



UNIVERSITY
OF ALBERTA

2023 Royce Harder Conference Abstract Book

Schedule Day 1 – Wednesday, April 12

([Zoom Link](#)) 2:45 pm to 5:00 pm

2:45	Welcome Anthony Singhal	
3:00-3:45	Talk Session 1 (n=3)	Session Chair: Sijie Ling
4:00-5:00	Poster Session 1 (n=17)	Main room attendant: Cailyn Poole

Schedule Day 2 – Thursday, April 13

([Zoom Link](#)) 8:45 am to 5:00 pm

8:45	Welcome by Sandra Ziolkowski	
9:00-10:00	Internal Invited Talk: Yao Zheng <i>"Parenting and Parent-Child Relationships on Multiple Timescales: Antecedents and Developmental Outcomes"</i>	Introducer: Sandra Wiebe
10:00-11:00	Poster Session 2 (n=17)	Main room attendant: Sandra Ziolkowski
11:00-11:45	Talk Session 2 (n=3)	Session Chair: Min Hye Kang
12:00-1:00	Poster Session 3 (n=17)	Main room attendant: Valery Kalinin
1:00-2:00	Poster Session 4 (n=16)	Main room attendant: Madison Fankhanel
2:00-3:00	Poster Session 5 (n=20)	Main room attendant: Madison Fankhanel
3:00-4:00	Poster Session 6 (n=16)	Main room attendant: Valery Kalinin
4:00-5:00	External Keynote Talk: <u>Janeen Loehr</u> <i>"From soloist to symphony: Investigating the sense of collective agency when coordinating together with others"</i>	Introducer: Tom Spalding

Instructions:

Royce-Harder 2023 is on Zoom (see Schedule on first page). The link will also be provided via email and will be accessible via the [webpage](#).

The spoken sessions (including the invited speakers) will be in the main room; posters will be in breakout rooms with 2-3 posters per breakout room. Breakout room assignments are in the conference abstract book.

Attendees will be able to enter and leave breakout rooms at their will (when you leave a breakout room, hit the leave button, then “leave room” button, **not** the “leave meeting” button, unless, of course, you want to log out of the Zoom entirely).

Presenters will share their screen to show their posters.

ABBREVIATIONS:

Neuroscience and Mental Health Institute (NMHI)

Day 1 – Wednesday, April 12: Talk Session 1 (3:00-3:45pm)**Exploring timescale in language comprehension with EEG**

S. Ling & A. Fyshe (Psychology Department, UAlberta)

As we listen to spoken language, the brain performs multiple levels of computation, from understanding individual words to comprehending the arc of a story. Recently, computational models have been developed that also process text on multiple levels. These models, called multi-timescale long short-term memory (MTLSTM) models, use information from different timescales to predict the next word in a sequence. However, the link between these MTLSTMs and the brain has not been explored.

We use electroencephalogram (EEG) recorded when subjects ($n=19$) passively listen to the first chapter of Alice's Adventures in Wonderland by Lewis Carroll. We train models that use patterns in the EEG to predict the different timescales of an MTLSTM model processing the same text. We find that segments of EEG signals can reliably predict the MTLSTM semantic representations of different timescales. For long timescales, the prediction accuracy is significant for most of the -2s to 2s window surrounding the onset of a word. For short timescales, prediction is significant in a short period around the onset of a word. We also observe reliable predictions for the short timescale at time points distant from word onset. This indicates that the timescales of the MTLSTM model have a connection to language understanding in the brain, while the brain has a complicated strategy, including anticipating and recalling short timescale information. The findings of this work give insight into the brain's timeline of efficiently managing different types of information and indicate the similarities and differences between the computational models and the brain.

Tissue compliance in clinical intracerebral hemorrhage patients

E. Khiabani (Psychology Department, UAlberta), B. Buck (Medicine Department, UAlberta), P. Hurd (Psychology Department, UAlberta), & F. Colbourne (Psychology Department/NMHI, UAlberta)

Strokes arising from intracerebral hemorrhages (ICH) are devastating with significant morbidity/mortality. The bleed occupies spaces within the cranium, raising intracranial pressure (ICP) to often fatal levels. Offsetting that mass are limited compliance mechanisms, such that cerebrospinal fluid and blood are diverted out of the cranium to make space. The Colbourne Lab has been studying an additional compliance mechanism in which substantial brain volume shrinkage occurs after large bleeds, and we believe this is to accommodate increased ICP levels following stroke in our animal models. This tissue compliance happens through the reduction in brain cell volume and an increase in cell density, and this leads to shrinkage in structures distal to the stroke (e.g., contralateral hemisphere). To explore the extent of compliance in patients, the hematoma volume and volume of contralateral brain tissue and ventricles are quantified in ICH patients through a retrospective analysis of CT scans. Factors such as age, biological sex, hypertension, and comorbidities will be considered as statistical covariates to account for their known impact on bleeding and brain volume. We hypothesize that large bleeds will similarly compress the contralateral hemisphere in stroke patients, as we observe in rats. Establishing this will validate our animal data and support future mechanistic studies exploring how tissue compliance is achieved at the cellular level and the consequences of that cell volume perturbation, such as on behavioral recovery.

Diminished error-related negativity in people low in trait self-control following anxiety

P. Faulkner & K. Nash (Psychology Department, UAlberta)

Trait self-control is commonly considered an advantageous personality trait, with good reason. People high in trait self-control tend to be healthier, happier, more psychologically secure, and socially connected. Less clear, however, are the processes by which trait self-control confers such positive outcomes. For example, recent work shows that trait self-control does not correlate with state self-control in reaction times tasks or with daily resistance of temptations. The present research examines one idea in which trait self-control moderates the cognitive consequences of anxious experiences. We suggest that anxiety disrupts performance monitoring

processes for low, but not high, self-control people. Using archival data, we examined the interaction between trait self-control and anxiety manipulation on error-related negativity (ERN), an index of performance monitoring. In the anxiety-inducing condition, we found diminished ERN amplitudes followed incorrect responses on the Stroop task in those with low trait self-control. This result suggests anxiety may influence performance monitoring in those with low trait self-control. This research provides further insight into conditions under which self-control may affect cognitive processes.

Day 1 – Wednesday, April 12: Poster Session 1 (4:00-5:00pm)

Co-occurrence of externalizing and internalizing symptoms in early childhood: Role of relationship quality with teachers and peers

C.M. Pan & W.L.G. Hoglund (Psychology Department, UAlberta)

Breakout room 1

Developmental challenges related to underregulation of behaviors and overregulation of emotions often emerge in early childhood (Cooley et al., 2022; Roubinov et al., 2020). Underregulation of behaviors has commonly been investigated as externalizing symptoms (e.g., aggression, conduct problems). Overregulation of emotions has often been studied as internalizing symptoms (e.g., symptoms of anxiety, depression, social withdrawal.). Externalizing and internalizing symptoms are two primary developmental challenges that have often been studied in childhood as distinct outcomes (Prino et al., 2022). However, externalizing and internalizing symptoms have often been studied in isolation even though these tend to be related. While previous studies have investigated how children's externalizing and internalizing symptoms are associated with the quality of teacher-child and peer relationships, these have often been investigated separately (Caputi et al., 2012; Lifshin et al., 2020, Roubinov et al., 2020). To address this gap, the present study examines: (1) the co-occurrence between externalizing (aggressive, hyperactive, and inattentive behaviours) and internalizing (symptoms of anxiety and depression) symptoms across two years in early childhood, (2) whether indicators of both positive and negative relationship quality with teachers and peers predict children's externalizing and internalizing symptoms, and (3) whether these associations differ between girls and boys. The results of this study will highlight the role of relationship quality with teachers and peers for children's symptomology in early childhood.

Impact of estrous cycle on intracerebral hemorrhage

A.H. Abrahart, A.C.J. Kalisvaart (Psychology Department, UAlberta), A.C. Klahr (Social Sciences - Augustana Faculty, UAlberta), & F. Colbourne (Psychology Department/NMHI, UAlberta)

Breakout room 1

Intracerebral hemorrhage (ICH) is a stroke subtype where bleeding occurs in the brain. Most ICH studies use young, healthy male rodents, which do not adequately reflect the clinical stroke population. Consequently, preclinical models should consider factors that influence patient recovery, including biological sex, comorbidities and aging. Evidence suggests that sex hormones in particular, such as estradiol, impact injury parameters and secondary processes after ICH. Though administration of supraphysiological estradiol has been tested in ICH, the natural estrous cycle of female rats has never been evaluated in this context; we aimed to study this phenomenon. Based on observed neuroprotective effects of estradiol, we hypothesized that ICH injury severity will be lessened in rats with higher concentrations of estradiol. The estrous stage of female rats was determined via vaginal cytology preceding ICH surgery, with animals sorted into 'high' and 'low' estradiol levels according to an a priori randomization. Twenty-four hours post-ICH, a hemoglobin assay was performed to evaluate the potential effect of estradiol levels on bleed volume. Contrary to our hypothesis, we found no significant difference in bleed volume between rats with high and low levels of estradiol at the time of surgery (ipsilateral

bleed volumes of 73.05 μL versus 91.91 μL respectively, $p = 0.124$). These data prompted the collection of preliminary data, including lesion volume, for foundational work assessing secondary injury parameters and behaviour, including exploring how estradiol impacts the tissue compliance phenomenon recently observed by our lab. These are our first steps towards better characterizing how female physiology impacts ICH progression.

Interventions for rural youth's mental health and addictions

I. Schoettler & W.L.G. Hoglund (Psychology Department, UAlberta)

Breakout room 2

Adolescence presents unique challenges to youths' mental wellbeing. In particular, Canadian youth in rural communities experience substantial barriers to receiving support for mental health problems and addictions, which are conditions that impact a person's mood, behaviours and cognitive functioning. Geographical location and remoteness of rural communities, may account for greater prevalence of mental health problems and addictions amongst rural adolescents. Additionally, rural settings may also account for differences in population characteristics between urban and rural communities, such as specific beliefs and stigmas regarding help-seeking behaviours for mental health problems and addiction support. Previous studies have examined potential interventions that demonstrate applicability in rural populations. However, there is limited knowledge on how these findings apply to rural adolescents specifically. To better understand inequities in receiving mental health and addictions services for youth in rural settings, the current study examines the implementation of mental health interventions and treatment through a systematic review. This will be done through assessing (1) what interventions demonstrate effectiveness in improving mental health and addiction outcomes for youth in rural settings, and (2) which of these interventions demonstrate the strongest impacts in supporting treatment success. The findings of this systematic review will inform upon interventions that are empirically effective in addressing rural youth mental health concerns and addictions.

Executive function's structure in monolingual and bilingual adults using confirmatory factor analysis

F. Anjomshoae, S. Wiebe (Psychology Department, UAlberta) & E. Nicoladis (Department of Psychology, UBC, Kelowna)

Breakout room 2

In processing their two languages, bilinguals have to selectively attend to the target language and context and reduce interference from the non-target language. These experiences could lead to a bilingual advantage in Executive Functions (EF). Indeed, some studies have found a bilingual advantage in executive functioning skills, including inhibition, attention, working memory, mental flexibility, creativity, and problem-solving. However, other studies have failed to replicate these findings. Yet other studies found a bilingual disadvantage in some EF tasks. The first aim of this study was to test for a bilingual advantage in EF among a large number of young adults using a latent variable approach, to rule out non-EF task differences as an explanation for inconsistency across studies. Also, we were interested in testing the EF structure using the Confirmatory Factor Analysis (CFA) approach. The findings showed no difference between monolinguals and bilinguals on EF tasks and also the EF structure was the same for both groups. These results do not support the argument that there is a bilingual advantage in EF. We discuss other possible variables that might contribute to the mixed results across studies.

Studying the relationship between age and death-threat anxiety

D. Gohil (Psychology Department, UAlberta) & Z. BayatRizi (Sociology Department, UAlberta)

Breakout room 3

Beginning March of 2020, a novel virus called COVID-19 had just started to emerge, which drastically changed the lives of many individuals in Alberta, resulting in possible changes to death-threat anxiety (DTA) among Albertans. The research in this paper aims to explore whether there is a relationship between age and DTA. This relationship has been studied by many researchers like Russac and colleagues (2007) whose findings suggested

that as individuals grow older, their death-anxiety decreases. However, because of the unique effect of the pandemic, and its disproportionate mortality rate among elderly individuals, this relationship seems to have reversed (Stasson 2021). The present study hypothesized that while there is a relationship between age and DTA, it would be higher among an older (60-75) age group compared to a younger one (20-29) because of the pandemic's disproportionate impact on elderly individuals. The present study tested this hypothesis by using Templer's 15-item death anxiety scale (DAS) questionnaire to assess DTA within each group. Results from the self-report questionnaire were used to compare death-threat anxiety between each age group and were interpreted using Fisher's exact test, which showed insignificant results. This is likely due to the small number of participants in the older age group.

VmPFC activity and emotion regulation influenced by childhood SES

A. Saini & K. Nash (Psychology Department, UAlberta)

Breakout room 3

Low childhood SES is associated with negative mental and physical health outcomes in adulthood (Luo & Waite, 2008). Preliminary research has shown that low childhood SES is associated with significant differences in cortical structures implicated in emotion, such as the amygdala and hippocampus (Luby et al., 2014). However, little is known about the underlying mechanisms that link low childhood SES with poor emotional regulation. In the current study, we use electroencephalography (EEG) to investigate whether young adults of differing childhood SES show significant differences in reactivity to negative stimuli. The childhood SES of participants will be assessed using the MacArthur Scale of Subjective Social Status. Participants will then be randomly assigned to either an economic threat condition in which participants will read an article forecasting a poor economic environment, or a control condition in which participants will read an article predicting a stable economic environment. Following this, we will record activity source localized to a key region in emotion regulation, the ventromedial prefrontal cortex (vmPFC), during an auditory oddball task to measure responsiveness to negative stimuli. For those in the control condition, we predict that SES will not be associated with a difference in vmPFC activity. In the threat condition, we expect vmPFC activity to be significantly higher in those with low childhood SES. This study will allow us to gain insight into how childhood SES affects emotion regulation later in life, and demonstrate how vmPFC activity may be affected by SES.

Sleep, emotion regulation, boredom, rumination, and adjustment

P. Lewis & J.R. Reddon (Psychology Department, UAlberta)

Breakout room 4

Sleep is an essential function for humans to thrive in everyday life. Being able to regulate one's emotion is an ability also associated with healthy development and functioning. Both poor sleep and emotion dysregulation, including feeling excessive boredom and demonstrating negative ruminative responses, have significant effects on mental health. This increases the risk of developing serious psychological problems. Investigating the associations between these four domains and psychosocial adjustment allows us to gain valuable insight by better understanding how sleep disruption can deepen issues in adjustment, emotion regulation, feelings of boredom, and rumination. Participants were recruited on social media networking sites and through the UAlberta's Research Participation Program for introductory psychology students. They accessed the questionnaire through an anonymous link, completing several scales measuring sleep, emotion regulation, boredom, rumination and psychosocial adjustment. Data analysis focused on correlational methods. Principal components analysis (PCA) was used to reduce the dimensionality of the Basic Personality Inventory, the psychosocial adjustment measure, to three dimensions, thereby simplifying the interpretation. We hypothesized that poor sleep is associated with psychosocial maladjustment and psychopathology, less ability to regulate emotions, excessive feelings of boredom, and greater tendencies to ruminate. This research has implications in supporting the prevention of these problems, comorbid conditions, or subsequent negative consequences.

“Where are you really from?”: Differences across immigration generations in African Canadians’ experiences of identity gaps and denial

B. Abdulkadir & K. Noels (Psychology Department, UAlberta)

Breakout room 4

Each individual has an inherent desire to belong, and high self-esteem is contingent on group membership. Identity denial may complicate this need to belong for those who do not match the idea of a “prototypical Canadian” (for example, racialized people). Identity denial occurs when a person’s identity is questioned or invalidated; past research suggests this experience may be more prevalent in second-generation rather than first-generation immigrants. In addition, identity denial may be linked to self-appraisals (how one views themselves) and reflected appraisals (their perception of how others view them). However, there are few examinations of this connection between identity gaps and the experience of identity denial, especially among African Canadians; this study will address that gap. We predict that second-generation African Canadians will align more closely with their racial identity (they will be more likely to prefer the label “Black” or “African”) and that first-generation immigrants will associate more strongly with their ethnic identity (they will be more likely to label themselves according to their ethnicity). We conducted a questionnaire survey with open-ended questions focused on experiences of identity denial and discrimination for young adult African Canadians. Preliminary thematic analysis has found several themes relating to belonging and identity, and early evidence to support the hypotheses. The results of this study will inform an understanding of identity denial experiences in African Canadians, particularly how perceived discrimination can vary across individuals from different generations. The findings may also help tailor specific programs (e.g., educational, settlement) for different generations.

Measuring conscious monitoring and metacognition of motor performance at the beginning, middle, and end of a reaching movement

T.E. Henry (Psychology Department, UAlberta), G. Oancea & C. Chapman (Faculty of Kinesiology, Sport, and Recreation, UAlberta)

Breakout room 5

This study investigates movement awareness and metacognition by analyzing how accurately and confidently participants perceive their movements during reaching tasks. We will assess when participants are most and least aware of their movements by measuring accuracy and confidence at different stages of the task, focusing on the middle portion of the movement, where changes are expected to be more challenging to detect. To carry out the study, we plan to recruit 50 right-handed individuals aged 17-35 to perform 100 reaching movements and immediately answer two questions, one related to accuracy and one related to confidence. We hypothesize that participants will have lower accuracy and confidence in detecting changes during the middle of the movement compared to the beginning and end due to increased visual awareness. By exploring the relationship between accuracy and confidence, we will better understand metacognition - an awareness of perception - during movement. Furthermore, we will assess inconsistencies in accuracy and confidence between different stages of the movement and investigate the degree to which participants’ perception matches the actual execution. This study has the potential to contribute to our knowledge of movement awareness and metacognition, which could have practical applications in areas such as sports performance and motor impairment research. By understanding the gap between perception and execution in individuals with motor impairments, we can develop better assessment tools and interventions to improve daily motor tasks. Additionally, insights gained from this study could help athletes optimize their movement accuracy and performance.

