accuracy than men. This pattern emerged as effort requirements increased. Our results illuminate gender differences in the relationship between mood disorder symptoms and motivation to actively and effortfully respond to achieve positive and avoid negative outcomes. Future studies can examine how sex/gender moderates the role of dopamine (DA) and serotonin (5HT) in effortful avoidance and reward-seeking. Targeting goal-directed effort deployment may also be a useful clinical intervention.

— 1 HOUR BREAK —

1:00pm / Edwina Picon (Supervisor: Noah Silverberg)

Subjective Memory Problems after Concussion

Subjective memory problems (forgetting names, leaving important objects at home) are among the most common lingering post-concussion symptoms that disrupt daily functioning and quality of living. Memory complaints after concussion are largely unrelated to injury severity, objective memory performance, or neuroimaging metrics of the brain's structural integrity and may be a manifestation of Functional Cognitive Disorder (FCD). We might expect both the symptomology and potential treatment of subjective memory concerns in concussion to be similar to other instances of FCD's. Biased metacognition - i.e., misjudging one's own cognitive performance and abilities as worse than they actually are - could be a key mechanism underlying FCD. Rather than actual memory impairment, metacognitive problems lead to people being persistently underconfident in their memories in situations in which they are actually correct. N=35 adults with recent concussion (6-36 months) and N=35 healthy control participants were recruited for a cross-sectional study of memory beliefs and performance. Metacognition was operationalized using a computer-based procedure that separates accuracy from metacognitive bias (the mismatch between trial-by-trial objective and subjective performance). Participants made confidence judgments on both memory and non-memory tasks to differentiate between a global lack of self-confidence vs. memory-specific metacognitive bias. We hypothesize that 1) participants with suspected FCD will display greater metacognitive bias - differences in confidence judgments despite consistent task performance - on memory tasks compared to healthy controls, and 2) metacognitive bias will correlate with memory perfectionism and catastrophizing, psychological factors thought to contribute to FCD. An improved understanding of FCD can guide development of novel methods for treating memory complaints after concussion, such as continuous feedback on confidence-accuracy discrepancies, which has recently been shown to reduce metacognitive bias is healthy participants.

1:10pm / Sofia Gray (Supervisor: Kiran Soma)

Neurosteroid modulation of aggression in an avian model

Steroid hormones, like testosterone (T) and estrogens (E_2), regulate a myriad of physiological and behavioural processes including aggression. In song sparrows (*Melospiza melodia*), adult males compete for territories year-round. During the breeding season, territorial aggression is modulated by T produced in the testes and released into the bloodstream. Territoriality persists into the non-breeding season despite blood T levels dropping to near non-detectable levels. Non-breeding aggression may be supported by E_2 locally produced in the brain (*neurosteroids*) because all enzymes necessary for neurosteroid production are present within the central nervous system. Juvenile male sparrows, born during summer, first establish territories during the non-breeding season before they reach sexual maturity. Despite having sexually immature testes, they demonstrate territorial aggression equivalent to adult males. As such, they present a unique model to investigate the role of neurosteroids in modulating non-breeding aggression. Here, we induced an aggressive response in wild juvenile males and measured

behavioural markers of aggression. Further, we measured a panel of 12 steroids in 11 brain regions, blood, and plasma using liquid chromatography-tandem mass spectrometry (LC-MS/MS), the leading technique in hormone measurement. Steroid concentrations are analyzed in the brain and blood; differences in steroid levels between aggressive subjects and control subjects will be discussed. Behaviourally, we found that juvenile males demonstrated equal or higher levels of aggression compared to their adult counterparts. Our results indicate the importance of evaluating physiological and behavioural effects of steroids at distinct developmental stages and in discrete biological matric.

