NOWCAM

27TH ANNUAL NORTHWEST COGNITION AND MEMORY

MAY 8-10, 2025

UNIVERSITY OF VICTORIA

3800 FINNERTY RD, VICTORIA

HTTPS://ONLINEACADEMICCOMMUNITY.UVIC.CA/NOWCAM-CONFERENCE/

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Credit to Eric Mah for preparing this program.

Program-At-A-Glance

THURSDAY, MAY 8ᵗʰ, 2025	
6PM on	
6 pm - late	No Host Reception: *CRAFT Beer Market (450 Swift St)*
FRIDAY, MAY 9ᵗʰ, 2025	
8:30AM – 6:20PM	
8:30 - 9:00 am	Registration (outside David Lam Auditorium MacLaurin A144)
9:00 - 9:15 am	Opening Remarks
9:15 - 9:30 am	Indigenous Welcome: Elder Terri Barnhard
9:30 - 9:35 am	Welcome from Social Sciences Dean Dr. Lois Harder
9:35 - 10:50 am	Paper Session 1: Eyewitness / Forensic
10:50 - 11:00 am	Break
11:00 - 12:00 pm	Paper Session 2: Learning / Belief
12:00 - 1:20 pm	Lunch (Not provided)
1:20 - 2:20 pm	Paper Session 3: Lifespan / Developmental
2:20 - 3:50 pm	Poster Session 1
3:50 - 4:50 pm	Paper Session 4: Cognition / Executive Functioning
4:50 - 5:00 pm	Break
5:00 - 6:20 pm	Keynote Address: Dr. Ira E. Hyman Jr. *Varieties of False Beliefs and False Memories*
7:00 - 10:00 pm	Gala Dinner: *Maple Room at the Sticky Wicket (919 Douglas St)*
SATURDAY, MAY 10ᵗʰ, 2025	
9AM – 2:30PM	
9:00 - 9:30 am	Registration (outside David Lam Auditorium MacLaurin A144)
9:00 - 10:30 am	Poster Session 2
10:30 - 11:45 am	Paper Session 5: Memory / Perception
11:45 - 1:15 pm	Poster Session 3 (Pizza lunch served)
1:15 - 2:15 pm	Paper Session 6: Decision-Making / Lifespan
2:15 - 2:30 pm	Closing Remarks

Keynote Address

Friday May 9th at 5:00 pm

IRA E. HYMAN JR.

Western Washington University

Varieties of False Beliefs and False Memories

Session Chair: Dr. D. Stephen Lindsay

People are susceptible to adopting false information. People can come to accept false facts and disinformation as true. They can also create a variety of false memories. But false beliefs and false memories are not all dependent on the same underlying processes. Understanding false beliefs and false memories will depend on considering the features that overlap and distinguish the varieties of false beliefs and memories that people adopt. Considering these features should lead to more thoughtful generalizing and to the creation of new research projects. A deeper understanding of the features of false beliefs will hopefully lead to new techniques for fighting disinformation campaigns.

NOWCAM MISSION STATEMENT

The Pacific Northwest is home to numerous wide-flung Psychology departments with strengths in cognition and memory. NOWCAM provides a forum for faculty, students and postdocs from these departments to get together and discuss their latest research. Interactions with other researchers can spark innovations and cross-fertilizations that move the research forward in new and exciting ways. In any case, it's good fun to get together with friends and colleagues who share similar interests, chew the cognitive rag a bit, and quaff a beer or two over a good meal.

The aim of NOWCAM is to support Pacific Northwest faculty, student, and postdoctoral researchers working in the general area of memory and cognition by creating an annual venue in which they can share their current research activities with an informed, sympathetic, and good-humoured audience. With the exception of keynote addresses, NOWCAM favours papers and posters presented by students and postdocs (usually with faculty as co-authors). This gives students and postdocs an opportunity to develop their chops, and faculty a chance to sit back and relax.

GETTING TO THE CONFERENCE

All of the conference activities will take place in the **MacLaurin Building** on the UVic campus. Poster sessions will take place in the lobby, and talk sessions will be in the David Lam Auditorium (Room A144)
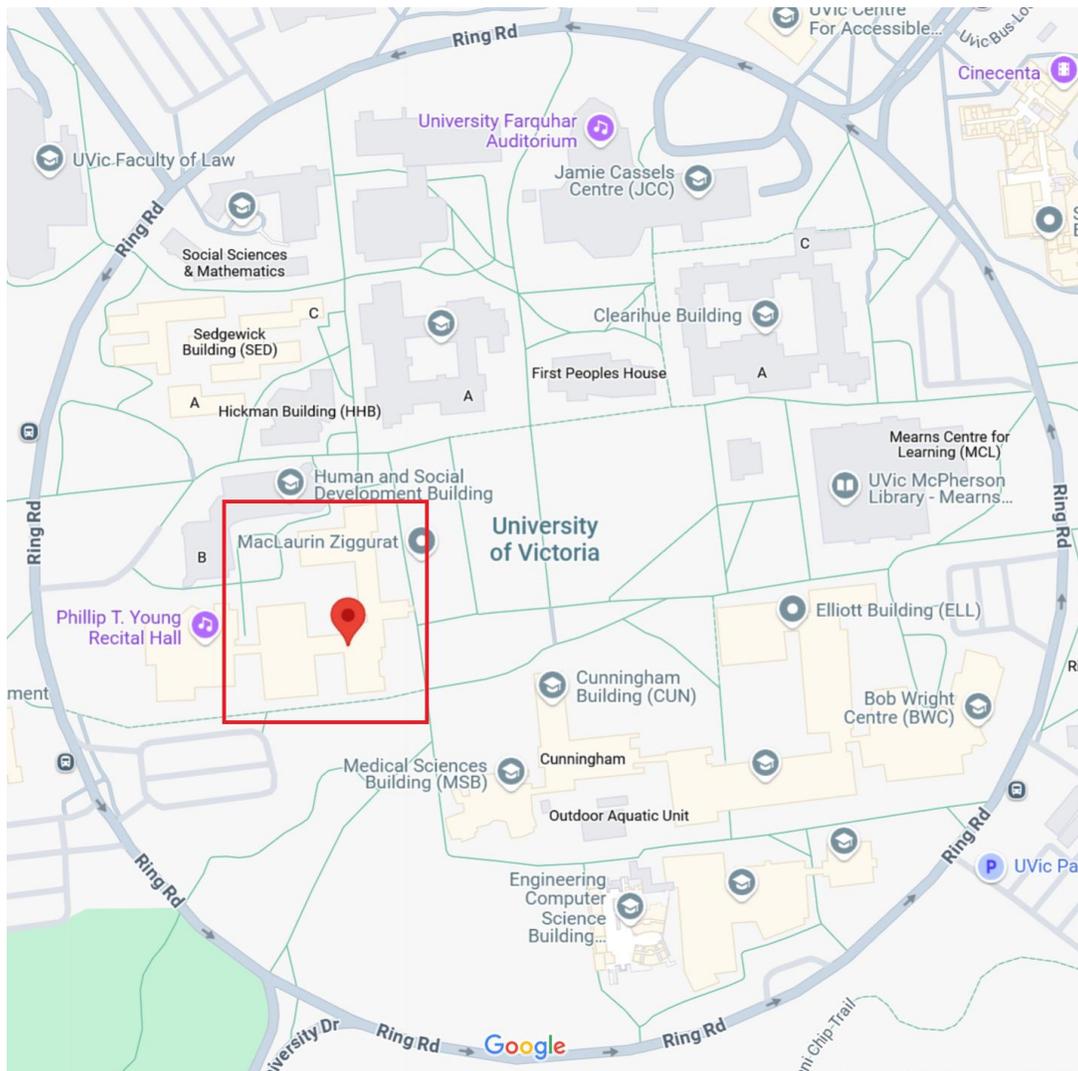
TRANSIT INFORMATION

Parking Lot E is the closest to the MacLaurin building. Parking on campus is $2 per hour or $9 for all day. Paying requires a credit card. Park and walk to a machine and enter your car's license plate number and then follow instructions.

A cab between downtown and campus costs $25.00 to $30. BC Transit has many bus routes that make stops on the UVic campus. Visit https://www.bctransit.com/victoria/ . There is an app for trip planning. It is also possible to pay via phone using an app called UMO but the reviews are terrible. A single trip costs $2.50; they cannot make change. It is possible to buy a sheet of 10 tickets for $22.50 at certain convenience stores; see https://www.bctransit.com/victoria/fares/

FOOD ON CAMPUS

 For info about food outlets see https://www.uvic.ca/campus/food-and-drink/index.php

GALA INFORMATION

On Friday, May 9th at 7:00 pm, the (optional) Gala dinner will be held at the Sticky Wicket in the Maple Room. Tickets are required (purchasable at registration), and space is limited to 60 attendees. The Sticky Wicket is in downtown Victoria (919 Douglas St). From the UVIC Transit Exchange, the **7 DOWNTOWN – TO 21 INTERURBAN** and **11 TILLICUM CTR – VIA GORGE** bus lines will get you to the venue in ~30 minutes.