A constant error, revisited

D. King & C. Westbury (Psychology Department, UAlberta)

Breakout room 5

The Halo Effect is a phenomenon that was first identified by Thorndike in his paper “A Constant Error” (1920). Despite a large body of research that has examined the Halo Effect, relatively little is known outside of a social and cognitive psychological lens. Furthermore, most of the research has examined post hoc relationships between a stimulus and its influence on perceived characteristics. Therefore, we conducted two studies that examine a potential explanation of the Halo Effect using linguistics. In the first study we directly tested whether the context of words could explain participants’ (N = 39) ratings of the probability that two characteristics would occur in the same person. We hand-picked 126 pairs of human characteristics selected from a larger set of 293 pairs. Using the word2vec skipgram model, we compared the participants’ judgements to the cosine distance between the vectors of the two words. The results showed that cosine distance between the vectors of the two words was a reliable predictor of the participants’ judgements of characteristic probability accounting for 41% of the variance. To ensure that the participants’ judgements were not based simply on meaning similarity, we conducted a second study. In the second study, we used a different set of participants (N = 40) and tested their judgements of word meaning similarity between the word pairs. We found that despite a strongly correlated relationship between cosine similarity values, the meaning ratings were a much better predictor of the characteristic’s correlation judgments, accounting for 68.4% of the variance. These findings suggest that linguistic influences may play a significant role in shaping the Halo effect and provide a new direction for future research.

Cerebral edema is not a reliable or predictable measure of intracranial pressure in rodent models

A. Kalisvaart, E. Khiabani, N. Bahr, C. Scavuzzo, & F. Colbourne (Psychology Department/NMHI, UAlberta)

Breakout room 6

Increased intracranial pressure (ICP) poses life threatening consequences of intracerebral hemorrhage (ICH). An ICH is a sudden bleed within the brain, commonly caused from ruptured arteries or veins. Fortunately, the brain has compensatory mechanisms to control elevated ICP. These mechanisms include reducing cerebral spinal fluid (CSF) volume and reduction in venous blood volume, as well as widespread reductions in brain tissue volume, known as tissue compliance. However, compensatory mechanisms can be limited depending on the severity of stroke and the individual’s age. Researchers commonly use animal models to assess and gauge therapeutics to combat elevated ICP. Most ICH studies assess cerebral edema as a surrogate predictor of ICP dysregulation; however, we have recently shown that cerebral edema does not accurately predict commonly assessed ICP parameters. Therefore, we plan to investigate the dynamics of cerebral glymphatic in relation to tissue compliance in rodents. Our goal is to assess whether CSF influx and clearance is significantly impaired following ICH along glymphatic routes, resulting in fluid buildup and waste products within the brain, ultimately increasing ICP. We will assess glymphatic drainage via injection of fluorescent tracers of various molecular weights into the uninjured striatum of rats following ICH, with groups of severe ICH, moderate ICH and control procedures. We hypothesize animals with greater and prolonged ICP elevations may have worse glymphatic drainage in their contralateral regions, while those with less severe ICP dysregulations may maintain better control of their compliance mechanisms.

How psychological stress impacts muscle sympathetic nerve activity (MSNA) in humans: A systematic review & meta-analysis

G. Kaur (Psychology Department, UAlberta) & C. Steinback (Faculty of Kinesiology, Sport, and Recreation, UAlberta)

Breakout room 6

Psychological or mental stress is an overwhelming state of mind that disrupts the way a person feels emotions, thinks and behaves. Additionally, it also exacerbates physical health conditions such as cardiovascular diseases. Human bodies respond to acute psychological stressors by activating the “fight-or-flight” response via the sympathetic nervous system (SNS). This system increases heart rate and blood pressure by constricting vasculature and increasing peripheral vascular resistance. One way to directly measure such changes in the sympathetic response is by measuring muscle sympathetic nerve activity (MSNA) which can be recorded directly through the microneurography technique. MSNA can be recorded by inserting an electrode into the muscle nerve fascicles of a peripheral nerve and evaluating the bursts of action potential discharges from the nerve. This measurement provides an understanding of the neural processes which are involved in blood pressure and cardiovascular system homeostasis. However, microneurography is challenging since it limits the number of participants within a study. There is also high variability of MSNA’s response to psychological/mental stress across studies. This systematic review and meta-analysis aims to determine: (1) how mental stress impacts MSNA (2) what type of mental stress impacts MSNA the most (3) are there sex differences in how mental stress affects MSNA. The study focuses on healthy, non-patient human populations and lab-based, acute mental stressors (for example, mental arithmetic or panic attacks). So far, 20 studies have been included for further analysis.

The effect of emotional facial stimuli on working memory performance and neural correlates in children

O. Tiessen & S. Wiebe (Psychology Department, UAlberta)

Breakout room 7

There is little research on the effect of emotional stimuli and working memory in children, and existing findings are mixed. Augusti et al. (2004) found that happy facial stimuli facilitated working memory performance and negatively valenced stimuli like fear and sadness hindered working memory performance on an n-back task while Kashihara and Matsuda (2022) found that angry faces, more than happy faces, facilitated working memory performance. More research is needed to resolve these conflicting findings. The current study will examine the effect of emotional faces on working memory using a 1-back task. Stimuli include 40 different cartoon faces: 8 characters each expressing happy, neutral, sad, angry, and fearful expressions. Six-year-old children will be recruited and asked to match the characters based on their gender (boy or girl). The underlying effects of the emotion of the faces will be examined. Event-related potentials (ERPs) will also be used in this study to look at the neural correlates of this relationship. I expect that negative facial expressions will hinder working memory performance and result in slower response times and lower response accuracy. Specifically, I expect the fearful faces and the angry faces to affect performance more than sad facial expressions. I also expect that happy faces will result in faster response time and greater accuracy. The results of this study will have implications for developmental research: it is important to understand how frequently encountered stimuli like emotional faces might be impacting children’s basic cognitive abilities like working memory.

Comparing the rapid neural processes in the Stroop and Flanker tasks: An EEG microstate approach

S.J. Schneider (Psychology Department, UAlberta)

Breakout Room 7

This study will determine if the classical colour-word Stroop task and Eriksen flanker task involve the same mental processes, indicating that they measure the same construct. To do this, we recorded EEG data from 63 young adults while they performed the classical colour-word Stroop task and the Eriksen flanker task. We will

use microstates analyses and compare the congruent and incongruent trials across the two tasks. Different stimuli modulate the amplitude of early event-related components related to sensory and perceptual processing. Thus, we hypothesize that microstates during the early processing stages will differ for the Stroop and flanker tasks because they present different stimuli. We also hypothesize that the microstates corresponding to later stages of processing will be similar as both tasks present task-relevant and task-irrelevant stimulus features that are either in conflict with each other (i.e., incongruent) or not (i.e., congruent) and thus measure the same concept. Overall, it is expected that both the incongruent and congruent trials of each task will follow this pattern of dissimilar early microstates and similar later microstates. If confirmed, the results of this study would reframe past research that has utilized the Stroop and Eriksen flanker tasks as measures of separate constructs and would shape future research on cognitive inhibition and attention.

The effects of social identity complexity and uncertainty on leadership support

A.E. Barrett, K.M. Kincaid, & D.E. Rast III (Psychology Department, UAlberta)

Breakout Room 7

Research into leadership styles agree that a democratic style is viewed more favourably than an autocratic style. However, recent examples of successful autocratic leaders have raised questions as to how this style of leader may come into power. Uncertainty about social identity is commonly cited as a reason behind supporting autocratic leaders, as these leaders promote strong and clear ideals regarding identity. However, individuals experience uncertainty differently depending on the number of identities they belong to. The more social identities that an individual uses to define themselves, the more complex their social identity is, giving them a buffer to better withstand uncertainty threats to a single identity. Therefore, the current study tests the interaction between social identity complexity, uncertainty and support for autocratic leadership. We measured participants on social identity complexity, uncertainty and overall support for perceived autocratic leaders. It is expected that individuals with less social identity complexity will be less resilient to uncertainty threats, thereby, causing them to show greater support for autocratic leaders. On the contrary, we predict that individuals with more complex identities will mitigate the negative effects of uncertainty and show the typical preference for democratic leaders.

Frontal midline theta oscillation in trait anxiety and episodic memory

T. Shalamberidze (Neuroscience and Mental Health Institute, UAlberta), K. Nash & J. Caplan (Psychology Department, UAlberta; Neuroscience and Mental Health Institute, UAlberta)

Breakout Room 8

Anxiety and memory are typically studied separately, but both are associated with frontal midline theta oscillations (FMT) in the EEG. We asked what the functional relationship is among trait anxiety, episodic memory, and FMT, hypothesizing that trait anxiety is negatively associated with memory-related theta oscillations and negatively associated with memory performance. Memory was tested with associative recognition. Anxiety was assessed according to State/Trait Anxiety Inventory, Ten-Item Personality Inventory, and BIS/BAS scale. EEG was recorded during the memory task and at rest (two cycles alternating 1 minute eyes open and 1 minute eyes closed). Overall, we did not find substantial FMT activity at rest, and the individual variability was not explained by trait anxiety. We replicated the significant subsequent memory effect, where FMT at study was greater for later remembered than forgotten pairs. The FMT subsequent memory effect, in turn, was negatively correlated with one measure of trait anxiety. Follow-up analyses will further test whether this pattern characterizes two independent oscillatory sources of memory and anxiety separately, modifying a single source. Overall, the study will help better understand the role of oscillations in emotion and cognition.

Forms of reading engagement that evoke curiosity in response to narrative turning points

D. Kuiken, S. Douglas, A. Jeremy, & V. Tao (Psychology Department, UAlberta)

Breakout Room 8

Recent studies have distinguished two types of absorbed reading engagement; Expressive Enactment and Integrative Comprehension (Kuiken & Douglas, 2017). As assessed using the Absorption-Like States Questionnaire (ASQ), Expressive Enactment predicts aesthetic reading outcomes, while Integrative Comprehension predicts explanatory reading outcomes (Kuiken & Douglas, 2017, 2018, Kuiken et al., 2021). The present study attempted to examine the specific passages in a literary text that evoke these reading outcomes. First, we identified 69 professional commentaries on Wordsworth's "The Thorn" (1798) and used exploratory factor analysis to identify groups of lines that these readers frequently cited. Second, in an online study, undergraduate readers selected passages that seemed to be (a) "striking or evocative" (Condition 1); (b) a narrative "turning point" for one of the characters, i.e., Martha (Condition 2); or (c) a narrative "turning point" for another character, i.e., the Narrator (Condition 3). Readers in Conditions 2 and 3 also rated the extent to which they reconsidered or reappraised something that had happened previously in the story (Narrative Curiosity). Results from structural equation modeling indicated that Integrative Comprehension (but not Expressive Enactment) predicted Narrative Curiosity (especially when curiosity ratings were combined with ratings of explanatory outcomes; narrator intelligibility, etc.). Also, Integrative Comprehension predicted undergraduate readers' selection of lines that the professional readers also cited when discussing Martha's narrative or the Narrator's narrative. These findings allow more precise consideration of the explanatory force and narrative curiosity that motivates professional and non-professional readers to identify and reflect on turning points in literary texts.

Day 2 – Thursday, April 13: Poster Session 2 (10:00-11:00am)

The effect of repeated startle stimuli on fish behaviour and neural activation in the habenula

A. Muth & P. Hurd (Psychology Department, UAlberta)

Breakout room 1

The habenula is a bilateral brain structure located in the epithalamus of vertebrates. In humans, it has been implicated in mood disorders, motivational learning, anxiety, and addiction. In teleost fishes, the habenula is divided into a dorsal and ventral subregion. The dorsal habenula (dHb) can be further divided into the dorsal lateral habenula (dHbL) and the dorsal medial habenula (dHbM). Fish provide a useful model for investigating the impact of learning in response to fear inducing stimuli. Ablation studies in *Danio rerio* (zebrafish) have shown the dHbL to be essential for associative learning. Zebrafish with an inactivated dHbL have shown enhanced freezing in response to an aversive conditioned stimuli, and deficits in decision making and memory extinction in operant conditioning paradigms. However, the role of the dHb in nonassociative learning is unclear. In this study, we aim to demonstrate habituation to a fear-invoked startle response in *Pelvicachromis pulcher* (kribensis cichlid fish), and correlate that response to differential neural activation between the two subregions of the dHb using Phospho-S6 Ribosomal Protein (ps6) staining. Based on the finding that dHbL ablation leads to decreased motor response to an aversive stimulus, we hypothesize that the dHbM will show increased neural activation compared to a control group in response to the habituation procedure, while the dHbL will show greater neural activation in the control group.

Behind the screen: An investigation of where we look during online vs in-person conversations

R. Almeida, M. Fankhanel, G. Christiansen, S. Janssens, & D.A. Hayward (Psychology Department, UAlberta)

Breakout Room 1

While most research has focused on understanding the mechanisms of social attention in laboratory settings, naturalistic studies have documented nuances in social attention, suggesting there's more work to be done. In addition, exploring whether our attention differs across contexts (e.g., videochat, face-to-face) is of renewed importance, due to the increase in online social interactions in the last few years. We investigated whether attention during conversations, operationalized as looking behaviour, varied across contexts (e.g., videochat versus face-to-face). We hypothesize that if context matters, then participant looking behaviour will differ across videochat and face-to-face conversations. In contrast, if the goal of the task matters, then participant looking behaviour should be similar across the two contexts, as participants are having a 5-minute conversation in both cases. Participants also completed a typical gaze-cueing task used to investigate social attention. Preliminary analyses of the social attention task yielded typical effects, suggesting that our sample is overall attuned to the gaze of others. We will also present looking behaviours across contexts to determine whether gaze patterns differ between videochat and face-to-face formats. Taken together, our data will inform the debate regarding whether social attention measured in the lab generalizes to real life.

Resilience resources in relation to mental health in youth with and without fetal alcohol spectrum disorder

S. Beeby (Psychology Department, UAlberta) & J. Pei (Educational Psychology, UAlberta)

Breakout Room 1

Fetal alcohol spectrum disorder (FASD) is a complex neurodevelopmental disorder, where brain-based and environmental challenges interact, placing youth with FASD at-risk for adverse outcomes. Notably, youth with FASD disproportionately experience high rates of mental health problems. Researchers who study FASD have primarily taken a deficit-based approach, which may exacerbate the stigma and poor mental health outcomes that this population disproportionately faces. A resilience theory framework offers a strengths-based lens to uncover population-relevant protective factors to mitigate adverse outcomes. Protective factors can be at the individual level (e.g., social skills, adaptive skills) or relational level (e.g., relationship quality). The present study aims to analyze caregiver and youth reports of individual and relational level resources in relation to mental health outcomes, specifically internalizing symptomatology. I predict that youth with FASD will have lower reported levels of the individual and relational resources compared to youth without FASD. I predict that youth with FASD might have a more significant correlation between individual and relational resources and lower internalizing symptomatology, representing an interaction effect. Employing a correlation study design, data will be collected cross-sectionally and a multiple regression analysis will be performed. This study is exploratory in nature, as there is relatively little strength-based literature conducted with FASD youth to draw upon. Strengths-based approaches offer a holistic view of individuals with FASD, which has implications for intervention and service creation.

The development of cognitive map-like spatial representations on campus

Z. Qi, & W. Mou (Psychology Department, UAlberta)

Breakout Room 2

There are some hypotheses about the structure of spatial knowledge used for navigation. The concept of the cognitive map is to embed local measurements of idiothetic (proprioceptive, motor, and vestibular) information into a geometrically consistent coordinate system. In contrast, the cognitive graph hypothesis acquires local information but does not embed them into a consistent system. It is an unsettled debate whether people can develop the cognitive map or only the cognitive graph in a large-scale environment. In this project, we aim to investigate to what extent people can develop more map-like spatial representations. Participants from the

UAlberta will be presented with a panorama view of their testing location buildings on campus in a virtual environment, and then they will be asked to point to several target buildings on campus. From participants' pointing responses, we will estimate participants' represented location and heading from the panorama view (using the least error method). Comparing represented locations to the actual locations, we will calculate the fidelity of the cognitive map (R squared of Bi-dimension regression). We will then investigate whether the fidelity of the cognitive map is correlated with participants' spatial abilities and the extent of familiarity with the campus, the kind of environment of location building (outdoor or indoor), and how well-known both location buildings and target buildings are.

Examining how language acquisition impacts auditory statistical learning in monolingual and multilingual adults

S. Saju, A. Bodau, K. Nisbit (Communication Sciences and Disorders Department, UAlberta), J. Cummine (Communication Sciences and Disorders Department/NMHI, UAlberta)

Breakout Room 2

Individuals of all ages display the ability to detect and extract regularities and patterns that are present in environmental stimuli. Known as statistical learning (SL), this ubiquitous process is involved in many aspects of behavior, but particularly in the process of language acquisition. Notably, the left superior temporal gyrus (LSTG) and the left inferior frontal gyrus (LIFG) have been implicated in the process of auditory statistical learning (ASL). In this study, a converse relationship between language acquisition and statistical learning is explored: the possibility that multilingualism may influence, and even improve, SL in individuals. Participants took part in a series of behavioral tasks as well as functional magnetic resonance imaging (fMRI) tasks whereby they were passively exposed to triplets of SL auditory stimuli (in a sequential order) for approximately 13 minutes. They then underwent a 17-minute testing phase to determine their degree of SL during the training phase. A region of interest analysis was conducted on the neuroimaging data to determine differences in activation in the aforementioned brain regions between monolinguals and multilinguals. Correlations between behavioral profiles and neural profiles were conducted to examine the relationship between language acquisition and ASL. Findings will aid in understanding the nuances between language acquisition and its impact on ASL as well as help fill gaps in the literature regarding the flexibility of ASL.

A comparative study of cued and contextual conditioned fear memory following intra-hippocampal or amygdalar infusions of anisomycin or muscimol in male sprague-dawley rats.

S. Marzoughi & S. Al-Smadi (Psychology Department, UAlberta)

Breakout Room 3

Over the past few decades, a variety of authors have commented on the processes and mechanisms surrounding memory. One topic of particular interest is memory consolidation, which aims to explain how labile and transient short-term memories are converted into more robust and stable long-term memories. The school of thought that has dominated this research has been the idea that the creation of new proteins after an event is the key facilitating factor in this process; dubbed the 'de novo protein synthesis hypothesis', which has been primarily supported by the impairment of consolidation after the application of protein synthesis inhibitors. However, more thorough investigations have revealed the wide range of confounding effects these inhibitors have including inducing malaise, apoptosis, and the inhibitory impact on neural activity. This specifically raises questions about the validity of the de novo protein hypothesis. The present investigation aims to provide support to the idea that while protein synthesis remains important for consolidation, the primary factor in facilitating long-term memory is intact neural activity. Male Sprague-Dawley rats will be trained using a standard fear conditioning paradigm to associate an auditory tone with a footshock. After conditioning, subjects will be infused with the protein synthesis inhibitor anisomycin into either the basolateral amygdala or hippocampus to test for cued and contextual fear memory respectively. These results will then be compared to the inactivating

effects of known neural activity inhibitors such as muscimol to see whether the extent of deficit is similar between translational inhibitor and neural inactivator. Further investigations into the neurobiological basis for consolidation and other memory processes remain crucial in being able to treat memory disorders within the clinical context.

