

PLEASE JOIN US FOR...



PSYCHOLOGY DISCOVERY CONFERENCE 2026

Sharing research and creating connections
across the psychology research community



April 14th, 2026

Location: Environment 3 (EV3)

.....



psychology.discovery.conference@uwaterloo.ca



ACKNOWLEDGEMENTS

Thank you for joining us for our annual departmental Psychology Discovery Conference! This year is particularly special, as we received our largest number of total submissions yet with just over 100 submissions, and set a new record with 25 talk submissions! A huge thank you to those who contributed their research and those who volunteered their time to review abstracts and judge posters. We also have nearly 200 participants across the University of Waterloo community registered to attend, including undergraduate and graduate students, postdoctoral fellows, faculty, staff, and more.

Thank you to the Psychology Department, the Graduate Student Endowment Fund (GSEF), and the Canadian Psychological Association (CPA) for their generous financial contributions and continued support for this conference. We would also like to thank the Graduate Student Association for Students in Psychology (GASP) and the Psychology Department staff for their immense support during the planning and execution of this conference, and for their continued support of graduate students in Psychology.

A huge thank you to our keynote speaker, Dr. Elizabeth Page-Gould from the University of Toronto, as well as our graduate student Lunch and Learn hosts from Women in Cognitive Science Canada (WiCSC+), for sharing their insights, advice, and time. A special thank you to Dr. Katherine White for providing endless guidance and encouragement as we brought this conference to life, and to Drs. Neil Hester & Katherine White for their time and judging expertise. Finally, a huge thank you to all our presenters, volunteers, and attendees for making this conference a success!

-- PDC 2026 Organizing Committee

Here's to **DISCOVERY!**



**GRADUATE STUDIES
ENDOWMENT FUND**
UNIVERSITY OF WATERLOO



CANADIAN
PSYCHOLOGICAL
ASSOCIATION
SOCIÉTÉ
CANADIENNE
DE PSYCHOLOGIE



Questions? Contact us at psychology.discovery.conference@uwaterloo.ca.

TABLE OF CONTENTS

Acknowledgements	2
Schedule	3
Keynote Speaker	4
Talk Abstracts	5
Session A Poster Abstracts	8
Session B Poster Abstracts	20
Session C Poster Abstracts	33

SCHEDULE OF EVENTS

Check-in will take place in the EV3 lower atrium beginning at 9:00am

TIME	EVENT	LOCATION
9:30am – 10:20am	Poster Session A	EV3 lower atrium
10:30am – 11:20am	Poster Session B	EV3 lower atrium
11:30am – 12:30pm	Keynote Speaker	EV3 1408
12:30pm – 2:00pm	LUNCH	EV3 4408
	WiCSC+ Lunch and Learn	EV3 4412
2:00pm – 3:30pm	Talk Session	EV3 1408
3:30pm – 4:20pm	Poster Session C	EV3 lower atrium

The University of Waterloo acknowledges that much of our work takes place on the traditional territory of the Neutral, Anishinaabeg, and Haudenosaunee peoples. Our main campus is situated on the Haldimand Tract, the land granted to the Six Nations that includes six miles on each side of the Grand River. Our active work toward reconciliation takes place across our campuses through research, learning, teaching, and community building, and is centralized within the Office of Indigenous Relations.

KEYNOTE SPEAKER

Dr. Elizabeth Page-Gould

Professor & Graduate Chair, University of Toronto



Psychological Systems of Cooperation: From Relationships to Social Groups

Abstract: Who will show up for you when you need it? This talk seeks to raise fun questions and encourage you to think more deeply about the intersection of interpersonal relationships and intergroup relations. We will start at the intersection of relationships and social groups by examining the role of cliques (e.g., the different groups or communities in a person's social network) as a source of social support that is distinct from the dependability of the individual people in those cliques. We will next turn this idea to social identity groups, diving into the question of whom we classify as ingroup members versus outgroup members. We examine this question in the context of people's existing social networks and the social interactions they have in their daily lives. We further explore the boundaries of ingroup and outgroup perception when social group categorization is based on "continuous" dimensions of difference (e.g., political beliefs, age). I will close by discussing these findings as demonstrating the psychological functionality of relationships and social groups in large-scale, diverse societies.

TALK SESSION

2:00pm – 2:15pm

Understanding the relationship between non-erotic thoughts, attachment, and gender

Carolyn Zeng* & Uzma Rehman

Sexual well-being is impacted by multiple factors such as non-erotic thoughts, attachment, and gender as they impact motivations, behaviours and attention during sexual encounters (Hazan & Shaver, 1987; Barlow, 1986; Purdon & Holdaway, 2006). Previous research has focused on how attention resources impact sexual dysfunctions, and existing non-erotic thought literature has found significant gender differences (Barlow, 1986; Purdon & Holdaway, 2006). 294 participants in current romantic relationships were recruited from Prolific and completed an online survey that assessed sexual satisfaction, attachment, and non-erotic thought frequency and anxiety. The results of this study found that there is a significant relationship between non-erotic thought frequency and anxiety, with attachment anxiety and attachment avoidance. There are considerable gender differences such that women report greater non-erotic thought anxiety than men; however, avoidantly attached men report greater non-erotic thought anxiety compared to avoidantly attached women. These findings suggest that non-erotic thoughts are related to attachment, impact sexual well-being differently by gender and attachment, and have implications for sexual dysfunction treatments.

Presenter: Carolyn Zeng (c44zeng@uwaterloo.ca; she/her)

2:15pm – 2:30pm

Does speaker age impact preschoolers' predictive use of disfluencies?

Brooke Johnston* & Katherine White

Disfluencies (such as “uh” and “um”) provide listeners with useful information, including helping them anticipate the type of linguistic material that will follow. When a speaker is disfluent, adult listeners predict they will change topics or talk about something difficult to describe (e.g., an unfamiliar object). Preschoolers similarly use disfluencies to predict reference to discourse-new objects, but existing work suggests that they do not anticipate difficult-to-describe objects. However, these studies have only used adult speakers. In the present study, we ask whether children are more likely to use disfluency to predict reference to unfamiliar objects for child speakers, as they may have a better sense of which objects are more difficult for their own age group. Children aged 3.5- to 4.5-years were presented with pairs of familiar and unfamiliar objects while listening to recordings of fluent and disfluent adult and child speakers. Looking behavior to the objects was coded offline. Preliminary data suggest that preschoolers use disfluencies to predict reference to unfamiliar objects for both child and adult speakers, with no interaction between speaker age and fluency. This pattern challenges previous findings with preschoolers and suggests that children make the same types of disfluency-based predictions as adults.

Presenter: Brooke Johnston
(bajohnst@uwaterloo.ca; she/her)

2:30pm – 2:45pm

**Convincing explanations, compelling stories:
Understanding belief and engagement with
conspiracy theories**

Chelsea L. Russill*, Jonathan A. Fugelsang, & Derek J. Koehler

There is a pressing need to understand why conspiracy theories achieve widespread popularity and influence relative to official accounts. Past work has primarily focused on examining the individual differences and motivations underlying belief in epistemically suspect claims, providing insight into who is most receptive to these beliefs, but not what makes the claims themselves compelling. Emerging research suggests that the internal contents and structure of a conspiracy theory may influence attention and engagement, but few studies have examined the characteristics contributing to their appeal. Here, we investigate the internal features of conspiracy theories that may contribute to their success (i.e., belief and social sharing), testing the hypothesis that successful theories operate as convincing explanations and compelling stories. In two studies (N = 456), participants rated one of eight conspiracy theories on features associated with good explanations and stories and responded to measures of conspiracy success. We find that conspiracy theories perceived as good explanations and compelling stories were more likely to be believed and shared, even after controlling for individual differences in conspiratorial ideation. An ongoing study extends and tests the generalizability of these findings using a within-subjects design and a larger set of conspiracy theories. Our findings suggest that one reason why some people may believe conspiracy theories rather than official accounts is that they see them to offer better explanations and more compelling stories.

Presenter: Chelsea Russill (crussill@uwaterloo.ca; she/her)

2:45pm – 3:00pm

ERPs to facial expressions of pain are modulated differently by different empathy tasks: Evidence from mass univariate statistics

Seth B. Winward* & Roxane J. Itier

Empathy is a multidimensional construct including affective and cognitive aspects. While many ERP studies claim that different ERP components reflect distinct empathy constructs, most studies use a single empathy task, tapping only one construct, and few investigate neural responses to faces. In a within-subjects ERP study, 100 participants viewed painful and neutral facial expressions primed by images of body parts experiencing painful or neutral stimulation while performing four different tasks. Participants rated their own level of discomfort (Affective Sharing/AS), their concern for the person experiencing the pain (Empathic Concern/EC), how much pain they thought this person was in (Perspective-Taking/PT), and how masculine/feminine the face looked (control). We used data-driven mass univariate analysis to perform statistical tests at every time-point and electrode. We observed widespread effects of pain for all empathy tasks, starting 100-150ms from face onset; this effect persisted past 400ms only for the affective empathy tasks (AS, EC). The pain effect was strongest and most widespread for the AS task, followed by the EC task and was weakest and most restricted for the PT task. No effect of pain was observed for the control task, reflecting task-related top-down empathy effects on face processing. Overall, ERPs to faces were modulated differently depending on the empathy construct. Implications for theories of empathy, face processing, and social cognition will be discussed.

Presenter: Seth Winward
(swinward@uwaterloo.ca; he/him)

3:00pm – 3:15pm

**Who has standing to challenge discrimination?
The roles of group (dis)advantage, responsibility,
and relevance**

Jessica Trickey*, Soumya Garg, & Hilary B. Bergsieker

Allyship-promoting messaging often focuses on when and how advantaged groups should participate in action against discrimination, yet members of advantaged groups may feel that it is not their place to do so. We theorize that psychological standing, defined as the perceived legitimacy one has to act on an issue, contains distinct subconstructs: perceived responsibility to act and personal relevance to the issue. In four studies, we test competing hypotheses about who has greater standing to combat discrimination: the shared responsibility hypothesis, which emphasizes the power and influence of advantaged groups who assume responsibility, and the lived experience hypothesis, which highlights the familiarity and expertise of disadvantaged groups based on personal relevance. We find that people perceive members of advantaged groups as sharing a collective responsibility with disadvantaged groups when group status is inferred from photos but lower responsibility when group status is made explicit. Actions seen as less appropriate for advantaged (vs. disadvantaged) groups are also rated harder and riskier on average, compounding a disproportionate burden of action for disadvantaged groups. Further, members of advantaged (vs. disadvantaged) groups personally feel less responsibility to act and relevance to the issue and are marginally less willing to take action, yet expect less backlash for doing so. Increasing standing among members of advantaged groups may remove a key barrier to allyship action.

Presenter: Jessica Trickey (jtrickey@uwaterloo.ca; she/her)

3:15pm – 3:30pm

**Savoring the wait: Anticipation buffers the
devaluation of delayed rewards**

Lingguo Xu*

Standard models of intertemporal choice assume that delays strictly discount the utility of a reward. However, this view neglects the affective experience of waiting: humans feel dread before pain and joy before pleasure. This paper investigates whether anticipatory utility—the pleasure derived from savoring a future outcome—can buffer against the negative impact of exogenous delays. In a laboratory experiment (N=360), participants engaged in a "Gold Mining" game where they waited for a probabilistic reward. We elicited their Willingness-to-Pay (WTP) for non-instrumental early information to classify them as "High Anticipation" (savorers) or "Low Anticipation." Results reveal distinct heterogeneity: while delays reduced the valuation of the reward for Low Anticipation individuals, High Anticipation participants exhibited resilience, showing no drop in valuation. Furthermore, distributional analysis reveals that savoring renders valuations "stickier" and less prone to external shocks. These findings suggest that for individuals who actively savor, the cognitive utility of anticipation offsets the cost of waiting.

Presenter: Lingguo Xu (l346xu@uwaterloo.ca)

Poster Session A - 9:30–10:20

CLINICAL

How do you study an emotion that hides? Evidence for the elusiveness of shame

Bailea Erb* & Uzma Rehman
(berb@uwaterloo.ca; she/her)

Shame is a self-conscious, aversive state that is difficult to tolerate, leading individuals to avoid acknowledging it. This avoidance makes shame challenging to study, despite its relevance to normative processes, psychological disorders, and clinical intervention. To develop rigorous methods for studying shame, we must first determine whether recalling shame differs from recalling other emotional states. If shame memories are uniquely challenging to access, new approaches to assessing shame may be needed. In this study, participants reflected on six emotions (shame, happiness, sadness, anxiety, anger, guilt). For each, they described a recent memory and rated recall ease, emotional clarity, confidence in said emotion, and how frequently they experienced the emotion. Shame memories differed from other emotional states in several ways: (1) they were harder to recall, (2) they were described with lower emotional clarity, (3) participants reported less confidence that the memory genuinely reflected shame, and (4) participants reported experiencing shame less frequently overall. Memories of shame were elusive, limiting individuals' ability to gain insight from their experiences relative to other emotions. This study underscores the methodological challenges of studying shame in empirical research. Findings suggest current shame self-report tools may be insufficient and highlight the need for measures that capture shame's aversive nature.

Family simulation training (FaST) in an interdisciplinary undergraduate course: An experiential partnership with theatre and mental health

Katie Musleh*, Imogen Sloss, & Dillon Browne
(kmusleh@uwaterloo.ca; she/her)

Family therapy is a widely-utilized, highly-sought intervention that addresses various psychological and relational challenges within the context of family systems. Unfortunately, undergraduate psychology

and other allied health fields provide few opportunities to shadow clinical work, particularly within the family-related clinical domain. The use of "simulated patients" is common in medical fields, whereby trained actors represent specific clinical presentations. Limited research has explored application of this experiential methodology to family therapy. This study addressed this gap by pilot testing a family therapy training model called Family Simulation Training (FaST) designed for an undergraduate learning context. Participants included 83 undergraduate students enrolled in a semester-long Trauma, Stress and Resilience in Families course in Winter 2026. An integral component of this course was the observation of in-class simulated therapy sessions conducted between the instructor serving as the family therapist and four actors formed into a simulated family. Participants completed adapted pre-post measures assessing their confidence in understanding and applying family course content and student engagement in learning before and after observation of mock therapy sessions. Results indicated that undergraduate students significantly improved in their confidence in understanding and applying helping skills and engaging in clinical conceptualization of family therapy tasks. Interestingly, while students significantly improved in their physical engagement over the semester, these same gains were not found for emotional or cognitive engagement. This study provides support for further expanding and testing this innovative theatre-mental health partnership to other faculties and professional programs at the University of Waterloo.

The interplay of experiential avoidance and perceived partner responsiveness in sexual communication and satisfaction

Kendra S. Wasson* & Uzma S. Rehman
(kwasson@uwaterloo.ca; she/her)

Sexual communication (SC) is central to sexual and relationship well-being, supporting mutual pleasure, safety, and boundary setting, whereas avoidance of SC is associated with poorer sexual outcomes. Despite its importance, SC is often avoided due to self-threat concerns (e.g., fear of rejection) and reluctance to experience negative emotions (e.g., shame). This study examined how SC links perceived partner responsiveness (PPR; feeling cared for,

understood, and validated) with sexual satisfaction, while considering experiential avoidance (EA; unwillingness to experience distressing internal states). Although PPR predicts positive sexual outcomes, SC's role in this process, particularly in relation to EA, remains underexplored.

Data were collected from 353 partnered adults in an online sample. Replicating prior work, mediation analyses (PROCESS Model 4, SPSS) showed that SC partially mediated the association between PPR and sexual satisfaction: higher PPR predicted greater perceived SC, which in turn predicted higher sexual satisfaction (indirect $\beta = 0.039$, 95% CI [0.024, 0.054]; direct $\beta = 0.075$, $p < .001$). Moderated mediation analyses (PROCESS Model 8) indicated a significant PPR \times EA interaction ($\beta = 0.004$, $p = .022$). Individuals higher in EA relied more on PPR when engaging in SC, whereas those lower in EA showed relatively stable communication regardless of responsiveness. However, EA did not moderate the overall indirect effect, suggesting that once SC occurs, its association with sexual satisfaction is consistent across avoidance levels.

These findings position SC as a key interpersonal pathway linking responsiveness with sexual well-being and highlight EA as a boundary condition influencing engagement in, but not benefits of, sexual communication.