INTERNET ACCESS

Visiting members of eduroam-supported institutions may securely connect to the EDUROAM wireless network. Authentication and support of eduroam for visitors is provided by your home institution. The best way to prepare to use EDUROAM for wireless access on a device at another institution is to ensure it works properly at your home institution before travelling. Further information can be found at http://eduroam.org.

OR

Use the "UVicStart" Guest network and follow the instructions for authentication on the network. When you connect to the network you will be automatically redirected to the authentication page with instructions.

PRESENTER INFO

Each speaker will have 10 minutes to give their presentation, followed by 3 minutes for questions. There will be 2 minutes to change to the next speaker. Student members of the NOWCAM Organizing Committee will chair each session, and will assist with speaker setup and changeover. The session room will have a PC setup available, with an HDMI cord if you want to use your own laptop. If you want to use the in-room PC, please bring a USB with your talk slides loaded on it. A clip-on lav mic will be available, but we can't guarantee a clicker, so if you prefer to use one we suggest you bring your own. **If you are giving a talk, plan to meet with your session chair at the podium 10 minutes prior to the start of your session to get your talk loaded and test out the setup.**

ACKNOWLEDGEMENTS

NOWCAM conferences have in recent years been generously supported by KPU, SFU, UBC, TRU, UFV, and UVic

Program
Paper & Poster Abstracts Listed After Program

Thursday, May 8th	
18:00 - Late	Social CRAFT Victoria Harbour (450 Swift St.)

Friday, May 9th	
08:30 - 09:00	**Registration**
09:00 - 09:15	**Opening Remarks**
09:15 - 09:30	**Indigenous Welcome: Elder Terri Barnhard**
09:30 - 09:35	**Welcome from Social Sciences Dean Dr. Lois Harder**

09:35 - 10:50	**Paper Session 1: Eyewitness / Forensic** *Session Chair: Eric Mah*

A Juror Blind Spot: Examining Mock Jurors' Credibility Perceptions of Child Witnesses

Kylie Viala, Madison Harvey, Nikola Klassen, Kristina Baker Todorovic, Deborah Connolly

How Many and How Often? Exploring Frequency Estimates as Described by Judges in CSA and HCSA Cases

Fiza Hasan, Heather L. Price, Deborah A. Connolly

Seeing Similarity: Predicting Lineup Performance from Psychological Embeddings of Perceptual Similarity

Bennett King-Nyberg, Eric Mah, D. Stephen Lindsay, Jim Tanaka

The perceived credibility of tele-forensic interviews with children across various online environments

Nikola R. Klassen, Madison B. Harvey, Heather L. Price, Deborah   A. Connolly

Use of Caveat Statements to Help Debias Investigators, Lawyers, and Jurors Presented with Forensic Evidence Reports

Nikolas Kulka, Adele Quigley-McBride

10:50 - 11:00	**Break**

| 11:00 - 12:00 | **Paper Session 2: Learning / Belief**
 Session Chair: Yanxin Xu |

Category learning, retention and psychological embeddings

Daniela Orellana Gonzalez, Johannes Schultz-Coulon, Brett D. Roads, James W. Tanaka

Enhancing Online Learning: The role of instructor presence and multimedia design

Katie Schmidt, Kristie Dukewich

Investigating Diagnostic Features in Prototype Category Learning Task: A Deep Learning Perspective

Yueling Sun, Jim Tanaka

Moderation in moderation? Intuitions about content moderation are misaligned with effective practices for reducing the spread of conspiracy beliefs.

Madeline Jalbert, Morgan Wack

| 12:00 - 13:20 | **Lunch (Not provided)** |
| 13:20 - 14:20 | **Paper Session 3: Lifespan / Developmental**
 Session Chair: Emiko Osborne |

A Longitudinal Study of Theory of Mind Across the Lifespan

Hanna Erceg, Eric Mah, Ruby Dhillon, Daniel Derksen, Daniel Bernstein

Social Indicators Influence Cognitive Function Across the Lifespan

Samantha Coleborn, Lauren Qualls, Stacey Voll, Stuart MacDonald, Jodie Gawryluk

The temporal dynamics of gist & perceptual encodings in younger and older adults

Anna K. Lawrance, Jalene R. Plamondon, Tarek Amer

Visuomotor Adaptation in Adults and Children Revealed by Magnetoencephalography (MEG) Time-Frequency Analysis

Minsu Song, Alex Cook, Deborah Giaschi, Hee Yeon Im

| 14:20 - 15:50 | **Poster Session 1** |
| 15:50 - 16:50 | **Paper Session 4: Cognition / Executive Function**
 Session Chair: Bennett King-Nyberg |

Affect Varies at the Daily Level. Does Cognition?

Melanie A. Butt, Todd C. Handy

Alerting Across Adulthood: Examining How Age Influences Executive Control

Alice Luan, Alice Luan, Samantha Good, James Enns

Hyperactive ADHD symptoms are associated with increased variability in thought content in less constrained contexts

Quentin Raffaelli, Simrit Rai, Ann Galbraith, Avery Krupa, Jonas Buerkner, Jessica R. Andrews-Hanna, Brandy L. Callahan, & Julia W. Y. Kam

OCD, Metacognition and Cognitive Deficits Following an Induced "Not Just Right Experience"

Aidan Sammel, Daniel Bernstein

16:50 - 17:00	**Break**
17:00 - 18:20	**Keynote** **Varieties of False Beliefs and False Memories** ***Dr. Ira E. Hyman Jr.*** ***Chair: Dr. D. Stephen Lindsay***
19:00 - 22:00	**Gala Dinner** **Maple Room at the Sticky Wicket**

Saturday, May 10th	
09:00 - 09:30	**Registration**
09:00 - 10:30	**Poster Session 2**
10:30 - 11:45	**Paper Session 5: Memory / Perception** *Session Chair: Anna Lawrance*

Attending to faces and bodies in person perception

Nicholas Argument, Anna Lawrance, Katelyn Forner, Eric Mah, James Tanaka

Discrete vs. continuous timer bars: How visual segmentation shapes the perception of time "running out"

Jasmindeep Kaur, Jiaying Zhao, Joan Danielle K. Ongchoco

More to 3D vision: measuring coarse stereopsis in the assessment of residual depth perception in amblyopia

Meriwether Morris, Kimberly Meier, Laurie Wilcox, Deborah Giaschi

Of What and When: Memory Contents and Retrospective Duration

Omran K. Safi , Daniela J. Palombo

Temporal asymmetries in emotional memory retrieval

Chantelle M. Cocquyt, Isabel Wilson, Daniela Palombo

11:45 - 13:15	**Poster Session 3 (Pizza lunch served)**

13:15 - 14:15	**Paper Session 6: Decision-Making / Lifespan** *Session Chair: Bennett King-Nyberg*

Tools or Art? How an Object's Perceived Purpose Shapes Visual Feature Processing

Izzy Moody, Amira Jensen, Nisa Hofer, Jenni Karl

Lifespan risk taking behaviour

Julia Bastiaanssen, Eric Mah, Joshua Weller, Daniel Bernstein

Scoping the Evidence: The Effect of Expectation Congruency in Workplace Investigations

Surveer Boparai, Carla MacLean

Strategic and Sharp: Executive Control Remains Efficient in Old Age

Paris Yuexiao Wang, Samantha Good, Alan Kingstone, James T. Enns

14:15 - 14:30	**Closing Remarks**

Paper Abstracts

Paper Session 1: Eyewitness / Forensic (09:35 - 10:50)
Session Chair: Eric Mah

A Juror Blind Spot: Examining Mock Jurors' Credibility Perceptions of Child Witnesses

Kylie Viala, Madison Harvey, Nikola Klassen, Kristina Baker Todorovic, Deborah Connolly

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Limited research has examined how jurors perceive the credibility of children asked suggestive questions by trusted adults. We assessed mock jurors' legal decisions and perceived credibility ratings of a child asked suggestive questions by their mother or a police investigator. University undergraduates (N = 330) read a legal vignette from a fictional child sexual abuse (CSA) case with the child's mother or a police investigator interviewing the child with varying levels of suggestiveness (no suggestive questions, moderately suggestive questions, highly suggestive questions) in a 2x3 experimental design. Hypotheses were partially supported. Implications will be discussed.

How Many and How Often? Exploring Frequency Estimates as Described by Judges in CSA and HCSA Cases

Fiza Hasan, Heather L. Price, Deborah A. Connolly

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Although abuse frequency can influence legal outcomes, understanding of the numerical estimates and frequency descriptors complainants commonly report is limited. We examined alleged abuse cases and found child sexual abuse (CSA) complainants specified frequency more often than historical CSA (HCSA) complainants. Most who specified frequency reported abuse happened up to three times, regardless of case type or age. Across case types, child complainants described abuse as occurring "a few" times, followed by "a lot," or "a pattern." Adult complainants reported alleged abuse occurred "a lot," followed by "a few" times, or "a pattern." Implications for forensic interviews regarding frequency judgements are discussed.