Peer relations, academic adjustment, and the role of the classroom climate in middle childhood

E. Lawczynski, R. Sorensen, B.R.L. Zatto, & W.L.G. Hoglund (Psychology Department, UAlberta)

Breakout Room 3

Children who engage in more prosocial behaviours toward peers are often more accepted by peers, more engaged in learning activities, and experience better academic adjustment (Greener, 2000; Wentzel et al., 2021). On the other hand, children who are rejected or demonstrate peer aggression are often less engaged in school and tend to have poorer academic adjustment (Fite et al., 2013; Risser, 2013). Much of this research has focused on academic engagement and skills as outcomes of peer experiences rather than how they co-occur over a school year. Previous studies have indicated that the quality of the classroom climate is important for how children's peer experiences co-occur with their academic engagement and skills (da Cunha et al., 2021; Rucinski & Brown, 2018). Supportive instructional practices and positive relationships in the classroom climate may promote children's prosocial behaviours and peer acceptance while reducing their peer rejection and aggression. This is because children are encouraged to interact positively with their peers if these positive interactions are modelled by their teacher. This study investigates (1) the co-occurrence of positive (acceptance, prosocial behaviour) and negative (rejection and aggression) peer relations with academic engagement and skills in middle childhood, and (2) classroom instructional practices as a moderator of this co-occurrence. Participants included 506 children in grades 1 to 4 who were assessed across three waves over one school year. This research will further a more inclusive understanding of how supportive classroom instructional practices and relationships facilitate children's peer relations and academic adjustment.

Plasticity in shy and bold cichlid fish and the influence of predation risk

G. Ou & P. Hurd (Psychology Department, UAlberta)

Breakout Room 4

The shy-bold continuum is a well-studied phenomenon of animal personality in fish. Bold fish consistently behave differently from shy fish across different contexts. These personality differences are studied with the aim of discovering the adaptive value of having different behavioural reactions to the same situation. Behaviour in contexts with higher predation risk are commonly studied because behavioural choices can result in life or death. These studies focus on the interindividual differences between shy and bold fish, but fewer studies compare the intraindividual differences between shy and bold fish when exposed to predator cues. These differences refer to how fish may differ in their own behaviour across different contexts. In other words, shy and bold fish can differ from each other in how their behaviours change across contexts as well. Shy fish tend to show greater change, or are less predictable and more plastic, than bold fish. This study aims to compare the plasticity and predictability of shy and bold fish in a context with perceived risk of predation. Fish will be sorted into shy and bold groups and exposed to predator cues (e.g., net chasing, conspecific cues) over several weeks and their behaviour in a boldness assay will be monitored. The predicted result is that shy fish change their behaviour more in response to the perceived predation risk.

Peer victimization and academic skills in middle childhood: Influence of teacher-child relationship and friendship quality

H. Multani, K. Sraa, B. Zatto, & W.L.G. Hoglund (Psychology Department, UAlberta)

Breakout Room 4

Peer victimization is a prevalent concern during middle childhood with 12.6% of children across 40 countries having reported experiences over the span of 2 months. Peer victimization includes both overt (e.g., being hit by a peer) and relational (e.g., exclusion from peer activities) forms. Experiences of peer victimization have been linked with adverse academic outcomes, including decreased academic achievement, engagement, and positive attitude about academics. Previous studies have found a negative association between peer victimization and academic skills. However, these studies used peer victimization as an umbrella term and do not differentiate the specific subtypes of victimization. These associations may vary depending on children's quality of relationships with friends and teachers. However, there is limited research on how friendship quality, teacher-child relationship quality, and gender may moderate the association between peer victimization and academic skills. The current study examines the following research questions: 1) Do overt and relational peer victimization and academic skills change over one academic year? Does this rate of change differ between girls and boys? 2) Do overt and relational peer victimization covary with academic skills in middle childhood? Do these associations differ between girls and boys? 3) Do friendship quality and teacher-child relationship (i.e., closeness and conflict) moderate the association between forms of peer victimization and academic skills? Do these associations differ between girls and boys? Participants included 506 children in grades 1 to 4, who were assessed 3 times over the course of one school year. This study aims to add to the literature on the relationship between peer victimization and academic skills as well as the moderating effects of dyadic friendship quality, teacher-child relationships, and gender on this association.

Meaning in life, forgiveness, emotion regulation, and psychosocial adjustment

M. Lam & J.R. Reddon (Psychology Department, UAlberta)

Breakout Room 5

After eliminating non-purposeful responders, 249 participants were obtained from social media platforms and weekly emails sent through the UAlberta to study the relationship between meaning in life, forgiveness, emotion regulation, and psychosocial adjustment which is valuable for enriching our understanding of wellbeing and adaptive functioning. Meaning in life was assessed using the Purpose in Life test (PIL, 1 scale). Forgiveness was assessed using the Heartland Forgiveness Scale (HFS, 3 subscales). Emotion regulation was measured using the Emotion Regulation Questionnaire (ERQ, 2 subscales) and Mentalized Affectivity Scale (MAS, 3 subscales). Psychosocial adjustment was assessed using the Basic Personality Inventory (BPI-II, 12 subscales). A principal component analysis of the PIL resulted in one dimension in which 19 of the 20 items loaded quite substantially. Item 15 was dropped, and a composite scale was formed with the remaining 19 items. The BPI-II resulted in the three dimensions Social, Psychiatric, and Depression. Notable correlations include that those higher in forgiveness had more adaptive emotion regulation skills and psychosocial adjustment. Meaning in life, forgiveness of self, forgiveness of situations, and emotion regulation were strongly related with the Psychiatric and Depression dimensions but weakly associated with the Social dimension of the BPI. Forgiveness of Others was related to the Social dimension of the BPI; this relationship is due to the focus of this Forgiveness subscale on interpersonal issues, which is one of the three constituents of the BPI Social dimension (i.e., Interpersonal Problems, Alienation, and Impulse Expression).

Peer victimization and emotion self-regulation in early childhood

C.G. Lindsay, A.B. Pettersen*, B.R.L. Zatto, & W.L.G. Hoglund (Psychology Department, UAlberta)*

Breakout Room 5

Peer victimization is a common experience in early childhood. For some, this experience is fleeting, however, for others it is ongoing and may be detrimental to their social-emotional development. Two main forms of peer victimization emerge in early childhood: relational (e.g., spreading rumors) and physical (e.g., kicked by another child). Understanding individual characteristics that may co-occur with an early emergence of peer victimization is crucial to identify early targets for intervention. Children's emotion self-regulation may be an important covariate of their early experiences of peer victimization. However, previous findings on the association between peer victimization and emotion self-regulation in early childhood are mixed. Given this, the primary goal of this study is to examine four conceptual models of the directional associations between peer victimization and emotion self-regulation across preschool and kindergarten: concurrent, child-driven, peer-driven, and transactional models. Participants included 428 children (Mage = 4.09 years, SD = 0.32, 49.1% girls) who were assessed four times from the fall of preschool to the spring of kindergarten. Teachers reported on children's relational and physical peer victimization and emotion self-regulation (positive emotion maintenance, negative emotion dysregulation and exuberant emotion dysregulation). Results from this study will further a comprehensive understanding of the associations between peer victimization and emotion self-regulation, and add to the existing literature on early experiences related to peer victimization.

The impact of dialogic/shared book reading on dual language learners' oral language and literacy development

S. Kapoor, C. Demers, & A.A.N. MacLeod (Communication Sciences and Disorders Department, UAlberta)

Breakout room 6

The increasing population of Dual Language Learners (DLL) in Canada and their struggles with slow expressive vocabulary development and widening academic achievement gap have raised concerns among speech-language pathologists and educational researchers. To improve language and literacy development in both monolingual and dual-language learners, shared book reading (Adesope et al., 2011) is an effective method. It is commonly used for delivering specific educational interventions, like vocabulary or early literacy instructional programs (Justice et al., 2009). The study is a rapid review that aims to examine the effectiveness of shared book reading interventions for DLLs by investigating the impact of translanguaging on their linguistic development and academic achievement. The paper discusses the concept of translanguaging, dialogic/shared book reading, and the specific intervention components that are critical for the success of language-focused interventions. The study highlights the importance of providing language-rich interactions in a literacy-rich environment. It also highlights the potential factors that influence shared book reading for DLLs like lower socioeconomic status of the family, duration of the shared book reading intervention, Bilingual people leading the shared book reading sessions etc.

Exploring the impact of camouflaging for Canadian autistic women

E. Derworiz, A. Gagnon, N. Denomey, & H. Brown (Educational Psychology, UAlberta)

Breakout room 6

Camouflaging is something that both autistic and non-autistic people do in an attempt to act according to what society considers 'normal' by hiding or suppressing the traits that might make them come across as different. Although people of all neurotypes use camouflaging to achieve their goals (e.g., avoid peer victimization, gain social acceptance, and achieve employment opportunities), a growing body of research has shown that autistic women in particular utilize camouflaging in order to succeed in a predominantly non-autistic society. Our present study intends to explore the camouflaging experiences of Canadian autistic women as the perspective of

autistic women is often under-represented in research (Howard et al., 2019). Additionally, the impact of camouflaging on the quality of life for autistic Canadian women has not been adequately assessed. We recruited ten Canadian autistic women who camouflage in their daily life for two semi-structured interviews about their experiences with camouflaging and how they perceive this to impact their well-being and quality of life. The interviews have been recorded and transcribed, and will undergo thematic analysis using the lens of impression management. Impression management views camouflaging as a way to mitigate stigma and harm and promote belonging, acceptance, opportunities, rewards, and self-esteem. However, it can negatively impact quality of life through social consequences, in-the-moment feelings, such as inauthenticity, exhaustion, anxiety, and shame, and longer-term consequences such as identity confusion and mental health conditions. These findings will allow us to better understand the benefits and costs of camouflaging for autistic women.

Reconceptualizing dependence: Is the DPD diagnosis dependable?

L. Ryckis & C. Baerveldt (Psychology Department, UAlberta)

Breakout room 7

Dependent Personality Disorder, or DPD is defined as passive, and characterized by an excessive and pervasive need to be taken care of, submissiveness, and clinginess. However, findings of uncharacteristically non-passive, or active dependence in DPD patients contradict this definition. These contradictions speak not just to the shortcomings of diagnostic language, but of language in general. DPD, as a disorder of passivity, is defined against activity (e.g., to take care of oneself). Passivity is defined basically as being inactive, or “not active”. But “passivity”, here, as a positive label (e.g., to receive care, or to be taken care of by another) and “not active”, as a negative one (e.g., to not take care of oneself), are not functionally equivalent. Mistakenly equating the two not only conceals a distinct type of action which is not active, positively labeled as “effectivity” (e.g., to receive care, or to take care from another); it reduces effectivity to passivity. To substantiate this theoretical distinction, I use discursive techniques to analyze a case study involving malingering (wherein they “play passive” to receive, or take, care from another). Because my case’s ostensibly passive dependency is more accurately described as effective dependency, I analyze their experience of disordered effectivity primarily to identify a personality structure distinct from DPD, along with its associated symptomatology, related strategies, and coping styles. Based on my analysis, I argue that rather than paradoxically active dependence, there is either activity* or effective dependency versus passive dependency.

Extended periods of hypothermia provide greater protection against focal ischemia: a systematic review of animal studies manipulating treatment duration

A. Thorkelsson (Psychology Department, UAlberta), M. Eberle (Neuroscience Department, UAlberta), L. Liddle (Psychology Department, UAlberta), & F. Colbourne (Psychology Department/NMHI, UAlberta)

Breakout room 7

Ischemic stroke is one of the leading causes of death and disability in Canada. Few treatments exist for ischemic stroke, with many patients facing permanent disability. Thus, there is a considerable need for neuroprotective co-therapies. Therapeutic hypothermia (TH) involves intentionally reducing body temperature to reduce injury. Current clinical and preclinical studies have investigated TH as an effective neuroprotectant following ischemic stroke. However, there is a disconnect between its efficacy in animal models and humans, with clinical studies encountering various challenges. We systematically reviewed preclinical literature from the PubMed database to examine the relationship between TH duration and neuroprotective efficacy. The review identified significant gaps in the knowledge surrounding the relationships between various treatment variables, such as optimal duration, delay of treatment and rewarming rates. It also exposed considerable limitations in the animal models used, such as the overuse of young, healthy animals and a lack of investigation into the various comorbid groups within the human stroke population. Many of the studies presented notable quality and bias concerns due to a lack of randomization and blinding. Substantial benefit from TH was also observed, with strong evidence

pointing towards increased durations of TH leading to increased effectiveness. Further research into this therapy is crucial to understanding how to implement neuroprotective strategies effectively and safely. For my thesis, I propose to test intra-arterial chilled infusion, followed by cooling applied locally and externally in a rat model. I hypothesize that this treatment protocol will maximally reduce injury and behavioural impairment following an ischemic stroke.

Predicting autobiographical change judgments: An initial test

O. Ekinçi & N.R. Brown (Psychology Department, UAlberta)

Breakout room 8

Transition Theory (Brown, 2016) suggests that lifetime periods are characterized by a certain set of event components (e.g. people, activities, locations). As transitions lead to changes in daily life, the event components are influenced by the degree of change. In this study, we aimed to examine how starting university gives rise to new event components (specifically, people) and how it relates to the perception of change. We asked first-year undergraduate students to report the people they had spent time with during the last year, and indicate their relationship with each person in relation to their transition to university. We found that starting university brought new people into one's life, especially if one went through a major transition (changed cities to start university) compared to a minor one (attended university in hometown), and the perception of change in people is related to the number of people we continue to see through the transition, and those we meet after, rather than those we stopped seeing.

Prosocial behaviours: Exploring the role of depression, anxiety and self-efficacy

S.J. Ramlal & W.L.G. Hoglund (Psychology Department, UAlberta)

Breakout room 8

Prosocial behaviors characterized as voluntary behaviors intended to benefit others (Eisenberg et al., 2006), are an understudied aspect of adolescent development. During adolescence, both the engagement in and the receipt of prosocial behaviors have been linked to many positive outcomes, such as lower levels of physical aggression, anxiety, and depressive symptoms, higher levels of optimism and increased grades (Flynn et al, 2016; Nantel-Viver et al, 2014; Oberle et al, 2022). Self-efficacy has been found to be both a motivating factor and a result of prosocial behaviours (Grant & Gino, 2010; Li et al, 2023). While prosocial behaviors have been found to relate negatively to anxious and depressive symptoms (Flynn et al, 2016; Nantel-Vivier et al, 2014; Oberle et al, 2022), it is unclear if anxious and depressive symptoms also predict prospective prosocial behaviors in adolescence. This study examines the variability in the developmental patterns of prosocial behaviors during adolescence and how these developmental patterns are associated with self-efficacy, anxiety, and depression. Data for this study come from a study of 1434 adolescents in grades 7 to 9 who were assessed four times over a two-year period. The results of this study will inform understanding of variability in prosocial behaviours during adolescence.

Day 2 – Thursday, April 13: Talk Session 2 (11:00-11:45am)

Your smile shines brighter when your company is smiling too: Facial expression perceptions in Korea

M.H. Kang, T. Masuda (Psychology Department, UAlberta), & J. Yu (Psychology Department, Sogang University)

Previous cross-cultural research in emotion perception demonstrated the importance of background figures in East Asians compared to Westerners due to their context-oriented thinking style. However, such an East versus West dichotomy is overly simplistic, obscuring the intricate characteristics of each culture in East Asia deriving from distinctive history and interactions with the world. For example, nuanced differences in cognitive style may exist even within East Asian cultures due to the Western influence which may have changed traditional Asian

worldviews. To this end, we recruited Koreans because they may have become more westernized than other Asian cultures due to their special relationship with the United States since the Korean War while still retaining their sovereignty and traditions. With these unique characteristics in consideration, we investigated whether Koreans' emotion perception is more similar to that of North Americans or other East Asians. We adopted pictorial stimuli from Masuda et al. (2022) depicting a person surrounded by 4 others displaying the same or different emotions from the central figure to examine the influence of the background on participants' perception of the central figure. Results showed that when background characters were smiling, Koreans judged the central figure as happier than when the background displayed neutral or sad facial expressions. Furthermore, comparisons of the current Korean data against European Canadian and East Asian Canadian data revealed a greater assimilation effect in Koreans in the smiling condition. This implies that Koreans' traditional value of maintaining a connection with the surroundings persists in their emotion judgment style.

Uncertainty predicts support for autocratic leadership and expanded government powers: Evidence from the 2022 Freedom Convoy protests in Canada

K. Kincaid, A. Ma, & D. Rast III (Psychology Department, UAlberta)

The 2022 Freedom Convoy protests and blockades created significant uncertainty across Canada, and many Canadians advocated for strong and forceful responses from their government. Autocratic leadership is typically seen as undesirable and receives less support than democratic leadership. However, in times of uncertainty, group members may have an accentuated desire for strong, directive leadership to help manage the uncertainty. Canadian participants (N = 406) reported their level of self-uncertainty, rated how autocratic they perceive Prime Minister Justin Trudeau to be, reported their level of support for Justin Trudeau, and responded to a series of items assessing their support for strong responses to the Freedom Convoy protests. As predicted, self-uncertainty moderated the relationship between leadership style (autocratic vs. non-autocratic) and leader support. Autocratic leadership style predicted significantly less leader support, but this relationship was weakened among participants high in uncertainty, who reported increased support for an autocratic leader. Further, self-uncertainty predicted greater wish for a strong leader, willingness to restrict civil liberties, and support for expanded government powers. Taken together, these results suggest that the typical preference for democratic leadership (vs. autocratic leadership) may be weakened when self-uncertainty is elevated.