**What are others thinking about you?
How older adolescents' motivation to mentalize
relates to their perceptions of others' thoughts
in online/offline contexts**

Yasna Yassini*, Kowsi Aravinthan, & Elizabeth Nilsen
(yyassini@uwaterloo.ca; she/her)

Mentalizing is a process that involves using social cues (e.g., expression/tone) to make inferences about others' mental states during social interactions. These indicators are limited in online communication, thereby creating ambiguity in interactions and leaving room for biased interpretation. Despite the increase in online communication among adolescents, there remains a gap in research regarding how mentalizing differs across online and in-person contexts. The present work assesses older adolescents' perceptions about what others are thinking about them within online and in-person social interactions. Additionally, we examined whether adolescents' motivation to

mentalize relates to particular styles of mentalizing in both contexts.

Older adolescent participants (17-19 years-old) were recruited using SONA (N = 160). During an online study, participants were asked to imagine themselves within mildly negative social scenarios occurring both on- and off-line and then indicated the degree to which they would hold certain thoughts (positive, neutral, negative). Results indicate that there is an interaction between context and valence, such that participants indicated that others would hold more negative thoughts about them in offline social scenarios (M = 51.00) than online (M = 49.93) – and that they would hold more neutral thoughts within online contexts (M = 55.56; versus offline, M = 53.36). This pattern suggests that participants adjust their interpretations based on available contextual cues. Individual differences in motivation to mentalize interacted with valence in predicting ratings: participants with greater motivation to mentalize had lower ratings of others' negative thoughts about them across contexts ($p = .010$).

**Not the plan, but the system: An analysis of
systemic factors to inclusive education in Ontario**

Harneet Kaur Sidhu* & Pamela Seeds
(hk7sidhu@uwaterloo.ca; she/her)

Individual Education Plans (IEPs) provide accommodations to students with diverse learning needs (Campbell et al., 2018). However, existing literature does not include sufficient information on its implementation process, nor do they clarify whether they are effective in supporting students' learning. The goal of this paper is to present the disconnect between IEPs and the student's actual experience. According to the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD), Canada is noncompliant with its standards for inclusive education based on five interrelated factors: reductions in education funding; insufficient support and parent participation; lack of teacher training; medicalized language; and the voluntary removal from the public system (Lord, 2020). Through addressing these limitations, IEPs can become efficient sources of alleviating the problems they are meant to address.

COGNITIVE

How adults evaluate exceptions: Generic and causal reasoning

Leanne Schut*, Elizabeth Lapidow, & Stephanie Denison
(lschut@uwaterloo.ca; she/her)

People often reason about the world using broad generalizations that allow for exceptions. Generic statements (e.g., “Ducks lay eggs”) capture what is typical or characteristic of a group, rather than what is true in every single case. However, people are sensitive to the type of exception: absences of a property (e.g., ducks that do not lay eggs) are acceptable, whereas those that introduce an alternative, conflicting property (e.g., the generalization “Ducks are male”) are not (Leslie, 2007; Simmons & Gelman, 2025). The present study asks whether this sensitivity to exception type extends to causal reasoning. Across two experiments with undergraduate participants, we examined how people interpret causes with either absence or alternative exceptions. In Experiment 1, participants (N = 120) evaluated causal claims based on patterns of observed outcomes. In Experiment 2 (N = 84), they chose which cause to act on to produce a particular effect. Both experiments used the same structure and stimuli, drawn from three different domains (psychological, mechanical, biological). Results revealed a consistent effect of exception type and interaction with domain. In biological and mechanical, participants preferred causes with absence over alternative exceptions. In psychological, however, this preference was reversed. These patterns held for both judgments about causal claims and decisions about causal interventions. Together, these findings suggest that people bring domain-specific expectations about variability to causal reasoning and may interpret exceptions in ways that parallel reasoning about generics. Ongoing work in Experiment 3 examines whether perceived similarity between outcomes helps explain these effects.

The effects of informative algorithmic cues on judgments of learning

Lucas R. Betts*, Skylar J. Laursen, Trent N. Cash, & Evan F. Risko
(lrbetts@uwaterloo.ca; he/him)

How do AI-generated predictions impact metamemory? In our experiment, participants rated the likelihood of recalling words in varying font sizes. Typically, larger fonts increase confidence (the font-size effect). Crucially, some trials included an AI confidence prediction that did not vary systematically with font size. Thus, use of the AI prediction in the JOL should reduce the impact of font size. We found that the AI’s presence did not generally reduce the font-size effect, suggesting that participants may have ignored it. However, higher self-reported reliance on the AI information was associated with a weaker font-size effect.

Seeking structure in uncertainty: Boredom proneness and meaning seeking

Ryan Chen* & James Danckert
(r449chen@uwaterloo.ca; he/him)

Boredom is a self-regulatory signal motivating individuals to seek more meaningful activities. Less is known about how this state translates into specific actions. The present study investigates whether trait boredom proneness is associated with distinct pathways of meaning construction under ambiguity, including low-level perceptual updating and higher-level endorsement of conspiratorial beliefs. Participants performed an ambiguous figures task in which one recognizable image morphs gradually into another. Participants indicate the point at which they recognize the second object in the sequence, indicative of how quickly they update perceptual representations. Reaction times and perceptual switch points are recorded as indices of cognitive flexibility in ambiguous contexts. In addition, participants completed a range of questionnaires that allowed us to explore the way in which boredom proneness is related to differences in endorsement of conspiratorial beliefs, and whether perceived meaning in life and the sense of agency mediated these relationships. Results revealed that higher boredom proneness significantly predicted stronger endorsement of conspiratorial beliefs. Mediation analysis demonstrated that this relationship was partially explained by a diminished sense of agency. Individuals with higher boredom proneness reported lower levels of agency, which in turn predicted greater endorsement of conspiracy beliefs. While boredom proneness did not significantly predict perceptual switch points, exploratory analyses showed that higher conspiratorial ideation and lower

agency (i.e., higher negative agency) were both directly associated with later pattern detection in the morphing figure task, individuals with high conspiratorial ideation and disrupted agency may actually exhibit reduced flexibility in updating their perceptual representations.

COGNITIVE NEUROSCIENCE

Do anxiety traits modulate facial expression processing? A full-scalp mass univariate ERP study

Amie J. Durston* & Roxane J. Itier
(ajdurston@uwaterloo.ca; she/her)

Understanding others' emotions is important to our social functioning. Anxious individuals may be more sensitive to negative facial expressions (e.g., fear and anger) than others. However, ERP studies investigating this question yield inconclusive findings, have small samples ($n < 30$) and error-prone statistics. Here, we used robust full-scalp analyses and a large sample. Participants viewed neutral, happy, angry, and fearful faces, and rated them on valence and arousal. Throughout data collection the volatility of ERP-anxiety correlations became evident. In a sub-sample ($n=114$), STICSA scores negatively correlated with arousal ratings for neutral faces only, and SPIN scores negatively correlated with valence ratings for angry and fearful faces. For ERP data, STICSA positively predicted ERP amplitudes to neutral (P2 component), angry (P1) and fearful (EPN) faces. SPIN was not a significant predictor of ERPs for any expression. In the full sample ($N=130$), SPIN negatively correlated with arousal ratings for neutral and angry faces. For ERP data, STICSA scores predicted C1 amplitudes in response to fearful faces, and SPIN predicted N1-VPP amplitudes elicited by neutral and fearful faces. These results highlight the instability of correlations between anxiety traits and subjective or ERP indices of face processing. Further, anxiety influenced subjective ratings and ERP amplitudes differently, suggesting a possible brain-behaviour disconnect. Future research on anxiety and affective face perception must utilize large-scale experiments to be confident in results.

Exploring boredom proneness through the lens of predictive coding: affective variability in arousal and valence

Dylan Tan* & James Danckert
(d29tan@uwaterloo.ca; he/him)

Boredom proneness has been linked to a range of negative psychological outcomes. Drawing on predictive coding as a conceptual framework, and recent neurobiological research relating interoceptive pathways to known boredom-related brain activities, this study investigates how individuals high in boredom proneness process emotional stimuli, with a specific focus on arousal and valence. It is hypothesized that boredom-prone individuals will show greater variability in physiological arousal responses and less correspondence between subjective and physiological arousal. Participants view a series of 80 emotionally standardized images from the Nencki Affective Picture System (NAPS) while their skin conductance and heart rate is continuously recorded. After each image, participants rate their emotional response using the Self-Assessment Manikin (SAM) scales for arousal and valence. Boredom proneness is assessed using the Short Form Boredom Proneness Scale (BPS-SF). Data collection is currently ongoing ($N = 38$), with a target sample of 84 participants. Correlational and regression analyses will examine how boredom proneness relates to variability and coherence in emotional responses. This work contributes to our understanding of boredom as a complex emotional state and explores it from an affective predictive coding framework.

Do the principles of the Attentional Boost Effect apply in the context of learning from video lectures?

Emily Mashaal* & Daniel Smilek
(emashaal@uwaterloo.ca; she/her)

The Attentional Boost Effect demonstrates how behaviourally relevant responding can dynamically modulate attention such that when pairing an encoding and target detection task, recognition memory for items paired with a target signal show no decrement to performance. More recently, there has been a call to investigate whether embedding behaviourally relevant events into learning material can modulate attention and memory similar to the Attentional Boost Effect. The current study aims to

explore whether embedding behaviourally relevant events can be generalized to other learning scenarios like a video lecture. An experimental group was instructed to watch a 40-minute video lecture in preparation for a later recognition memory test with the additional task of identifying when the border around the video matched a target colour. Results indicated a performance decrement for those engaging in the target detection task.

Building trust one character at a time: How AI trust is impacted by content presentation

Jacob Oliveira*, Adrian Berk Safati, & Monica Tsang
(jacob.oliveira@uwaterloo.ca)

AI chat systems are rapidly becoming trusted sources of advice, yet surprisingly little is known about how interface design shapes trust. Most research focuses on what AI says, such as accuracy and competence, but ignores how responses are presented. The present research tests whether a purely cosmetic feature, typing animation speed, can influence trust in AI chat interfaces even though it conveys no information about correctness. Across two within-subject laboratory experiments, participants interacted with three AI agents whose responses were presented with slow typing (50 ms per character), fast typing (20 ms per character), or instant appearance (0 ms per character). After each response, participants rated their trust in both the response and the agent. In Experiment 1 (N = 71), responses were pre-scripted and content was held constant. Typing animations increased trust in the AI agent compared to instant presentation, despite response accuracy having no effect on trust. In Experiment 2 (N = 68), participants asked their own questions and received live responses from a large language model. Under these naturalistic conditions, typing animations increased trust at both the response and agent levels. Fast and slow typing produced comparable effects, indicating that the presence of visible typing, rather than its precise speed, is sufficient to increase trust. These findings reveal that a ubiquitous and seemingly trivial interface feature can meaningfully shape trust in AI systems independent of content quality. This raises important concerns about miscalibrated trust and highlights the powerful role of interface design in shaping human AI interaction.

Sounds of the past: Music-cued autobiographical recall in older adults

Nadya Drury*, Khalil Husein, & Myra Fernandes
(nbrury@uwaterloo.ca; she/her)

Autobiographical memory supports a stable sense of self and emotional well being, but the ability to recall these memories declines with age and is further reduced in people with mild cognitive impairment. Music can trigger vivid meaningful memories, making it a promising way to support retrieval in older adults. Self efficacy—belief in one’s ability to succeed—can improve memory retrieval by boosting motivation, persistence, and confidence during memory tasks. This study examined the relationship between self-efficacy, measured using the General Self-Efficacy Scale, and the number of music-evoked autobiographical memories in older adults with varying cognitive status. Participants listened to short 15-second clips of popular late-1960s songs from their youth. These were presented as either unaltered songs or in modified format (lyric-only). Following each cue, participants verbally described any autobiographical memory that was evoked. Analyses showed that unaltered song cues elicited a greater number of autobiographical memories than lyric-only cues. Furthermore, higher self-efficacy was associated with an overall increase in number of memories elicited. Importantly, self-efficacy differentially increased the ability of song versus lyric cues to elicit memories. Individuals with poorer cognitive status, measured using the Montreal Cognitive Assessment, recalled fewer memories overall, though self-efficacy remained a significant predictor of memory. Together, these findings demonstrate that music reliably evokes autobiographical memories across individuals with different levels of cognitive functioning. They also suggest that everyday memory retrieval may benefit from using musical cues to enhance access to memories, with self efficacy further strengthening its impact.

DEVELOPMENTAL

Children's concept of luck is not mature, even at age 7

Amy Howard*, Stephanie Denison, & Ori Friedman
(a6howard@uwaterloo.ca; she/her)

When people judge an event as lucky or unlucky they contrast what happened with what could have happened (Teigan, 1995). How good or bad that luck is depends on whether what actually happened is better or worse than what could have happened. While children develop the ability to think about what could have happened between 4-6-years-old (Pawsey et al., 2024; Beck & Guthrie, 2011), they understand that expectations shape how people feel about what happened at age 4. (Asaba et al., 2019). We investigated children's early concept of luck and their emotion inferences in response to an unexpected outcome. In Experiments 1 and 2, children aged 4-7 years (N = 160?) saw two animals: one high and the other low in jumping ability (e.g., kangaroo, sheep). In each story, both animals either succeeded or failed to jump over an obstacle. Children were either asked which animal had good or bad luck and which animal was happier or sadder. When the animals succeeded children thought the high-ability animal had good luck and was happier. When both animals failed children thought the low-ability animal had bad luck and was sadder. These results suggest children's early understanding of luck differs from adults'.

How do children infer future-thinking in others?

Ayshe Ozlu*, Stephanie Denison, & Ori Friedman
(aozlu@uwaterloo.ca; she/her)

Suppose that a boy has ice cream and it starts melting. So, he grabs a napkin. Another boy, who also has ice cream, grabs a napkin first and then his ice cream starts melting. Which boy thought more about what might happen? In two experiments (N = 295), we investigated whether children recognize that someone who acts in anticipation is thinking about the future. In Experiment 1, 3-7-year-olds completed two trials. In each trial, they learned about a character who did something in anticipation of what might happen and another one who reacted to what just happened. Both characters engaged in the same

actions, but the order of actions differed. Then, children were asked: "Which boy/girl thought more about what might happen?" Five-year-olds and older children were more likely to choose the character who acted in anticipation. In Experiment 2, children were either asked the previous question or a control question: "Which boy/girl thought less about what might happen?" We expected children to answer in the opposite direction with this question, ruling out the explanation that they were choosing the character who acted in anticipation regardless of the question. Results for the original question replicated Experiment 1, but younger children were inclined to give the same response (selecting the character who acted in anticipation) to the question about who thought less. By age 6, this reduced to chance level. Together, these results reveal that there is more to discover about the kinds of evidence children consider inferring people's future-thinking.

Temporal trends of youth mental health symptoms in Ontario, Canada from 1983 to 2023

Curtis Fung*, Chris Ji, Emma Nolan, Jordan Edwards, Meira Golberg, Nicole S.J. Dryburgh, Yun-Ju Chen, Peter Szatmari, Kathy Georgiades, & Katherine T. Cost

(c29fung@uwaterloo.ca)

Few studies have examined temporal trends in youth mental health over multiple decades that includes recent data after the COVID-19 pandemic. Previous temporal trend research has relied on cut-offs and symptom means, which may not represent the skewed distribution of symptom scores. Therefore, we investigated trends in self-reported mental health symptoms in Ontario youth over a 40-year period, with quantile regression to characterise scores across the entire distribution. Confirmatory factor analysis assessed factor structure and measurement invariance of four epidemiological mental health symptom surveys by Statistics Canada of youth (ages 12-15) in Ontario, Canada from the years 1983, 1998, 2014, and 2023. Quantile regression characterised the distribution of symptom scores. Data were stratified by sex. Data from 1983 did not demonstrate convergent validity and were dropped from subsequent analyses. There were no significant differences over time between 2014 and 2023 for internalizing and externalizing scores. Inattention and hyperactivity symptom scores increased from

2014 to 2023 in upper quantiles ($\tau = 0.5, 0.75, 0.9$). Sex differences were reported in all three symptom domains. The findings suggest a more nuanced view of youth mental health in Canada. Strengths of this study include assessing the measurement invariance of the survey over multiple decades and using quantile regression to evaluate the entire distribution. Stratified results indicate specific areas of concern such as the significant increases of inattention-hyperactivity symptoms in almost all female youth. Potential future research could examine other grouping characteristics (e.g., socioeconomic status).