1:20pm / Valerie Lo (Supervisor: Kiran Soma)

Androgen modulation of behavioural flexibility in male rats

Behavioural flexibility, the ability to adapt behaviour in response to environmental changes, is regulated by the mesocorticolimbic system. Strategy set-shifting is one form of behavioural flexibility, and in preclinical rodent assays, subjects initially learn to use one rule to receive a reward (e.g., select the lever denoted by a visual cue, or a “cue rule”), but then must switch to a new discrimination strategy (e.g., select the lever in one position, irrespective of the position of the visual cue, or a “response rule”). Androgens, such as testosterone (T), are produced locally within the mesocorticolimbic system, and T treatment impairs set shifting. Previous studies in our lab show that decreasing androgens with the androgen synthesis inhibitor abiraterone acetate (ABI) improves behavioural flexibility in male rats performing a strategy set-shifting task using a cue-response shift. However, the effect size of ABI treatment was relatively small. In the present study, we assess different set-shifting procedures intended to make the shift more difficult for control animals and examine whether this may potentially increase the effect size of ABI treatment in intact and gonadectomized rodents. In doing so, we modified the strategy set-shifting task to be more difficult and determined the effect of ABI on the original (cue-response shift) and modified (response-cue shift) paradigms. In the first study, rats were assigned to one of six different set-shifting tasks, which required them to perform either the cue-response shift or response-cue shift with variable numbers of minimum learning trials when learning the first discrimination and varied whether the set-shift on the following day was preceded by the 20 reminder trials prior to the shift. Rats performing the response-cue shift required a significantly greater number of trials to criterion to complete the task and made significantly more errors to criterion compared to rats performing the cue-response sht. These results show that the response-cue shift is significantly more difficult for rats. In the second study, intact rats were assigned to (1) ABI or vehicle treatment and (2) the cue-response shift or the response-cue shift. There was no effect of ABI on performance in both versions of the set-shifting task. Since these results contrasted with our previous studies, we conducted a third study to clarify this effect and investigate the role of neurally produced testosterone in set-shifting. In the third study, gonadectomized rats were assigned to (1) ABI or vehicle treatment and (2) the cue-response shift or response-cue shift. Data collection for the third study is ongoing. Together, the data will clarify the effects of androgens on behavioural flexibility and the mesocorticolimbic system.

1:30pm / Aaron Reiss (Supervisor: Catharine Rankin)

How The G Protein Signaling Pathway Affects Habituation

Habituation, a form of non-associative learning, is the incremental decrease in response amplitude due to repeated stimulation, not due to sensory adaptation or motor fatigue. The characteristics of habituation are universal across phylogeny, indicating likely shared molecular mechanisms underlying habituation. Pilot data showed that G proteins and their associated signaling pathways might play a crucial role in habituation. To investigate further, this research utilizes the versatile model organism *Caenorhabditis elegans,* along with a computer vision system known as the Multi-Worm Tracker (MWT), and various genetic tools to determine the effects specific G-protein genes have on regulating/influencing habituation. In particular, we focus on the *C. elegans* gene *goa-1*, an ortholog of the human GNAO1 gene, and genes that interact with it and its molecular products. Tracking data of transgenic strains of null and loss of function mutants in genes involved in the G-protein signaling pathway exhibited a variety of abnormal habituation phenotypes, with worms having mutations in *goa-1* demonstrating the lowest levels of behavioral habituation. Additionally, similar abnormal habituation phenotypes were found in a transgenic strain with a functional *goa-1* gene tagged with a green fluorescent protein. Exploring the findings of this study will hopefully help to elucidate the molecular mechanisms regulating/influencing habituation.