Beyond east and west: A cultural task analysis across Mongolians, Japanese, and Canadians

T. Masuda, Ts. Bayart-Od (Psychology Department, UAlberta), D. Dashzeveg (Shine Mongol High School), S. Khurelbaatar (National University of Mongolia), K. Ishii (University of Nagoya), & S. Kitayama (University of Michigan)

So far, research in cultural psychology has been dichotomized between Eastern versus Western cultures. Even though discussions on cultural psychology have gradually expanded, several cultures still need to be included in the spotlight. To further broaden our understanding of cultural psychology, investigating different cultures, such as Mediterranean, Middle Eastern, and Central Asian cultures, is necessary. In line with this research motivation, we focus on Mongolians, whose culture has historically represented the nomadic pastoral culture of Central Asia, and we compared them with Canadian and Japanese individuals, who are from sedentary agricultural cultures and represent Western and Eastern societies, respectively. Individuals from cultures like Mongolian culture demonstrate a self-assertive interdependence with holistic attention, attribute the causes of events to situational traits, show an interdependent self-construal, and correlate happiness with social (versus personal) success, which is common in Easterners. On the contrary, these individuals also have an inflated self-view and socially disengaging emotions, which Westerners have. We hypothesized that Mongolians would demonstrate a self-assertive interdependence, which we assessed using cultural tasks. Additionally, to investigate cultural differences in attitudes toward cultures of honour, we used a Retribution Scale to measure the extent to which participants endorsed retaliatory responses. Our findings from this ongoing study suggest that Mongolians' psychological characteristics differ from those observed in East Asian and Western cultures. We will discuss the academic implications of the ongoing research by referring to the globalization of psychology. This study

contributes to globalizing the psychological sciences by providing insights into Central Asian nomadic pastoral Mongolians and expanding the diversity of cultural psychology research.

Day 2 – Thursday, April 13: Poster Session 3 (12:00-1:00pm)

Semantic inhibition of pseudo-compounds

M. Sawiak, C. Gagne, & T. Spalding (Psychology Department, UAlberta)

Breakout Room 1

Compound words (e.g., snowball) contain two words or constituents. The head provides the syntactic category (ball is a noun), and the modifier (snow) refines the meaning. Pseudo-compounds are words that appear to have two constituents like compounds but do not (e.g., car and pet are not constituents in carpet). Recent research shows that the parts, or pseudo-constituents, of pseudo-compounds, are inhibited during processing because they are not truly part of the word; however, whether this inhibition is related to the whole word, its parts, or its meaning is unclear. The current project aims to distinguish whether, and to what extent, the meaning of pseudo-compounds is inhibited during processing through two experiments. The first will use a lexical decision task using items with transposed constituents or pseudo-constituents of compounds and pseudo-compounds (e.g., carpet becomes petcar), and control non-words. Differences between the three groups suggest differences in the activation and inhibition of constituents and pseudo-constituents. The second experiment will use a picture-based primed semantic judgment task. Participants will be presented with a pseudo-compound or an unrelated word (primed) and then will make a semantic judgment to a picture (e.g., when presented with a picture of a car, they will answer the question: “is this a vehicle?”). If the presentation of the pseudo-compound prime results in slower semantic judgment when it relates to the picture compared to compounds and nonwords, then this suggests that the meaning of the pseudo-constituent, has been inhibited; that is, semantic inhibition of the pseudo-constituent occurs during pseudo-compound processing.

Visual perspective and retrieval orientation

S. Küçüktaş, A.E. Cuff, & P.L. St. Jacques (Psychology Department, UAlberta)

Breakout Room 1

Autobiographical memories are memories of events from our personal past. These memories are recalled from a particular visual perspective. From an own-eyes perspective, people adopt a viewpoint identical to how the memory was formed (through their own eyes). From an observer perspective, people see themselves in their memories as if they were an observer. People are able to shift between these perspectives or experience both. Less is known regarding the brain regions contributing to behavioral changes associated with shifting perspectives when remembering. In the current study, we will use functional magnetic resonance imaging (fMRI) to investigate the brain regions that support visual perspective during autobiographical memory retrieval. We will compare differences in brain activity when instructions cue people to adopt an own-eyes or observer perspective, then recall a specific autobiographical memory. We are specifically interested in distinguishing how retrieval orientation associated with adopting visual perspectives changes the memory reactivation process. If visual perspective constrains retrieval prior to reactivation of memories and/or operates on the content of recovered memories, then there should be a preparatory response in brain regions that support the ability to take a particular visual perspective when the cue provides information about retrieval, compared to when the cue does not provide information regarding retrieval. Specifically, we predict that the posterior parietal cortex, the precuneus, and the angular gyrus will be recruited for specific perspective cues more than neutral recall.

Impact of prozac on kribensis cichlid fish serotonin levels and personality

S. Kalis & P. Hurd (Psychology Department, UAlberta)

Breakout Room 1

“What impact do neural serotonin (5-HT) levels have on personality?”. 5-HT, a monoamine neurotransmitter, plays an important role in physiological function such as cardiovascular regulation, respiration, and thermoregulation, as well as many behavioural functions such as; aggression, learning, and sensorimotor activity. Dysregulation of 5-HT can cause physiological symptoms such as anxiety and depression. These features are consistent among most species. In this experiment, I will analyze the impact of increased 5-HT levels on the personality of Kribensis cichlid fish. This experiment is relevant as the role of the serotonergic pathway and temperament in Kribensis cichlid behaviour is significantly understudied and knowing more about this interaction contributes to the question of how increased levels of serotonin due to SSRIS affects social behaviour. This study is relevant in identifying how the increased bioaccumulation of fluoxetine and other chemicals as a reflection of human antidepressant medication intake affects fish in waterways. Fluoxetine is a popular selective serotonin reuptake inhibitor (SSRI) that is commonly used in the treatment of human mental disorders, such as depression. SSRIs decrease serotonin uptake in the neuronal synapse, increasing serotonin (5-HT) in the brain. I will expose Kribensis cichlids to Fluoxetine and record subsequent behaviours. The fish will be divided into two control groups and two groups that will be exposed to fluoxetine and the behavioural measures of anxiety (plus maze), avoidance/learning (shuttle box), and aggression (mirror aggression test) will be recorded. I hypothesize that Prozac-exposed groups will display decreased anxiety, increased avoidance, and decreased aggression.

Working memory task complexity and its impact on executive functioning performance in healthy young adults

C. In, K. Pfeifle (Psychology Department, UAlberta), & A. Leung (Department of Occupational Therapy, UAlberta)

Breakout Room 2

This project explores how working memory training may affect an individual’s executive functioning overall. Executive functioning includes components of working memory, inhibitory control, and cognitive flexibility. Working memory requires the continuous updating of new information presented while inhibitory control requires the ability to prevent old information from interfering with current information. Cognitive flexibility requires the ability to switch between two tasks and working memory training engages these executive functioning components together. Recent work done by Forsberg et al., 2020 and Laine et al., 2018 discovered that working memory outcomes improve when participants use a visualization strategy while performing the n-back task. In this present study, we provide participants with this visualization strategy to use while performing the n-back task in two different conditions. Participants will perform the n-back task which will activate their working memory. In our experimental condition we include switching and inhibition paradigms in the n-back task to observe any additional effects on executive functioning outcomes. We hypothesize that increasing working memory complexity by adding switching and inhibition tasks, will improve participants performance on executive functioning tasks. Previous research has found some evidence of transfer effects on these tasks; however, results have been inconsistent. Our goal is to replicate Forsberg et al., 2020 study and examine how increasing complexity on a working memory task may improve an individual’s executive functioning.

Does the female zebra finch (*Taeniopygia guttata*) influence nest structure?

C. Poole, J. Hewitt, A. Camacho-Alpizar, B.A. Whittaker, L.M. Guillette (Psychology Department, UAlberta)

Breakout Room 2

Nest building in birds is a key biological event because it is essential to reproductive success. In the zebra finch (*Taeniopygia guttata*), the male is the primary nest builder leaving the role of the females overlooked. This

experiment asks if the female partner influences the nest characteristics built by her male partner. Male zebra finches were randomly assigned to one of two treatment groups: (1) same partner - where the focal male built five nests with the same female partner and, (2) different partner - where the focal male built five nests with a different female partner for each nest. All subjects were naïve to experimentation and none of the males had constructed a nest previous to this experiment. Each nest was considered to be complete once the female had laid her first egg in the nest. All pairs were separated after the completion of each nest to account for the potential disruption effect of switching female partners. Using linear measurements taken from standard photographs of the front, above, right, and left views of the nests we compared the variance of each measurement between males from the two groups. If the female has an influence on the nest characteristics, the nests built by males who had a different partner for each nest would show greater variance than those constructed by males who built with the same partner for each nest.

Similarities and differences across decision-making strategies

R. Huizinga & B.J. Dyson (Psychology Department, UAlberta)

Breakout room 3

In this experiment we sought to look at the processes of decision-making across different types of tasks, namely rock, paper, scissors (RPS) and multiple-choice trivia questions (MCQs). The choices made in RPS are dependent on previous choices, such as the common strategies win-stay, lose-shift (Forder & Dyson, 2016). Win-stay is the player tendency to make the same choice again after winning a round, while lose-shift is the player tendency to make a different choice after losing a round. Lose-shift is more commonly seen than win-stay, so it is possible that across different tasks, this strategy will be more common. The decisions made when answering MCQs are not typically related to previous choices, presuming that the questions themselves are independent from each other. We are collecting self-reported BFI and BIS BAS data. We predict that those high in BAS, which is related to avoidance of punishment, will be more sensitive to failure than success (Carver & White, 1994). For the BFI data, we predict that those high in neuroticism will have faster reaction times as neuroticism is positively related to impulsivity (Fetterman et al, 2010). For the main portion of the study, we are looking to see if participants adopt similar strategies across different domains of decision making, i.e., if they used a win-stay, lose-shift strategy during one task, do they also use it in the other (domain-independent)? Or will the fact that the tasks are rooted in different types of decision-making lead to different results (domain-independent)?

Self-determination theory and language learning: A meta-analysis

K. Noels, T. Kube, R. Weng, S. Arif, J. Chavarría, E. Morita, J. Abuan, S. Chen, K. Pathak, M. Marcotte, H. Perlas, D. Abraham & H. Torri (Psychology Department, UAlberta)

Breakout room 3

Self-Determination Theory (SDT) is a practical psychological framework for educators and researchers to investigate various factors that relate to motivation in second language (SL) and foreign language (FL) learning (Noels et al. 2019). Though SDT has guided studies for decades, little work has been done to synthesize the results. To organize this field of research, we conducted a meta-analysis to provide an overview of research findings and determine patterns across studies. Our team completed an initial literature search across four databases to identify empirical studies, theses, and dissertations from 1970-2022 investigating language learning motivation. A total of 681 empirical articles and 782 dissertations underwent abstract and full-text screenings. Eligible studies (74 empirical articles & 39 dissertations) were then coded in terms of features related to quantitatively measured relevant descriptives & variables. These codes will be statistically analyzed to calculate the weighted and averaged effect sizes. We hypothesize that 1) supporting students' needs can foster their sense of autonomy, relatedness, and competence; 2) needs satisfaction drives learner autonomy and fosters self-determined motivation; and 3) more autonomous motivational orientations have a stronger positive effect on linguistic, psychological, and sociocultural outcomes than less autonomous orientations. We discuss some of

the methodological limitations of research in this area, as well as some gaps in research foci that might guide future inquiries. Ultimately, we conclude that a comprehensive understanding of the current state of motivation research provides much needed insights to guide both research and pedagogy towards a comprehensive theory of language learning.

Does teacher-child relationship quality predict child emotion self-regulation in early childhood?

E. Glyson, P. Li, B. Zatto, & W.L.G. Hoglund (Psychology Department, UAlberta)

Breakout room 4

Emotion self-regulation is a critical process contributing to healthy socio-emotional development during early childhood. Caregivers, such as parents, play an important role in the development of emotion self-regulation for children by modeling socialization practices through meaningful interaction. In preschool, teachers become important sources of support for children. Recent literature has focused on children's self-regulation abilities generally across all three components (cognitive, behavioural, emotional), but with little emphasis on the emotional component of self-regulation. The ways that teacher-child relationship quality relates to children's emotion self-regulation in early childhood is unclear. Given that the majority of previous studies focused on middle childhood, the current study examines change in the frequency of emotion self-regulation and how emotion self-regulation covaries with dimensions of teacher-child relationship quality in early childhood. Gender differences among these associations will be further investigated. Participants included 428 children who were assessed longitudinally across four waves, in the fall and spring of preschool and kindergarten. Children's emotion self-regulation was assessed using behavioural tasks (Disappointing-Gift-Task and Delayed Frustration Task) and from teacher-reports. Teacher-child relationship quality was assessed from teacher-reports and structured observations. The study's results will provide insight into the trajectory of emotion

The consistency of episodic and semantic details in autobiographical memories that have shifted visual perspective

A. Nash, C.I. King & P.L. St. Jacques (Psychology Department, UAlberta)

Breakout room 4

Memories can be viewed from an "own eyes" and an "observer" perspective. Past research demonstrates that visual perspective influences the content of memories and that natural shifts in visual perspective can change memory consistency. However, no studies have examined whether manipulating visual perspective leads to similar changes in consistency. To address this, we measured how shifting visual perspective influences the consistency of detail content in autobiographical memory (AM) narratives. Participants wrote AM narratives while maintaining an own eyes perspective or while shifting from an own eyes to an observer perspective. The participants came back two days later for a post-manipulation recall where they wrote their AM narratives again, without visual perspective instructions. We coded the consistency of episodic and semantic details in the narratives. Memories that shifted visual perspective had greater changes than memories that maintained the same perspective. Specifically, the content within personal semantic, emotion, and perceptual details changed more when participants shifted their visual perspective. For the post-manipulation recall, personal semantic details were also changed more in memories that participants shifted their perspective. Additionally, the memories where participants adopted a forced perspective had greater changes than baseline memories. Taken together, these results suggest that the more a visual perspective is changed from the original AM, the more inconsistent the resulting memory will be. These study results can help guide eyewitness interviewing protocols and therapeutic memory recollection.

Sex differences in lateralized responses to emotionally conditioned stimuli in kribensis cichlid fish

H. Kim & P.L. Hurd (Psychology Department, UAlberta)

Breakout room 5

Cerebral lateralization of emotion was previously believed to be a unique trait to humans, but numerous studies have shown that a wide range of animals demonstrate lateralized responses to the different emotional triggers. Several animals have also shown sex differences in lateralization patterns when responding to intrinsically emotionally arousing stimuli. Not many studies have, however, investigated the lateralized responses to learned emotional stimuli. The present study used emotionally conditioned visual stimuli to examine sex differences in lateralized behavior of kribensis cichlids. One stimulus was given an appetitive association through the pairing with food, and the other stimulus was given an aversive association by pairing with a chemical alarm signal. A circular lateralized tank was used to measure the asymmetries in eye use as a measure of lateralization. We hypothesized the males to have a stronger visual lateralization to negatively valent stimuli, and the females to have a stronger visual lateralization to positively valent stimuli. Furthermore, we expected to see lateralization only at an individual level, since lateralization at the population level is only prevalent in those species with strong schooling tendencies. The findings of the present study could lead to better understanding of the complex relationship between sex and lateralized responses to emotion, which could help identify and explain the sex differences in certain behavioral roles and personality-like characteristics of these animals.

A systematic review and meta-analysis of therapeutic hypothermia and pharmacological co-therapies in animal models of ischemic stroke

A.C. Suerte, L.J. Liddle, A. Abrahart (Psychology Department, UAlberta), & F. Colbourne (Psychology Department/NMHI, UAlberta)

Breakout room 5

Ischemic stroke occurs due to a blocked artery in the brain. Only a small number of treatments have been approved for clinical use, and not all patients benefit from them. As a result, many patients suffer post-stroke disabilities (e.g., paralysis on one side of the body). Therefore, additional treatment protocols must be examined to further improve outcomes. Therapeutic hypothermia (TH) is one neuroprotective (i.e., cell-saving) method that has been widely studied. TH reduces injuries by blocking multiple injury pathways. To further boost its efficacy, researchers have been combining it with a variety of neuroprotective drugs. These agents may make cooling easier and/or further block injury pathways. Our objective is to investigate the effectiveness of TH combined with other drugs through a systematic review and meta-analysis. Several databases were used to identify animal studies of focal ischemic stroke, with TH and co-therapy. We analyzed whether behavioral deficits and brain injury were reduced by TH and whether they were further reduced by co-therapies. Based on the results, there have only been a handful of neuroprotective drugs that have been tested with TH. Furthermore, study quality varied between studies; some experimental design elements (e.g., blinding and randomization) were common, whereas others (e.g., sample size calculations) were infrequent. Future studies could be warranted to translate the most beneficial co-therapies into clinical settings. This is particularly important for patients who do not respond well to current treatment options, as it could improve their outcomes post-stroke and lessen the risk of developing disabilities following stroke onset.

Recalling lists backwards: Performance versus estimation

N.D. Robinson & J.B. Caplan (Psychology Department, UAlberta)

Breakout room 6

When remembering a phone number, we attempt to recall the digits in the correct order. This is an example of serial recall, where the order of items (such as digits or words) is important. How we recall the list backward is much less understood. The associative chaining models learn associations between items, meaning one item

cues for the following item, while the positional coding model learns associations between each item and its position in the list, allowing positions to cue items. Though these models were designed to explain forward serial recall, the same mechanisms could be simply reversed to perform backward recall. Consistent with this, backward recall performance; appears to be almost a mirror image of forward, where the first few items are recalled better in forward recall, whereas the last few items are recalled better backward. Guitard & Saint-Aubin (2022) found that foreknowledge of recall direction influenced participants to change their study strategy for backward recall, but this may not have been necessary. Because forward recall is more common in our lives, we hypothesize that participants will underestimate their own backward recall more than forward recall. If the first experiment shows this, I will investigate the cause. If participants are altering their study approach based on the direction of recall, this may be the cause of the dissociation between backward and forward recall. Future research should be directed toward this metamemory illusion in order to determine if these effects are influenced by practice with backward recall.

Religion, threat, and attachment

K. Nash, D. Simpson, P. Faulkner, K. Johnson, Y. Zhu (Psychology Department, UAlberta)

Breakout room 6

The purpose of this study was to test whether attachment style moderates the effects of both a relational and an achievement threat on changes in religious zeal, specifically looking at which attachment styles would increase or decrease in religious zeal under the differing threats. This study was intended to replicate and expand the results found in a previous study which found that people who were low in attachment anxiety and high in attachment avoidance increased religious zeal after an achievement threat, and those with high anxiety and high avoidance increased religious zeal after a relational threat. The predicted results were not replicated. Exploratory results and explanations for the lack of replication are discussed.