Seeing Similarity: Predicting Lineup Performance from Psychological Embeddings of Perceptual Similarity

Bennett King-Nyberg, Eric Mah, D. Stephen Lindsay, Jim Tanaka

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This study examined whether similarity ratings predict accuracy in lineup tasks. Using PsiZ, a machine learning method that transforms behavioral similarity judgments into multidimensional psychological embeddings, participants rated the similarity of faces from existing lineup datasets. We then tested whether PsiZ-derived similarity metrics predicted lineup outcomes. This research evaluates PsiZ as both a predictive tool for lineup performance and a practical method for constructing lineups using quantitative perceptual similarity. By grounding lineup construction in psychological similarity measures, this approach could improve lineup fairness and accuracy in real-world identification procedures.

The perceived credibility of tele-forensic interviews with children across various online environments

Nikola R. Klassen, Madison B. Harvey, Heather L. Price, Deborah A. Connolly

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Online investigative interviews with children (tele-forensic interviews) are an emerging interview medium within the criminal justice system. However, tele-forensic interviews and the online environment have different distractions, such as interviewer background and the child's own video feed, that may impact the perceived credibility of the child. To examine the impact of the online environment on credibility, we employed a 2(interviewer background: simple vs. child-friendly) x 2(child video: visible vs. hidden) x 2(disclosure: present vs. absent) between-subjects design. Perceptions of child credibility (i.e. honesty, cognitive competence and suggestibility) and perception of the interviewer were measured. Results and implications will be discussed.

Use of Caveat Statements to Help Debias Investigators, Lawyers, and Jurors Presented with Forensic Evidence Reports

Nikolas Kulka, Adele Quigley-McBride

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Forensic results are most often communicated in written reports rather than during testimony. This study examined whether adding caveat statements could counteract the tendency for lay-persons to overestimate the strength of forensic evidence. Participants read a mock trial vignette and corresponding report that either included no caveats or one of three short statements about limitation in forensic sciences. There was no overall effect of the caveats on whether participants thought the person was guilty. Participants who were high in "Need for Cognition" and thought the person was "not guilty", however, altered their responses in line with the caveat statements.

Paper Session 2: Learning / Belief (11:00 - 12:00)

Session Chair: Yanxin Xu

Category learning, retention and psychological embeddings

Daniela Orellana Gonzalez, Johannes Schultz-Coulon, Brett D. Roads, James W. Tanaka

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The purpose of this study was to investigate the relationship between category learning speed and retention. Participants (n=151 across two experiments) completed similarity ranking tasks followed by perceptual training (90% accuracy criterion). Retention for fast and slow learners was tested post-training (48 hours or 7 days) using recognition tasks. Differences in psychological embeddings were analyzed via PsiZ. Whereas fast learners maintained high accuracy and distinct psychological embeddings in both post-training conditions, the slow learners showed reduced accuracy and less distinct psychological embeddings in the 7-day condition.

Enhancing Online Learning: The role of instructor presence and multimedia design

Katie Schmidt, Kristie Dukewich

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Research on multimedia suggests that specific design features can improve learner outcomes, yet little is known about their interactions. Studies on instructor presence indicate that a visible instructor can help or hinder learning. We explored how multimedia interacts with instructor presence, hypothesizing that multimedia design features may influence its effectiveness. Participants viewed two 10-minute educational videos with either rich, sparse, or no multimedia and a present or absent instructor. Preliminary findings (n = 103) show that instructor presence and multimedia design influences subjective ratings but not learning outcomes. We will explore potential explanations for the lack of effect and offer critical commentary on the educational literature surrounding these topics.

Investigating Diagnostic Features in Prototype Category Learning Task: A Deep Learning Perspective

Yueling Sun, Jim Tanaka

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Categorization is the process by which objects are grouped based on their shared diagnostic features. In this study, we trained a convolutional neural network (VGG16) to classify artificial stimuli (RuBubbles) into one of four categories. After 7 epochs of training, the model achieved perfect accuracy based on its probabilistic activations across categories. We then applied Grad-CAM to identify the diagnostic features used by the model. By varying heatmap thresholds, we found that VGG16 could still achieve high accuracy using only small patches of these diagnostic features.

Moderation in moderation? Intuitions about content moderation are misaligned with effective practices for reducing the spread of conspiracy beliefs.

Madeline Jalbert, Morgan Wack

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What social media posts are the most important to remove to prevent the spread of conspiracy beliefs? Participants read social media posts containing evidence for conspiracy theories in different moderation conditions. Consistent with theories of information integration, individuals believed the conspiracy theories less when posts containing believable evidence had been removed, but not when posts containing evidence low in believability had been removed. However, in follow-up experiments using the same materials, new participants making moderation decisions preferred to remove the posts containing evidence low in believability. We explain, consider solutions for, and discuss the implications of this concerning discrepancy.

Paper Session 3: Lifespan / Developmental (13:20 – 14:20)

Session Chair: Emiko Osborne

A Longitudinal Study of Theory of Mind Across the Lifespan

Hanna Erceg, Eric Mah, Ruby Dhillon, Daniel Derksen, Daniel Bernstein

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Theory of Mind (ToM) is essential for social interactions, yet its developmental trajectory remains unclear. We analyzed data from a longitudinal study of individuals aged 3-98 years. We assessed cognitive ToM using the Sandbox task (N = 671) and affective ToM using the Reading the Mind in the Eyes Task (N = 632). Mixed-effects models revealed that cognitive ToM was present at all ages and remained stable over time. Affective ToM improved into early adulthood, plateaued in midlife, and declined in older age, demonstrating age-dependent longitudinal changes. Our findings reveal distinct developmental patterns in ToM abilities across the lifespan.

Social Indicators Influence Cognitive Function Across the Lifespan

Samantha Coleborn, Lauren Qualls, Stacey Voll, Stuart MacDonald, Jodie Gawryluk

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Emotional support (ES), instrumental support (IS), and loneliness influence cognition in older adults, yet their impact across the lifespan is poorly understood. Participants (N = 273, 56% female) were partitioned into four age groups. Measures of IS, ES, and loneliness (NIH Emotion Toolbox), memory (Picture Vocabulary), and executive functioning (Trails) were indexed. Linear regressions indicated significant relationships of loneliness and Trails for young (ages 18-24) participants ($\beta=85.86$, $p<0.001$), and picture vocabulary and ES for older (ages 60-74) participants ($\beta= 0.34$, $p<0.05$). Results emphasize the importance of a lifespan approach to understanding the impact of loneliness and social support on cognition.

The temporal dynamics of gist & perceptual encodings in younger and older adults

Anna K. Lawrance, Jalene R. Plamondon, Tarek Amer

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Episodic memories vary in their level of detail from more gist-like to perceptual. The literature suggests that encoding duration positively correlates with memory specificity and that older adults' episodic memories are predominantly gist-like when assessed explicitly. By using an implicit measure, we examined whether explicit retrieval demands drive this age-related specificity "loss." Encoding duration in an associative memory task was manipulated to encourage formation of gist- and perceptual-representations. Reaction times on an implicit retrieval task for intact and semantically-related pairs assessed the time needed to form perceptual associations. At long encoding durations, both younger and older adults referenced perceptual representations.

Visuomotor Adaptation in Adults and Children Revealed by Magnetoencephalography (MEG) Time-Frequency Analysis

Minsu Song, Alex Cook, Deborah Giaschi, Hee Yeon Im

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Visuomotor adaptation is a process that enables us to adjust movements and reduce errors in response to visual feedback. It is suggested to be mediated by two mechanisms: an initial response driven by feedforward motor commands, and a subsequent feedback-based error correction. We explored developmental aspects of these mechanisms by measuring MEG in children (6-12 years old) and adults during a hand-eye coordination task. Time-frequency analyses revealed that children show weaker movement-related oscillatory activity for the feedforward phase, but more dominant, prolonged activity associated with feedback than adults. This suggests that visuomotor adaptation is still maturing over this age range.

Paper Session 4: Cognition / Executive Function (15:50 – 16:50)

Session Chair: Bennett King-Nyberg

Affect Varies at the Daily Level. Does Cognition?

Melanie A. Butt, Todd C. Handy

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To what extent does cognition vary on a day-to-day level in young adults? To address this question, we collected phone-based subjective cognitive assessments from student participants (N = 215) three times a day for two weeks, along with measures of mood. We found that daily cognitive scores were predicted by daily mood, and further, that there was systematic variability in participants' tendency to show this mood-cognition effect. Our findings suggest that cognition varies on a daily level in young adults, but that some people may be more resilient to these mood-related effects than others.