1:40pm / Giulio Laino (Supervisor: Stan Floresco)

Stress, decision-making, and punishment: a neuropharmacological approach to risky reward-seeking

Discerning which choices are advantageous amongst many based on reward magnitude and uncertainty is essential for survival, and salient cues may be perceived as threatening via a variety of neurochemical and behavioural changes. This type of decision-making where different actions may yield rewards associated with costs or punishment is mediated by dopamine circuits, and stressors can differentially alter how these systems regulate action-selection depending on the type of costs being evaluated. We have shown acute stress induces selective decisional perturbations, having no effect on preference for larger/uncertain rewards *vs.* smaller/certain ones, but reducing choice for physically effortful rewards. However, how stress may modulate decisions where rewards are linked to punishment has yet to be fully explored. Here we examined how acute restraint and pharmacological stress influenced action-selection on two tasks involving reward-seeking under risk of punishment in male and female rats. One series of experiments utilised a risky decision-making task involving choice between a small/safe lever always delivering one reward pellet and a large/risky option delivering three pellets but that could also deliver foot shock with an increasing probability across blocks of trials (0, 25, 50, 75, 100%). In well-trained rats, one-hour restraint enhanced punishment sensitivity, markedly reducing preference for the shock-associated reward comparably between sexes. In contrast, the α-2 noradrenergic antagonist yohimbine had minimal effects on choice. In a

second study a go/no-go task assessed ability to inhibit approach towards a readily available reward associated with punishment. Here, a food pellet was delivered in a cup, and on 30/60 trials the rat merely had to approach and retrieve reward. On the other 30 trials, a 12-s visual/auditory warning cue signalled food retrieval also delivered foot shock and that approach must be withheld until cue termination. Restraint and yohimbine had comparable effects: males were more impulsive on test day but females markedly less the day after. These findings suggest acute restraint enhances the effects of punishment on choice between different rewards while differentially altering sensitivity to punishment-associated cues in males and females. The mechanisms underlying this effect may relate to the increased risk aversion and impaired reward-related approach behaviour observed in individuals with depression.

3:00 pm / Invited Keynote Speakers

Hanne de Jaegher

Theo Rosenfeld

Day 2

FRIDAY, APRIL 29

11:20 am / Welcome

11:30 am / Presentations

11:30am / **Tiana Broen** (Supervisor: Christiane A Hoppmann)

Pain and loneliness as obstacles to physical activity: Time sampling during the COVID-19 pandemic

The COVID-19 pandemic has threatened physical and mental health across the lifespan and highlighted the importance of safe everyday behaviours that individuals may engage in to maintain health and wellbeing. One health-promoting behaviour that has been encouraged by health officials during the pandemic is physical activity; however, emerging research indicates that physical activity behaviours have decreased significantly during this time. Research examining physical activity as a health behaviour typically looks at between-person differences in number of steps or moderate-to-vigorous physical activity. Yet, we know that the lion's share of variation in physical activity engagement is actually at the within-person level. To gain a deeper understanding of this key health behaviour and design effective interventions, it is paramount that we understand what differentiates a good physical activity day from a bad physical activity day. The current research aimed to examine life as it is lived using repeated daily life assessment in a sample of 138 adults residing in Canada (M_{age} = 40.58 years, range = 18-83 years). Participants completed daily evening questionnaires for 10 consecutive days, where they reported daily ratings of potential barriers to physical activity, such as pain and loneliness, as well as their daily number of steps and minutes of moderate-to-vigorous physical activity. Results indicate that loneliness and physical activity were significantly linked on a day-to-day basis, such that individuals who reported feeling lonelier on a particular day engaged in less moderate-to-vigorous physical activity that same day. However, we did not find any significant relationships between pain and physical activity. These results indicate that

loneliness may be a particularly salient barrier to physical activity, which may be targeted by health-promoting interventions.