Probability learning in infants

Diya Bhatt*, Thuvaraka Mahenthiran, & Stephanie Denison
(d7bhatt@uwaterloo.ca; she/her)

Infants observe events in their environment and learn to anticipate what might come next. While research has established that infants can detect statistical regularities and reason through probability (Saffran et al., 1996; Xu & Garcia, 2008), very little is known about how infants distribute their predictions across repeated probabilistic events (Denison & Xu, 2019). In adult and child literature, two main strategies have been identified: probability matching, where choices are distributed in proportion to observed outcome frequencies, and maximizing, where the highest probability option is chosen consistently (Koehler & James, 2009; Plate et al., 2018). The current study examines probability learning in infants aged 6–18 months using a 70:30 probability ratio, as a pilot for a full study. Approximately 15 infants will watch balls drop from one of two chutes into occluded boxes across a learning phase (40 trials) and an anticipation phase (20 trials), followed by a violation-of-expectation trial revealing either a matching or mismatching distribution of balls. Anticipatory gaze will be measured in a 200ms window before each ball is released to determine whether infants look preferentially toward the high-probability side above chance, using a t-test. For the violation-of-expectation trials, we expect a trend towards infants looking longer at the unexpected outcome, compared to the expected outcome, if they track the events they observed (Romberg & Saffran, 2013). Given the small sample, results are unlikely to be statistically significant, and results will focus on averages and

trends to assess paradigm viability. These findings will set the foundation for a larger study.

Growing together or growing apart: How peer interaction shapes children's mental health after Covid-19

Mandeep Singh*, Hongcui Du, Callie Little & Sara Hart
(mk24sing@uwaterloo.ca; she/her)

The COVID-19 pandemic disrupted children's peer interaction, raising concerns about longer-term socioemotional development. While prior research documented cross-sectional associations between peer experiences and mental health during the pandemic, less is known about whether early post-pandemic peer contexts predict changes in children's socioemotional functioning. This study examined whether parent-reported peer experiences in Fall 2021 predicted children's trajectories of emotional and behavioral difficulties and prosocial behavior from 2021-2023. Data were drawn from 1,104 children aged 8-12 years (49.8% male) participating in the National Project on Achievement in Twins, a population-based longitudinal twin study. Linear growth curve models were estimated separately for Total Difficulties (TD) and Prosocial Behavior (PR) as measured by the Strengths and Difficulties Questionnaire (SDQ). Four peer variables from Fall 2021 (face-to-face contact, conflict with friends, social media contact, and close friends) were included as predictors of baseline levels and rates of change. TD declined modestly and PR remained stable across the two-year period. Peer experiences were more strongly associated with baseline functioning than change over time. Peer variables explained 10% of variance in baseline TD and 3% in baseline PR but modest variance in slopes (4% and 11% respectively). Higher conflict predicted higher baseline TD and lower PR, whereas larger friendship networks predicted lower baseline TD. Face-to-face and social media contact showed weak associations. Results suggest children's peer environments as schools reopened were closely linked to simultaneous socioemotional well-being, with modest implications for trajectories. Interventions targeting peer conflict and supporting friendships may benefit children during social recovery following disruptions.

The role of children's temperamental shyness for success on a dyadic drawing task

Mika Jayaweera*, Elizabeth Nilsen, & Heather A. Henderson
(mijayawe@uwaterloo.ca; she/her)

Past research suggests that during dyadic tasks, children higher in temperamental shyness communicate less with peers and may elicit certain listening behaviours from their partners (Sosa-Hernandez et al., 2023). Extending this work, the present study examined whether children's temperamental shyness is associated with success during a dyadic drawing task. As a part of a broader study, children aged 9-12 years (N=194), completed a collaborative drawing task. Dyads were assigned instructor and listener roles, whereby instructors described a line drawing to their partner, the listener, who attempted to recreate it based solely on verbal instructions. Children also self-reported temperamental shyness using the Children's Shyness Questionnaire (CSQ; Crozier, 1995). Drawing success was scored on a 5-point scale, with a score of one indicating no resemblance to the original figure, and a score of five indicating perfect resemblance to original figures (M = 1.57). Analyses revealed no significant associations between instructor or listener shyness and drawing task success ($p > .05$). However, age was positively associated with task success for both instructors ($r = .33, p < .001$) and listeners ($r = .27, p < .001$), indicating improved performance with increasing age. These findings suggest that shyness may not directly predict task success, however, future analyses will examine whether specific communicative behaviours are related to both children's shyness and task performance. This work contributes to literature on temperamental shyness by clarifying its role in collaborative task contexts and may inform future efforts to support children's social communication.

Understanding modal reasoning across tangible and intangible outcomes in early childhood

Paige Wahl*, Elizabeth Lapidow, & Stephanie Denison
(piwahl@uwaterloo.ca; she/her)

The present study examines whether 3 to 4-year-old children can use modal reasoning to understand mutually exclusive events. Modal reasoning, the capacity to evaluate possible, impossible, and necessary states of reality, is a core component of

higher-level cognitive abilities. There is ongoing debate about whether children younger than 5 years old can engage in modal reasoning, particularly in tasks that require the consideration of mutually exclusive possibilities (Phillips & Kratzer, 2024). Some evidence suggests young children fail such tasks (Redshaw & Suddendorf, 2016; Leahy, 2024), while other work posits these failures reflect limitations in other, related abilities rather than in modal reasoning (Turan-Küçük & Kibbe, 2025). To address this debate, we adapt a task previously used to elicit modal reasoning about multiple possibilities in older children (Sodian et al., 1991). The current study modifies the paradigm for a younger age group (3- to 4-year-olds) while contrasting modal reasoning capabilities about intangible outcomes (seeking information) with the more commonly studied modal reasoning for producing tangible outcomes (making something happen). These findings contribute important, novel insights to ongoing debates about how and when modal reasoning abilities emerge during development.

Children's evaluation of self-denying leaders

Sara Al-Uqaili* & Ori Friedman
(sealuqai@uwaterloo.ca)

What qualities differentiate leaders from ordinary people? Religious leaders, such as shamans, practise self-denial by abstaining from food. This self-denial may serve to mark them as leaders by signalling self-control, or by indicating supernatural otherness. We conducted two experiments investigating whether young children (total N = 117) see self-denial as a cue to leadership, and if so why. In Experiment 1, 4-7-year-olds saw stories about two leaders and then judged which leader was more amazing, which should be in charge, and which should be sought for help. In some stories, leaders varied in luxury consumption (e.g. eating more vs less dessert). In others, leaders differed in their engagement with vital needs (e.g. needing more vs less sleep). Children's responses varied by condition. When the leaders differed in their consumption of luxuries, they preferred the leader who consumed less. By contrast, when they differed in their vital needs, they preferred the leader with greater needs. In Experiment 2, we replicated these findings in a design that also included an additional kind of leader, whose consumption of luxuries and vital needs was typical of other people. Experiment 3, which is

currently underway, investigates whether the findings replicate when children consider unfamiliar luxuries and needs. Overall, children increasingly interpret self-denial of luxuries as a leadership cue, but not other forms of low consumption, as children preferred leaders with greater vital needs. Supernatural power also did not appear to signal leadership, as children did not choose leaders who engaged less across all contexts.

An exploration of parent-child joint attention during a problem-solving task: A novel eye tracking method

Thuvaraka Mahenthiran*, Nadine Ghanem, Heather Henderson, & Stephanie Denison
(t2mahent@uwaterloo.ca; she/her)

Parents play a critical role in guiding their young children when helping them navigate challenging or novel problems (Ladd & Petit, 2002). Studies have shown that joint attention (JA) is a key predictor for successful collaboration which plays a crucial role in problem solving and learning (Barron, 2003). JA occurs when two individuals coordinate their focus to mutually share attention towards a common event/object (Bradley et al., 2023). Most studies examine JA in infants/toddlers and their parent with limited focus on other aspects of the interaction (Ambrose et al., 2020; Guo & Feng, 2013; etc.). There is limited focus on the bidirectional attentional patterns along with parenting behaviors in naturalistic learning contexts. The current work examines whether the proportion and type (child-led or parent-led) of JA differ depending on the parents' motivational state? The study examined eye tracking data from subset of participants in a larger study (N=29 dyads; child ages 4.00 - 5.83 years). Eye tracking devices were used to capture their eye movements while they completed three challenging puzzles (Lunkeheimer et al., 2017). The dyads were randomly assigned to one of the two study conditions used to manipulate the parents' motivational states; process-oriented vs. outcome-oriented condition. Data was used to create synchronized measures that capture the frequency and duration of gaze fixations to quantify JA, as well as who initiated JA for predefined regions of interest (e.g., the puzzle boards, parent hand, etc.). Findings suggest that children primarily drove JA during this task regardless of the study condition.

Age-based prediction in children's language processing

Suevin Un*, Kate McCrimmon, & Katherine S. White
(suevin.un@uwaterloo.ca; she/her)

Language processing is incremental and predictive. Previous work demonstrates that children use cues such as subject-verb agreement (Lukyanenko & Fisher, 2016) and speaker preferences (Thacker et al., 2017) to predict the word that will come next in a sentence. In the present study, we explore whether children make predictions based on speaker age. Preschoolers aged 3.5 to 5.5 years were recruited. In each trial (32 total), participants heard a sentence spoken by an adult or child speaker (e.g., "I will ride the nice [item]"). Depending on the type of the trial, participants saw either a pair of objects related to different age groups (e.g., motorcycle and tricycle) or a pair of objects related to different verbs (e.g., tricycle and teddy). Participants' gaze patterns were coded in 33-msec increments. Preliminary analyses reveal a robust verb prediction effect replicating prior research and a smaller age prediction effect. Visual inspection of time series plots suggests that children's predictions are stronger for the child voice than the adult voice. Analyses on the full dataset will reveal whether this holds for the condition where participants did not see the speaker's face, along with whether children's predictions vary as a function of particular verbs or stimulus items. Thus far, this study demonstrates for the first time that preschoolers use age as a predictive language cue. However, the smaller magnitude of the effect relative to verb-based predictions raises interesting questions about the relative strength of different types of cues and how experience shapes their use.

INDUSTRIAL-ORGANIZATIONAL

How does cultural perspective-taking increase cooperation in cross-cultural business exchanges?

Aleena Khan* & Wendi L. Adair
(a639khan@uwaterloo.ca; she/her)

Cross-cultural business interactions are increasingly common in today's extremely globalized economy, yet they are also vulnerable to misunderstandings and breakdowns, damaging the chance of successful cooperation (Lee et al., 2013). Prior research suggests that Cultural Perspective Taking (CPT)—the active effort to anticipate and interpret others'

culturally-shaped norms and behaviours before and during an interaction—can increase collaborative outcomes in intercultural business contexts (Mor et al., 2013). However, despite growing evidence that CPT is effective, relatively little is known about the psychological mechanisms through which it promotes cooperation. Drawing on the perspective-taking literature, the present research proposes Representational Overlap, the mental merging of the self and the other, as a theoretically grounded mechanism linking CPT to cross-cultural collaboration (Aron et al., 1992; Davis et al., 1996). Perspective taking reduces self–other distinctions by incorporating aspects of another into one’s self-concept, increasing perceived similarity, understanding, and alignment (Aron et al., 1991; Aron et al., 1992). Adopting another’s viewpoint can shift attention away from competition and toward shared goals and outcomes (Galinsky et al., 2005; Ku & Wang, 2015). In intercultural business contexts, CPT may foster collaboration by increasing overlap between partners whose cultural backgrounds heighten perceived distance. By testing Representational Overlap as a mechanism, this work aims to refine theoretical accounts of CPT and contribute to a more precise understanding of how professionals mentally model culturally-different counterparts. Practically, these findings have implications for the design of perspective-taking interventions and organizational training programs intended to promote cooperation, trust, and sustainable relationships in international business settings.

Minority identity employees’ experiences of workplace microaggressions: Exploring the buffering role of microvalidations

Kamila Porebska*, Catherine He, Wendi L. Adair, & Charlotte Young
(kporebsk@uwaterloo.ca; she/her)

While many Canadian organizations have implemented EDIB initiatives, minority employees often still feel pressured to conform to majority norms in order to be accepted, heard, and promoted. Workplaces are filled with subtle interpersonal cues - microaggressions and microvalidations - that can either undermine or affirm employees’ social identities. Drawing on previous research, we predict that minority-identity employees who experience microaggressions engage in identity protection

behaviors that reduce psychological resources otherwise available for promotion-seeking and organizational citizenship behaviors. Across two pilot studies, we developed the Identity Threat Response Scale, which isolates identity-focused responses, in contrast to prior scales that more broadly evaluate stress, coping mechanisms, or discrimination. Using principal axis factoring with varimax rotation, six distinctive dimensions of identity threat response behaviours were identified: 1) Derogation ($\alpha = 0.93$); 2) Concealment ($\alpha = 0.94$); 3) Positive Distinctiveness ($\alpha = 0.92$); 4) Identity Exit ($\alpha = 0.96$); 5) Meaning Change ($\alpha = 0.92$); and 6) Importance Change ($\alpha = 0.96$). Building on these findings, we are conducting further quantitative analyses, with data acquired from minority-identity populations of the Kitchener-Waterloo Region (ON, CA), to assess how daily microaggressions shape work engagement and whether microvalidations buffer these effects. Findings will contribute to organizational psychology, EDIB strategy development, and the design of inclusive workplace interventions.

Cross-cultural experiences on campus

Shadrian McPherson* & Wendi Adair
(simcpher@uwaterloo.ca; she/her)

This research investigates the relationship between cross-cultural codeswitching, cultural intelligence, and internal conflict among multicultural university students. Cross-cultural codeswitching is used as a form of cultural adaptation, and involves modifying one’s behaviour to accommodate different cultural norms. When acting in a way that is incongruent with one’s traditional cultural values or beliefs, a person may experience various stages of internal conflict marked by feelings of illegitimacy and awkwardness. This study examines whether having a high level of cultural intelligence may influence the degree to which multicultural university students engage in cross-cultural codeswitching, and whether they experience internal conflict while doing so. This study features a sample from the University of Waterloo who participated in an online survey.

SOCIAL

How attachment shapes responses to praise vs criticism in romantic relationships

Arini Siddiqui* & Megan McCarthy
(ahsiddiq@uwaterloo.ca; she/her)

Communicating of praise and criticism plays a crucial role in relationship satisfaction and individual well-being. However, attachment insecurity can undermine the benefits of feedback, with insecure individuals often struggling to internalize praise or respond constructively to criticism. This study investigates whether emphasizing relational value can buffer the negative effects of insecurity on responses to relationship feedback. We predict that for anxiously attached individuals, emphasizing relational value will enhance the positive effects of praise and mitigate the negative effects of criticism by providing needed reassurance. For avoidantly attached individuals, we expect relational feedback may backfire, triggering distancing strategies due to increased intimacy, while simple feedback may be better tolerated. This research has important implications for understanding how to tailor communication strategies to individual differences in attachment security, potentially informing relationship interventions and couple therapy approaches.

Authenticity under emotional vulnerability: How self-compassion and honesty-humility sustain being real

Rubee Kung* & Ian McGregor
(rkung@uwaterloo.ca; she/her)

Authenticity is celebrated for its links to well-being, vitality, and psychological integration (Kernis & Goldman, 2006; Ryan & Deci, 2000; Weinstein et al., 2012), and authentic individuals are perceived as socially attractive (Sedikides et al., 2019). Yet if authenticity is so beneficial, why is it not more common? One possibility is that authenticity requires trusting that one's unpolished thoughts, values, and preferences are viable enough to withstand evaluation and uncertainty. When that trust falters, individuals may instead invest in idealized self-concepts, consistent with theories of defensive self-enhancement (Rogers, 1961; Paulhus & John, 1998). Such defensive investment may be especially tempting for individuals high in neuroticism, who are prone to negative self-

appraisals and emotional reactivity (Costa & McCrae, 2008; DeYoung et al., 2007). The present research proposes that authenticity under emotional vulnerability requires two commitments that can feel counterintuitive: self-compassion and honesty-humility. Self-compassion reflects accepting personal imperfections with kindness (Neff, 2003), reducing the threat of self-examination. Honesty-humility, a HEXACO trait, reflects sincerity and resistance to self-enhancement (Ashton & Lee, 2008), limiting defensive self-distortion. Authenticity is operationalized as authentic living, low external influence, and low self-alienation (Wood et al., 2008). In a sample of over 400 undergraduates, we test whether authenticity is predicted by neuroticism (DeYoung et al., 2007), self-compassion (Neff, 2003), and honesty-humility (Ashton & Lee, 2008), including higher-order interactions. We hypothesize a three-way interaction such that self-compassion and honesty-humility jointly support authenticity, particularly among highly neurotic individuals. This analysis clarifies the psychological conditions under which emotional vulnerability may not undermine authentic self-alignment.