Alerting Across Adulthood: Examining How Age Influences Executive Control

Alice Luan, Alice Luan, Samantha Good, James Enns

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This study examined how internal (endogenous) and external (exogenous) alertness influence executive control across age groups using the Combined Attention Systems Test with 42 younger and 42 older adults. Results showed that younger adults showed larger flanker effects in response to alerting cues ($F_{(1, 328)} = 24.58$, $p < .001$), while older adults benefited more from endogenous alerting ($F_{(1, 328)} = 3.94$, $p = .047$). These findings suggest that while alerting remains stable with age, its interaction with executive control changes across the lifespan, offering insight into cognitive aging and potential strategies to support executive function.

Hyperactive ADHD symptoms are associated with increased variability in thought content in less constrained contexts

Quentin Raffaelli, Simrit Rai, Ann Galbraith, Avery Krupa, Jonas Buerkner, Jessica R. Andrews-Hanna, Brandy L. Callahan, & Julia W. Y. Kam

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Using two complementary methods, we demonstrated that hyperactive ADHD symptoms are linked to thought dynamics under contexts that differ in the extent to which constraints are placed on ongoing thoughts. Participants first voiced aloud their thoughts in real-time (i.e., Think-Aloud task) then completed seven days of ecological momentary assessment. Both tasks varied in the levels of constraints exerted on participants' thoughts. In both tasks, hyperactive, but not inattentive, ADHD symptoms were positively associated with increased thought content variability only in situations where levels of constraints on thoughts were minimal. These convergent results support the Dynamic Framework of Spontaneous Thought.

OCD, Metacognition and Cognitive Deficits Following an Induced "Not Just Right Experience"

Aidan Sammel, Daniel Bernstein

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Previous literature has demonstrated deficits in cognitive function among individuals high in obsessive compulsive tendencies (OCT), specifically, in executive functions such as inhibition, set shifting and updating. Little research has been done to examine how the "Not Just Right Experience" (NJRE) might contribute to these deficits, though research has found it to be among the primary motivators behind OCD behaviour. Our findings indicate that individuals higher in OCT experience impaired abilities in set shifting but not updating or inhibition, and that this is the case whether they are induced with an NJRE or not.

Attending to faces and bodies in person perception

Nicholas Argument, Anna Lawrance, Katelyn Forner, Eric Mah, James Tanaka

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When we perceive another person, we receive information from their face and their body. How these sources of information influence our perception of them is unknown. In an attempt to answer these questions, we created pairs of composite face-body images, which were presented to participants in congruent and incongruent trials across two experiments. Experiment 1 had participants attend to the image's face and Experiment 2 the body, in both experiments participants responded by deciding if the attended feature was "same" or "different". Results saw improved performance on congruent trials which indicates face/body information is automatically combined in person perception.

Discrete vs. continuous timer bars: How visual segmentation shapes the perception of time "running out"

Jasmindeep Kaur, Jiaying Zhao, Joan Danielle K. Ongchoco

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Our lives are flooded with visual reminders of time slipping away — from ticking clocks to countdowns timers, all depicting a sense of time "running out". In time perception, the same duration can feel longer or shorter because of various factors (e.g., attention, predictability) — but we know less about what influences our perception of how much time is left. Observers performed a multi-item localization task, clicking sequential targets as a timer-bar emptied *continuously* or in *discrete* segments. Results revealed longer inter-click latencies for discrete (versus continuous) timer-bars, suggesting that subtle visual segmentation cues alter our sense of urgency in time-sensitive tasks.

More to 3D vision: measuring coarse stereopsis in the assessment of residual depth perception in amblyopia

Meriwether Morris, Kimberly Meier, Laurie Wilcox, Deborah Giaschi

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Depth perception from small disparities that can be fused (extensively studied fine stereopsis) typically develops after depth perception from large retinal disparities that produce double vision (often overlooked coarse stereopsis). This suggests the possibility of separate stereopsis mechanisms. We assessed this in 90 children with disrupted binocular vision (amblyopia and/or strabismus), and 90 age-similar controls in a computer game-like task using 3D goggles. Fine stereopsis was impaired in all patient groups compared to controls. Coarse stereopsis was impaired in strabismus and spared in the other patient groups. This suggests that separate mechanisms support these different forms of depth perception.

Of What and When: Memory Contents and Retrospective Duration

Omran K. Safi , Daniela J. Palombo

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Psychological time is multifaceted and nuanced. One aspect, retrospective duration judgements, has been proposed to be primarily driven by memory. Previous work suggests it is constructed using the contents available in memory. However, studies directly testing this proposal are limited. To address this gap, we conducted a within-subjects study in which participants encoded a series of events. Later, they were tasked with providing retrospective duration estimates for these events, followed by a memory test. Our results demonstrate an overall compression effect for recalled duration. Additionally, we explore the relationship between duration estimates and participants' memory for the content of events.

Temporal asymmetries in emotional memory retrieval

Chantelle M. Cocquyt, Isabel Wilson, Daniela Palombo

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Emotionally intense events, like those involving fear, anger, sadness, or joy, rarely occur in isolation. Instead, they are embedded within neutral moments, creating a dynamic, interconnected narrative. This study examined how the temporal dynamics of emotion shape what neutral content "carries" about an emotional experience. In an online task, participants encoded image triplets: a neutral 'before-object,' a negative or neutral 'middle-scene,' and an 'after-object.' Later, either the before or after object cued memory. Results across two independent samples revealed that memory was significantly influenced by the object's position relative to the emotional event, highlighting temporal asymmetries in emotional memory retrieval.

Paper Session 6: Decision-Making / Lifespan (13:15 - 14:15)

Session Chair: Bennett King-Nyberg

Tools or Art? How an Object's Perceived Purpose Shapes Visual Feature Processing

Izzy Moody, Amira Jensen, Nisa Hofer, Jenni Karl

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We hypothesized that if a novel object was perceived as a tool, it would bias visual processing towards the dorsal vision-for-action stream, selectively altering detection of action-relevant object features like orientation. Participants detected orientation and saturation changes in novel objects, which they then learned were either tools, art pieces, or arbitrary objects (control). After learning, participants were slower to detect orientation (but not saturation) changes only in objects they perceived to be tools with their "handles" misaligned to their responding right hand. The results suggest that the activation of incongruent action affordances selectively interferes with the processing of action-relevant features.

Lifespan risk taking behaviour

Julia Bastiaanssen, Eric Mah, Joshua Weller, Daniel Bernstein

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Adaptive decision making (ADM) is an ability developed over the lifespan that promotes advantageous choices through the evaluation of potential risks and rewards. We investigated longitudinal change in ADM by measuring risk taking behaviour using the Cups task over a 2-10 year period in 658 participants aged 3-98. We found participants' expected value sensitivity (taking more advantageous than disadvantageous risks) was lowest in childhood, increasing until approximately 40 years, then remaining relatively stable. Risk taking to avoid loss rather than achieve gain appeared stable across the lifespan. This suggests individual differences may significantly impact risk-taking behaviour.

Scoping the Evidence: The Effect of Expectation Congruency in Workplace Investigations

Surveer Boparai, Carla MacLean

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This research tested whether information commonly shared with workplace investigators at the outset of their investigation, i.e., the name and organizational position of the person accused of the harassing behaviour, could bias people's credibility assessments of the person making the accusation. Using a 2(congruent; incongruent) x2(race; position) x2(group 1; group 2) mixed-method design, we found that congruency between organizational position of the harasser and the behaviour (e.g., sexual harassment from a superior versus a subordinate) increased credibility judgements of the accuser. No congruency effect was found for racial identity and behaviour (e.g., aggression by a Black man versus Asian female).

Strategic and Sharp: Executive Control Remains Efficient in Old Age

Paris Yuexiao Wang, Samantha Good, Alan Kingstone, James T. Enns

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Cognitive aging is often viewed through a loss-focused lens, supported by Brinley functions showing older adults consistently respond slower than young adults across tasks. However, our study found that executive control efficiency is preserved when strategic cautiousness is controlled. Using a modified flanker task, young and older adults (n = 20 per group) were instructed to prioritize either speed or accuracy. When strategy was aligned, an individual Brinley plot revealed parallel slopes across incongruent and congruent conditions, indicating no age-related differences in conflict resolution ability. These findings challenge deficit-centered views and suggest strategy preferences may inflate the reported slowing effects.