11:40am / Elise Ng-Cordell (Supervisor: Connor Kerns)

Assessing the moderating role of behavioral regulation on the longitudinal relationships between anxiety and social communication among autistic children

Autistic children's anxiety is related to difficulties across social (i.e., social communication; SC) and cognitive (i.e., executive functioning; EF) domains. It remains unclear whether anxiety predicts greater SC difficulties over time (or vice versa) in autistic children, and whether EF – particularly behavioural regulation (BR) – acts as a protective factor, by moderating these relationships. This study (1) investigated longitudinal associations between anxiety and SC difficulties, and (2) assessed the moderating effect of BR among a sample of autistic children (N = 157; 15% female; mean FSIQ = 84.8) who were assessed at two time points: Age 9 and Age 10. A cross-lagged panel model tested whether anxiety levels at Age 9 predicted SC difficulties at Age 10, and vice versa. Next, a multigroup analysis tested for similarity in cross-lagged pathways across different levels of BR ability. Results revealed that higher Age 9 anxiety scores predicted *fewer* SC difficulties at Age 10. Further, the multigroup analysis indicated that the association between higher Age 9 anxiety and lower Age 10 SC difficulties was present among children with poorer BR abilities, but not those with good BR abilities. These unexpected results suggest that anxiety may facilitate greater behavioural inhibition, especially among those with poorer BR, which in turn may mask or reduce SC difficulties over time. Our findings emphasize the importance of studying both protective and negative developmental effects of anxiety for autistic youth. Further research is required to clarify the mechanisms (e.g., behavioural inhibition) underlying the protective role anxiety may play, and to investigate how these associations continue developing into adolescence and adulthood for autistic people – in particular evaluating the longer-term mental health consequences of anxiety compared to its potential social benefits.

11:50am / Titania Dixon-Luinenburg (Supervisor: E. David Klonsky)

Examining the relationship between borderline personality traits and suicide desire through the lens of the Three-Step Theory

The present study used the Three Step Theory of Suicide (3ST) to explain the association between BPD traits and suicide desire. The 3ST states that pain and hopelessness cause suicide desire, and that the extent to which pain exceeds connectedness determines the intensity of suicide desire. These premises were examined in 852 participants, including 456 with histories of suicide ideation or attempts. BPD traits, current suicide desire, pain, hopelessness, and connectedness were measured using validated self-report questionnaires. Consistent with Step 1 of the 3ST, pain and hopelessness explained most of the association between BPD traits and suicide desire. Consistent with Step 2, the association between BPD and intensity of suicide desire was fully accounted for by a pain-

connectedness difference score. In a simpler model, pain, hopelessness, and connection reduced the correlation between BPD and suicide desire from r=.41 to r_p=.08. This research improves our understanding of why people with BPD traits experience suicide desire and informs the development of treatment and prevention strategies.

12:00pm / Persephone Larkin (Supervisor: Sheila R. Woody)

Development of a Measure of Hoarding-Related Risks for Use by Community Service Providers

The dysfunction associated with hoarding behavior sometimes requires intervention from community agencies to reduce the risks to occupants and the community. These agencies have different backgrounds, mandates, and understandings of hoarding disorder. Community agencies do not use a common approach or guideline to assess risk in hoarded homes. In addition, measures in current use do not reflect a shared understanding of aspects of the home and situation that are necessary to assess by community providers for cases of hoarding. This study aimed to develop a measure that would reflect a collective understanding of essential health and safety risks in the home that require intervention for hoarding. Study one involved a Delphi survey to create a list of items that are critical to assess in hoarded homes. Through the Delphi study, we determined 34 environmental risk factors to include in the risk assessment measure. Another group of experts assessed the content validity of the resulting measure using the Content Validity Index method. Participants were asked to assess the clarity, importance, and feasibility of assessing the various items and domains on the measure. These studies will play a role in the creation of a risk assessment measure that can improve communication between agencies, track changes due to intervention, and create a list of items to assess in hoarded homes.