'Perhaps we are not all that different': Facilitating intercultural understanding among international and domestic students in Canada via shared experiences and other-oriented hope

A. Ali, Y.S.D. Zhang, K.A. Noels, & D. Larsen (Psychology Department, UAlberta)

Breakout room 7

According to Baumeister and Leary (1995), people have a need for positive interactions to form bonds with others and develop a feeling of belongingness. This feeling of belongingness is important for international students as they are studying in a foreign place and may struggle to fit into the host society. The focus of this study was on promoting cross-cultural understanding and positive intercultural relationships between domestic and international students through shared experiences (e.g., adapting to a foreign culture). Specifically, this study aimed to achieve this goal by inviting participants to reflect and share personal hopes and the hopes they have for others (e.g., other-oriented hope) in regard to cross-cultural success. The study involved a three-day virtual workshop that was conducted in collaboration with hope researchers. A total of 11 Canadian students ($M_{age} = 26$, $SD_{age} = 4.47$) and 12 international students ($M_{age} = 26.25$, $SD_{age} = 5.12$) from a western Canadian university participated in this study. Thematic analysis on the data showed that both international and domestic students face similar hardships in their cross-cultural adaptations, including a lack of understanding from one's family back home, and a longing for social connections and social support in the host country. Regardless of the students' nationality and ethnocultural background, sharing common experiences seemed to have increased their understanding of one another despite perceived cultural differences, and drew them relationally closer. In a similar vein, expressions of other-oriented hope appeared to be associated with intercultural understanding and positive intercultural relationships.

Heterogeneity in developmental trajectories of Cyber Victimization and prediction of depressive Symptoms

P. Rawat, C.M. Pan, I. Schoettler, & W.L.G. Hoglund (Psychology Department, UAlberta)

Breakout room 7

Cyber victimization is a form of peer victimization that occurs through the use of electronic devices via social platforms and personal correspondence between the aggressor and the target. About 28% of U.S. adolescents reported being cyber-victimized in 2013 (Patchin, 2013), which increased to 59% in 2018 (Atske, 2022). Adolescents who experience cyber victimization have an almost three-fold higher risk of experiencing depressive symptoms when compared to non-cyber-victims (Tran et al., 2021). With the growing use of social media among adolescents (Anderson & Jiang, 2018), it is essential to study cyber victimization and its associated risks to adolescents' mental health. Various patterns of stability and change in peer victimization have been observed due to substantial individual variability in timing, duration, and intensity (Oncioiu et al., 2020). However, there has been limited research on the heterogeneity in the developmental trajectories of cyber victimization. It is also unclear how this heterogeneity might relate to adolescents' experiences of depressive symptoms. The current study investigates the following research questions: (1) Is there heterogeneity in the trajectories of cyber victimization during adolescence? (2) Do the trajectories of cyber victimization predict the frequency of adolescents' depressive symptoms? (3) Does gender moderate the association between the trajectories of cyber victimization and depressive symptoms? The study included 1,434 adolescents in grades 7 to 9 who were assessed on four occasions over two years. Adolescents reported on the frequency of their experiences of cyber victimization and depressive symptoms in the fall and spring of each school year. The implications of the study aim to address the gap in scientific knowledge regarding heterogeneity in developmental trajectories of cyber victimization and its impact associated with depressive symptoms in adolescence, as well as to inform early preventative programs in high schools to reduce adolescents' risks of experiencing cyber victimization.

Relationship between linguistic and socio-emotional speech evaluations of Chinese immigrants

X. Zhou, K.A. Noels, V. Wong, & Y. Fang (Psychology Department, UAlberta)

Breakout room 8

How native speakers (NS) evaluate the speech of non-native speakers (NNS) affects the communication quality, influences the attitudes of NS towards NNS, and may lead to language-based discrimination. Understanding the speech evaluation process offers insight into improving language education and reducing language-based biases. The current study explores the relationship between two dimensions of speech evaluation: the linguistic dimension targeting accentedness, comprehensibility, and fluency, and the socio-emotional dimension focusing on warmth and competence using the Stereotype Content Model (SCM). In total, 453 native English speakers listened to a sample of 10 tellings of a story produced by non-native English speakers randomly chosen from 242 Chinese immigrants. The NS graded the speech samples on accentedness, comprehensibility, fluency, warmth, and competence. Path analysis showed that fluency mediated the relationship between the linguistic and socio-emotional evaluation variables: comprehensibility moderately predicted warmth ($\beta = .46$) and strongly predicted competence ($\beta = .62$) indirectly via the mediation of fluency, while accentedness weakly predicted warmth ($\beta = -.11$) and competence ($\beta = -.14$) indirectly via the mediation of fluency. Accentedness also had a moderate direct association with warmth ($\beta = .30$) but not competence, while comprehensibility had no direct relationship with either warmth or competence. The present study revealed that greater comprehensibility and fluency perceived by the NS better predicted their perceived warmth and competence of the NNS than accentedness, suggesting that language training programs for the NNS should prioritize improving comprehensibility and fluency for more pleasant communication between the NS and NNS.

The role of trust and childhood SES on the adult stress response*S. Mazidi & K. Nash (Psychology Department, UAlberta)***Breakout room 8**

Childhood socioeconomic status (SES) is a well-documented determining factor in adult health (Luo & Waite, 2005). Though research suggests that low childhood SES alone can magnify the adult stress response, it is unclear what factors may lead to this increase. In this study, we use a high powered, pre-registered design to measure the relationship between trust, SES, and one's response to stressful stimuli. First, participants rated their subjective childhood SES and level of trust towards god, government, and parental figures in childhood. Next, participants were randomly assigned to read a fabricated news article about either a positive (control condition) or negative (threat condition) economic outlook. After this manipulation, participants rated their level of felt anxiety. (Results Pending): It is expected that participants in the threat condition who report lower childhood SES and higher levels of trust will have lower levels of felt anxiety than those who report lower childhood SES and lower levels of trust. This would suggest that for individuals who grow up in lower SES environments, trust may play a moderating role in the increased response to stressful stimuli seen in previous research. With this analysis, we aim to help unravel the complex relationship between SES and stress.

Day 2 – Thursday, April 13: Poster Session 4 (1:00-2:00pm)**Cognitive and sensorimotor task performance predicts on-road driving risk in commercial truck, bus, and light vehicle drivers***A.E. Atkin (Psychology Department/NMHI, UAlberta), D. Scott (Impirica, Inc.), A. Granley (Impirica, Inc.), & A. Singhal (Psychology Department/NMHI, UAlberta)***Breakout room 1**

Safe driving requires numerous cognitive and sensorimotor skills. Unsafe driving can be identified using an on-road evaluation, but this can be risky, time-consuming, and expensive. Poor performance on cognitive and sensorimotor tasks has previously been shown to predict on-road driving performance in privately licensed drivers, but commercially-licensed drivers have not yet been studied despite commercial driving generally being more demanding, with larger and heavier vehicles that increase the risk from unsafe driving. For this study, we recruited 3 types of commercial drivers (truck, heavy and light vehicle drivers) and presented them with the tablet based, Vitals cognitive screening tool. The Vitals tool uses a series of 4 tasks to measure reaction time, decision-making judgment, working memory, and sensorimotor control. Following the Vitals, participants completed a standardized on-road driving evaluation using their vehicle. Performance on the Vitals tool was shown to predict on-road performance across all vehicle types, with participants becoming more likely to fail their on-road evaluation as their performance on the Vitals decreased. On an individual task level, on-road evaluation failure was associated with lower success on the judgment and working memory tasks, and less time on-target in the sensorimotor control task. This study demonstrates that cognitive and sensorimotor task performance is a good predictor of risk in commercially-licensed drivers, regardless of vehicle type. Use of the Vitals tasks as a screening tool prior to an on-road evaluation may benefit both drivers and evaluators.

Differential behavioral responses in zebra finches (*Taeniopygia guttata*) to male and female distance calls*I.M. Ebrahim, M.J. Deimeke, P.K. Sahu (Psychology Department, UAlberta), & C.B. Sturdy (Psychology Department/NMHI, UAlberta)***Breakout room 1**

Zebra finches (*Taeniopygia guttata*) are songbirds that have sexually dimorphic vocalizations. While only males produce a song, learned from listening to a male tutor, both males and females produce calls. Distance calls serve as contact calls between birds in a flock and are used in mate-to-mate communication. While common to

both sexes, the spectral structure and duration of distance calls differ based on the sex of the caller. A study by Gobes and colleagues (2009) found that male and female zebra finches respond differentially to male and female distance calls, with both sexes showing a preference for female calls, demonstrated through phonotaxis and increased calling. Female call playbacks also resulted in higher immediate early gene (ZENK) expression in the forebrain of females, but not males as compared to silence. A recent study from Scully and colleagues (2017) did not find this difference in ZENK expression of male and female zebra finches after listening to male and female distance calls. However, Scully et al. (2017) did not analyze behavioral responses to call playback. Therefore, the current study is a behavioral replication of Gobes et al. (2009) and an extension of Scully et al. (2017). The number, rate of calling, and general perch movements were analyzed from audiovisual recordings collected during the Scully et al. (2017). We predict that the zebra finches will show differential responding to the distance calls based on the sex of the caller.

An investigation of the neural correlates of statistical learning

A. Boadu (NMHI, UAlberta), S. Saju (NMHI, UAlberta), K. Nisbet (Psychology Department, UAlberta), J. Cummine (Communication Sciences and Disorders Department/NMHI, UAlberta)

Breakout room 2

The brain's ability to learn from and use the continuous streams of information it encounters on a daily basis is known as statistical learning. This applies to many sensory domains, where statistical learning involves organizing the statistical regularities in streams of sensory input into organized arrays and associations within the brain's regions. Because statistical regularities are widespread in our environment, this ability is a useful tool in many different areas. Of particular interest is its role in language processing, including facilitating reading comprehension. Previous studies have established a clear link between statistical learning abilities and reading comprehension proficiency. However, research has yet to discuss the neural correlates of statistical learning, as well as its neural relationship to reading comprehension abilities. This study aims to bridge this gap by examining the neural correlates of statistical learning to identify a centralized region for statistical processing. This was executed using online measures of fMRI to localize brain activity during statistical learning-based activities, as well as offline measures of reading proficiency. So far, the results suggest small areas of overlap between visual and auditory stimuli in areas responsible for linguistic processing and object perception, in addition to areas typically found for processing each sensory modality. These findings suggest that there is a central area involved in processing all stimuli, despite their different modalities. The findings of this study, and further studies, provide a rationale for personalized approaches to targeted therapies for groups where reading and language abilities are applicable.

The impact of entropy and frequency on compound word processing

J. Gauthier, C. Gagne & T. Spalding (Psychology Department, UAlberta)

Breakout room 2

Compound words provide unique insight into how people process a word's form and meaning. When reading a compound word, people unconsciously link the meaning of its two parts together using a semantic relation; e.g., 'snowball' ball made of snow, 'teacup' a cup for tea. Entropy is a measure of the relational competition that exists in a given compound. When compound words have multiple possible relational structures (i.e., high relational entropy), they are processed slower than unambiguous compounds (i.e., low relational entropy). For instance, 'speedboat' could be a boat that uses speed, a boat for speed, or a boat that has speed whereas the word 'bathrobe' has only one dominant relational structure which is a robe for bath. Therefore, 'speedboat' would take longer to process than 'bathrobe.' Previous research has also found a word frequency effect: commonly used compound words, such as 'speedboat' or 'bathrobe' are processed faster than uncommon compounds such as 'bootstrap.' This study aims to examine the interaction between frequency and entropy during processing by using a lexical decision task. In this task, speed of processing is calculated by how long a

participant takes to decide if a compound word is a real word or not. Our hypothesis is that higher entropy will slow processing for low-frequency compounds compared to high-frequency compounds. Once we've encountered a compound word repeatedly, it is easier to select one dominant relation and thus, the word is retrieved more quickly and overall processing is faster.

Living in history in Fort McMurray

C. Heninger, E. Heanoy, & N. Brown (Psychology Department, UAlberta)

Breakout room 3

The Living-in-History (LiH) effect is defined as the frequent use of the important public events to date personal memories. However, this phenomenon is only observed when external forces bring about dramatic and enduring changes in the fabric of daily life - what people do, where they do it, and with whom. The aim of this study is to examine the LiH effect in the sample of Fort McMurray residents who experienced the devastating wildfire of 2016. Additionally, we are interested to investigate whether the onset of COVID-19 Pandemic and the flood in 2020 have an effect on their autobiographical memory content. We will use a 4-phase procedure where participants will respond to neutral cue words, estimate dates of the recalled events while thinking-out-loud, rate relatedness of those events to fire, flood, and COVID-19, and answer to 12-item TIS, 7-item CES, 8-item PTSD, disaster consequence and demographic questionnaire. Data collection will begin soon. Based on previous LiH findings, we hypothesize that people will frequently mention the 2016 fire while dating personal events. We also predict that people who report more fire-related events will have a higher TIS rating. Additionally, we predict that CES, and PTSD scores will also correlate with the TIS ratings.

The effects of parental adverse childhood experiences on parenting and children's executive function

N. Abdul-Rahim & S. Wiebe (Psychology Department, UAlberta)

Breakout room 3

Executive function (EF) in children, including inhibitory control, working memory, and cognitive flexibility, is crucial in almost every aspect of life. Previous research has found that parenting behaviour and a history of adverse childhood experiences (ACEs) have an impact on children's EF. This study will explore parent ACEs and their impact on parenting behaviour, as well as their combined impact on children's EF. Data will be gathered from 75 parent-child dyads aged 3-5 years. Parent ACEs refer to any abusive experiences the individual has had before the age of 19; this will be measured using the ACEs questionnaire (Felitti et al., 1998). Parenting behaviour will include warm and harsh parenting; these will be measured using the parenting styles and dimensions questionnaire (PSDQ) (Robinson et al., 2001). The Word Span task and the Shape School task will be used to assess children's EF; these tasks are designed to measure children's working memory and cognitive flexibility. Data analysis will include correlational and regression analyses to determine whether there is a linear relationship between parent ACEs, parenting behaviour, and children's EF. Additionally, a mediation analysis will be performed to investigate the effect of ACEs on EF through parenting. This study will provide insight into how and why parents' ACEs and children's EF are related.

Emotion socialization, autonomy and self-regulation in early childhood

V.C. Kalinin & S.A. Wiebe (Psychology Department, UAlberta)

Breakout room 4

Parents' reactions to children's negative emotions can support or hinder children's emotion regulation (King et al., 2022). Self-determination theory states that the basic need for autonomy facilitates the development of self-regulation (Legault & Inzlicht, 2013). Self-regulation is a construct implicated in aspects such as reduced internalizing behaviours later in life (Belsky et al., 2008; Devine et al., 2016; Levitt et al., 2020). The current study will assess how parenting practices around emotional displays impact child autonomy and self-regulation. It is

hypothesized that unsupportive emotion coping parenting will be related to reduced child autonomy, which in turn will negatively impact self-regulation. The sample included 55 parent-child dyads (M_{age} = 3.59, 60% female). Parents completed the Coping with Children's Negative Emotions Scale (CCNES), which measures expressive encouragement (EE), emotion-focused reactions (EFR), and problem-focused reactions (PFR) (Fabes et al., 2002). EE and PFR items reflect supportive parenting practices whereas EFR items reflect unsupportive parenting practices. EFR emphasize dismissing the negative emotion and utilize intrusive strategies to do so. The intrusive aspect of EFR is linked to reduced child autonomy (King et al., 2022, Perry et al., 2018). Self-regulation was measured using the Shape School task, and child autonomy was coded during free play. Data analyses are currently in progress.

Coping strategies on personal growth

A. Sadiq & K. Nash (Psychology Department, UAlberta)

Breakout room 4

This study aims to replicate and extend a previous investigation that examined the impact of problem-focused strategies and cognitive reappraisal on self-efficacy and growth motive, two key constructs that contribute to personal development. Problem-focused strategies involve a direct approach in targeting a problem and developing strategies to mitigate it, whereas cognitive reappraisal involves reframing negative events to positively reinterpret the situation and elicit more positive emotions. Previous research suggested that problem-focused techniques may be slightly more effective than cognitive reappraisal in enhancing self-efficacy and growth motive. This study aims to provide a deeper knowledge on how individuals may successfully handle difficult situations and foster growth. Participants will read an article describing a humanitarian crisis conflict and be randomly assigned to either develop methods to overcome the problem (problem-focused condition) or reframe the circumstance in a less negative way (cognitive reappraisal condition). Participants in the problem-focused condition are predicted to report higher levels of self-efficacy and intrinsic motivation compared to those in the cognitive reappraisal condition. Overall, the results of this study have relevance for evidence-based therapies that support intrinsic motivation, self-efficacy, and adaptive coping mechanisms, all of which are essential for personal growth.

Coping with threats to body image: A cross-cultural study on stress coping strategies between European Canadians and East Asian Canadians

L. Wojcik & T. Masuda (Psychology Department, UAlberta)

Breakout room 5

Whether it be through social media, friends, or family, threats to body image may lead to an overall negative body image if not coped with effectively. In turn, a negative body image is associated with disordered eating patterns. Over one million Canadians are currently diagnosed with an eating disorder, and numbers are rising in many East Asian countries. Given the prevalence and severity of eating disorders, it is essential to gain more knowledge on body image coping strategies which serve as protective factors. The current study investigated how individuals cope with threats to their own body image. European Canadians (n = 112) and East Asian Canadians (n = 101) rated the extent to which they use certain coping strategies in response to a body image threat, using the "Body Image Coping Strategies Inventory" (BICSI). We examined cultural differences in the usage of three types of coping strategies: Appearance Fixing, Avoidance, and Positive Rational Acceptance. Results found a main effect of culture on Appearance Fixing, in that European Canadians are more likely to endorse this coping strategy than East Asian Canadians. Furthermore, it was found that Appearance Fixing and Avoidance coping strategies were least adaptive in terms of well-being, given the significant relationships between them and symptoms for stress, depression, and social anxiety. The implications of culturally grounded research on body image and well-being are further discussed.