Bottom-up dimensions of dress perception

Shawn Yee* & Neil Hester
(s6yee@uwaterloo.ca; he/him)

Past research in person perception has overwhelmingly focused on facial stimuli, despite a myriad of other variables (focally, dress/clothing) that influence our first impressions. Dress has been previously examined in a variety of specific contexts (e.g., sexual preference, status signaling, professionalism), but only recently have broader dimensions of dress perception been identified (i.e., formality and expressiveness; Yee & Hester, in prep.). However, dimensions of formality and expressiveness were selected a priori, and are likely not representative of all salient dimensions. To address this limitation, we probed participants for salient adjectives that came to mind when perceiving 260 garments (Study 1; N = 260) and then asked participants to rate 50% of these garments on the top 40 provided adjectives (Study 2; N = 1,276), to which we extracted nine total factors. Finally, we had participants rate the other 50% of garments on a reduced list of 29 adjectives (Study 3; N = 892). Preliminary results from Study 2 show our initial nine-factor solution explaining 80% of the total

variance in adjective ratings, with the top two factors closely corresponding to the previously identified dimensions of formality ($R^2 = .16$) and expressiveness ($R^2 = .14$). Additional analyses will investigate the generalizability of our nine-factor structure, exploring how garment gender (e.g., whether a garment is considered "feminine") results in factor non-invariance. This research will further theorize on how dress influences first impressions, contributing to more holistic and externally valid models of person perception.

Poster Session B - 10:30–11:20

CLINICAL

A qualitative examination of inner dialogue in OCD

Erin Bowman*, Tyler Eschenwecker, Karen Rowa, & Christine Purdon

(erin.bowman@uwaterloo.ca; she/her)

Preliminary research in our lab (Chiang & Purdon, 2023) found that participants with OCD experienced obsessive doubt as a neutral dominant voice, narrative, or dialogue, delivered by one part of the self to the other. This study replicated and extended these preliminary findings by exploring the phenomenology of an obsessional voice in OCD. Adults with a confirmed diagnosis of OCD (N=20) were administered a semi-structured interview asking about their experience of the OCD voice during obsessive-compulsive episodes in which they performed versus resisted a compulsion. All participants reported experiencing their OCD as a voice, often separate from the self (n=11), and most engaged with the voice in an internal dialogue (n=17). In episodes in which the compulsion was performed, the OCD voice tended to subside after the compulsion (n=15), whereas in episodes in which the compulsion was resisted, half reported the voice subsided once dismissed as irrelevant (n=10). The OCD voice more often conveyed an immediate threat (e.g., “Make sure to wash properly”) rather than a future-oriented threat (e.g., “You might contract something”) in episodes in which the compulsion was performed. Finally, there was greater conflict between the self and the OCD voice when obsessions led to a compulsion. These preliminary findings emphasize the merit of further studying intrapersonal dynamics between the OCD voice and other parts of the self, and the potential therapeutic value of identifying and addressing people’s relationship with their OCD voice.

Racial Pathologization: Are we pathologizing experiences of racialized communities to disconnect from the larger discourse surrounding colonial and state violence?

Ravneet Kaur Jhattu* & Pamela Seeds
(rkjhattu@uwaterloo.ca; she/her)

The experience of accurate diagnosis can have major impacts on recovery through securing insurance

coverage, disability and adequate support. Within the North American context however, there is a bias in the types of diagnoses that racialized individuals receive, suggesting an overemphasizing in certain clusters of symptoms and disorders and under emphasizing in others (Gara et al., 2019). For example, there is an over-emphasis of schizophrenia and other psychotic disorders in Black individuals in comparison to mood disorders (Gara et al., 2019). Historically, the system of psychology was built in alignment with state interests. This alignment has deep roots in how the system operates today such as the association between schizophrenia, Black people, and violence, the condemnation of black liberation movements, police involvement in the mental-health crisis response, and privileged protection (Kennedy, 2022; Gara et al., 2019; Kahn et. al, 2017). The state sanctioned violence and prejudice towards racialized communities creates a deep distrust in the mental health care system, creating difficulties for clinicians to accurately diagnose disorders, and exacerbates racial biases clinicians hold towards the presentation of symptoms (Gara et al., 2019; Kennedy, 2022). Recommendations for moving forward include addressing the historical ties psychology has had with state and colonial violence in oppressing racialized communities, improving training for law enforcement and mental health clinicians rooted in anti-racism, exploring alternatives to police involvement in mental health crises, and improving the accuracy of diagnostic tools in racialized communities (Faber et al., 2023).

Updating the self: The interplay between negative mental imagery and schema change in rescripting negative social memories in social anxiety

Sara Al-Uqaili*, Jennifer E. Fudge, Rotem Paz, & David A. Moscovitch
(sealukai@uwaterloo.ca)

Social anxiety (SA) is maintained by negative social autobiographical memories and mental images which reflect maladaptive self-schemas. Imagery rescripting (IR) interventions update memories and their associated imagery by guiding individuals to intervene imaginatively within their memory, thereby meeting previously unmet emotional needs and updating negative schemas. We compared compassionate vs. assertive IR strategies and examined whether SA severity moderates these

effects. Participants (311 undergraduates: 37% White, 77% female) retrieved a specific memory where they felt socially excluded and were randomized to one of three online conditions: self-compassionate IR, assertive IR, or a reflective control condition. Participants completed standardized measures of schema content, anxiety and mental imagery valence pre- and post-intervention. Post intervention, participants within active rescripting conditions experienced reductions in image negativity, b 's > -24.84 , p 's $< .001$, d 's < 1.29 , and increases in image positivity, compared to the control, b 's < 30.42 , p 's $< .001$, d 's < 1.48 . Notably, anxiety levels reduced for high SA individuals within the assertive condition when compared to the control condition, $b = 6.77$, $p = .005$, $d = 0.95$. Surprisingly, schema change was not significant in any condition, b 's < 1.58 , p 's $> .05$, d 's < 0.62 , suggesting that brief, self-guided IR can improve emotional and imagery outcomes independently of underlying schemas. Thus, meaningful schema change may require multiple sessions or complementary, clinician-guided interventions to harness schema-updating mechanisms such as expectancy violation and prediction error, thereby promoting deeper and perhaps also more sustainable and enduring symptom improvements.

Temporal trends in children's mental health in Ontario from 1983 to 2023

Erya Xu*, Chris Ji, Emma Nolan, Jordan Edwards, Meira Golberg, Nicole Dryburgh, Yun-Ju Chen, Peter Szatmari, Kathy Georgiades, & Katherine T. Cost
(e2xu@uwaterloo.ca)

Introduction: There are concerns that children's mental health (MH) has gotten worse in recent years, which is troubling because childhood MH is associated with later outcomes. Existing literature on temporal trends, however, is mixed: some studies reported increasing problems whereas others found stable or decreasing problems. Our objective was to measure internalizing, externalizing, and inattention-hyperactivity symptoms in children aged 5-11 and examine its changes across the full distribution between 1983-2023 in Ontario, using validated parent-reported measures tested for factor structure and invariance. Methods: Confirmatory factor analyses with measurement invariance testing by year (1983, 1998, 2014, 2023) and assigned sex were conducted to support validity. Symptom

changes by year were assessed with quantile regression. Four measurement points were used to capture changes across years. We included a year-by-sex interaction term to test for sex differences. Results: Symptom levels in all domains increased in at least one quantile between 1983-1998 but decreased between 1998-2014. Between 2014-2023, only inattention-hyperactivity increased, in 0.5 and 0.75 quantiles. In 2023, all domains showed no change compared to 1983 but showed significant decreases compared to 1998. No year-by-sex interactions were statistically significant. Conclusions: Results suggest that children's MH in Ontario has not declined since 1983. Rather, all MH domain symptoms increased, decreased, then remained stable since 2014, except for an increase in inattention-hyperactivity, highlighting an area of intervention. MH sex differences were not evident in sample. While we only have four measurements over 40 years, our large sample size and sampling approach provide confidence in generalizability of findings

Desire maintenance in women's long-term relationships: The role of sexual growth and destiny beliefs

Simran Mukkar*, Siobhan Sutherland, & Christine Logel
(s2mukkar@uwaterloo.ca; she/her)

Research suggests that women's implicit sexual beliefs, conceptualized as growth-oriented (i.e., the belief that a satisfying sexual relationship requires effort to maintain) or destiny-oriented (i.e., the belief that sexual compatibility is fixed or predetermined), are associated with how they manage and respond to changes in sexual desire (Maxwell et al., 2017). However, it remains unclear how implicit beliefs predict women's choice among distinct desire-maintenance strategies. This preregistered study investigates how implicit sexual beliefs predict women's use of four desire-maintenance strategies. We collected and analyzed online survey data from women from Canada, the United States, and the United Kingdom in long-term monogamous relationships ($N = 321$) who completed measures of sexual growth and sexual destiny beliefs along with measures of four desire-maintenance strategies: flexible coping, sexual communal strength, sexual communication, and extra-dyadic interest. Stronger sexual growth beliefs were associated with greater

flexible coping and sexual communal strength, with a smaller positive association with sexual communication. Sexual destiny beliefs were generally unrelated to these desire-maintenance strategies, but showed a positive association with extra-dyadic interest. These findings highlight patterns linking implicit belief systems with desire-related behaviors in long-term monogamous partnerships and point to a possible avenue for maintaining sexual desire and improving relationships and well-being.

COGNITIVE

Believing in the familiar: Kinds of conspiracy theories believable by high and low actively open-minded thinking styles

Amir Tabatabaie*, Chelsea Russill, & Jonathan Fugelsang
(a2tabata@uwaterloo.ca; he/him)

Conspiracy theories can shape people's opinions about the world and promote poor decisions that places themselves and others at harm like with vaccine hesitancy and the Jan 6th Capitol violence. People high on Actively Open-Minded Thinking (AOT) generally find conspiracy theories less believable, however, certain conspiracy theories are more plausible than others. The difference between these conspiracy theories has yet to be defined. The current study aims to compare the kinds of conspiracy theories believable by high and low AOT individuals and consider the influence of familiarity and deliberation on this relationship. Undergraduate students completed an online survey with a within-subject design where 55 conspiracy theories (40 false, 15 true) were presented along with measures of believability, familiarity, and level of deliberation for each theory. The 4-Component Thinking Style Questionnaire and Generic Conspiracist Belief scale were used to determine participants' AOT level and general conspiracy beliefs. Preliminary results replicate findings that AOT is negatively related to conspiracy belief and suggest that familiarity with a conspiracy theory strengthens the belief with no effect found for immediate compared to a few seconds of deliberation before making a belief rating.

Minds in motion: Inferring mental states from observed kinematics

Carter M. Smith* & Clara Colombatto
(c45smith@uwaterloo.ca; he/him)

A central challenge for vision is identifying important stimuli in the environment, and we often rely on a simple cue to help us: others' gaze. Observers automatically orient their attention to locations where others are looking — a phenomenon known as the gaze cueing effect (GCE). But there is more to others' gaze than just direction: people may look with different intentions. For example, head turns can be driven by internal goals ("IG"; e.g., turning to reach for a cup) or external stimuli ("EG"; e.g., turning toward a sudden noise). In three experiments, we investigated whether observers could perceive these intentions when observing others' movements. In Experiment 1 (N=100), participants watched videos of actors turning their heads and reported whether each turn seemed IG or EG. Participants were unable to discriminate IG and EG above chance, but their judgments were biased by speed: participants perceived slower turns as IG and faster turns as EG. In Experiment 2 (N=50), we directly manipulated turn velocity and found that faster turns were indeed more likely to be perceived as EG. Finally, in Experiment 3 (N=30), we examined how observers' own attention might be sensitive to these factors: participants localized targets appearing in the locations the actors turned towards vs. away from, and we asked whether detection times differed for IG vs. EG turns at various speeds. Together, these studies offer new insight into the fundamental building blocks of social perception by uncovering new kinematic cues to intention perception, and their influence on observers' attention.

The effect of social conformity on mind wandering

Maryam Hodaie*, Adrian Berk Safati, & Daniel Smilek
(mhodaie@uwaterloo.ca)

Mind wandering (MW), defined as a shift from task related processing to internally generated thought, disrupts sustained attention and impairs performance across a range of goal directed tasks. Although MW is conceptualized as an internally driven state, emerging evidence suggests that attentional engagement is sensitive to social context.

Drawing on classic conformity frameworks and contemporary models of attentional control, we investigate whether normative information about others' MW influences individuals' own attentional states. 180 undergraduate students will be recruited and randomly assigned to one of two normative conditions: low MW (high attentive) condition or high MW (inattentive) condition. Participants will complete the Metronome Response Task (MRT), periodically reporting their MW through thought probes. During the task, participants will receive manipulated "group-average" MW feedback indicating that peers are either highly attentive or highly inattentive. Rhythmic response time variability (RRTv) serves as an index of performance, with greater variability indicating poorer attentional stability, since RRTv reliably correlates with MW reports. We predict that exposure to high MW norms will increase self-reported MW and RRTv, whereas low MW norms will reduce MW and improve performance. By assessing whether MW conforms to social norms, we clarify the social malleability of people's tendency to engage in task-unrelated thoughts.

Intuitive theories of attention shape perceptions of others' attentiveness

Yuanze Huang* & Clara Colombatto
(y292huan@uwaterloo.ca; he/him)

When we look at other people, we extract much information about them, from demographic attributes to emotional states. Social interactions, however, also require that we infer others' cognitive states, such as whether they seem attentive or distracted. Here we examine how perceptions of others' attentiveness depend on their behaviour (e.g., how quickly they respond to external stimuli), but also on the context in which that behaviour occurs (e.g., how distracting the environment is). In particular, we hypothesized that judgments of others' attentiveness in a cueing task would be higher when others have been cued to attend to incorrect locations ('invalid' cues) than to correct ones ('valid' cues). Participants (preregistered N=50) viewed actors perform a spatial cueing task and rated their attentiveness on each trial. Actors were seen as more attentive when they responded faster, but also following invalid (vs. valid) cues, indicating that observers accounted for the greater attentional demands of detecting targets after an invalid cue.

These results suggest that observers draw on multiple sources of information when judging others' attentional states, evaluating both observed behaviour and contextual factors. In this way, evaluations of attentiveness can reveal folk expectations about how attention operates—their intuitive theories of attention.

COGNITIVE NEUROSCIENCE

Evaluating the robustness of the face fixation location effect across datasets and statistical methods

Calla Mueller* & Roxane J. Itier
(c7muelle@uwaterloo.ca; she/her)

Recent studies using event-related potentials and gaze-contingent procedures have found modulations in early visual processing (~80-350ms, maximal at ~130ms) when participants fixate on different features of a face, such as the mouth, nose, or eyes. We evaluated the robustness of these neural modulations by face fixation location across three large distinct datasets (N1=51, N2=52, N3=54) and three different statistical techniques—mass univariate statistics (MUS), partial least squares analysis (PLS), and microstate segmentation analysis. Results were very consistent across datasets, and three main patterns emerged. The first pattern was primarily driven by differences between the mouth and other features around 120ms after face-onset, reflecting retinotopic mapping at the parietal C2 component. The second pattern reflected differential processing between the nose and the other fixations around the N170 timing. The last pattern reflected differences between the right and left eye throughout but maximally around the P1. Maximal effects typically fell between, rather than on, component peaks, regardless of statistical method. All three statistical methods showed similar results. However, while MUS and PLS plots highlighted the same results and complemented each other, segmentation plots were not as readily interpretable or uniquely useful. These findings highlight the importance of robust statistics and careful consideration of how ERP results are interpreted and reported, and demonstrate the strength and reliability of the face fixation location effect.

Linking objective Instagram behavior and psychological measures using real account data

FengWei Pi*, Adrian Safati, & Daniel Smilek
(f2pi@uwaterloo.ca; he/him)

Social media has been argued to cause detrimental effects on cognition and well-being. However, reviews consistently demonstrate weak and mixed correlations between self-reported social media use and various psychological outcomes. The present study explored associations between objective Instagram behaviours and both self-reported Instagram use and psychological characteristics. Ninety-three participants provided their real Instagram data and completed questionnaires assessing Instagram use, attention, and well-being in two in-lab sessions spaced seven days apart. A custom data-processing script was developed to extract detailed behavioural metrics from participants' downloadable Instagram account data. Between-session correlations for Instagram actions were high, supporting reliability, while correlations across different actions were low, indicating distinct constructs. Objective Instagram behaviours were largely unassociated with self-reported psychological measures. Future work may build on these findings by focusing on constructs that more robustly capture the psychologically relevant aspects of social media use.