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   Lucas Copp, Eric Mah, James Tanaka

8. Exploring the effects of shared gratitude in families with children with and without support needs.
   Kaitlyn Doerksen, Brooke Heron, Jack Foster, Shawn Geniole, & Valentina Proietti

9. Detecting infrequent visual deviants in time (oddballs) and space (singletons)
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19. When Perception Ruins Potential: How Disclosure of Mood Disorder Treatment Affects Hireability
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1. Does alerting occur in the absence of changes in space-averaged luminance in the display?
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2. Children's Memory for Conversations: The Effects of Emotional Content on Destination Memory
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4. Does Prediction Error Influence the Fate of Negative Episodic Memories?
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5. Sex Differences in Probiotic Effects on Cognitive Function and NMDA receptors in Stress-Induced Mice During Puberty
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8. Do you remember what they looked like? Examining eyewitness descriptions, accuracy, and confidence.
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9. The Role of Brain Activity in Category Learning: Using artificial stimuli and psychological embeddings
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10. Perceived time as 'jerky': Exploring a novel distortion of *discontinuous* temporal experience
    Sage Roeder, Joan Danielle K. Ongchoco

11. Action Readiness in Neural and Behavioural Responses to Brief Visual Threat Cues
    Kathleen Botha, Hee Yeon Im, Minsu Song

12. Investigating the Relationship Between Anxiety and Stress After Repeated Social Losses
    Jasmine Khaira , Avneet Sahota, Kaylin Harvey, Dr. Shawn Geniole

13. Exploring the Influence of Health and Lifestyle Factors on Memory
    Ella Sokolosky, Katie O'Neill, Gabe Damasceno, Paige Schoening

14. Trick Shots and Confidence: The Impact of Observing Success and Failure
    Arshnoor, Bhavan Mann, Carolyn Baer, Maryanne Garry, Daniel Bernstein

15. Visual causal chains shape the segmentation of temporal experience
    Emily Wedin, Joan Danielle K. Ongchoco

16. Cognition, Carbs, and 50 Kilometres: Relating Carbohydrate Consumption to Cognitive Changes Following Ultramarathon Running
    Nevan Young, Katherine Boere, Dr. Olav Krigolson

17. Neural bases of attentional context-dependent visuomotor adaptation
    Isabel Wilson, Joo-Hyun Song, Hee-Yeon Im

18. Covert recognition during inattentional blindness: Evidence from pupillometry data
    Melanie Hull, Malcolm Hendricks, Kap Snyder, Michi Matsukura, Ira E. Hyman Jr., Lawrence A. Symons

19. Involuntary attention is contingent on top-down control settings for the target's defining feature and singleton status.
    Rebecca Carson, Aidan Barker, Daniel Tay, John McDonald

20. Lay Perceptions and Misconceptions of Eyewitness and Fingerprint Evidence
    Tia Blackall, Adele Quigley-McBride

21. The effect of dehumanization on support for reintegrating ex-offenders
    Drew Ramey, Andrea Hughes

22. Understanding the Associations Between Neurological Symptoms, Health Factors, Psychosocial History, and Demographic Factors in Post-COVID Condition
    Kudrat Bhinder, Zoë M. Gilson, Theone S.E. Paterson

1. The Effect of Multisensory Integration on Reward Processing
   Jared R. Girard, Cameron D. Hassall

2. LLMs and Thematic Analysis: A Collaboration of Humans and Machines
   Abby Hunter, Tove Jensen, Jonathan Kiss, James Tanaka

3. Assessing Locus Coeruleus Activity in Goal-Directed Tasks as a Function of ADHD Tendencies
   Kelsey L. Hazelwood, Aaron A. N. Richardson, Evan Caldbick, Nadja Jankovic, Vince Di Lollo, Thomas M. Spalek

4. Surviving the Semester: The Longitudinal Impact of Exercise, Sleep, and Workload on Attention
   Alix Chong, Thaskani Mtawali, Mathew Rocha Hammerstrom, Olave E. Krigolson

5. Muddying the Waters: The Effects of Disinformation on the Perceptions of Truth, Consensus, And Knowledge States
   Kirandeep K. Dogra , Ellie Mack, Vi Ly, Serena Calkins & Ira E. Hyman Jr.

6. Automatic ensemble coding of task-irrelevant visual features: Insights from MEG-based (magnetoencephalography) decoding
   Victor Cui

7. Causal Evidence that Success Spells more Success in an Online Word Search
   Isabella Hooge, Nadia Montenegro, Ashley Huberts, Dr. Shawn Geniole

8. The Influence of Emotional Valence and Sex Differences on Picture Perception
   Jenny Lee, Nada Alaifan, Dr. Peter Graf

9. Exploring the Effectiveness of a Myth Buster Intervention on Self-Ageism and Depression
   Jessica Pike & Danika Veigh, Joelle Kool, Serena Beckett, Shawn Geniole, Andrea Hughes, Lesley Jessiman, Valentina Proietti

10. Weighing on Your Mind: Effects of Stress on Types of Thought
    Cecilia Liu, Chris Clark, Julia Kam

11. Comparing Human versus Machine Approaches to Measuring Autobiographical Memory Consistency
    Sabrina Co & Kimberley Marty, Victoria Wardell, & Daniela J. Palombo

12. Photos Increase Belief in News Headlines
    Benedict Walters, Daniel Derksen, Daniel Bernstein

13. A Lifespan Longitudinal Analysis of Receptive Language
    Christine Sorensen, Eric Mah, Daniel Bernstein

14. Development of cerebellar function for visuomotor adaptation: a magnetoencephalography (MEG) study
    Max Garson, Alex Cook, Deborah Giaschi, Hee-Yeon Im

15. Adventures in Multimedia Design for Learning: Do design features interact?
    Alex Thrasher, C.I. Symonds, Kristie Dukewich

16. Eyes on the Prize: How Learnability Impacts Reward Processing
    Abigail Oloriz, Cameron D. Hassall

17. Making Time for the Future: Effects of Emotion on Duration in the Mind's Eye
    Omran K. Safi , Oliver R. Bontkes, Daniela J. Palombo

18. A Two-Phase Procedure to Investigate the 'Photo Truthiness' Effect
    Bennett King-Nyberg, Kaitlyn Fallow, Hartmut Blank, Eryn Newman, D. Stephen Lindsay

19. More than a stylistic preference: Object-based effects show the connective power of the em-dash
    Natalie Houle, Joan Danielle K. Ongchoco

20. Just Asking Questions: Can an Implication Generate an Illusory Truth Effect?
    Gwen Pane, Macallan Enns-Ford, Macy Kneipp, Isa Eigen, Annabelle Eckel, Madeline Jalbert, & Ira E. Hyman, Jr.

21. Hormonal & Emotional Responses to Competitive Social Stressors
    Lynnea Lindsay, Nadia Montenegro, & Dr. Shawn Geniole

Poster Abstracts

Poster Session 1 (Friday, May 9th: 14:30 - 16:00)

1. Beyond Fitness: The Cognitive Advantages of Engaging Exercise

Rae Fletcher, Yao Sun, Mathew Hammerstrom, Paul McCarthy, Paul Zehr & Olav Krigolson

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Exercise enhances cognitive function, but cognitive engagement during exercise may provide additional benefits. This study examined neural effects of high versus low cognitive-load exercise by comparing Brazilian Jiu-Jitsu (BJJ) and treadmill running. Mobile EEG recorded brain activity at three time points: pre-workout, post-warm-up, and post-exercise. Results suggest increased posterior alpha power following BJJ compared to treadmill running. This proposes a greater cognitive benefit from cognitively demanding exercise. These findings align with prior research linking alpha power to cognitive enhancement and flow state. Our results pose that cognitively engaging exercise amplifies cognitive benefits beyond physical activity alone.

2. Visual cues do not produce a deviance distraction effect

Nadja Jankovic, Rachel J. Yapp, Aaron A.N. Richardson, Vincent Di Lollo, Thomas M. Spalek

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A familiar task-irrelevant cue is easy to ignore. If it changes suddenly, it causes distraction and slowed responses. "Deviance distraction" occurs when displays are preceded by standard (80% of trials) or deviant (20%) tones. Conversely, "alerting" occurs when leading cues (50%) facilitate responses compared to no-cue trials. E1 tested whether reducing the proportion of alerting-cue-present trials to 20% converts visual "alerting" to "distraction". E2 included both standard and deviant leading visual cues. No differences between cue conditions were found in either experiment. Responses were faster in E2 than in E1, indicating overall alerting when a cue occurred on every trial.

3. Towards Operationalizing Intrinsic Capacity: A Scoping Review (2019-2025)

Stacey Voll, Graciela Muniz-Terrera, Stuart MacDonald

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In 2019, the World Health Organization (WHO) put forward a call to foster health care interventions for older adults that emphasize healthy aging. Moving away from deficit/disease models of aging, such as frailty, the WHO recommended broad guidelines in service of conceptualizing intrinsic capacity (IC). We present a scoping review of the measurement of the five domains of IC (cognition, vitality, locomotor, sensory and psychological). Although the recommended shift away from a deficit understanding of aging is applauded, it is unclear whether the proposed construct of intrinsic capacity in the current literature is successful in achieving this goal.

4. Memory for Conversations: Effects of Age and Conversation Topic

Irina Jinga, Becky Earhart

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Research on destination memory (recalling with whom you shared information; Gopie & MacLeod, 2009) has often used a paradigm in which participants read facts to many photos of faces. This method may underestimate destination memory capabilities because in naturalistic conversations themed around a topic, the topic of the conversation could aid in forming associations between content and destination. Further, almost no published work has examined destination memory in children. This study compared children and adults' destination memory across conditions where conversations involved sharing random facts, versus sharing information themed around a topic. Effects of age and conversation topic were found.