Involvement of mind wandering in the inconsistent contradiction effect during narrative reading

S. Peng & P. Dixon (Psychology Department, UAlberta)

Breakout room 5

Previous research has discovered that readers may slow down when the current sentence contradicts a previous sentence, which is referred to as the contradiction effect. Presumably, this effect depends on readers being able to retain and retrieve the previous information. We hypothesized that these memory processes would be impaired when readers were mind wandering. We measured mind wandering in three ways: First, we inserted self-report probes at periodic intervals in which readers indicated the extent to which they were off task. Second, we measured cognitive coupling, a correlation between text complexity and reading time. Complexity was manipulated in terms of two properties: lexical difficulty and syntactic difficulty. Finally, there were comprehension questions to index how much of the material was retained. We predicted that all of these mind wandering indices should covary and should predict the magnitude of the contradiction effect.

Improving intergroup bias through superordinate group leadership

N. Wheeler, C. Kershaw, L. Syfers & D.E. Rast III (Psychology Department, UAlberta)

Breakout room 6

The social groups we belong to are often composed of smaller subgroups nested within a larger superordinate group. For example, faculties within a university maintain unique identities while existing within the shared framework of the university. A leader of a superordinate group with multiple subgroups can influence subgroup relationships and reduce intergroup bias— the perceived differences between subgroups that are likely to result in negative attitudes about the outgroup. An experiment (N= 339) examined how the characteristics of a leader can reduce intergroup bias. Specifically, how the leader being representative of the superordinate group identity (i.e., leader prototypicality) or being a member of the in-subgroup (i.e., leader affiliation) independently reduce intergroup bias. It was hypothesized that prototypical leaders would influence lower levels of intergroup bias than non-prototypical leaders regardless of the leader's subgroup affiliation and that subgroup affiliation would increase these effects. The results did not achieve statistical significance and did not support the hypotheses. These findings indicate that it is integral to refine the methodologies and manipulations used to explore this aspect of leadership. Contextual factors and group norms may have impacted how intergroup bias is affected by leader affiliation and prototypicality. Future researchers could investigate factors like uncertainty to increase the perceived threat between subgroups.

The politics of attention: Examining the role of political ingroup-outgroup biases in social attention

A. Puchakotla, E. Heidebrecht, & D.A. Hayward (Psychology Department, UAlberta)

Breakout room 6

There have been a number of investigations into how an individual's personality/traits relate to social attention. For instance, one investigation demonstrated political temperament moderated social attention, in that Republicans show muted social attention as compared to Democrats. We aimed to extend this work by investigating whether social attention changes based on looking at a face that belongs to an individual's political ingroup or outgroup. 50 participants completed a two-day study; on Day 1, participants completed a typical gaze-cueing task, whereby a face looked towards (cued) or away (uncued) from a target, and response times for the two trial types were contrasted to measure social attention. On Day 2, participants completed a gaze-cueing task again, however the schematic faces wore a hat with either their political in-group or out-group logo. Day 1 analyses yielded differences in social attention, in that those who identified as Conservative showed no social attention (-3ms), while those who identified as Green, Liberal, or NDP showed robust social attention (16ms, 18ms, 19ms respectively). Day 2 results will also be discussed. Together, our work provides additional support for the variation in social attention across individuals.

The role of institutional logics on demonstration of creativity

P. Nayak (Psychology Department, UAlberta), & V. Glaser (School of Business, UAlberta)

Breakout room 7

Institutional logics is the material practices, beliefs, and assumptions that define a particular social world (Glaser et al., 2016). The psychological representations of logics are represented by dividing them into two: market logic and family logic. Research on institutional logics has shown that the two kinds of logics have different influences on human motivation. Similarly, research on creativity has highlighted several factors such as rewards and culture influence creativity. This suggests that logics can also impact creativity. However, little is known about the relationship between institutional logics and creativity. The current study aims to fill this gap in the literature by identifying if being primed to either one of the market or family logic will affect the creativity displayed. We used surveys to prime participants to either one of the two logics after which we asked them to provide creative uses for everyday objects, known as the alternative uses task. We found that those individuals not primed with an institutional logic displayed higher creativity on the alternative uses task than those participants who did receive a prime before the task. There was no significant difference between the creativity displayed between the two logics suggesting that neither logic is predictive of higher creativity. This study adds to our understanding of how different beliefs and assumptions can affect behaviours such as creativity. It introduces another factor that may affect creativity, especially in the workplace.

Comparing habenular and behavioural asymmetry between *Pelvicachromis Pulchers* in wild vs captive-reared environments.

R. Khan & P. Hurd (Psychology Department, UAlberta)

Breakout room 7

Interest in studying personality traits in animals has been increasing. Recent research shows differences in stress responses among bold vs shy fish. Bold fish react in proactive manners such as fighting, while shy fish tend to cope more reactively through freezing. Previous studies have focused on assessing sex differences in the boldness shyness continuum as a result of stressors in lab reared fish. Since the fish are acquired from pet stores, it is less likely that they have experienced predation pressures, making it difficult to assess bold vs shy behaviours in fish following exposure to a predator. Our study investigates differences in habenular and behavioural asymmetry through predator inspection and open field tests in a sample of cichlids acquired from an area with high predation in Nicaragua (wild convict cichlids). We examined differences in fish that are reared in high predation areas and compared them to findings in low predation areas. Furthermore, we also examined whether asymmetry in the habenula relates to behavioural responses to stress and anxiety in the presence of stressors. We predict that there will be right hemisphere dominance as a result of processing stimuli in fish reared in high predator areas, and look at differences in male versus female convict cichlids to examine if there is a larger population bias towards a larger left habenula. We believe that fish in high predation areas will demonstrate more boldness compared to fish from no predation areas.

Working memory is facilitated by task-relevant emotions – an ERP study

V.R. Gumnur, S.A. Wiebe, & and L. Qureshi (Psychology Department, UAlberta)

Breakout room 8

Previous research has shown that emotions can impact the ability to monitor and replace information in working memory (WM), but the extent to which this effect varies with the valence, and relevance of emotional information to the task is unclear. The current EEG study with young adults aimed to test how emotional stimuli and their task relevance affect performance on a visual n-back task, a common paradigm for assessing WM. Participants (N = 40, 17-24 years) completed a modified 1-back and 2-back task wherein they responded to human faces that were either young, middle-aged, or old and showed a neutral, happy, or sad expression. The

task relevance of emotion was manipulated through instructions to make match/non-match judgments based on the emotion (i.e., emotion was task-relevant) or the age (i.e., emotion was task-irrelevant) of the face. Analysis of the behavioural results from the online pilot version of this study found a four-way interaction between emotional valence, task relevance, cognitive load, and trial type (maintenance or updating). Results showed faster response times and higher accuracy when emotion was task relevant than irrelevant especially when faces showed a positive expression. Furthermore, positive emotions were associated with worse performance on trials requiring maintenance of WM rather than updating under higher cognitive load. These findings suggest that task-relevance of positive emotional information could enhance WM even under high cognitive load and we hope to find corroborative behavioural and ERP evidence in our current study.

With a little help from my friends: Determining the outcomes of a peer support intervention for informal caregivers to people with aphasia

E. Favis (Psychology Department, UAlberta) & E. Kim (Communication Sciences and Disorders Department, UAlberta)

Breakout room 8

Informal caregivers, defined as family members or friends who provide practical care without payment or formal training, are an essential resource for the care recipient and the health care system. Because of caregivers' functional and economic importance, caregiver research has focused on reducing caregiver burden and improving caregiver quality of life. Caregiver burden is exacerbated when the care recipient has aphasia, a communication impairment experienced as a result of stroke, severe head injury, or progressive neurological disorder. Specifically, caregivers to people with aphasia (PWA) report reduced social activities, difficulty adapting to new roles, and a lack of support and respite. To minimize caregiver burden, interventions have been developed for caregivers to PWA; however, peer support interventions require further study to determine whether they improve caregivers' psychosocial functioning and overall quality of life. The present study outlines the framework for a peer support intervention designed for caregivers to PWA. Caregivers participated in a peer support group beginning at the Alberta Aphasia Camp followed by four bi-weekly online support sessions hosted online via Zoom. Using a mixed methods design, social participation and emotional adjustment were measured by the Family Aphasia Measure of Life Impact (FAMLI) scale and a semi-structured interview with one caregiver who had not previously participated in this intervention. Three themes were found post program: understanding the realities of aphasia, changes to caregiver independence, and shifting perspectives. Results and applications to develop and modify interventions that better address problems faced by informal caregivers are discussed.

Day 2 – Thursday, April 13: Poster Session 5 (2:00-3:00pm)

Death fears: A qualitative analysis in young adults

S.S. Kandpal (Psychology Department, UAlberta) & Z. BayatRizi (Sociology Department, UAlberta)

Breakout room 1

Psychology as a discipline has long questioned whether humans fear death specifically, or whether perhaps some closely related concept onto which death is projected. This question has been briefly pondered by scientists, but rarely in a systematic manner by citizens. Thus, this study examined the fears young adults may have surrounding death and utilized a hierarchical fear structure to provide insight into the target population. Semi-structured interviews with 30 participants were conducted among persons aged 18 to 25, ranging in characteristics. To better comprehend participant sentiments, 10 broadly outlined questions were posed in each interview, with many participants choosing to extend their interviews and further discuss. Data was then extracted and qualitatively interpreted from interview transcripts through content analysis of the interview content. The results demonstrated agreement with the study hypothesis, that there is a psychological as well as a physical component to death fears, which are both divided into 3 subcategories each. Under the psychological

aspect of fearing death, subsections included the fear of the unknown, dying with regret, and the disappearance of an existence. Physically, fearing death consisted of a fear of the dying process, the fear of the end of life, and the fear of pain. Study findings could be utilized by health authorities worldwide to identify age-based inclinations in death anxiety for future research, and better advising healthcare practitioners on how to better handle the death fears of the younger population and to have a stronger grasp of why they may manifest in the first place.

Internalizing problems in early childhood: The role of cultural socialization practices and immigrant status

J.K. Mahal, B. Zatto, & W.L.G. Høglund (Psychology Department, UAlberta)

Breakout room 1

Internalizing problems emerge in early childhood, with an estimated prevalence rate of about 2-20% (Gutman et al., 2020). Internalizing problems commonly include symptoms of anxiety and depression. These internalizing problems increase on average across this period (Gutman et al., 2020). Yet we know little about important family characteristics and processes that might be protective for ethnically diverse children's risks for experiencing internalizing problems in early childhood. Parental cultural socialization practices (teaching about ethnic/racial heritage and history) have been found to be negatively associated with internalizing problems, but only two studies have investigated this association in early childhood (Caughy et al., 2002; Osborne et al., 2021). Moreover, both studies included only African American children in their samples which affects the generalizability of these findings. The current study uses longitudinal data from an ethnically diverse sample of 443 preschool children (47.9 % girls; Mage = 4.08 years, SD = .34 years), their parents and teachers to examine the following research questions: 1) What is the frequency and pattern of change in depressive and anxious symptoms across early childhood? Does the frequency and pattern of changes differ by children's immigration status? 2) Do parent cultural socialization practices predict the frequency or change in children's depressive and anxious symptoms? and 3) Does the association between parent cultural socialization practices and children's depressive and anxious symptoms differ by children's immigration status? It is hypothesized that anxiety and depression symptoms will increase on average throughout early childhood, more so, for non-immigrant children. Internalizing problems will have a negative association with parental cultural socialization practices and this association is speculated to be stronger for immigrant children.

"It just hasn't clicked yet!": Effects of JUMPMath and MathLinks on supporting Canadian youth with learning disabilities

R. Del Colle, L. Hovelings-Hofmann, M. Kinsman, A. Engstrom, S. Budgen (Psychology Department, UAlberta), & H.M. Brown (Educational Psychology, UAlberta)

Breakout room 1

Despite extensive research aimed at developing programs to improve basic math competencies (Parker et al., 2019), a significant proportion of students with LDs still struggle with numeracy, especially in areas such as number sense, arithmetic, precise and fluent calculation, and reasoning (APA, 2013). The poor math performance of this population highlights the need for instruction that utilizes strategies supported by empirical evidence. This project's objective was to compare the efficacy of two authorized math resources, Math Links and JUMP Math. Two grade eight classes with learning disabilities (n=22) were evaluated through multiple assessments to determine their math ability during instructional units on fractions and Pythagorean theorem. Our research aimed to determine whether students with LDs made greater progress with JUMP Math instruction compared to Math Links instruction, relative to the baseline (averaged across both classes). Results showed that students had greater overall gains in the JUMP Math condition, as revealed by a paired sample t-test with a large effect ($t(21) = 4.79, p < .001, d=1.0$). On average, students under JUMP Math instruction improved by 49.4% (SD=17.30) while the same students only improved by 28% (SD=20.30%) under Math Links instruction. This study is the first to evaluate JUMP Math's effectiveness independently of its creators. Our research affirms that JUMP

Math's curriculum is effective in promoting arithmetic and geometry skills among grade eight students with LDs, allowing them to realize their full potential and enjoy an improved quality of life.

Peer victimization and aggression in adolescence: Individual characteristics and perceived school climate

R. Dodd, M.A.L. Giese, B. Zatto, & W.L.G. Hoglund (Psychology Department, UAlberta)

Breakout room 2

Peer victimization is a public health concern that negatively relates to adolescents' perceptions of safety and relationship quality within school settings. The transition into junior high school often brings a reorganization in the social structure of peer groups and increased risks for experiencing peer victimization and peer aggression. Developmental change in experiences of peer victimization and aggression might vary depending on adolescents' attitudes toward aggression and perception of the school climate. Attitudes toward aggression indicate an adolescent's level of acceptance toward aggressive behaviors. A school's climate is shaped by its standards, regulations, social patterns, and organizing framework (e.g., whether there are clear rules against aggression). Previous studies have examined the covariation of peer victimization with peer bullying perpetration, but there is limited information on the covariation of peer victimization with peer aggression across adolescence. It is also unclear how adolescents' attitudes toward aggression and perception of safety and bullying within their school relates to their co-varying experiences of peer victimization and aggression. The current study examines (1) the covariation between peer victimization and aggression across adolescence, and (2) how adolescents' acceptability of aggression and perceived school climate (school safety, school-wide bullying) predict the covariation of peer victimization and aggression. Participants were 1434 adolescents from western Canada in grades 7-9 who were assessed four times across two school years. Results from this study will enhance understanding of the developmental co-occurrence of peer victimization and aggression during adolescence and the role of attitudes toward aggression and school climate in this co-occurrence.

Investigating social attention: Eye-catching methodologies

M. Hasan, M. Mah, J. Nosko, A. Quito, & D.A. Hayward (Psychology Department, UAlberta)

Breakout room 2

Research in social attention focuses largely on how we pay attention to other people. For instance, we can ask various questions about how we attend to others, including (i) how the self influences attention and memory, (ii) the effect of face masks on social motivation, and (iii) whether one's perceived trustworthiness affects attention/individual neural signatures. Paradigms such as visual search tasks allow us to investigate how people search for objects and how various distractors slow people down, along with whether distraction influences memory retrieval. Other paradigms can employ a modified trust game where one can manipulate selfish vs. fair decisions and determine whether attention is differentially paid to the different personalities. We also aim to employ various technologies to either extract meaningful gaze behaviour via desktop and portable eye trackers or investigate potential links between neural signatures and attention/distraction. The results of these investigations could help inform how we respond to different social stimuli, such as ourselves, someone wearing a mask, or faces we do/ do not trust.

Attention Deficit/Hyperactivity Disorder (ADHD) and personal agency: A qualitative discursive exploration

E.A. Elhassan & C. Baerveldt (Psychology Department, UAlberta)

Breakout room 3

Attention Deficit/Hyperactivity Disorder (ADHD) is a common neurodevelopmental condition, usually diagnosed in childhood and spans into adulthood. ADHD has gained recognition in the medical field with its biological underpinnings mainly attributed to neural pathology. However, mere medicalization of the condition and deterministic ideas (beliefs that human actions are ultimately determined by causes external to free will), fail to

provide well-rounded perspectives of individuals' lives that are necessary for effective diagnosis and holistic/multimodal treatment. They enforce alienating labels and negative connotations affording little capacity for personal agency and self-representation. Affected individuals experience inattentiveness, impulsivity, and hyperactivity. Symptoms are often attributed to frontal lobe activity that impairs decision-making and emotional regulation. Such implications are especially evident in adulthood when individuals are developing a mature understanding of their identities and navigating interpersonal relations. From an agentic perspective, rather than a disability/dysfunction, we could consider ADHD as a particular 'style' of functioning, a different form of enablement. The proposed study explores how personal agency is facilitated or diminished by the personal accounts individuals give of themselves and by their level of expressive skills and articulation. It investigates how they express their agency in a particular way, with 'ADHD' being part of their 'identities'. Following a mixed-methods qualitative approach, my presentation discusses two to three excerpts from semi-structured interviews of adults with ADHD. Discourse analysis is used to explore how participants use language to constitute themselves as agentic beings (contributing to their circumstances versus being a byproduct of them).

The subjective nature of reading

C.M. Kosowan & C. Westbury (Psychology Department, UAlberta)

Breakout room 3

Although there is general agreement that individuals may differ in the manner in which they internalize the information they are reading, also known as their reading style, the specific nature and categorization of these reading strategies is debatable. Visualization while reading is the behaviour most commonly identified and explored in previous studies related to reading styles. This supports the idea that individuals reading behaviour connects to sensory experiences as in addition to visualization, other reading styles may be characterized by hearing and feeling. Our study sought to examine if reading style impacts comprehension and enjoyment of text in a sample of university students. Reading style was assessed as visual, auditory, or emotional using an initial questionnaire before participants read 6 passages, each with either high or low levels of visual, auditory, or sensational imagery. Afterwards, participants rated their enjoyment of the passages to assess their stylistic preferences and answered comprehension questions to assess understanding of the texts. Reading speed was also assessed as the time spent on each phrase of the text being presented. From our analysis, low visual readers and low hearing readers both had faster reading times. Therefore, having a low visual or auditory reading style allows one to read more quickly.

Repeatability in visual laterality during consecutive nest-building experiences

J. Hewitt, C. Poole, A. Camacho-Alpizar, & L.M. Guillette (Psychology Department, UAlberta)

Breakout room 3

Cerebral lateralization is when the left and right hemispheres of the brain specialize in different perceptual, cognitive and behavioural tasks. Visual laterality is a type of cerebral lateralization that refers to the biased use of the left versus the right eye, which occurs across a variety of behavioural contexts including foraging, mate selection, predator detection and tool manufacture. Research from our team using the zebra finch (*Taeniopygia guttata*) shows that visual lateralization occurs during nest building, specifically during building material pickups. These birds ($n=58$) varied both in the direction (left versus right eye) and the strength of lateralization, where one third were strongly lateralized. These data consisted of one nest building attempt per male, the nest builder in this species, and, as in most laterality experiments, it was assumed that this single measure of lateralization represented the true visual biases of each subject. In the current experiment, we attempt to answer whether a single measure of a side bias is an accurate indication of the lateralization of an individual. If one measure of laterality is representative of the lateralization, subjects should be consistent in their bias across nest-building attempts. To answer whether individuals are consistent in their laterality direction and strength, we measured their visual bias and calculated lateralization indexes of 20 male zebra finches by scoring the eye used during the

first 25 nest-material pickups of each of five nests (98 total nests). These data are currently being analyzed, conclusions will be extracted upon completion.