Categorical thinking and the use of prototypes

Julia Schirmeister* & Britt Anderson
(jschirme@uwaterloo.ca; she/her)

A common concern we often hear about human thinking is that it is problematically categorical. We put things in boxes; we reduce instances to stereotypes; we create artificially discrete classes of things. Categorical thinking can be explained as a particular form of optimal information compression: we reduce entire distributions to their single most-representative members (i.e. their category prototypes). To demonstrate a human natural aptitude for identifying and using category prototypes, we designed a new classification learning task. Stimuli were abstract, coloured shapes varying over nine visual feature dimensions. Participants learned to classify visual stimuli as either being category members or being random in appearance. Categories were contiguous subsets of the feature-space from which category members

were drawn with uniform probability. Participant classification performance was best when the category was based around a category prototype (i.e. formed a hypersphere in feature space around a central point). Performance was worse when the category was stretched along one rotated dimension, creating a linear relationship between features. This stretch transformation preserves Shannon entropy, a metric of how ordered or predictable a distribution is. However, the resulting distribution is no longer well-represented by its category centroid. It is better summarized via recognition of the linear dependence between features. In sum, participants' improved performance in the prototype condition is used as evidence to support human pattern-recognition ability being specialized for identifying recurring similar instances and extracting category prototypes. Future research may uncover broad adoption of this strategy (finding summary members) where inappropriate.

Unsteady lines, unshaken recall: Why handedness and production quality do not affect the drawing benefit

Karen Nayiga* & Myra Fernandes
(kmmayiga@uwaterloo.ca; she/her)

Encoding techniques exist that can enhance the retention of information. Their effectiveness may depend on various factors, including the level of motor engagement, visual imagery, and semantic processing. Drawing a sketch, as a way to encode information, boosts memory compared to other techniques, such as reading or writing to-be-remembered information. Prior research suggests three key components are responsible for the drawing boost to memory: semantic elaboration, pictorial, and motoric processes. We examined whether fine motor control of hand movements, manipulated by using the dominant or non-dominant hand to draw or write words during encoding, influenced the magnitude of the memory benefit. Participants (n=65) were visually presented with a list of 40 concrete nouns, one at a time, and were asked either to write or to draw a picture representing each word, with cue-type intermixed. In separate blocks, writing and drawing were performed using either the dominant or non-dominant hand (within-subject). Drawing compared to writing at encoding led to higher recall, as did using the dominant compared to the non-dominant

hand. Importantly, encoding strategy and hand type did not interact: the typical memory gain from drawing at encoding was preserved regardless of the hand used. Results suggest that the quality of productions does not contribute to the magnitude of the drawing benefit. Instead, simply planning the motor actions required to draw an image is sufficient to boost memory.

Face size modulates face perception: Evidence from mass univariate analyses of ERPs in a parametric design

Lily M. R. Laevens* & Roxane J. Itier
(lmrlaeve@uwaterloo.ca)

In everyday life, we encounter people at various distances, causing their faces to vary in size on the retina. Face size is thus an important factor that may modulate face-related processes, yet its impact at the neural level remains understudied. Importantly, face sizes larger than 6° of horizontal visual angle are rarely tested, and methodological concerns such as lack of enforced fixation location and small sample sizes are likely contributors to result inconsistencies. The present study used a fixation-contingent approach with an eye tracker to investigate the effects of 7 face sizes (2°, 4°, 6°, 8°, 10°, 12°, 14° horizontally) on gender discrimination. Data were analyzed using data-driven whole scalp mass-univariate statistics. Results (N = 56) indicate main effects of gender and size, but no interaction between them. Face size impacted neural activity from 50 to 350ms across the scalp. Paired contrasts showed the strongest N170 differences between 2-4°, with some differences also observed between 4-6°. Differences between sizes 6-8°, 8-10° and 10-12° were non-significant, while those between sizes 12-14° occurred between 200-250ms only at right posterior sites. Results suggest that face-related neural activity is mostly impacted by small and large face sizes but remains similar for faces seen at conversational distances.

Reducing the sustained attention decrement through instantaneous environmental transitions in virtual reality

Maxime LeDrew*, Adrian B. Safati, & Daniel Smilek
(mledrew@uwaterloo.ca; he/him)

When people must sustain attention over prolonged periods, their performance typically declines

while their mind-wandering (MW) rates increase over time. We aim to explore whether introducing a change to one's visual surroundings part way through an attention task (without modifying the nature of the task itself) will trigger disinhibition and restore attentional engagement to the task. In the study, participants complete a visual metronome response task (VMRT) and respond to intermittent thought probes asking about their mind wandering. The stimuli of the VMRT are presented in a virtual reality (VR) headset. Participants also wear a functional near-infrared spectroscopy (fNIRS) headband to measure activity in the medial prefrontal cortex (default-mode processing) and dorsolateral prefrontal cortex (attentional control). The VMRT task is divided into three blocks such that each participant observes a substantial change to their virtual environment (e.g. classroom to forest) as well as a null transition (e.g. forest to forest) between blocks (order counterbalanced). If abrupt change to the task-unrelated background visual context leads to disinhibition and restores attention to the task, then we would expect that, after a change in context (relative to a non-change), there will be (1) reduced response variability in the VMRT indicating improved performance, (2) reduced reports of MW, and (3) decreased activity in default-mode processing in the medial prefrontal cortex, and increased activity in controlled processing by the dorsolateral prefrontal cortex. This study may shed light on the role of environmental variability in reducing task habituation and prolonging sustained attention.

Attentional forecasting: Can people predict their attention will decline over time-on-task?

Melissa van Dijk-Allen*, Bruno Korst-Fagundes, & Daniel Smilek
(m.vandijk@uwaterloo.ca; she/her)

Research has explored people's knowledge of their immediate attentional states, demonstrating that individuals can accurately report a gradual decline in their attentional engagement over the course of a lecture. However, it remains unknown whether individuals are able to predict this pattern. Here, we explored this "attentional forecasting" by asking half of our participants to predict their future levels of attentional engagement at eight time points during a lecture. Then, each participant watched the lecture and intermittently reported on their levels of

attentional engagement at various time points. Results indicated a progressive decline in participants' predicted and reported levels of attentional engagement across the lecture.

Modelling memory representation strength under compromised attention

Patrick Tsapoitis*, Jakeb Chouinard, & Myra Fernandes

(patrick.tsapoitis@uwaterloo.ca; he/him)

Reading words aloud, compared to silently, during encoding may enhance memory by strengthening representations. Computational modelling enables manipulation of representation strength and can be used to simulate memory. Our model, Encoding-based Strength Representation in Memory (ESRM), was created using the Nengo Python library. Nengo uses the Neural Engineering Framework to enable mapping cognitive models onto spiking neural networks. ESRM includes simplified hippocampal memory components that account for primacy, recency, and decay. It reinforces 'read aloud' words by creating an additional distinct, and general memory representation. Recall in ESRM is determined by neural populations competitively accumulating evidence of word representations to a threshold, using a previously established minimum of 30% to filter irrelevant evidence. An accumulation to threshold denotes successful recall. Results from 50 simulations with ESRM were compared to behavioural data (N=50) in which participants were presented with a set of words, one at a time, and asked to either read them aloud or silently, intermixed within-subjects. A 2 (Source: ESRM vs Human) x 2 (Cue: aloud vs. silent) mixed ANOVA revealed a significant effect of Cue, better memory for words read aloud than silently, but no effect of Source. We then compared memory under conditions with or without noise, to mimic real-world divided attention conditions. ESRM again replicated human data: the production benefit from reading aloud versus silently remained, though it was reduced in magnitude. ESRM can successfully be used to model the effectiveness of encoding techniques, expanding applicability to populations where attention may be compromised (aging, MCI, TBI).

Examining attentional synchrony in sports spectatorship

Tanraj Grewal*, Adrian Berk Safati, & Daniel Smilek
(t22grewa@uwaterloo.ca; she/her)

While audio and visual information both play an important role in shaping sport viewing experiences, the mechanisms by which audio-visual congruence influences attentional synchrony in highly dynamic naturalistic contexts like sports broadcasts has rarely been examined. The proposed study uses a between-subjects design that includes three conditions, with participants (N=254) randomly assigned to viewing a recording of the 2017 full-length boxing match between Canelo Alvarez vs. GGG (Gennady Golovkin) with matching audio, mismatched audio (using audio from a 2018 fight between the same boxers), or no audio. Participants are asked to report moments they find attentionally engaging (e.g., interesting, exciting) by holding down the 'SPACEBAR' as they watch the match. Engagement reports across the conditions will be compared to examine how the combination of visual and audio presentation influences attention. We expect to see greater engagement (i.e., more cumulative spacebar presses) and more alignment (i.e., more temporal alignment) of reported attentional engagement across the matched audio condition in comparison to the mismatched audio and no audio conditions. This work expands existing attentional synchrony research by revealing the specific role of audio-visual congruence in coordinating viewers' moment-to-moment attention during dynamic, naturalistic events. Findings may offer practical insights for sports broadcasters seeking to enhance both individual engagement and synchronized collective viewing experiences.

DEVELOPMENTAL

The Neutral Pathway Integration (NPI) program for self-regulation in children and adolescents: A pilot study

Amelia M. Vertolli* & Dillon Browne
(amvertol@uwaterloo.ca)

The present pilot study assesses the feasibility of conducting a randomized clinical trial of a novel intervention for promoting self-regulation of emotions in children and adolescents. The program, called the Neural Pathways Integration (NPI) program, utilizes interactive and technology-based

interventions that are based on Dialectical Behaviour Therapy (DBT) theory. The intervention incorporates mindfulness meditations, sensory integration activities, biofeedback-based video gaming and semi-structured emotional regulation training to provide experimental skill development. Using a single-group pre-post design, secondary data from 60 participants who completed the 12-week program will be analyzed using measures from the National Institutes of Health (NIH) Toolbox. It is hypothesized that there will be improvements in focus, attention, relaxation and de-escalation corresponding to completion of the NPI. Retention/attrition, effect sizes, and logistical considerations will be reviewed to assess the suitability of an efficacy trial. Findings could suggest that there is sufficient evidence for a larger randomized evaluation of the NPI, permitting robust testing of whether this novel intervention enhances emotional regulation capacities in children and adolescents.

Understanding early childhood disruptive behaviours with supervised machine learning approaches

Diana Garcia Soler*, Piyumi K. Mudiyansele, Eva Unternaehrer, Charles Keown-Stoneman, Jonathon L. Maguire, Catherine S. Birken, Alice Charach, & Katherine T. Cost
(dm3garciasoler@uwaterloo.ca; she/her)

Childhood externalizing (EXT) behaviours have a multi-factorial pathogenesis involving individual and contextual factors. Traditional research on EXT behaviours in childhood populations has mainly used variable-centred approaches, which cannot establish the relative importance of multiple socio-ecological risk factors. Given the long-term consequences of EXT behaviours, our objective was to use two complimentary data-driven approaches to identify variables at age 3-5 years that predict child EXT symptoms at age 3-9 years. Data were obtained from 1,607 children aged 3-9 years in the longitudinal TARGet Kids! study, a Canadian research network that follows children during primary healthcare visits. Fifteen predictors were analyzed using LASSO regression and Random Forest (RF) models with k-fold cross-validation. EXT behaviours were measured using the Strengths and Difficulties Questionnaire. Predictive accuracy was assessed using Means Squared Error (MSE) and Root Mean

Squared Error (RMSE), allowing comparability across models. LASSO and RF yielded comparable MSEs (0.03;0.03), and RMSEs (0.17; 0.18), respectively. Shorter sleep duration, younger age, male sex, and higher parental screen time were identified by both models to be consistently associated with higher EXT scores; these variables improved predictive accuracy. Other factors were also identified in the models which suggest linear and moderated associations with EXT. This study identified key variables associated with EXT behaviours, emphasizing the roles of individual and family factors, as well as health behaviours. High predictive accuracy on test data implies the models generalize to new samples. These findings use a data-driven approach that may inform multiple points of intervention to support child mental health.

A university-landscape architect collaboration to develop an augmentative and alternative communication (AAC) board for the Eby Farm playground

Olivia Vento*, Maia Aurini*, Catelyn Ritchie, Aimee Landry, & Daniela K. O'Neill
(ovento@uwaterloo.ca; she/her)

This poster presents the development of an Augmentative and Alternative Communication (AAC) board for the Eby Farm Playground in Waterloo as a result of a class project and further involvement of four undergraduate students working with Dr. Daniela O'Neill and the landscape architect redeveloping the playground. An AAC board with words and symbols, typically arranged in a grid format, can help supplement or compensate for impairments in speech-language production. In creating this AAC board, we prioritized social pragmatic communication and an activity-focused approach to identify the most relevant language needed by children. We sourced relevant expert and empirical information from many domains, including speech-language pathology, AAC, and children's language and cognitive development. This process informed our choices about the content and vocabulary included, the symbols used and developed, and design decisions such as the positioning of components on the board. Symbol and border colours enhanced accessibility and ease of use. We also made some novel decisions, such as to consider the age and height of children in relation to the vertical positioning of symbols, and created some

novel elements (e.g., colour wheel). We trialed a draft version at the playground and feedback from children and their parents led to final revisions. A final openly available report detailing all aspects of the process of developing this AAC board was provided to the landscape architect and the city. This 18-month project culminated with the installation of the Eby Farm Playground AAC board in Waterloo Park in December 2025.

Expressing the positive: Exploring the associations between positive emotionality and interaction enjoyment in peer dyads

Phoebe Macleod Emmer*, Sarah D. English, Linda Sosa-Hernandez, Kristie L. Poole, & Heather A. Henderson
(p2macleo@uwaterloo.ca; she/her)

Positive emotionality (PE) refers to the propensity to express and experience positive emotions. The current study examined how children's own PE, their partner's PE, and the combination of both predicted interaction enjoyment and social engagement. Participants were 186 9- to 12-year-old children (108 girls; Mage = 10.72 years, SDage = 1.09) who were paired with an unfamiliar child of the same age and gender. Dyads were instructed to get to know each other for 5 minutes. PE was assessed via parent report using the High Intensity Pleasure (HIP) subscale of the Early Adolescent Temperament Questionnaire-Revised (EATQ-R). Children self-reported their enjoyment of the interaction. An independent third-party observer rated each child's social engagement. Multiple regression analyses showed that HIP did not predict children's own ($\beta = .044, p = .566$) or their partner's self-reported enjoyment ($\beta = -.046, p = .556$). However, there was a significant interaction between children and their partners' HIP in third-party ratings of social engagement ($p = .040$). Simple slopes analyses revealed a significant positive relationship between HIP and social engagement when children's partners were low in HIP ($\beta = .316, p = .008$), but no significant relationship when partners were high in HIP ($\beta = .133, p = .081$). These findings suggest that children high in HIP were rated as more socially engaged but only when their partner was low in HIP. One possible explanation is that partners low in HIP may express positive affect less often. This may prompt high-HIP children to compensate by expressing more positive affect, making them appear more socially engaged.

From research to the classroom: Supporting measurement learning in kindergarten

Safa Barlas* & Sara Hart
(s2barlas@uwaterloo.ca)

There is no doubt that children's early math skills are essential in later determining their academic success. In fact, studies have found that early math skills predict math, reading, grade retention and even science achievement beginning from kindergarten into eighth grade (Claessens & Engel, 2013). The current project takes place in a kindergarten class where I am working alongside the classroom teacher to implement developmentally appropriate and hands on measurement activities, for students ages 4 and 5. Together, we are aiming to strengthen their math, specifically measurement, skills by integrating these activities into their daily learning. The poster will display an overview of this kindergarten classroom-based project. Firstly, it will include brief research on early math, specifically measurement skills, our instructional approach to the activities, examples of the measurement activities I implemented with visual examples, and how children engaged with these activities. Moreover, the poster will aim to highlight and emphasize how as researchers it is crucial to translate what we know from research into practice. The poster strives to emphasize the importance of early measurement skills, emphasizing how educators and researchers can apply evidence-based strategies into the school environment.

Sex differences in special education language services

Sean P. McCarron, Sara Hart, Jacob Oleson, Hope S. Lancaster, & Karla McGregor
(seanmccarron@uwaterloo.ca; he/him)

Developmental language disorder (DLD) is a highly prevalent condition affecting 7-9% of children. Although community research samples reveal near parity in the ratio of boys to girls who meet criteria for DLD, school speech language pathologists serve half as many girls as boys. This striking contrast suggests that the risk of diagnosis is partly determined by a child's sex, independent of ability. Using longitudinal demographic and reading achievement data from over 1.6 million U.S. students, we evaluated several proposed explanations for this disparity. Consistent with previous findings, girls

were approximately half as likely as boys to receive special education services for either DLD or specific learning disorder (SLD). After controlling for reading scores which served as a proxy for language ability, the effect of sex was meaningfully reduced, indicating that fewer girls may need services. However, girls were still 30–40% less likely to receive either service compared to boys, demonstrating that ability alone does not fully explain the service gap. Girls were also no more likely to receive service for SLD than DLD, and there was no difference in grade of qualification among those who were served. These results reveal a persistent sex gap in special education services that cannot be fully explained by differences in ability, service type, or age, suggesting that referral or evaluation processes may contribute to the under-identification of girls with DLD.