5. The Overlooked Variable in VO2 Max Testing: Ventilatory Threshold as a Predictor of Working Memory

Jessica Kraft, Katherine Boere, Mathew Rocha Hammerstrom, Olave E. Krigolson

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Regular physical activity benefits cognitive functioning, as shown by higher maximal oxygen consumption (VO2 max) scores. The role of ventilatory threshold (VT), a VO2 max subcomponent indicating hyperventilation during exercise, remains unknown. Addressing this, we examined VT's relationship with working memory using electroencephalography (EEG) in endurance-trained individuals. We show no correlation between pre-existing VT scores and working memory, suggesting no association due to distinct physiological mechanisms or individual variability. Understanding VT's cognitive relationship has practical implications, as it is a non-invasive, quantifiable training target occurring below VO2 max, making it relevant for individuals with cardiac complications or on beta-blocker therapies.

6. Perceptual and cognitive strategies in perceptual grouping by proximity

Luke Huang, Alexis Fong, Meriwether Morris, Deborah Giaschi, Hee Yeon Im

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Perceptual grouping enables us to combine elements into meaningful configurations. While previous studies have shown consistent patterns of proximity-based grouping in adults, mechanisms and development underlying these strategies remain unclear. In this study, adults and school-aged children freely circled dots on a display varying in number and spatial distribution. Preliminary data from adults suggest a tendency to initiate groupings in the upper-left corner. Adults also formed smaller, more numerous groups containing fewer dots when dots were more dispersed, indicating sensitivity to the spatial distribution of elements. These findings validate our paradigm and provide foundations for investigating children's perceptual grouping strategies.

7. RUBubbles vs. Warbler's: Examining Individual Differences in Category Learning Across Naturalistic & Artificial Categories

Lucas Copp, Eric Mah, James Tanaka

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The present experiment examines individual differences in visual category learning for both a naturalistic category (Warbler birds) and a novel, artificially generated category (RUBubbles). A group of 75 individuals completed a categorization experiment where they learned to categorize both stimulus types across iterative trials. The results of the study indicated that cumulative accuracy was correlated across the two category types. Thus, performance categorizing Warbler's significantly predicted performance when learning the artificial stimulus, RUBubbles. These results are consistent with an emergent literature indicating the presence of a stimulus-general visual object identification factor that predicts generalized categorization ability.

8. Exploring the effects of shared gratitude in families with children with and without support needs.

Kaitlyn Doerksen, Brooke Heron, Jack Foster, Shawn Geniole, & Valentina Proietti

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Parents who have children with support needs (e.g., autism spectrum disorder, attention deficit/hyperactivity disorder, oppositional defiance disorder, etc.) face additional difficulties that can affect their well-being and parent-child relationships. Here, we test the potential effects of an intervention in which parents reflected on, wrote about, and shared gratitude with their child. Data collection is ongoing but will provide insight into how such shared, child-specific gratitude impacts parental well-being, and parent-child conflict and closeness in parents with children with (vs without) support needs.

9. Detecting infrequent visual deviants in time (oddballs) and space (singletons)

Aidan Barker, Rebecca Carson, Daniel Tay, John McDonald

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Different paradigms have been developed to investigate how humans detect deviants appearing in sequences of repetitive stimuli (oddball paradigm) and ones appearing within uniform arrays of stimuli (search paradigm). We developed an integrated oddball search paradigm to determine how the brain's two deviance detection systems interact. Standard arrays with six blue vertical bars (80%) were interspersed with target singleton arrays (10%) and nontarget singleton arrays (10%). Target singletons elicited an event-related potential component associated with spatial selection (N2pc) but not one associated with oddball detection (MMN). This initial finding indicates that the two visual deviance detection systems are independent.

10. Effects of Reappraisal, Rumination, and Acceptance on Story Recall: A Pilot Study

Adesewa Adeyemi-King , Dr. Catherine Ortner

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Reappraisal, an emotion regulation strategy that involves changing one's thoughts about an event, reduces negative feelings. However, the effects of reappraisal on memory are not clear. In the current pilot study, 26 participants were randomly assigned to reappraise, ruminate, or accept their emotions after listening to a sad story. After a 24-hour delay, they were asked to recall the story. Preliminary analyses indicated that reappraisal increased pleasant feelings. Furthermore, reappraisal increased positive tone of the story recall after the delay, compared to the rumination group, pHolm = .033. Results will be further analysed to assess memory for event details.

11. More Than Memory: Overlooked Functional Deficits in MCI Patients

Alyssa Gagnon, Isaac Barss, Alexandre Henri-Bhargava, Olav Krigolson

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Mild cognitive impairment (MCI) is classified as an intermediate stage of cognitive regression between normal aging and dementia, defined by the preservation of functional abilities. In this study, the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) and the Functional Activities Questionnaire (FAQ) were used to assess cognitive and functional status, respectively. Participants classified with MCI demonstrated higher FAQ scores, suggesting impairments in activities of daily living. These findings challenge the conventional MCI classification criteria which emphasize intact functional ability, highlighting a disconnect between diagnostic definitions and real-world functional outcomes.

12. EEG insights into Semantic Categorization through Visual Perceptual Learning

Grace Veugelers, Nas Khodaeian, Kiera Ludlow, Dr. Eric Mah, Dr. Jim Tanaka

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This EEG study examines categorization of four species of bubble clusters through visual perceptual training and correct/incorrect feedback on a same-different task. EEG responses were measured before and after training, which assigned labels to the species. An analysis for the N400 ERP component separates pre- and post-training, and same-different trials to investigate whether the paradigm was sufficient to generate semantic associations. An additional hypothesis expects that the N400 would display increased amplitude on post-incongruent trials, as compared to post-congruent trials, to reflect increased semantic inconsistencies. Results may inform the involvement of semantics in categorization and visual perception.

13. Exploring the Impact of Teaching Styles on Learning and Retention: A Comparative Study of Lecture-Based and Constructivist Approaches

Francesca Anderson, Jeff Hopkins, Olav E. Krigolson

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This study will employ mobile electroencephalography (mEEG) to investigate how lecture-based and constructivist teaching methods affect brain activity during learning. Cognitive engagement and attention will be measured through theta and alpha wave oscillations in high school and undergraduate students to explore age-related differences. Constructivist methods (specifically concept attainment) are hypothesized to increase frontal theta and decrease parietal alpha waves during information acquisition, indicating greater engagement and focus, while requiring less executive function during recall, suggesting improved retention compared to lecturing. Our findings aim to support pedagogical innovation, optimize learning performance and instructional strategies, and further validate mEEG in educational research.

14. The Reward of Choice: The Relationship Between Narrative, Reward and Memory

Stacey-Jane A. Harris, Cameron D. Hassall

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Little is known of the effect of narrative on reward processing as previous reward studies have not included story-like features. The current study investigates how narrative influences the reward positivity (RewP), a neural measure of reward processing. In the 'narrative' condition, participants will receive rewards by interacting with items in a story. In the non-narrative condition, they will make similar decisions but without the broader context of a narrative. We predict an enhanced RewP during narrative trials over non-narrative trials. This study aims to deepen our understanding of the practical implications of narrative and how it influences our reward processing.

15. Beyond the Lens: Eye Movements as a Window into Pattern Separation

Olivia Leyden, Grace Veugelers, Dr. Jordana Wynn, Dr. Tarek Amer

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Eye-tracking was used to investigate the relationship between attention modulation and pattern separation. Gaze similarity, used as an index of pattern separation, was assessed as participants judged similar images of individual objects belonging to one of two categories. To manipulate attention, participants performed an additional counting task that increased pattern separation demand for one of the categories, resulting in a "Relevant" and "Irrelevant" category. The attention manipulation both increased pattern separation for the Relevant objects and decreased for the Irrelevant objects.

16. MEG Decoding of Brain Dynamics during Voluntary Eye Movements

Advitya Hajela, Hee Yeon Im

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Voluntary eye movements are critical in supporting perception, attention, and visuomotor coordination. We use magnetoencephalography (MEG) to decode neural dynamics of self-directed gaze shifts, with and without visual cues. Using MEG's high spatiotemporal resolution and source-reconstructed signals, we predicted gaze locations across 32 grid positions with machine learning. Our pipeline achieved decoding accuracies significantly above chance for both when eye movements were guided by a visual cue for the target location and when a cue preceded guiding planned eye movements. This work displays MEG's potential in understanding how the brain controls voluntary eye gazes, informing applications for brain-computer interfaces.