Internalizing symptoms, hostile attributions, and teacher-child relationship quality in middle childhood

A. Bondesen, E. Sawyer, B. Zatto, & W.L.G. Hoglund (Psychology Department, UAlberta)

Breakout room 4

Up to 10-20% of children show elevated internalizing problems (e.g., anxiety, depression) during middle childhood. These problems increase risks for more significant maladjustment in adolescence. Previous studies have found associations between internalizing problems, teacher-child relationship quality, and hostile attribution bias. Hostile attribution bias refers to the increased tendency for a child to perceive hostile intent in other's actions. However, the direction of the associations among these constructs has not been established. The current study examines the directional associations between internalizing symptoms, teacher-child relationship quality, and hostile attributions by comparing five conceptual models of association. The research questions include: 1) What is the direction of the association between these three constructs? 2) Which conceptual model of association best explains these directional associations: concurrent, internalizing-driven, hostile-attribution-driven, or relationship driven model? 3) Do these associations differ by gender? Participants included 506 children in grades 1 to 4 in 60 classrooms in 10 public elementary schools in Western Canada. Children reported on their internalizing problems and hostile attributions. Teachers reported on their relationship quality with children. The results of this study will enhance understanding of the relationship(s) between internalizing symptoms, hostile attributions, and teacher-child relationship quality as well as informing interactions between teachers and children based on children's individual behaviours and beliefs.

PAX GBG, conduct problems, and hyperactive-inattentive behaviour: Influence on child social-emotional and academic adjustment

S. Coogan-Grahn, B. Zatto, & W.L.G. Hoglund (Psychology Department, UAlberta)

Breakout room 4

Supporting children's social-emotional and academic adjustment in middle childhood has been a focus of several school-based interventions. While many of these interventions have demonstrated small but positive effects, it is unclear if they are particularly beneficial in supporting the social-emotional and academic adjustment of children with higher levels of conduct problems and hyperactive-inattentive behaviours. The current study examines whether PAXIS Institute's PAX Good Behaviour Game (GBG) is especially beneficial for children with higher conduct problems and hyperactive-inattentive behaviours. The current study examined: 1) If children's social-emotional and academic adjustment changed over two school years, 2) If children's social-emotional and academic adjustment differed by conduct and hyperactive-inattentive behaviours and participation in the PAX GBG, and 3) Whether the impacts of the PAX GBG on social-emotional and academic adjustment differed by children's levels of conduct problems and hyperactive-inattentive behaviours. Participants included 8433 children in Kindergarten to grade 6 who were nested within 24 elementary schools participating in a randomized evaluation of the PAX GBG. Teachers rated the social-emotional and academic adjustment of the children on three occasions over two school years. Multilevel analyses were conducted to account for gender, grade level, conduct problems and hyperactive-inattentive behaviours, and treatment on social-emotional and academic adjustment. Results from the study will enhance our understanding of the effectiveness of using PAX GBG within Western Canada and classrooms and how applications of this program can be used to support children with increased levels of conduct problems and hyperactive-inattentive behaviours.

Atheists' may increase confidence in their beliefs when faced with anxiety provoking situations

G.C. Seeley & K. Nash (Psychology Department, UAlberta)

Breakout room 5

Growing evidence indicates that atheism is a distinct, positive belief system that provides similar psychological benefits as other religious belief systems. For example, belief in secular worldviews, such as Humanism, may provide anxiety buffering effects to atheists, in much the same way that religious beliefs can buffer anxiety for believers. We predicted that atheists may respond to an anxiety-provoking event by increasing the conviction of their atheistic beliefs. We conducted an experiment in which participants were randomly assigned to either an achievement anxiety condition or an achievement control condition. Participants in the achievement anxiety condition (vs. participants in the control condition) reported stronger atheistic beliefs, as well as higher levels of belief superiority. Thus, some atheists may increase the conviction of their beliefs to help them deal with anxiety-provoking situations.

The emergence of hypercorrection: the impact of feedback and high confidence report on error correction

T. Dou & B.J. Dyson (Psychology Department, UAlberta)

Breakout room 5

The confidence of learners is a crucial factor for utilizing current knowledge to answer questions and change incorrect beliefs based on corrective feedback. Previous research demonstrated that individuals were more likely to rectify incorrect answers they initially provided with stronger confidence (hypercorrection effect). However, the interaction between confidence and feedback was understudied. During an initial test of multiple-choice questions, participants completed questions in four different conditions, varying in the presence or absence of a confidence measure and the presence or absence of corrective feedback. Immediately after the initial test, they completed a retest of all the same questions in a randomized order. We hypothesized reporting stronger confidence and receiving corrective feedback would lead to the highest accuracy in the re-test. We also predicted the main effect of reporting stronger confidence on enhancing the likelihood of error correction, suggesting it could aid in people activating and evaluating their current knowledge. Finally, receiving corrective feedback would show a stronger main effect on the hypercorrection effect, which indicated that learning feedback, instead of enhancing the access to current knowledge, was the major reason behind performance improvements. Regarding individual differences, we expected positive correlations between error correction and the personality traits of conscientiousness and openness. The findings of this study contribute to improving educational strategies that maximize learners' chances of updating their knowledge.

Fish out of water: How social context influences cichlid behaviour

S. Fisher & P.L. Hurd (Psychology Department, UAlberta)

Breakout room 6

As humans, we connect with those in our social environment and lean on those individuals when uncertainty arises. Oftentimes, social familiarity among friends and family helps us alleviate the stress from our environment. While this seems like a purely human experience, researchers have explored this experience in non-mammalian species. This thesis examines cichlid (*Pelvicachromis pulcher*) behaviour in a novel object task. The goal of this study is to gain insight into the exploratory and neophobic behaviours of cichlid fish by comparing their reactions to a familiar and novel object. Additionally, this study will explore how social familiarity among conspecifics influence boldness and exploratory behaviour. The expectation is that the presence of a conspecific will influence the focal fish's behaviour in some way due to social familiarity or unfamiliarity. During the novel object task, the focal fish will be in the presence of either a familiar or unfamiliar female. Twenty focal fish will be tested in a novel object task in the presence of a conspecific and their behaviours observed. We will also measure boldness in focal fish by measuring how much time they spend in

the shallow versus deep end of a slanted tank. We expect to find that focal fish that are bolder and more exploratory will approach a novel object quickly and spend more time in the shallow end of a slanted tank. This experiment will develop the body of knowledge concerning social behaviour in cichlids and further establish the impact that social familiarity has on behaviour.

Nonlinear effects of paternal and maternal ages on schizotypy

C.F. Wasel & P.L. Hurd (Psychology Department, UAlberta)

Breakout room 6

The risk of schizophrenia in offspring increases with increasing paternal age. This effect has largely been ascribed to accumulating de novo mutations in male sperm. Male sperm undergo far more cell divisions before fertilization than do female eggs, and the number of divisions increases with age. A subclinical level of schizophrenia exists among some relatives of schizophrenia patients, known as schizotypy. Schizotypy is a continuous trait, with schizophrenia as the most extreme manifestation along the continuum. Schizotypy is highly heritable, with estimates ranging from .51 to .81, and high schizotypy is associated with an increased risk of schizophrenia in genetic relatives. Paternal and maternal ages have shown differing relationships to the sub-dimensions of schizotypy. Here, I investigate non-linear relationships between paternal and maternal ages and the different sub-dimensions of schizotypy: cognitive perceptual, disorganized and interpersonal. A sample of undergraduate students completed the Schizotypal Personality Questionnaire- Brief Revised (SPQ-BR) and provided the age of their parents at the time of their birth. The accumulating de novo mutation hypothesis predicts that paternal, not maternal, age drives this effect and that the risk of schizophrenia increases linearly as paternal age increases. Instead, I find more complex effects for both parents depending on the sub dimension, and these effects are non-linear with increasing schizotypy at the youngest and oldest parental ages. These results are consistent with the idea that parents with these highly heritable schizotypy traits, and a greater propensity to schizophrenia in their offspring, are more likely to have children both earlier and later in life.

Using computer models of language to evaluate movie viewing in autistic and non-autistic individuals

M. Keskin (Computing Science, UAlberta), B. Chouinard (Computing Science & Kinesiology, Sport, and Recreation, UAlberta), L. Gallagher (St. James's Hospital, Trinity College Dublin), C. Kelly (Neuroscience, Trinity College Dublin), & A. Fyshe (Computing Science & Psychology Departments, UAlberta)

Breakout room 7

In early work, a majority of participants watching a short video of geometric shapes moving around attributed human-like characteristics to the shapes (Heider & Simmel, 1944). More recently, a similar study found that autistic participants were less likely to attribute human characteristics to the shapes, or to identify social components of the story, compared to non-autistic participants (Ami, 2000). Here, we used a newer, longer video of moving geometric shapes, which autistic and non-autistic adolescents watched while we collected fMRI data. In order to study how each group encodes language in the brain, we used computer models of language to examine patterns of brain activity related to the different concepts in our video. First, we determined the most responsive voxels. Then, we tested whether our computer model performed differently based on how much context surrounding our target concept it was given. Finally, we investigated how much variance was explained by our model for 13 different social and non-social dimensions (e.g., "verbs requiring two people", "size"). We did this analysis separately for each group, keeping ourselves blind to group identity to prevent bias. We found that greater context length improved model performance for both groups, and that there were no differences between the groups on any of the dimensions. However, looking at group distributions suggests that within-group variability may be hiding some important differences. These results are preliminary, and because inter-subject variability may be masking group differences, further analysis comparing language encoding between autistic and non-autistic individuals is ongoing.

Cyberbullying in adolescence: Trajectories and co-occurrences of cyber victimization and aggression

S. Lee, T.J. Wilde, B.R.L. Zatto, & W.L.G. Hoglund (Psychology Department, UAlberta)

Breakout room 7

Cyber victimization and aggression are growing issues in adolescents' lives, with the prevalence rate increasing from 10% in 2000 to over 16% in 2017. Cyberbullying is distinct from traditional bullying in that aggressors can remain anonymous and perpetrate aggression at any place and time. This distinction suggests that cyberbullying needs to be explored as a unique construct in developmental research. Previous studies have found that cyber victimization and aggression co-occur, suggesting that joint experiences of the constructs are common in adolescence. Additionally, a number of individual and school-related factors have been demonstrated to predict the occurrence of cyber victimization and aggression; however, few studies have investigated how these factors predict membership in co-occurring patterns of cyber victimization and aggression. The present study examines: (1) heterogeneity in the developmental trajectories of cyber victimization and aggression across adolescence, and gender differences in these trajectories; (2) the co-occurrence of the developmental trajectories of cyber victimization and aggression, and gender differences in this co-occurrence; and (3) individual (e.g., leadership, prosocial behaviour, traditional victimization and aggression) and contextual (e.g., perceptions of school climate) factors predicting membership in these trajectories. Participants included 1434 adolescents in grades 7-9 who were assessed four times across two school years. Latent growth mixture models will be used to examine potential differences in pathways of cyber victimization and aggression. The results of the study will increase understanding of how cyber victimization and aggression co-occur across adolescence and offer insights into improving cyberbullying prevention programs.

Effect of parenting styles on code-switching in bilingual preschoolers

J. Juneja, J. Sidhu (Psychology Department, UAlberta) & A.A.N. MacLeod (Communication Sciences & Disorders Department, UAlberta)

Breakout room 7

Code-switching, a common phenomenon seen when two bilinguals interact, is simply substituting a word or phrase in one language with a word or phrase from another language (Li, 1996; Heredia & Altarriba, 2001). Although there are some opposing views on why bilinguals code-switch, ample research suggests that individuals require an elaborate skill to switch languages while following the rules of both languages. This indicates the individual's competence in both languages (Poplack, 1980). Code-switching is common in both bilingual adults as well as children. Parents and their parenting style are seen to influence a child's language development. This research aims to analyze this important factor, parenting style, with respect to code-switching behaviours in bilingual preschool children. Currently, there is a gap in the literature that connects code-switching and parenting styles. Eleven Hindi-English and Punjabi-English bilingual children (ages 4-7 years) and their parents participated in this study. The children's speech was elicited by participating in video story retelling tasks in their home language and Edmonton Narrative Norms Instrument (ENNI) in English and their home language (Schneider et al., 2005). ENNI is an assessment tool for collecting language information from children through storytelling. We noted code-switching behaviours during these tasks. Parents answered the Parenting Style Four Factor Questionnaire (PS-FFQ) and the Canadian Questionnaire of language use and exposure in bilingual preschool-aged children (C-QUEB) (Shyny, 2017; MacLeod, 2021). We found that authoritative parenting styles led to more code-switching behaviors indicating better language proficiency in children. This research could help develop better parenting strategies that aid bilingual children's language development.

Prenatal maternal stress and externalizing behaviour: A longitudinal assessment

G.F. Mico (Psychology Department, UAlberta), K.A. Espy (University of Texas at San Antonio), L.S. Wakschlag (Northwestern Medicine), & S.A. Wiebe (Psychology Department, UAlberta)

Breakout room 8

The prenatal environment is a critical and sensitive time for developing children, with numerous threats to the healthy development of a mother's offspring. Specifically, maternal psychological distress is posited to be especially detrimental during fetal development. This paper seeks to expand the current research and further understand the relationships between maternal stress and the emergence of externalizing behaviour problems in children at ages three and five years. Externalizing problems include observable difficulties regulating aggression, activity, emotions, and social behaviour. This study used data from the Midwestern Infant Development Study (MIDS) cohort, a sample of mother-child dyads originally recruited during pregnancy to study the effects of prenatal tobacco exposure (Espy et al., 2010). This cohort has been followed longitudinally through age 5 years, and data is available on maternal stress, mental health, and child behaviour at multiple timepoints. Data analysis is ongoing and will specifically examine the relationship between maternal stress and child externalizing problems, and how this relationship changes as the child develops from three to five years old

Spaced practice: Increasing the learning experience through the application of an empirically based study schedule tool

H. Hines, & J. Passey (Psychology Department, UAlberta)

Breakout room 8

University students are often overwhelmed and unsure of how to effectively structure their time, resulting in lower academic achievement and increased stress. Spaced practice is a study method proven to increase learning potential by employing an interval of at least 24 hours between reviewing related material. Without guidance or awareness of proper study techniques, students often fall victim to ineffective study techniques such as mass practice. Mass practice includes reviewing a large amount of material and concepts at one time and results in surface-level learning. The following study will examine if a study schedule-building tool using spaced practice is advantageous for students. Participants will either use the tool or their preferred study schedule over the course of a semester. At the end of the semester, the treatment and control group will complete a survey on their perceived learning, organization, and stress throughout the semester. The proposed study aims to assess whether the study tool can help students organize their studying effectively while minimizing student stress. I expect people who use the tool to perceive an increase in long-term retention of material, feel more organized with the use of their time, and have lower levels of stress concerning organizing their studying. Providing students with a study schedule tool will foster effective study habits, allowing them to meet their full academic potential while protecting their mental well-being.

Big little fears

S.A. Manuel & W.L.G. Hoglund (Psychology Department, UAlberta)

Breakout room 8

Anxious symptoms are one of the most common experiences in childhood. They persist over time and are a major risk factor for mental disorders in adulthood. Anxious symptoms can range from mild symptoms of anxiety (ex. trouble sleeping, easily tired, restlessness) to more clinical levels of anxiety disorders. Childhood is a particularly vulnerable phase for developing anxious symptoms (ex. withdrawn temperament, irritability, trouble focusing, etc.). Research has shown that 1 in 10 children experience anxiety disorders at least once between the ages of 4 and 14. Anxious symptoms that arise during childhood can impact social, emotional and academic development. This presentation aims to summarize and disseminate knowledge on anxious symptoms for a general audience. It aims to provide parents with information on symptoms their child may present if they are

struggling with anxious symptoms and activities to mitigate these feelings to prevent development of anxiety disorders in later years. This presentation outlines two newsletters that were developed as resources for parents of preschoolers (ages 3-5) to recognize the underlying symptoms their children may face. The first section outlines what anxiety is, types of fears, how children might behave (symptoms) and the reasons behind anxious emotions within young children. The second section provides two simple activities that parents can complete at home with their children to foster children's self-regulation of their anxious feelings. In addition, it provides an activity for caregivers to manage their own symptoms of anxiety.

Day 2 – Thursday, April 13: Poster Session 6 (3:00-4:00pm)

Optimism and risk-taking: Can being optimistic make you riskier?

B. Koirala & B. Dyson (Psychology Department, UAlberta)

Breakout room 1

Past research has shown a strong association between optimism and risk-taking. The rationale for this is that people who are optimistic show positive expectations for the future and therefore are more likely to take immediate risks compared to people who are less optimistic. The study used a within-subjects design with a total of 72 participants randomly allocated to one of the neutral or positive groups. Autobiographical recall was used to increase optimism levels for the participants in the positive groups. Following that, 96 trivia questions were shown to all participants where we hypothesize that participants in the optimism groups will be more attracted to risk-taking by selecting a greater number of answer options compared to the participants in the neutral groups. If the hypothesis is supported through this study, it has practical implications supporting the idea that optimism can be manipulated enough for people to be more attracted to risk-taking. For example, athletes or entertainers can use various ways to feel optimistic before a performance to take more risks but it can also have adverse effects that attract one to more thrill-seeking behaviours that could potentially harm them.