More than control: Exclusivity drives children's ownership inferences

Tia Kleiner* & Ori Friedman
(tkleiner@uwaterloo.ca)

Control is often treated as a central cue to ownership, but “control” can mean different things, such as restricting others’ autonomy or deciding whether others may use an object. Much less is known about whether manipulative control (i.e., being able to make an object do something) guides ownership judgments. In the current study, we examined whether children use manipulative control to infer ownership, in relation to exclusivity—that is, whether a particular agent had a privileged connection to an object, or whether others also had the same connection. In the study, children aged 4–7 years ($N = 92$) were told about different natural objects that are not typically owned (e.g., pinecones, rocks, leaves) and were asked whether each object belonged to an agent (Sam). Across trials, the objects varied in (a) whether they could be controlled to produce unusual effects, or produced unusual effects even without human intervention (control vs. no control) and (b) whether these effects were exclusive to Sam (agent scope) or occurred for everyone (non-exclusive scope), yielding a within-subjects 2×2 design. Children were overall more likely to attribute ownership to Sam when the object’s effect happened only around him, compared with when the effect was not exclusive to Sam, and this sensitivity to exclusivity increased with age. Children’s judgments

were not affected, though, by whether the effect was subject to his (or others’) control. These findings suggest that children prioritize exclusivity over manipulative control when deciding who owns an object, with children becoming increasingly sensitive to exclusivity as they age.

Information dynamics: Children's understanding of how knowledge changes over time

Yashika Berry*, Sundus Ismaeil, Alexandra Minard, & Stephanie Denison
(yberry@uwaterloo.ca; she/her)

This research examines children’s ability to distinguish between information that is expected to change over time and information that remains constant. Between ages 4 and 5, children show increasing awareness of memory retention and knowledge accumulation (Lyon & Flavell, 1993; Caza et al., 2016). However, prior to age 5, children often struggle to appreciate that preferences can change and that memories may become less accurate over time (Bélanger et al., 2014; Fitneva, 2020). Across two experiments, we examined how 4- to 7-year-olds reason about different types of information across time. In Experiment 1, children heard stories in which a character witnessed an event (e.g., seeing a bear) and immediately reported one detail, but many months later reported the same detail differently. Children were then asked either what the detail (e.g., colour of the bear) really is or what the character thinks it is. Data were analyzed using a GEE model with condition and age as predictors, revealing a main effect of condition and a significant interaction with age. From age 4, children were more likely to select testimony closer in time to the original event in the “really” condition than in the “thinks” condition. In an ongoing Experiment 2, we attempt to replicate the “really” condition with new stories and contrast it with questions about favorites. Preliminary results suggest children judge factual information based on earlier reports, but preferences based on more recent ones. These findings suggest that children appreciate that whether information changes over time depends on its type.

INDUSTRIAL-ORGANIZATIONAL

Same-gender conflict and its impact on workplace outcomes: Exploring the experiences of men and women middle managers

Abigail Pew* & Samantha Hancock
(apew@uwaterloo.ca; she/her)

Same-gender conflict occurs when an individual perceives differences and opposition between themselves and another individual of the same gender about interests, resources, beliefs, values, or practices. Frequent and intense workplace conflict can reduce an employee's organizational commitment, well-being, and job satisfaction. Previous literature has suggested that conflicts among women tend to occur more frequently and result in more negative outcomes than those among men. Using a cross-sectional survey design, data was collected from 194 middle managers in the US and Canada via Prolific. Participants reflected on a conflict experience with a same-ranking coworker and reported their perceptions of that coworker, including measures of trust, liking and friendship opportunity. Findings indicated that both men and women were more likely to report a same-gender conflict than an opposite-gender conflict. However, there were no gender differences in conflict outcomes, challenging the prevailing notion that conflicts among women in the workplace are particularly prevalent and detrimental. These findings highlight a need to address biases that problematize conflict between women, both in the literature and in staffing decisions, to promote gender equity in management.

Third-party observer reactions to cronyism through the lens of organizational justice theories

Catherine He* & Annika Hillebrandt
(c73he@uwaterloo.ca; she/her)

Cronyism - defined as granting organizational rewards based on personal ties rather than merit - is a prevalent managerial practice. However, the potentially detrimental consequences of cronyism for employees and organizations remain poorly understood. Drawing on organizational justice theories, we propose that employees who perceive higher levels of cronyism are less likely to view their manager as fair. In turn, this predicts heightened

anger and deviant behaviours towards one's manager and coworkers. Furthermore, we draw on cultural value perspectives to propose that paternalism and particularism weaken the negative effect of cronyism on fairness perceptions by influencing how individuals interpret relational dynamics in workplace decisions. A cross-sectional survey of employees (N = 179) provided support for our hypotheses. Taken together, the findings show how fairness evaluations, emotional reactions, and culturally rooted values shape third-party responses to cronyism, highlighting both the theoretical importance of these mechanisms and the practical need for transparent and merit-based leadership practices.

Collateral damage: Uncovering the hidden toll of organizational misconduct on employees

Esosa Omoregbee*, Annika Hillebrandt, & Megan Herrewynen
(eomoregb@uwaterloo.ca; she/her)

Organizational misconduct (e.g., fraud, corruption, pollution) often cause issues for the organization and the direct victims. However, little is known about how these transgressions affect the organization's employees, who often have little to no say regarding how the transgression occurs. Drawing on the social judgment literature, we propose that organizational misconduct can cause a decrease in employees' sense of agency and social acceptance. In turn, these changes in employees' self-image negatively affect personal (e.g., self-esteem) and work-related (e.g., turnover intentions) outcomes. Hypotheses were supported across two experiments: A recall study in which employees (N = 128) were randomly assigned to recall a time that their organization engaged in a transgression (versus control), and a vignette study in which employees (N = 268) were randomly assigned to imagine themselves working for an organization that engaged in a transgression (versus control). Theoretically, these findings advance the organizational psychology literature by furthering our understanding of how employees are affected by transgressions for which they are not directly responsible. Practically, they provide a theoretical foundation for the development of interventions aimed at mitigating the negative effects that organizational transgressions can have on individual employees.

SOCIAL

When Message Meets Messenger: Effects of Framing and Messenger Identity on Responses to Allyship

Alyssa Ngo Bao Tran Nguyen*, Jessica Trickey, & Hilary Bergsieker
(anbtnguy@uwaterloo.ca; she/her)

Allies from advantaged groups play a critical role in advancing racial justice, yet many hesitate to speak up due to uncertainty about their legitimacy to act. This experiment examined how message framing and messenger identity shape White individuals' psychological standing, defined as felt legitimacy to act, antiracist beliefs, and social dominance orientation (SDO). SDO reflects endorsement of group-based hierarchy and is treated as trait-like. However, because higher SDO is associated with prejudice and less positive outgroup attitudes, messages that encourage positive outgroup attitudes may reduce momentary endorsement of hierarchy-supporting attitudes. In a 2 (Framing: responsibility vs. relevance) x 2 (Messenger identity: White man vs. Black woman) between-participants experiment, 368 White undergraduate students read a news article about racial wage inequality that evoked either responsibility to act or personal relevance to the issue. Additionally, the article featured an individual from participants' racial ingroup (i.e., White man) or outgroup (i.e., Black woman). When participants read a responsibility-framed message, they reported higher antiracist beliefs when the message was delivered by a Black woman compared to a White man. By contrast, beliefs did not differ between an ingroup and outgroup messenger in the relevance-framed condition. A similar pattern emerged for SDO: participants reported lower SDO when a Black woman (vs. White man) delivered a responsibility-framed message, but SDO did not differ in the relevance-framed condition. These findings suggest allyship-focused messages are most effective when framing and messenger identity are aligned, highlighting the need to tailor both who delivers calls to action and how those calls are framed.

Perceptions of clothing appropriateness: The role of target and perceiver characteristics

Ava Pettingill* & Neil Hester
(apetting@uwaterloo.ca; she/her)

Throughout history and across cultures, women and girls face judgments of appropriateness for the clothing that they wear, which can negatively impact their self-esteem and well-being. Prior research suggests these evaluations are shaped by social norms and gender expectations. The present study examines how perceived clothing appropriateness varies as a function of target characteristics (age, body type, ethnicity, and clothing type) and perceiver characteristics (age, gender, religiosity, political orientation, and cultural beliefs). We recruited 200 participants through Prolific. Participants rated 60 randomly selected images from a stimulus set of 960 AI-generated full-body images. Stimuli depicted middle school, high school, and college-aged girls of diverse ethnicities and body types wearing eight outfits ranging from very tight/revealing to very baggy/covered. After rating images on clothing inappropriateness, participants completed demographic and individual difference measures. We found a main effect of clothing type: the two outfits featuring tight/revealing tops were rated as the most inappropriate. This effect was moderated by target age, such that inappropriateness ratings for these outfits decreased as target age increased. Additionally, participants who identified as more politically conservative or more religious rated these tight/revealing outfits as significantly more inappropriate than less conservative or less religious participants. Our findings demonstrate that clothing appropriateness judgments are not based solely on garments themselves but are shaped by both who is wearing and who is evaluating the clothing. By better understanding these effects, we can identify contexts in which women and girls are most vulnerable to appropriateness judgements, which have downstream consequences for well-being.

Who's dateable? A target-based analysis of anticipated biphobia and bi+ attraction

Krista Quinn*, Neil Hester, & Grace M. Wetzel
(k6quinn@uwaterloo.ca; she/her)

Partner selection research has historically focused on the preferences of straight people, and to a lesser extent gay and lesbian (LG) populations, while excluding bi+ (e.g., bisexual, pansexual, fluid) people, or combining them with LG participants. This prior work has found that both straight and LG participants demonstrate a preference to date within their respective ingroups, but above and beyond this ingroup effect, evidence suggests this reluctance to date bi+ people is partially due to biphobic beliefs (e.g., bi-erasure, bi-stereotypes). However, little work centers bi+ people and their preferences, whose reasons for preferring bisexual people over straight and gay people might involve anticipated biphobia. Bi+ participants (N = 85) completed measures for four targets: bi+ women and bi+ men; straight women and gay men (for bi+ men); and straight men and lesbian women (for bi+ women). For each target group, participants reported anticipated biphobia beliefs as well as their willingness to engage in short-term/long-term, sexual/romantic (2x2) relationships with members of that target group. Anticipated biphobia was highest for straight targets, lowest for bi+ targets, and in between for LG targets. Nonetheless, bi+ people were generally willing to enter all forms of relationships with all targets. We found support for an indirect effect of target sexuality on willingness to date through anticipated biphobia, an effect which is stronger when considering i) straight targets and ii) willingness to enter casual (short-term & sexual) relationships. This work clarifies factors explaining the relationship preferences of bi+ people, an understudied population.

Rescue first, prevention later: How emotional narratives pull public priorities downstream

Pamela Campos-Ordóñez* & Richard Eibach
(pcamposo@uwaterloo.ca; she/her)

Upstream (preventative) public health interventions are more effective and less resource-intensive than downstream (reactive) approaches, yet they continue to receive less funding and public support. The present work investigates psychological factors that contribute to a bias favoring downstream over

upstream interventions across three domains: drug abuse, eating disorders, and mental health. In two within-participant experiments (N = 732), participants evaluated equivalent upstream and downstream interventions and allocated resources (funding, cuts, volunteering). Across domains, participants consistently preferred downstream programs—a tendency strongest among those higher in empathy, suggesting that affective engagement may underlie this preference. We hypothesized that emotionally compelling redemptive narratives, which emphasize recovery after adversity and are common in downstream success stories, are more appealing than upstream narratives that focus on prevention rather than redemption. A follow-up experiment (N = 210) tested this narrative hypothesis. Participants read fictionalized success stories from both upstream and downstream gang-prevention programs, with each pair of stories designed to reflect similar transformation themes. Despite equivalent life outcomes, downstream stories were rated as more emotionally engaging and received greater funding support, particularly among participants high in empathic concern. Even when upstream stories depicted exceptional upward mobility, downstream interventions remained more compelling. Across studies, empathy, emotional engagement, and narrative framing played key roles in shaping preferences for intervention types. Redemptive narratives increased the emotional salience of downstream successes, amplifying downstream bias. These findings highlight how emotional and storytelling factors shape public health decisions and suggest that reframing prevention narratives could help increase support for upstream interventions.

Poster Session C - 3:30–4:20

CLINICAL

The role of state shame in Obsessive-Compulsive Disorder: A qualitative interview study

Aliya McNeil* & Christine Purdon
(am4mcnei@uwaterloo.ca)

A growing body of research suggests that compulsions have interpersonal elements. For example, Dean and Purdon (2021) found that a priority goal of compulsions was to avoid being held responsible for harm by others, a finding that aligns with Pozza et al. (2021) in which fear of disapproval from others was a strong predictor of OCD symptom severity. Meanwhile, people with OCD report negative core beliefs (e.g., “I am bad”) and/or an ambivalent or feared self (“Maybe I’m bad”) (Aardema et al., 2018). Finally, there is evidence that compulsions are intended to mitigate or prevent being a bad person (Chiang & Purdon, 2023). Unsurprisingly, people with OCD report strong feelings of shame during their obsessive-compulsive episodes (e.g., Visvalingam et al., 2022), but first-line treatments for OCD do not consistently reduce feelings of shame (Haaland & et al., 2011). Research on shame in OCD has focused on trait shame, as opposed to shame that arises within the obsessive-compulsive cycle, and we know surprisingly little about it. This pre-registered study (osf.io/ms9dh) examines the phenomenology of state shame within OCD episodes, focusing on prevalence, qualities, and relation to core beliefs about the self. Participants from the community, meeting diagnostic criteria for OCD (N = 20, Mage = 28.55), were administered a 90-minute semi-structured interview developed for the study. A thematic analysis of the qualitative data is in progress. Preliminary analyses suggest that shame is central to people’s experience with OCD and closely connected to negative core beliefs about the self. As such, shame may be an important emotion to consider to adequately capture the diversity of experiences of people living with OCD.

Online mental health: An analysis of the benefits and risks of self-diagnosis in the modern age

Maaz Ghias*

(mghias@uwaterloo.ca; he/him)

Since the invention of the internet, the widespread availability of mental health information has enabled individuals to easily search for and compare symptoms of mental disorders to what they’re experiencing to arrive at a self-diagnosis (Naslund et al., 2020). The most common sources for self-diagnosing mental health conditions online include social media, mental health applications (Larsen et al., 2019), and AI-based chatbots (Supra Wimbari et al., 2024). As self-diagnosis becomes increasingly prevalent, this literature review examines its underlying causes, prevalence, and the associated benefits and risks identified in psychological research. While the research shows social media can provide emotional validation and community support (Gowen, 2013), it poses significant risks due to the wealth of misinformation and the influence of online perceptions of mental health (Giles & Newbold, 2010; Starvaggi et al., 2023). Additionally, widely used mental health applications for diagnosis make unsubstantiated claims about their accuracy (Larsen et al., 2019), and AI-based tools, despite their potential for preliminary examination for the process of a diagnosis, lack the critical expertise of mental health professionals necessary for accurate assessment and diagnosis (You & Gui, 2021; Supra Wimbari et al., 2024). As technology continues to evolve, future research should further investigate the psychological impact of online self-diagnosis, and strategies should be developed to mitigate misinformation, and improve the reliability and ethical use of such digital mental health tools.

The association between physical activity and mental health in Ontario youth: Barriers to access in a gender diverse sample

Sebastien Tuck-Melanson*, Jasmine Zhang, Imogen Sloss, Alison Pearson, & Dillon Browne
(sstuckme@uwaterloo.ca; he/him)

Physical activity is widely recognized as a predictor of mental health. However, there is evidence suggesting that its benefits may differ by gender (Bhui & Fletcher, 2000). The study examined whether the association between physical activity and mental health is moderated by gender, where

attention was paid to the location of physical activity (school, extracurricular) along with barriers to accessing activity opportunities. Data were drawn from the 2023 Youth Impact Survey (YIS; ages 9-18 years), which assessed self-reported physical activity, barriers, mental health symptoms, well-being, and sociodemographic covariates. A one-way analysis of variance compared mean mental health scores across gender groups. Mental health differed significantly across genders, with boys (N = 572) reporting the highest average mental health, followed by girls (N = 701), then gender non-conforming participants (N = 65). Linear regression analyses revealed different patterns across gender identities. Among boys, higher perceived barriers and older age were associated with lower well-being. Exercise and in-school physical activity were positively associated with well-being, while outdoor activity showed a small, non-significant positive trend. Out-of-school activity was not associated with mental health. Among girls, perceived barriers and age were negatively associated with mental health, while in-school activity, out of school activity, outdoor activity, and exercise were not meaningful predictors. Among gender non-conforming participants, none of the predictors were associated with mental health, although age showed a weak, non-significant negative trend. Overall, results suggest perceived barriers are important factors in youth mental health and the relationship between physical activity and mental health may vary across gender groups.