17. Cognitive Function and Mental Health: Investigating the Effects of Depression and Anxiety on the Relationship Between Subjective Cognitive Decline and Cognitive Performance

Leah Derry, Zoë Gilson, Theone Paterson

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This study examines the relationship between self-reported Subjective Cognitive Decline (SCD) and objective cognitive performance, considering the potential moderating effects of depression and anxiety. Using a sample of 53 older adults with self-reported SCD, we assessed cognitive performance through standardized neuropsychological tests and mental health symptoms. Results revealed no significant associations between SCD and overall cognitive performance or specific cognitive domains (e.g., memory, executive function). Depression and anxiety symptoms did not influence this relationship. These findings highlight the challenges of relying on self-reported cognitive decline in clinical settings and underscore the need for further research into subjective-objective cognition discrepancies.

18. Exploring the Effects of Experience with Older Adults in Shaping Children's Perspectives on Aging

Karlee Gross, Kataya Munday, Thaya Neels, Nyomie Brechin, Mikayah Chadsey, Valentina Proietti

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By age 5, children often develop negative biases towards older adults. Prior research suggests that experiences with older adults can reduce these biases. This study evaluated the GrandFriend program, a school-led intergenerational initiative, on children's attitudes towards older adults. Biases were measured using tasks assessing perceptual (face memory), emotional (temperature scales), and cognitive (views on older adults) biases in 52 children aged 6–9, including 34 children who participated in the GrandFriend program. While the program did not significantly improve children's attitudes, results showed that children in this sample did not exhibit the anticipated negative biases towards older adults.

19. When Perception Ruins Potential: How Disclosure of Mood Disorder Treatment Affects Hireability

Ella Porter, Ciarra Van Dop, Dr. Kevin B. Smith

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Discrimination against individuals with mood disorders continues to be a barrier for employment reintegration. This study examined whether disclosing successful treatment of a mood disorder reduced employment discrimination compared to revealing the diagnoses. Participants evaluated hypothetical job candidates by questionnaire in one of three conditions: no mood disorder, mood disorder, or mood disorder with treatment. Results indicated that disclosing treatment of a mood disorder did not reduce hiring discrimination and candidates were perceived similarly across groups. Additionally, a three-way ANOVA revealed significant interactions, demonstrating women offered higher salaries and were willing to hire candidates from their own group than men.

20. Investigating 3D Virtual Reality Lineups

Hana Lalani, Callum Sandor, Eric Mah, Alexandros Kastrinogiannis, Florian Barthel, Amelia Kohl, Amir Shapira, Bennett King-Nyberg, Kyra Scott, Michael Gaebler, Peter Eisert, Anna Bobak, Mark Donoghue, D. Stephen Lindsay, Melissa Colloff, Heather Flowe

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Eyewitness misidentifications contribute to wrongful convictions and unsolved crimes. Lineups are typically administered using 2D photographs, but advancements in virtual reality (VR) allow for the possibility of interactive 3D lineups. 3D lineups could increase eyewitness accuracy (e.g., by allowing for 3D face exploration and active pose reinstatement). The proposed study will explore whether interactive 3D VR lineups result in higher eyewitness accuracy relative to both interactive and traditional static 2D lineups. We predict that 3D VR lineups will enhance eyewitness accuracy relative to 2D lineups. If effective, this innovation could reduce misidentifications, improving police procedures and justice outcomes.

Poster Session 2 (Saturday, May 10th: 9:00 – 10:30)

1. Does alerting occur in the absence of changes in space-averaged luminance in the display?

Nadja Jankovic, Rachel J. Yapp, Aaron A. N. Richardson, Vincent Di Lollo, Thomas M. Spalek

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Visual-search performance improves when a brief, task irrelevant stimulus precedes the display (the alerting effect). The visual alerting stimulus often consists of a transient whole-screen white flash. We tested whether such a global change in space-averaged luminance is required to elicit alerting. We used an achromatic checkerboard in which the luminance of each square was reversed without changing the space-averaged luminance. Alerting occurred—though only at a longer SOA (200 ms) than in the whole-screen white flash condition (150 ms). This reliable difference suggests separate underlying mechanisms that may mediate the relationship between the alerting effect and activity in the locus coeruleus.

2. Children's Memory for Conversations: The Effects of Emotional Content on Destination Memory

Jannah Krasko, Audrey Larsen, Dr. Becky Earhart

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Destination memory is one's ability to remember whom they shared information with (Gopie & MacLeod, 2009). This study is among the first to explore destination memory in children. Specifically, it examines how emotional content influences destination memory in children. Participants held conversations with positive, negative, and neutral content, and destination memory accuracy scores were measured for each emotional condition. Data collection is nearly complete; however, we expect that neutral information will have improved destination memory accuracy over positive or negative. This research has legal implications, as children may be asked to recall individuals with whom they have discussed a crime.

3. Assessing the Impact of Back-Floating on Executive Functioning in Children with Sensory Processing Challenges

Razeen Muhajireen, Riya K. Gill, Kirandeep K. Dogra, Daniel M. Bernstein

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Floating or sensory deprivation tank therapy promotes relaxation and reduces sensory overload. This study examines whether back-floating improves attention control, response inhibition, and working memory in children (Ages 5-12Y) with challenges in receiving, interpreting, and responding to sensory information. Participants will complete a pre-test of the tasks Forward Digit-Span, Go/No-Go, and Color-Shape matching. Some will undergo back-floating exercises, while others will not. Afterwards, children will complete a post-test of the same executive functioning tasks. Findings may inform aquatic therapy for cognitive development in children experiencing sensory processing challenges.

4. Does Prediction Error Influence the Fate of Negative Episodic Memories?

Sanjana Subramaniam, Khushi Sharma, Daniela J Palombo

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Prediction error –the mismatch between expectation and reality– can influence memory encoding and recall. Although emotionally charged experiences enhance memory retention, prediction error alters its stability, distorting memories for the past. This study used negative scenes from the film Pihu to examine how different emotional outcomes (positive, negative, no-ending) affect memory distortion. We hypothesized that a negative experience followed by an unexpected positive (versus negative or no) ending would result in increased inaccuracies due to increased prediction error. Initial analyses do not provide support for this hypothesis. Our study suggests that prediction error does not impact the recall of previously negative events.

5. Sex Differences in Probiotic Effects on Cognitive Function and NMDA receptors in Stress-Induced Mice During Puberty

Priya Monga, Dr. Kevin B. Smith

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Puberty is a critical developmental period characterized by neuronal organization, synaptogenesis and pruning. However, stress can interfere with this process and cause long-term impairments in cognition. This study examines whether gut bacterial interventions, such as probiotics, can repair these memory and cognition deficits. The Object Recognition and Object Location Tests revealed long-term cognitive impairments and downregulated NMDA receptor expression due to stress. Probiotics show neuroprotective effects, enhancing memory and cognition by modulating NMDA receptor levels and reducing neuroinflammation, offering a potential mechanism to explain the enduring negative effects of pubertal stress.

6. Degree of Reentrant Processing Indexed by the N2pc

Graham Voiles, Nadja Jankovic, Vincent Di Lollo, Thomas M. Spalek

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The N2pc event-related potential component indexes attention to a lateralized stimulus in a visual search display. It might also index task complexity which was manipulated in the present work. Participants viewed a single display but they completed either a simple task (requiring a button press when the target of a specified colour was present) or a complex task (requiring one of two button presses to indicate whether an oddball was present or absent). We tested the idea that the N2pc is absent (or smaller) in the simple than in the complex task, reflecting the degree of reentrant processing.

7. Impact of Sleep, Physical Activity, and Work on Cognitive Performance: A Longitudinal EEG Study

Thaskani Mtawali, Mathew Hammerstrom

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Our longitudinal study examined the impact of weekly variation in lifestyle factors, including sleep, physical activity, and work, on the cognitive function of college students. Participants self-reported these lifestyle factors and performed weekly tasks where electroencephalography (EEG) was used to measure their cognitive performance in working memory and attention-based tasks. Metadata was also gathered regarding environmental factors such as weather, hours of daylight, and time of year. The study offers insights into how lifestyle and environmental factors may influence the cognitive function of university-aged individuals over time.

8. Do you remember what they looked like? Examining eyewitness descriptions, accuracy, and confidence.

Diana Negrabee, Dr. Adele Quigley-McBride

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Descriptions from eyewitnesses are frequently used in criminal investigations. Despite this, there is little existing research how to use eyewitness descriptions. In a two-part experiment (N=215), participants watched a mock crime video and provided a written description of the video event. At least 24 hours later, participants completed a lineup and recalled their initial description, with some completing the lineup task first and others recalling their description first. The order of these tasks did not affect identification accuracy, but participants who provided their descriptions before the lineup task provided confidence judgments that were more closely linked to identification accuracy.