Let's think about it: The relationship between need for cognition and empathy is moderated by political ideology

J. Teppan, L. Syfers, D.E. Rast III (Psychology Department, UAlberta), & A.M. Gaffney (Psychology Department, Humboldt State University)

Breakout room 1

Empathy is an emotional response that involves a cognitive component in which an individual attempts to understand another person's emotions (Cuff et al., 2016). Thus, cognitive effort should be associated with experiencing empathy. As empathy requires cognitive effort, it should be related to an individual's desire and enjoyment for effortful thinking, which is referred to as need for cognition (Cacioppo & Petty, 1982). We applied this theoretical proposition to the relationship between political ideology and empathy. Political conservatism is associated with a lack of empathy (Marsden & Barnett, 2020), but this may depend on individual variations in need for cognition. We predicted that political conservatives who have a high need for cognition should be more empathetic than conservatives who have a low need for cognition. We examined this hypothesis in a correlational study (N = 315) that measured need for cognition, political conservatism and empathy using an online sample of U.S. citizens. Results supported the hypothesis, such that political conservatism was associated with more empathy at high than low levels of need for cognition. This study details the complexities of empathy and how political values interact with an individual trait that indicates cognitive effort. Future research may examine how an individuals' need for cognition and empathy are related to ideological norms and values.

Effects of academic motivation

K.T. Pangan & K. Nash (Psychology Department, UAlberta)

Breakout room 2

Establishing a sense of cultural belonging is important in academia, as reminding students that they belong within academic environments is correlated with a high quality of school life, including motivation in pursuing learning opportunities. Because of the complexity of existing cultural paradigms, understanding the concept of cultural belonging requires context into the student's understanding of identity. In previous research, the highest academic benefits are found when students are reminded of their cultural belonging in a way that aligns with their beliefs of their own cultural identity. The proposed study examines how the degree to which a reminder of belonging aligns with a student's beliefs of identity influences academic motivation. It is expected that reminders that align best with student's beliefs will result in the highest rates of motivation and sense of belonging. The sample in question are Canadian university students, with a philosophy of a "cultural mosaic" of multiculturalism. Participants will be randomly assigned to three conditions that vary in relevance to their cultural philosophy from least to most relevant: a neutral, an American "melting pot" multiculturalism and a Canadian "cultural mosaic" multiculturalism prompt. Belonging will be measured through the Psychological Sense of School Membership Scale (Goodenow, 1993) and academic motivation will be measured through the Academic Motivation Scale (Vallerand et. al, 1989) in a pretest/posttest design. Because the "cultural mosaic" multiculturalism prompt aligns with the philosophy of the Canadian student sample, it is expected that the cultural mosaic prime will result in the highest increases of academic motivation.

The effect of leader rhetoric, uncertainty, and group identification on perceived group entitativity

N. Malaiaian, Y. Ouyang, & D. Rast III (Psychology Department, UAlberta)

Breakout room 3

Affirming language causes less informational processing conflict and is better positioned to construct a clear group identity than negating language. Using affirming rather than negating language to describe group identity enhances group members' perceptions of group entitativity, which in turn reduces feelings of uncertainty. Therefore, a leader can increase group entitativity by endorsing affirmational rhetoric to communicate group identity during times of uncertainty. However, this effect might be limited to low identifiers. High identifiers are the embodiment of the group identity. They possess and even provide identity-related information, so their perceptions of the group are less dependent on the clarity of the leader's communication on group identity. The current study examines the impact of affirmational and negational rhetoric on group entitativity among low and high identifiers under low and high uncertainty. Participants reported their group identification and received an uncertainty priming procedure that manipulated their levels of uncertainty. They then read an article displaying the statements of a leader using either affirmation or negational rhetoric and respond to a group entitativity scale. The results showed that under high uncertainty, affirmational rhetoric increased group entitativity for low identifiers but decreased group entitativity for high identifiers compared to negational rhetoric. This research provides insight into how leaders can influence perceived group entitativity by managing their rhetoric during times of uncertainty at different group identification levels.

Investigating the link between screen use and social and emotional competence in preschool children

K. Dorn & S. Wiebe (Psychology Department, UAlberta)

Breakout room 3

When considering the pervasive nature of screen technology in our society, there is a startling lack of understanding regarding its impact on children. Gaining insight into the relationship between screen use and the development of social and emotional competence is crucial for fostering school readiness, peer acceptance, and mental health. The proposed research intends to utilize data originally collected for the Technology and

Development in Early Childhood (TECH) Study. This study includes a large, diverse sample with participants aged three to four years across Western Canada. Screen time is measured using detailed 14-day screen time diaries, in which parents describe the device their child used, type of screen time, screen content, and co-viewing status. Social and emotional competence are measured using the Strengths and Difficulties Questionnaire. Data will be analyzed using multiple linear regression, controlling for factors like socioeconomic status and maternal education. It is hypothesized that greater overall screen time will be associated with lower scores for social and emotional competence. Additionally, it is hypothesized that greater amounts of educational screen time that is co-viewed with an adult will help mitigate these detrimental effects. The results of this study will have important implications for child screen use guidelines and interventions proposed by governments and pediatricians.

Attachment style as a moderator between group-loss and self-esteem

A. Vestby, & K. Nash (Psychology Department, UAlberta)

Breakout room 4

Bowlby (1973) suggests attachment allows for a sense of security and securely or insecurely attached people develop different senses of this security and generate different models of self-esteem. Specifically, the bases for self-esteem between the attachment styles differs; insecure individuals seem to seek validation outwardly while secure individuals rely on an internalized sense of self-worth (Park et al. 2004). To assess self-esteem, attachment styles, and create the conditions for a minimal group paradigm, participants will complete Rosenberg's Self-Esteem Scale (Rosenberg, 1965), Relationships Questionnaire (Bartholomew and Horowitz, 1991), and the Ten Item Personality Inventory (Gosling, Rentfrow, and Swann, 2003) before being told they are assigned to one of two groups based on similar personality traits and values. Participants will be told that they are on a team to compete in games of reading comprehension and logic skills. Bogus results simulate a win or loss condition, and Rosenberg's Self-Esteem Scale would then be administered again. This work hypothesizes that insecure individuals will experience greater declines in personal self-esteem after experiencing group-loss than secure individuals because of greater outsourcing of self-esteem in group identities. Results could contribute to the clinical understanding of insecurely attached individuals and sources of self-esteem, potentially having implications for therapeutic techniques such as those in cognitive behavioural domains. As a disclaimer, this project is a work in progress and some changes may occur.

The relationship between interdependent decisions and win-stay/lose-shift performance

A. Asad & B. Dyson (Psychology Department, UAlberta)

Breakout room 4

Although multiple-choice question (MCQ) exams are commonly used in assessing students' knowledge in educational settings, little consideration is given to how individual questions may be interrelated when answering them. Students frequently lack feedback on the correct response in MCQ exams which may be negatively impacting their performance. The presence of feedback in the current study strengthens outcome associations that are known as win-stay/lose-shift. To our knowledge, no paper has investigated the relationship between interdependent decision-making and win-stay and lose-shift performance under conditions with and without feedback. This study aims to explore the relationship between win-stay/lose-shift performance, the Big Five traits, and feedback responsiveness. It is hypothesized that the tendency to win-stay and/or lose-shift would increase when the present question was from the same category as the previous question (interdependent). Additionally, it is hypothesized that participants perform better with feedback than without, and those with higher conscientiousness perform better with feedback than individuals higher in neuroticism. 100 participants completed two counterbalanced blocks of MCQs: one with feedback and one without feedback. MCQs were delivered in pairs alternating between questions from the same category and (interdependent) and questions from different categories (independent). The results of this experiment are yet to be determined. This study suggests that understanding the impact of interdependent decision-making on win-stay and lose-shift

performance can help students make decisions that maximize favourable outcomes. One future research avenue is to study students' views and performance on MCQs organized by topic versus in randomized order on cumulative content exams.

Adolescent personality and social-emotional functioning: A correlation study considering the moderating effect of parenting behaviours

A. Shukalek (Psychology Department, UAlberta) & C. Rinaldi (Educational Psychology, UAlberta)

Breakout room 5

During adolescence, social-emotional functioning varies between individuals and is associated with both internal and external factors. An internal factor proven to be significantly related to social-emotional functioning is personality. Research has focused on the role that personality plays in implicating various internalizing, externalizing, and interpersonal difficulties. Parenting behavior is an external level factor that has been found to be correlated with both adolescent personality and social-emotional functioning. The present study examined the relationship between adolescent personality traits and social-emotional functioning as moderated by parenting. A cross-sectional, correlational design was applied. A total of 148 adolescents between the ages of 13 and 19 were surveyed online. The following research questions were explored: Is there a relationship between adolescents' self-reports of the Big 5 personality traits and their social-emotional functioning? If so, which of the Big 5 traits are most strongly associated with individual elements of social-emotional functioning (e.g. conduct problems, and prosocial behaviors)? Second, is the relationship between the Big 5 traits and social-emotional functioning moderated by parenting behaviors? Based on the literature we expected: A relationship between personality and social-emotional functioning. Specifically, that neuroticism and extraversion will be negatively linked with social-emotional functioning, while agreeableness and conscientiousness will be positively correlated. Finally, we predicted that parenting behavior would act as a moderator specifically for the relationship between neuroticism and extraversion, and hyperactivity and conduct problems. This study will further our understanding of the interaction between parenting behaviors and adolescent outcomes with possible implications for practising certain parenting behaviors over others.

The shape school task; In-person vs. online data collection methods

J. Wu & S. Wiebe (Psychology Department, UAlberta)

Breakout room 5

Executive function (EF) skills are vital for individuals to socialize and function within society. These skills are developed throughout childhood and can be used as a predictor variable for learning (Bull et al., 2008). The Shape School task was designed to measure the inhibitory control and switching aspects of EF specifically in preschool-aged children due to the tasks engaging and simple nature (Espy, 1997). This study will use a between-subjects design to compare the results of the Shape School task when it is delivered in an in-person method compared to an online format. The in-person condition will take place in the ABCD lab with the Shape School task being presented to the participant on paper. The online condition will take place over Zoom with the Shape School task being presented to the participant on a slideshow. Past research has shown that EF tasks have been successfully converted to an online format which produced consistent and reliable results (Ahmed et al., 2022). Additionally, comparisons between in-person and online data have shown that results between the two are generally consistent (Dandurand, 2008). After taking these results into consideration, it is hypothesized that the Shape School Task could be delivered online and yield reliable results.

Updating negative autobiographical memories by imagining positive future events: The influence of counterconditioning during autobiographical memory retrieval

V.C. Pane (Psychology Department, UAlberta), A.D. Arellano Perez (Texas A&M University), P.L. St. Jacques (Psychology Department, UAlberta)

Breakout room 6

Counterconditioning has been shown to modify behaviour through association with a stimulus of opposite valence. The current study examines whether counterconditioning can be applied to autobiographical memories, which could be useful for reducing the strength of negative memories in applied settings. Here we examined whether imagining positive future events following retrieval of negative autobiographical memories would affect the subjective valence of memories. We predicted that after recalling negative and neutral memories, participants who imagined positive future events would experience counterconditioning that would lead to a change in the valence of the negative memories. The study consisted of two sessions a week apart. In the first session participants recalled negative and neutral autobiographical memories and provided subjective ratings for valence, intensity, and vividness. Participants were then randomly assigned to imagine a positive or neutral future event and completed the same ratings as in the first part. In the second session participants were presented with the titles of their negative and neutral memories and rated the memories again. In the positive future group, we found that there was a significant reduction in emotional intensity and a shift from negative to positive valence in autobiographical memories across sessions. Data collection for the neutral future group is ongoing. Our findings suggest that imagining a positive future event following memory reactivation can reduce the negativity and intensity of a negative memory.

Children's first language proficiency and attrition, and parent's language attitudes in Punjabi-English and Hindi-English bilinguals living in Canada

J. Sidhu, J. Juneja* (Psychology Department, UAlberta), & A.A.N. MacLeod (Communication Sciences & Disorders Department, UAlberta)*

Breakout room 6

First language (L1) attrition is a relatively under explored field of research. Previous research on the relationship between attitudinal factors and L1 attrition has produced mixed results. Furthermore, there are not many analyses on parental language attitudes and its relationship to L1 attrition in their children. The present study aims at expanding knowledge on child bilingual development by examining the connection between parental language attitudes, children's language attitudes, and children's L1 language proficiency in Punjabi-English and Hindi-English bilinguals living in Canada. Children participated in a video retelling task and told stories in their L1 and English based on pictures from the Edmonton Narrative Norms Instrument (ENNI) to elicit free speech (Schneider, Dubé, and Hayward, 2005). From these stories, macrostructural and microstructural analyses were scored and examined. From the video retelling task, overall measures of disfluencies (e.g., silent or filled pauses, repetitions), instances of uncertainty (e.g., "I don't know") and lexical density (LD) were examined. For the attitudinal factor, both children and parents completed a language attitudes questionnaire developed from Schmid and Dusseldorp (2010). Parents also completed a semi-structured interview to examine their and their child's language use and exposure. We found that parents and children with positive language attitudes toward their L1 had a lower number of disfluencies and higher LD. Moreover, these children had higher scores from the ENNI task. These findings can help identify if personal or parental attitude towards language supports childrens' language learning to aid in their language development.

Acculturation stress coping strategies and bicultural competence of university students who relocated from rural to urban area: A qualitative study through discursive psychology

C. de Guzman & C. Baerveldt (Psychology Department, UAlberta)

Breakout room 7

Adapting to a new and intimidating university environment is one of the major stressors for post-secondary students. For many who are from rural areas, acculturation stress induced by relocation affects their mental health and capability to perform at their full academic potential. This mixed method qualitative study will investigate two factors that influence the success of students from small and rural areas in adapting to the life and customs in the metropolis, city of Edmonton in particular. These two factors are coping styles and social competence. Ten voluntary student participants from the UAlberta will be interviewed regarding their acculturation stress, personal coping strategy, and self-report on bicultural competence. The interviews will be unstructured or designed to mimic typical everyday conversations, where interviewees can freely narrate their experiences and emotions. These recorded one-on-one interviews will be transcribed and then analyzed through discursive psychology. Discursive strategies such as the identification of interpretative repertoires and subject position and identity work will be utilized to interpret participants' responses. The result of the research will help us better understand how students from rural areas and small cities can successfully adapt to academic and social life in the big city through the discussion of coping styles and bicultural competence.

Where should I...? The role of the built environment on space preferences for studying, socializing, and relaxing

M. Pacificar, R. Prinsen, O. Rajab, J. Pham, J. Wiebe, & D.A. Hayward (Psychology Department, UAlberta)

Breakout room 7

Most classic cognitive research has been done in controlled laboratory environments. However, people spend their time interacting with different built spaces for different types of activities. Thus, we took an ethological approach to explore (i) people's interactions with real-world environments, (ii) how physical spaces and specific goals influence their decisions, and (iii) how preferences for spaces differ across individuals. We implemented two experiments: one online and one in-person. In the online experiment, participants viewed images of campus spaces with varying features (e.g., lighting, seating) and rated them based on their likelihood to use them for three given activities: (1) studying, (2) socializing, and (3) relaxing/meditating/praying. In the in-person experiment, participants physically navigated a subset of the campus spaces from the online experiment and identified and completed the same ratings. In both experiments, participants' eye movements were recorded via their webcams (online task) and a mobile eye tracker (in-person task). They were also asked to provide reasons for their ratings. Findings include: participants preferred campus spaces with access to natural light and nearby windows for all activities. Moreover, participants chose and rated spaces higher when they provided comfortable seating, especially for relaxing, and a great atmosphere, especially for studying. These findings provide insight into how physical spaces and their features inform people's actions and decision-making processes, and thus, furthering our understanding of how the environment influences cognition.

Do attention-deficit hyperactivity disorder traits affect event segmentation and memory abilities?

M. Oslund, S.I. Gulab, & D.A. Hayward (Psychology Department, UAlberta)

Breakout room 8

Although every day we are inundated with countless pieces of information that we need to make sense of, the vast majority of research on attention employs lab tasks and static images to measure attention. Further, the way in which people pay attention varies due to individual differences including the number of ADHD traits. Thus, here we used an event segmentation task to measure attention allocation to continuous streams of information, through asking 36 participants varying in ADHD traits to watch a video depicting complex social

interactions and parse the scene into meaningful segments. Subsequently, participants were shown still images from the video (some altered, some not) to assess memory. Contrary to our predictions, we found no differences in parsing the scene across those with few versus many ADHD traits. For the memory task, we found that participants were worse at identifying altered scenes, especially when there were people interacting in the scene, yet this did not vary based on ADHD traits. Taken together, these results could indicate that the number of ADHD traits does not affect temporal attention or memory recall.

Our love confuses me: An exploration in how queer women manage emotionally intense relationships

A.E. de Dios & C. Baerveldt (Psychology Department, UAlberta)

Breakout room 8

In this research, I conducted an exploratory study investigating how queer women use talk to navigate the complex domain of emotionally intense relationships. Emotionally intense relationships reside in a largely ambiguous area, because they are less constricted by the normative boundaries/labels of “just friends” or “lovers”. These relationships are said to cause major confusion for those within it. The overall literature has found that queer women are more commonly involved in such relationships, but research as to how they manage and navigate this grey area is limited. This exploratory qualitative study used a mixed-method discursive psychological approach, focusing on the expressive and affective features of talk, to analyze excerpts from semi-structured interviews. Talk as a form of expression is used to consensually validate and navigate ambiguous or ‘confusing’ feelings which are the focus of the study. This study allowed us to gain a “thicker” description of the verbal processes queer women engage in when they manage the ambiguity of emotionally intense relationships.

Working memory is facilitated by task-relevant emotions – an ERP study

V.R. Gumnur, S.A. Wiebe, & L. Qureshi (Psychology Department, UAlberta)

Breakout room 8

Previous research has shown that emotions can impact the ability to monitor and replace information in working memory (WM), but the extent to which this effect varies with the valence, and relevance of emotional information to the task is unclear. The current EEG study with young adults aimed to test how emotional stimuli and their task relevance affect performance on a visual n-back task, a common paradigm for assessing WM. Participants (N = 40, 17-24 years) completed a modified 1-back and 2-back task wherein they responded to human faces that were either young, middle-aged, or old and showed a neutral, happy, or sad expression. The task relevance of emotion was manipulated through instructions to make match/non-match judgments based on the emotion (i.e., emotion was task-relevant) or the age (i.e., emotion was task-irrelevant) of the face. Analysis of the behavioural results from the online pilot version of this study found a four-way interaction between emotional valence, task relevance, cognitive load, and trial type (maintenance or updating). Results showed faster response times and higher accuracy when emotion was task relevant than irrelevant especially when faces showed a positive expression. Furthermore, positive emotions were associated with worse performance on trials requiring maintenance of WM rather than updating under higher cognitive load. These findings suggest that task-relevance of positive emotional information could enhance WM even under high cognitive load and we hope to find corroborative behavioural and ERP evidence in our current study.