Measuring developmental trauma disorder: Content coverage and similarity analysis of child and adolescent trauma measures

Lucas Stohr*, Dillon Browne, & Jackson Smith
(lestohr@uwaterloo.ca; he/him)

From 22 countries, approximately 22.4% of adults have experienced at least 1 Adverse Childhood Experience (ACE's), which may be with specific post-traumatic stress responses. In 2005, Van der Kolk proposed a new disorder called "Developmental Trauma Disorder (DTD)" to capture the symptoms and characteristics of this syndrome. There are many measures that assess psychological distress symptoms following traumatic exposure, however it is unclear to what extent these measures capture the DTD criteria. Common current practices tend to use the Developmental Trauma Disorder Semi-

Structured Interview (DTD-SI), or to adapt other measures not made to capture DTD (e.g. Assessment Checklist for Children (ACC)). Numerous measures used for clinical work and research that may or may not adequately describe developmental trauma symptoms. Therefore, the present paper proposes to investigate how well selected measures capture the DTD phenotype. Scales chosen for this investigation were chosen based on citation count, frequency in recent reviews, age range, constructs tapped by the measure, and psychometric quality. Symptom criteria will be evaluated using the Jaccard Index, a similarity coefficient that quantifies item overlap across measures. Results will shed light on the degree of content overlap among symptom-based scales, with implications for assessment selection in both research and clinical practice.

COGNITIVE

Anticipated emotions and loss aversion in risky intertemporal choice

Avery Bernardin* & Samuel G.B. Johnson
(avery.bernardin@uwaterloo.ca; he/him)

Economic choices often involve both delay and risk. While people typically prefer to expedite gains and postpone losses, the opposite pattern—delaying gains and hastening losses—has sometimes been observed. This preference reversal has been linked to anticipated emotions, with dread (negative affect) and savouring (positive affect) influencing the valuation of delayed outcomes. In this experiment, we investigate the effect of anticipated emotions on intertemporal risky choice. Specifically, we test whether dread, savouring, and vividness predict changes in loss aversion over time. While choosing between hypothetical 50/50 mixed lotteries, participants displayed significantly greater loss aversion when the resolution of uncertainty was delayed by six months, compared to with no delay. This difference was observed across lotteries with potential gains of \$100, \$500, and \$1000. Further, dread—but not savouring—predicted larger changes in loss aversion for delayed lotteries, over and above discounting of sure amounts. These findings indicate that people are more loss averse for delayed outcomes in part due to anticipated emotions, with dread exerting more influence than savouring.

Truth perception and memory for crossmodally presented information

Greg Shaikevich*, Jonathan Fugelsang, & Katherine White
(geshaike@uwaterloo.ca; he/him)

The ease with which we process information (i.e., processing fluency) is positively related to its perceived truthfulness, a phenomenon known as the Illusion of Truth Effect (IOT). One way in which fluency may be manipulated is through repetition, where repeated statements are typically judged to be more truthful than non-repeated statements. To date, the vast majority of research on the IOT has focused on the visual domain. However, in the real world, much of our exposure to information comes through the auditory modality. Furthermore, this means that, across several exposures, information may be presented in different modalities (i.e., crossmodally); you may hear something first and read it later. Therefore, it is critical to understand how processing fluency influences perceived truthfulness when the modality of the information changes across exposures and how this compares to when the modality remains the same. In addition, it is critical to better understand the link between truth perception and memory, given that memory is often relied on when making truth judgements. Results from two experiments show that, while a change in modality between exposure and test leads to worse memory performance for the information presented, no difference in truth perception is observed. Future work aims to address this discrepancy and further explore the relationship between memory and truth perception. Results will be discussed in the context of our current understanding of truth perception and memory, as well as the relationship between both.

Seeing attention unfold: How dynamic pupil cues shape social attention

Hannah Chung* & Clara Colombatto
(hc4chung@uwaterloo.ca; she/they)

Being able to recognize when someone is paying attention, and particularly when their attention shifts, is critical in everyday social interactions. Previous research has found that observers' attention is preferentially drawn to faces with dilated pupils (which signal high attentional engagement), compared to faces with constricted pupils (which signal lower attentional engagement). This work has

relied primarily on static stimuli, assuming that others' attention is fixed. However, attentional states in everyday life are dynamic: pupils continuously dilate and constrict, reflecting moment-to-moment shifts in attention. The present study examines whether dynamic changes in pupil size capture observers' attention. Specifically, we test whether observers are more strongly drawn to faces whose pupils dilate (signaling increasing attention) than to faces whose pupils constrict (signaling decreasing attention). Participants (N=150) completed a dot-probe task, where on each trial they viewed two faces presented side-by-side, followed by a target dot appearing either in the same location as a dynamically changing pupil ('congruent') or in the opposite location ('incongruent'). Preliminary results suggest that participants were equally fast at detecting dots following faces with dilating and constricting pupils, suggesting that dynamic attentional states capture observers' attention regardless of their direction. Overall, this work investigates humans' sensitivity to dynamic cues to others' cognitive states and the role of subtle physiological signals in guiding social attention.

Between justice and utility: Cognitive foundations of punitive judgments

Jisoo Kim*, Ori Friedman, & Samuel G. B. Johnson
(jisoo.kim@uwaterloo.ca; she/her)

Legal scholars disagree on whether laws function to maximize societal well-being (an economic view) or to implement justice (a moral view). According to economic theories of law, crimes with lower apprehension probabilities should receive harsher punishments to maintain a negative expected value and deter future offenses. Do people apply this logic when assigning punishments, or are they primarily guided by moral principles? To test this question, we completed a set of three studies. In Experiment 1, we manipulated the level of harm (e.g., \$100 vs. \$400 clean-up cost) and apprehension probability (20%, 50%, 80% or "very low", "very high"). Experiment 2 extended this to bodily harm scenarios. Participants read vignettes with two varying levels of victim harm (e.g., a broken leg vs. loss of a leg) and apprehension probability, then assigned jail time punishments. Experiment 3 expanded on previous findings by investigating the relationship between object of harm (society or personal), apprehension probability, and the magnitude of harm. A main

effect of victim harm held across all experiments. We found main effects of apprehension probability in Experiments 1 and 3, although the effect disappeared in Experiment 2. No significant effect of object of harm was observed. Overall, people behaved more like economists than expected in property harm scenarios—but not bodily harm scenarios. Through integrating cognitive decision-making with legal policy studies and economic computational analyses, our research may have implications for legal policy, perceptions of legitimacy in the legal system, and our broader understanding of legal decision-making.

Learning goes electric: Investigating the effects of presence in virtual reality guitar lessons

Miriam Tam*, Lucas Betts, & Evan Risko
(mdtam@uwaterloo.ca; she/they)

There has been an increase in interest in virtual reality usage in academic contexts (Makransky & Petersen, 2021; Kaplan-Rakowski & Gruber, 2024; Klingenberg et al., 2024). In my honours thesis, I investigated the effect of presence on learning in a virtual reality (VR) setting in a one-on-one context (i.e., a guitar lesson). Following the Cognitive Affective Model of Immersive Learning, it was hypothesized that the more present a learner feels in the learning environment, the more learning they will achieve. Therefore, higher performance on the test (i.e., higher learning) was predicted for the participants in the high-immersion VR context. A between-subjects design was used, where participants were shown a guitar lesson in one of three conditions (i.e., the presence modality): in a high-immersion VR context (i.e., viewing the video through a VR headset), in a low-immersion context (i.e., viewing the video on a computer monitor), and in a low-immersion context while holding an acoustic guitar. Learning was assessed with a multiple-choice quiz and a physical test with the guitar. The results indicated that there was no significant effect of the presence modality on the level of presence, nor on the test performance for both the multiple-choice quiz and physical test. This study further demonstrates the potential use of VR in education and how using different presence modalities can influence various other factors (i.e., level of presence, interest, liking, positive and negative affect, cognitive load) that may in turn influence the amount of learning achieved.

How we think we know ourselves: Investigating meta-meta knowledge in decision making

Trent N. Cash*, Samuel G. B. Johnson, & Clara Colombatto
(tcash@uwaterloo.ca; he/him)

Metacognitive knowledge is an individual's explicit understanding of how their cognitive processes work. Recent research on multi-attribute choice – decisions where individuals compare multiple alternatives on multiple attributes – finds that decision makers have reasonably accurate metacognitive knowledge of how they make decisions. Here, we build on this literature by exploring how participants believe they make sense of their decisions. Across two pre-registered studies, participants made multi-attribute choices between homes (Study 1; n = 209) or doctors (Study 2; n = 210), then self-reported the importance (i.e., weight) they placed on each of six attributes (e.g., mortgage; doctor experience). We then evaluated participants' meta-metacognitive beliefs about how they generated these importance ratings. When answering open-ended prompts, most participants (Homes: 55%; Doctors: 52%) reported that they simply thought holistically about which attributes were important to them. Only 1/3 of participants (Homes: 38%; Doctors: 39%) reported thinking back to the choice task. When rating their usage of ten metacognitive strategies (on 1-5 Likert scales), the most used strategy was holistic self-reflection, with a secondary focus on recall and simulation of future choices. Total strategy usage (i.e., sum of Likert responses) was negatively associated with meta-knowledge accuracy, though the correlation was only significant for doctors (Homes: $r = -0.10$, $p = .15$; Doctors: $r = -0.30$, $p < .001$). These results suggest that decision makers hold a lay belief that they generate metacognitive knowledge through broad introspection, rather than targeted metacognitive strategies, and that greater (perceived) strategy usage may be associated with less effective metacognition.

COGNITIVE NEUROSCIENCE

Examining various experience sampling techniques for repeated measures of attentional disengagement

Adrian Safati* & Daniel Smilek
(absafati@uwaterloo.ca)

Experience sampling is commonly used to assess attentional disengagement states such as mind-wandering and boredom. We investigated how different experience sampling instruments influence reported mental states and their relationships with task performance over time. Participants (N = 480) completed a metronome response task while intermittently reporting mind-wandering or boredom using one of four response scales: a Likert scale, a visual analogue scale, a Bluetooth dial anchored to zero, or a Bluetooth dial that carried values forward across probes. Results revealed systematic differences across response scales, demonstrating that instrument choice can substantially influence the interpretation of experience sampling data.

What underlies differences in emotional expression in L1 and L2? Examining lexical properties of narratives

Brian S. Kim*, Myra A. Fernandes, & Katherine S. White
(bs8kim@uwaterloo.ca; he/him)

Bilingual speakers are often reported to express emotion less intensely in their L2 than their L1 (Pavlenko, 2005), yet the mechanisms underlying this attenuation remain poorly understood. The present study examines potential linguistic contributors to this difference. English monolinguals (N=70) and bilingual (N=71) participants (self-reported L2 English) produced English descriptions of silent normed emotional video clips (Ack Baraly et al., 2020). Independent human raters (N=305) each rated a random subset of transcripts for emotional expressivity on a -1 (negative) to 1 (positive) scale. Monolingual transcripts were rated as more emotionally expressive than bilingual transcripts, but only for negative videos. Examination of transcripts revealed that monolinguals produced longer descriptions than bilinguals overall. The emotionality of words was captured using the NRC Emotion Lexicon

(Mohammad & Turney, 2013), which provides crowdsourced emotionality ratings for 15,000 English words. Collapsed across language groups, the density of words considered emotional predicted human coders' expressivity ratings: increased use of emotionally charged words was associated with more extreme ratings. This held for transcripts from both positive and negative videos. Comparisons between language groups revealed that monolinguals produced a greater density of emotionally charged words than bilinguals, in line with the human expressivity ratings. These results suggest that judgments of emotion are influenced by the density of emotionally valenced words and that this may contribute to differences in L1 and L2 emotion expressivity. Future analyses will explore why this language group difference holds only for negative emotion and examine contributions of additional lexical characteristics.

Familiarity as a potential cue for media multitasking behaviour

Colin Kwiatkowski* & Daniel Smilek
(c2kwiatk@uwaterloo.ca; he/him)

In class, media multitasking is a term that refers to the use of unrelated digital media throughout a lecture. Prior research suggests that when people can choose to multitask with media, they do so strategically, which prevents significant declines in lecture comprehension. The current study extends this work by examining whether content familiarity influences multitasking behaviour. We hypothesized that people would multitask more during familiar segments than unfamiliar content. Additionally, we examined whether participants would remain engaged in multitasking after familiar content or whether they would disengage from digital media once novel content returned. To assess this, participants first watched a brief excerpt from a lecture and then viewed a longer version of the lecture, during which they could toggle a secondary video on or off. Results showed that participants toggled the secondary video on more frequently during the lecture segment they had already viewed. Immediately after the familiar segment, multitasking decreased. These findings suggest that familiarity may serve as a strategic cue initiating multitasking behaviour. Moreover, we found evidence that people may modulate this behaviour, reducing their multitasking once novel lecture content returned.

Sex differences in attention and emotion regulation in young adults with mild traumatic brain injury

Tala Tayem*, Adam Cox, & Myra Fernandes
(ttayem@uwaterloo.ca; she/her)

Long after experiencing a mild traumatic brain injury (mTBI), individuals sometimes report lingering deficits attention and memory difficulties, as well as changes in mood. Reliably documenting deficits in past studies, however, has been hampered by small sample sizes, heterogeneous TBI classification, and varying assessments of function. This large-scale, multi-year, retrospective cohort study examined consequences of a remote mTBI in a large sample of undergraduate students (N = 5,937 controls and N = 869 mTBI), and investigated whether sex changed patterns of findings. We compared attention-related errors, assessments of mood and difficulties in emotion regulation in individuals with and without a self-reported remote head injury. Replicated over multiple terms, individuals with a remote mTBI reported significantly more cognitive failures and greater endorsement of anxiety and stress symptoms relative to controls. Regardless of mTBI status, females reported more attention-related errors, greater difficulty with emotion regulation, and elevated mental health symptoms than males. Notably, anxiety was most pronounced in females with mTBI. Overall, findings demonstrate more attention-related errors in daily life (e.g., enhanced mind-wandering and attention slips) and negative emotional symptoms continue to plague those with mTBI long after injury.

DEVELOPMENTAL

Information dynamics: Young children's reasoning about information change over time

Alexandra Minard* & Stephanie Denison
(aminard@uwaterloo.ca; she/her)

This thesis examined children's understanding of how knowledge changes over time by investigating their ability to distinguish between information that changes (e.g., preferences) and information that remains constant (e.g., facts). A sample of 130 children ages 4- to 7-years was tested using scenarios in which they evaluated conflicting reports about preferences and factual events. Results showed a developmental trend: older children were

more likely to recognize that preferences are dynamic and that the most recent information about a person's preference is more likely to be correct, whereas past episodic facts cannot change. Younger children demonstrated greater difficulty making this distinction. These findings suggest that children's understanding of information dynamics evolves with age, reflecting increasing sophistication in recognizing the different properties of preferences and facts. This work contributes to theories of cognitive development by highlighting how children progressively refine their reasoning about the nature of information.