—— 20 MINUTE BREAK ——

12:30pm / Sonia Jafari Milani (Supervisor: Samantha J. Dawson)

MouseView.js: An online alternative to eye tracking in sex research

Eye tracking has been used extensively to assess visual processing and attentional biases elicited by sexual stimuli. Despite its utility, eye tracking is limited to being conducted in a laboratory setting. Recently a novel online alternative to eye tracking—MouseView.js—was developed. One study has demonstrated that MouseView.js produces dwell patterns to emotionally salient stimuli (i.e., disgust and pleasant images) that are highly correlated with the patterns observed in eye tracking. Here, I conducted an extensive validation of MouseView.js for sex research in two separate studies. In both studies I examined evidence for response specificity (i.e., response patterns consistent with a bias to processing sexual vs. nonsexual images) and convergent validity (i.e., MouseView.js data that correlate with self-reported attraction ratings). In study 1 (N=497 undergraduate participants), I found

evidence of response specificity in women and men, such that sexual stimuli were attended to more than nonsexual stimuli. Convergent validity was established, such that mouse dwell was positively associated with self-reported attraction ratings. These effects were replicated in Study 2 (N=249 community participants). Overall, these studies demonstrate the validity of MouseView.js and provide compelling evidence of the utility of a new, convenient, affordable alternative to in-lab experimental eye tracking commonly used to understand sexual function and sexual interest and orientation. Additional benefits of this new methodology include the ability to collect data from large samples, including more diverse samples, strengthening generalizability of the findings.

12:40am / Martin Smith (Supervisor: Paul Hewitt)

Understanding the Impact of Perfectionism and Social Disconnection on Treatment Outcome in Group Psychotherapy

Half a century of theoretical accounts, case histories, and evidence implies perfectionism limits the success of psychotherapy and makes it hard for people to participate in and benefit from close relationships. Likewise, intimate relationships are crucial determinants of the success of treatment. However, the extent to which specific types of relationships explain why perfectionism leads to a poorer treatment outcome is unclear. We addressed this by, first, testing whether the perfectionism traits of self-oriented, other-oriented, and socially prescribed perfectionism hindered symptom reduction in group psychotherapy for depression and, second, assessing the mediating role of romantic love, friendships, and familial love on the effects of perfectionism traits on change in depression. Psychiatric patients (N 156) enrolled in short-term post discharge group cognitive-behavioral therapy for residual depression completed measures of perfectionism at pre-treatment; of romantic love, friendships, and familial love at posttreatment; and of depression at pre- and posttreatment. Multilevel modeling showed that other-oriented and socially prescribed perfectionism were associated with lower posttreatment reductions in depression over treatment, and path analysis revealed that self-oriented, other-oriented, and socially prescribed perfectionism indirectly predicted lower posttreatment reductions in depression through a perceived lack of quality friendships. Results lend credence and coherence to the perfectionism social disconnection model in a clinical context and underscore the importance of taking extra therapeutic social disconnection into account when treating perfectionistic patients.

12:50pm / Julia Nakamura (Supervisor: Frances Chen)

The underappreciated force of informal help in people's lives

People around the world spend millions of hours helping each other every year. Whether it be babysitting, cooking meals, or providing transportation, informal helping is one of the most common prosocial behaviors, but one of the least studied. Current discussions of civic engagement may be too narrow and exclude these important informal contributions,

devaluing those who do not engage in more commonly recognized prosocial activities (e.g., volunteering). While there is a large and growing body of evidence around the health and well-being benefits of formal volunteering, less is known about the downstream benefits of informal helping behaviors. While some evidence suggests that informal helping is associated with improved health and well-being outcomes, studies have not investigated whether *changes* in informal helping are associated with subsequent health and well-being. We evaluated if *changes* in informal helping were associated with 35 indicators of physical, behavioral, and psychosocial health and well-being using data from 12,988 participants of the Health and Retirement study — a nationally representative cohort of U.S. adults aged >50. Over the four-year follow-up period, informal helping >100 (versus 0) hours/year was associated with a decreased risk of mortality and improved physical health, health behaviors, and psychosocial outcomes. However, there was also evidence of that informal helping was associated with increased negative affect and little evidence of associations with other outcomes. Promoting informal helping may be a double-pronged approach to: 1) improving the health of the helpers on an individual level, and 2) improving society as a whole.

1:00pm / Closing Remarks

4:00pm / BOH!