The influence of goal-orientation on parent-child affect during a problem-solving task

Annamaria Savic*, Nadine Ghanem, Stephanie Denison, & Heather Henderson
(amsavic@uwaterloo.ca; she/her)

Background: When children express positive emotions, their attentional frame is broadened enhancing social and cognitive development (Denovan et al., 2016; Shoshani et al., 2021). Grounded in the Broaden-and-Build Theory (Fredrickson, 1998), this project examines how parents' goal orientation, either focusing on their child's learning (i.e., process) or on task completion (i.e., outcome), may shape expressed emotions within parent-child dyads during a problem-solving task. Methods: Data were leveraged from a larger study (N=160; 80 dyads; Mage = 4.43) where dyads were randomly assigned to one of two goal-orientation conditions (process vs outcome), before completing an eight-minute puzzle task. Using Mangold INTERACT software, affect type (positive, negative, and neutral) was coded for parents and children. Inter-rater reliability was adequate for parent (k = .51, 91% agreement), and child affect (k = .59, 89% agreement). A 2x2x3 mixed ANOVA examined proportions of time each affect type was expressed in relation to condition, role, and affect type. State-space grid (SSG) analyses examined proportions of time individuals shared positive affect. Results: A significant role × condition × affect type interaction emerged, $F(2, 156) = 3.88, p = .022$. Follow-up analyses showed that parents expressed significantly more positive affect than children in the outcome condition only. Across conditions, both parents and children mainly demonstrated neutral affect (>80% of time). SSGs showed minimal

occurrences of shared positive affect in both conditions (process: $M = 1.98\%$; outcome: $M = 1.55\%$). Conclusion: Parental goal-orientation influenced positive affect expression as a parent-child discrepancy emerged in the outcome condition, possibly reflecting parents' attempt to motivate their children. Additionally, minimal occurrences of shared positive affect might suggest that temporal dynamics of emotional exchanges are more important than coordination for children's early learning.

Investigating the approximate number system: Non-symbolic addition and rational number representation in 5-7-year-olds

Candice Rubie* & Stephanie Denison
(carubie@uwaterloo.ca; she/her)

Many studies have documented the existence of the approximate number system (ANS), a mental system that automatically creates imprecise representations of non-symbolic numbers. These representations can be used to make intuitive judgements, such as comparing quantities or manipulating them arithmetically, without requiring counting or formal calculations. Past research suggests that the ANS can represent natural numbers (e.g., whole numbers), and cannot represent irrational numbers (e.g., π). Conversely, considerable debate exists over whether the ANS represents rational numbers, such as ratios and fractions. In two experiments with 5-7-year-olds ($N = 124$; Mage = 6.48; recruited on CHS), we tested whether the ANS can represent and compute over ratios. In Experiment 1, we examined whether children could represent ratios using an adaptation of a large number ANS addition paradigm. In six trials of varying difficulty, one mixed set of blue and purple balls entered an opaque box quickly followed by a second set. An opaque cup then scooped a small sample of balls from the box and children identified which of two samples came from the cup (i.e., same ratio as the sum in the box, but smaller quantity). Thus, children could not use quantities to identify the correct answer, but only the summed ratio. In Experiment 2, we varied the total number of balls in each of the sets added to the box, such that children had to weight the ratios in each added set to determine the summed ratio. Binomial tests by ages-in-years indicated that five-, six-, and seven-year-olds performed significantly above chance on the task in both experiments, providing initial evidence that the ANS can represent non-symbolic rational numbers.

Children's treatment of grammatical errors from speakers with different accents

Cheyenne Salazar* & Katherine White
(c3salaza@uwaterloo.ca)

People judge others based on how they speak, with unfamiliar or non-native accents often eliciting negative appraisals (Dragojevic & Giles, 2016). However, adults sometimes show greater tolerance toward non-native speakers, demonstrating reduced sensitivity to grammatical errors and greater willingness to reinterpret implausible or incomplete statements (Fairchild & Papafragou, 2018; Gibson et al., 2017; Hanulikova et al., 2012). Emerging research suggests children may also be more tolerant of grammatical errors from non-native speakers (Rett & White, 2022), but it remains unclear how these judgments develop or whether they depend on accent type. Children may be selectively tolerant of errors from second-language speakers or treat all unfamiliar accents similarly. Here, we examine 4- to 7-year-olds' ($N=77$, ongoing) treatment of grammatical errors using a within-subjects design. Children listen to pairs of Canadian-, Mandarin-, Italian-, Australian-, and Indian-accented speakers, one with and the other without grammatical errors, then complete an endorsement task and an accent origin task. Preliminary results show a significant preference for the grammatical speaker overall during the endorsement task, but no differences by speaker type. However, there is a significant effect of age, with 7-year-olds showing stronger grammaticality preferences than 4-year-olds. In the origin judgment task, there is a significant interaction of age and speaker type, with 6- and 7-year-olds judging Canadian-accented speakers as being "from here" more than other speaker types. These patterns suggest that children's judgments of grammatical errors change across childhood and may depend on error type. Future analyses will examine experiential and speech influences on these judgments.

A pig as small as a cup? Children's beliefs about improbable natural items

Mopreet Pabla* & Ori Friedman
(mk2pabla@uwaterloo.ca; she/her)

Children often say that completely possible improbable events are not possible, and only gradually begin to affirm their possibility. For

instance, children often deny that someone could do unusual things, like eat pickle flavoured ice cream or have a pet peacock. These denials are surprising since we often think of children as fantastical thinkers. Much of previous possibility research has been human-centered, focusing on people and what they can do. Our concern was that this human influence may be impacting children's possibility judgements, given their knowledge about human social norms and people's general wants and desires. In this experiment (N=160), we attempt to move away from human-centered possibility judgements and instead ask children about the possibility of natural items. Children aged 4-7 judged whether ordinary, improbable, and impossible natural events could or have ever happened. We found that while children affirm the possibility of ordinary events and deny the possibility of impossible events, they also continue to deny the possibility of improbable events. When comparing children's results to those of adults (N=197), we find that children are significantly less likely than adults to affirm the possibility of improbable events. Taken together, these results show that children's denials of improbable events can be taken at face value. Whether asked about human-centered or natural events, children continue to deny the possibility of improbable events.

Guesses vs. gambles: Individual differences in children's responses to uncertainty with and without stakes

Jacqueline Laramy*, Elizabeth Lapidow, & Stephanie Denison
(jmlaramy@uwaterloo.ca; she/her)

Uncertainty in decision-making refers to situations in which the outcomes of one's actions are unknown or cannot be predicted with certainty (Thoma & Schulze, 2025). Previous research shows that in such contexts, children use environmental feedback to update expectations, test strategies, and learn from both success and failure (Bonawitz et al., 2014). However, uncertain decisions occur in different contexts, and incorrect decisions may have either minimal consequences (without-stakes settings) or lead to tangible gains or losses (with-stakes settings). Although both settings require learning from probabilistic outcomes, developmental work often examines them separately, leaving unclear

whether children approach uncertainty in similar ways across these two contexts. The current study addresses this gap by examining individual differences in how children respond to uncertainty across contexts with and without stakes. Children (4- to 5-year-olds) complete two computerized tasks in a within-subject design. In the Without-Stakes task, children make repeated predictions while observing accumulating probabilistic evidence. In the With-Stakes task, children play a push-your-luck game in which they decide whether to continue for greater rewards or stop to avoid a potential loss. Performance across the two tasks is used to assess whether feedback sensitivity—how strongly children update beliefs based on both prior information and outcome feedback—is related across the two decision contexts, and whether this relation changes with age. Together, these findings will offer a more integrated view of early decision-making, clarifying how children navigate uncertainty in contexts with and without stakes.

When math runs in the family: Links between parental math difficulties and children's math achievement

Olivia D. Bartels*, Mandeep Singh, Colleen Ganley, & Sara A. Hart
(obartels@uwaterloo.ca)

Research demonstrates that math abilities run in families. Supporting this finding, family history of math difficulties is associated with lower child achievement. However, most studies examine this relationship alongside familial reading difficulties, despite evidence that familial math history (FMH) uniquely predicts later math skills. This study will examine how children's mathematics outcomes are associated with FMH when difficulties are present in (a) both parents, (b) one parent only, (c) or neither parent. We hypothesize that children with a family history of math difficulties will have lower math achievement than children without a family history. Participants were drawn from a dataset (N = 2,953) comprising parents of U.S. children in grades K–3. Parents completed a survey assessing their own math performance during school, history of math learning disabilities, and level of education. Respondents reported the same information for their child's other biological parent. Children's math achievement was measured using the External Measurement of Student Achievement.

Repeat after me: The effects of exclusion on children's language behavior

Salva Asgharizadeh* & Katherine S. White
(sasghari@uwaterloo.ca; she/her)

In Canada, children may speak a home language that differs from the community language. Oftentimes, these children will rapidly pick up the community language once they begin interacting with peers, sometimes at the expense of their home language. Children may be motivated to learn the community language by a desire to affiliate with peers, particularly if they experience or anticipate social exclusion due to their background. Little work examines this hypothesis experimentally, although there are demonstrations that feelings of ostracism can increase other types of affiliative behavior, such as facial and behavioral mimicry. Here we investigate the role of ostracism on lexical alignment in bilingual and monolingual children for labels either commonly used in the community (“preferred”) or less commonly used (“dispreferred”). Sixty 4-6-year-old children (40 monolinguals, 20 bilinguals; data collection ongoing) completed the Cyberball paradigm, used to induce feelings of either inclusion or exclusion, followed by a picture naming task aimed at assessing the rate of children’s lexical alignment (use of the same labels) with an experimenter. Preliminary data reveal no significant differences between language groups, but a highly significant effect of label type, such that alignment is higher for preferred labels across all groups/conditions. Both monolingual and bilingual children show numerically higher alignment rates following inclusion, with bilingual children showing particularly low alignment rates for dispreferred labels following exclusion. These findings, if maintained in the full sample, may demonstrate that positive social experiences increase children’s tendency to align linguistically with others, in contrast to our initial hypothesis.

INDUSTRIAL-ORGANIZATIONAL

The two sides of fairness: Opposing indirect effects of fairness perceptions on support for diversity initiatives

Alison Stephens*, Ramona Bobocel, & Amy Barron
(a8stephe@uwaterloo.ca; she/her)

The success of workplace diversity initiatives depends on support from employees, which necessitates research to examine predictors of support. Most research has identified demographic factors and characteristics of the diversity initiatives as predictors of support. But less is known about whether perceptions of the broader organization foster or hinder employee support. We propose that employees’ overall fairness perceptions are associated with their support for diversity initiatives through two opposing pathways. Drawing on fairness heuristic theory, we propose that support is, paradoxically, lower among employees with greater overall fairness perceptions because they perceive that such initiatives are not needed. Conversely, drawing on the group-value model of justice, we propose that greater perceptions of overall fairness will also indicate to employees that their organization is an inclusive environment, which in turn will be associated with greater support. To this end, we conducted a three-wave, online survey with focal variables assessed at different times, to help rule out common method bias (N = 313). We measured overall fairness perceptions and demographics (Time 1), perceptions of need for diversity initiatives and perceptions of organizational inclusivity (Time 2), and support for diversity initiatives (Time 3) along with relevant control variables. Results supported our predictions, suggesting that overall fairness perceptions may both promote and reduce support via different pathways. While recognizing limitations of the methodology regarding causality, our research contributes to an understanding of how employees use their overall fairness perceptions and may suggest practical interventions to promote support for diversity initiatives in organizations.

The impact of team diversity ideologies on cultural minorities' identity inclusion and knowledge exchange expectancies: Implications for workgroup information-processing

Allister Grapes* & Wendi Adair
(acgrapes@uwaterloo.ca; he/him)

Information-processing accounts of diversity suggest that diversity, under the right conditions, can benefit workgroup performance through the inclusion of the unique perspectives, ideas and knowledge inherent to members' diverse identities. We explored how team diversity ideologies (aka diversity perspectives/beliefs) may contribute to these processes. Little research has examined the impact of diversity ideologies relating to information-processing, despite recognition for their influence on a wide variety of diversity-related outcomes. Cultural minorities residing in Canada and the United States were asked to imagine working with a team that endorsed either a colourblind, multicultural or polycultural diversity ideology, before giving their expectations for team identity-engagement, information-seeking, and valuing of their unique perspectives and contributions. We focus our results particularly on the potential benefits of polyculturalism with its unique emphasis on the beneficial and dynamic influence of cultures on one another. We hope to build preliminary support for the impact of diversity ideologies on team information-processing, opening opportunities for further research to explore their wider implications within the field and longitudinal settings, and help practitioners identify beliefs that can improve inclusion and productivity in diverse workgroups.

Impact of cross-cultural code-switching and age on identity conflict type experienced amongst recent immigrants to Canada

Kass Makarenko* & Wendi Adair
(kmaakaren@uwaterloo.ca; they/them)

Canada annually welcomes hundreds of thousands permanent migrants and student visa holders. Like all societies, Canada has its' distinct set of culturally appropriate social behaviours, which many newcomers try adapting to for the purposes of fitting in and giving off a positive impression. This act of purposeful change of behaviour in a foreign cultural setting is called cross-cultural code switching, a practice of marginalized groups facing social pressure to hide their authentic selves and assimilate

into mainstream society. The purpose of the present study is to address the gap in the literature regarding the role of age in how cross-cultural code-switching affects mental health, particularly feelings of identity conflict. Recent immigrants will be recruited through SONA and local community centers, with responses collected through an online Qualtrics survey. Data will be analyzed using simple linear regression.

Minimizing human threat activation in the rise of social robots

Saleha Ranjha*
(snranjha@uwaterloo.ca; she/her)

The human-robot relationship in the era of early AI-assisted social robots is a topic of growing public interest and concern, which is particularly demonstrable through ongoing contemporary debates on the ethical rights of robots. Through a socio-cognitive lens, this paper explores the interaction of human threat-activation and the seemingly inherent, automatic perceptual processes involved in conceptually assigning autonomy, recognition of life, and trust to social robots as non-biological agents. For instance, perceptual effects grouped in this paper include eye gaze data, the uncanny valley effect, or visual perspective-taking. Composed of 25 peer-reviewed articles from psychology and computer science research databases, the thematic aim of this scoping review is to identify and group together perceptual forces that, if considered by software developers and organizations in building their AI-assisted social robots, may specifically minimize threat-activation for humans in human-robot interactions.

SOCIAL

Empathic responses and attributions of racial discrimination for monoracial and multiracial disclosers

Christie Lee* & Megan McCarthy
(cjolee727@gmail.com; she/her)

How do people of colour respond to multiracial people who can pass as White in the context of racial discrimination? Multiracial people with White ancestry may experience racial discrimination, yet because they do not fully belong to any monoracial ingroup, and because they are closer to being perceived as White, they may not have access to

racialized social support from other people of colour. The present study examines whether people of colour differ in their empathic responses to racial discrimination disclosures, their attribution of these experiences to racism, and their expectations that the discloser will be responsive to the participant's own race-related experiences when the discloser is monoracial compared to multiracial. Participants viewed photographs of four monoracial, light-skinned people, and four multiracial White-passing people and read transcripts of a time in which the photographed person believes they faced racial discrimination. Participants then provided ratings of how much they empathized with each person and were asked to attribute the experience to a cause (e.g. racism, social skills, other's incompetence, etc.). Next, participants recalled a negative experience of their own and indicated how supported they would feel if they disclosed their experience to each previously viewed target. Data collection is currently in progress, but preliminary analyses will be reported. Findings from this research will contribute to a better understanding of social support networks for multiracial individuals and how people of colour evaluate and respond to White-passing multiracial individuals in situations involving race and discrimination.

Examining the accuracy of vaccinated Canadians' perceptions of the reasons for COVID-19 vaccine hesitancy

Mico D. McDonald*, Geoffrey T. Fong, Zahid A. Butt, & Peter A. Hall
(m23mcdon@uwaterloo.ca; they/them)

Vaccine hesitancy is a known and growing concern for worldwide health. Identifying the underlying reasons and mechanisms of this hesitancy is critical for creating targeted public health responses. The objective of this study was to examine the validity of vaccinated individuals' predictions of the reasons for COVID-19 vaccine hesitancy among Canadians. The Canadian COVID Experiences Survey (CCES) was a nationally representative survey of a cohort of Canadian adults (18-56 years; N=1958) that was conducted in 2021. The respondents were sampled so that approximately half (N=983) were fully vaccinated and half were vaccine-hesitant (N=975; those who had either received a single dose without intending to receive a second dose and those who were unvaccinated). Among the many questions in

the CCES were a list of 29 reasons compiled from the literature on reasons for and against vaccination. Those who were vaccine-hesitant indicated for each of the 29 reasons, whether it was a reason why they were not fully vaccinated; those who were fully vaccinated estimated for each of the 29 reasons, the percentage of vaccine-hesitant Canadians who have indicated that it was a reason for their hesitancy. This design allowed for an assessment of whether non-hesitant people can accurately predict the prevalence of reasons that vaccine-hesitant people give for hesitancy. We expect that the findings will reveal a discrepancy between the reported reasoning of vaccine-hesitant individuals and the predicted reasoning by non-vaccine-hesitant individuals.

WiCSC+ LUNCH AND LEARN

During the lunch & learn, WiCSC+ trainee board members Candice Rubie & Julianna Salvatierra will discuss organizational tips and guidelines for perfecting your academic curriculum vitae (CV). Don't miss out on this opportunity to learn, connect, and grow!