9. The Role of Brain Activity in Category Learning: Using artificial stimuli and psychological embeddings

Kiera Ludlow, Abby Hunter, Eric Y Mah, James Tanaka

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This study investigates how category learning shapes neural and behavioral responses. We recorded EEG (N170, N250) and behavioral measures from 18 participants trained on RUBubbles, an artificial stimuli minimizing perceptual biases. Using a pre-/post-test design with similarity ratings, a discrimination task and stimuli species training, we found altered neural responses, improved performance and significant representational changes on PsiZ, between sessions and groups. Results demonstrate how learning modifies both brain activity and psychological representations, advancing our understanding of category acquisition mechanisms.

10. Perceived time as 'jerky': Exploring a novel distortion of *discontinuous* temporal experience

Sage Roeder, Joan Danielle K. Ongchoco

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We are all familiar with time seeming to go faster or slower than it actually does. Here, in contrast, we investigate a novel temporal distortion: psychological time as 'jerky'—momentarily speeding-up or slowing-down—as in individuals with schizophrenia. We recreated this experience in the general population and asked how this is modulated by common psychosis symptoms, like paranoia. Observers engaged in a sustained attention task while a task-irrelevant metronome played. 'Jerkiness' was induced by having the beats sometimes arrive sooner or later. High and low-paranoia individuals were differentially impacted by the slow-downs. These results reveal nuanced ways time might be experienced discontinuously.

11. Action Readiness in Neural and Behavioural Responses to Brief Visual Threat Cues

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Rapidly recognizing potential threats is a crucial perceptual skill for survival. This EEG study explores the time course of neural and behavioral responses during rapid visual threat perception. Participants viewed dangerous or safe images for 16–128 msec and reported whether they detected a potential threat. Detection was highly accurate as early as 16 msec, declining slightly with longer exposures due to more frequent false-positive responses. EEG time-frequency analysis showed earlier beta suppression in motor areas for dangerous images suggesting faster action readiness. These results provide insights into neural and behavioural processes for prioritizing visual threat perception.

12. Investigating the Relationship Between Anxiety and Stress After Repeated Social Losses

Jasmine Khaira , Avneet Sahota, Kaylin Harvey, Dr. Shawn Geniole

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The pressure to succeed and fear of failure can trigger stress, especially in competitive environments. This study examined whether individuals with high trait anxiety experience more stress after repeated social losses in a virtual reality (VR) competition. Male participants (N= 137) completed pre-competition anxiety and stress measures before being randomly assigned to win or lose three 90-second VR boxing matches. Post-competition stress was also assessed. Results showed greater stress after repeated losses (P<.001), but trait anxiety did not significantly impact stress response (P=.619). These findings suggest repeated social losses increase stress, but trait anxiety does not heighten this effect.

13. Exploring the Influence of Health and Lifestyle Factors on Memory

Ella Sokolosky, Katie O'Neill, Gabe Damasceno, Paige Schoening

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To identify health and life-style factors affecting memory retention in undergraduate students, we conducted two one-week studies: first a correlational study tracking naturalistic changes in various factors and then an experimental study testing the factor most strongly correlated with memory. Our correlational study found memory was significantly related to anxiety-depression and study time/frequency/duration/spacing, but not with sleep amount, heart rate, urination amounts, or physical activity amount/intensity. The experimental study revealed that increased study time improved memory retention, independent of anxiety-depression changes. We recommend students focus primarily on their studying habits to enhance memory.

14. Trick Shots and Confidence: The Impact of Observing Success and Failure

Arshnoor, Bhavan Mann, Carolyn Baer, Maryanne Garry, Daniel Bernstein

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Why are people often more confident than their accuracy reflects? We examined whether seeing examples of success or failure influenced people's confidence. A total of 237 children and adults viewed "trick shot" videos of challenging games (e.g., darts, bowling) with successful, failed or unknown outcomes. Participants then estimated how many shots they thought they could make. Consistent with Bayesian and fluency theories, children and adults increased their confidence after viewing success and decreased their confidence after viewing failure. These findings show that people adjust their confidence based on success and failure, making this a promising method for confidence manipulation.

15. Visual causal chains shape the segmentation of temporal experience

Emily Wedin, Joan Danielle K. Ongchoco

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How did you get here? In theory, one could trace a causal chain all the way back to the big bang, though there are always more proximal intuitive causes. Are causal chains mere philosophical thought experiments, or might they actually structure perception and enumeration? Whereas causal interactions are typically studied as single cause-effect events, here observers viewed discs collide in a 'causal chain' and reported how many discs appeared. Causal chains were underestimated less compared to sequences with identical motions but with spatial gaps between the discs. Thus, causal chains may change what 'counts' as an event in experience.

16. Cognition, Carbs, and 50 Kilometres: Relating Carbohydrate Consumption to Cognitive Changes Following Ultramarathon Running

Nevan Young, Katherine Boere, Dr. Olav Krigolson

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Ultramarathons are mountain races longer than the traditional marathon where runners must maintain attention and consume nutritional items while energy stores deplete. As ultramarathons are cognitively and metabolically demanding, we investigated the cognitive effects of running a 50-kilometre ultramarathon, and whether there is a relationship between carbohydrate intake and potential cognitive changes. Using portable electroencephalography, we found that attentional capacity was significantly reduced from pre-race to post-race. Carbohydrate intake, however, did not correlate with this reduction. Cognitive findings were consistent with other endurance exercise research, while the limited reliability of self-reporting carbohydrate intake likely contributed to finding no nutritional relationship.

17. Neural bases of attentional context-dependent visuomotor adaptation

Isabel Wilson, Joo-Hyun Song, Hee-Yeon Im

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Visuomotor adaptation is the process by which we recalibrate movements in response to environmental changes. The attentional context during visuomotor adaptation can serve as a retrieval cue (Im et al., 2014), but the underlying mechanism is unclear. We used fMRI to explore the neural correlates of attentional contexts that enhance or impair visuomotor adaptation. Participants performed a task requiring them to adjust cursor movements under biased visual feedback in divided or undivided attentional contexts. Initial analysis of whole-brain fMRI signals using the multivariate constrained-PCA approach (Hunter & Takane, 1998) revealed differences across attentional contexts in motor response and default mode networks.

18. Covert recognition during inattentional blindness: Evidence from pupillometry data

Melanie Hull, Malcolm Hendricks, Kap Snyder, Michi Matsukura, Ira E. Hyman Jr., Lawrence A. Symons

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Covert recognition—awareness of a percept despite of the inability to report the percept—has been extensively studied in prosopagnosia. Inspired by Wulff and Hyman (2022), we manipulated observers' attention by presenting a dynamic scene to find evidence of covert recognition by tracking changes in observers' pupil diameter. The participants viewed a video of a theft while their attention was diverted by counting individuals wearing a certain outfit. We found a pupil size increase during the crime, even though the participants did not remember seeing such a crime.

19. Involuntary attention is contingent on top-down control settings for the target's defining feature and singleton status.

Rebecca Carson, Aidan Barker, Daniel Tay, John McDonald

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Salient-but-irrelevant singletons sometimes capture attention when people search for a target singleton. This happens because attention is guided by control settings that represent the target's defining feature (contingent capture hypothesis) or its singleton status (singleton detection mode hypothesis). We tested these hypotheses in spatial cueing experiments using colour singleton cue and target arrays. The cue singleton either matched the target colour or did not. Cue validity effects were produced for both the matching and mismatching cues but was larger for matching cues. The results indicate that attentional control settings represent both the target's defining feature and its singleton status.

20. Lay Perceptions and Misconceptions of Eyewitness and Fingerprint Evidence

Tia Blackall, Adele Quigley-McBride

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Eyewitness performance is well understood due to decades of systematic research. Comparatively, latent fingerprint evidence (LPE) has little foundational research contributing to how examiner performance is understood. LPE research is lacking and has not been communicated to the public, so laypersons may have a weaker understanding, resulting in more misconceptions about LPE than eyewitness evidence. We surveyed jury-eligible US citizens (N = 500) about their perceptions of eyewitness and fingerprint evidence. Results show lay individuals had different levels of misconceptions about eyewitness and LPE. These findings will improve our understanding of how jurors perceive evidence in criminal cases.

21. The Effect of Dehumanization on Support for Reintegrating Ex-Offenders

Drew Ramey, Andrea Hughes

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Possessing a dehumanizing or humanizing perspective of others is known to impact how people think of and treat the individuals they dehumanize. However, there is not a consensus on whether mere exposure to dehumanizing or humanizing perspectives can impact how we perceive or treat others. The current study manipulated exposure to dehumanizing or humanizing perspectives and then measured whether it impacted participants social perceptions of ex-offenders and their decisions about support for reintegration. We predicted that exposure to dehumanizing perspectives would result in more negative perspectives and a decrease in supportive behaviors, while the humanizing condition would have the opposite effect. At a base level, our findings did not support our hypothesis, although our manipulation did have an interaction with the individual factor of growth mindset, that provided partial support.

22. Understanding the Associations Between Neurological Symptoms, Health Factors, Psychosocial History, and Demographic Factors in Post-COVID Condition

Kudrat Bhinder, Zoë M. Gilson, Theone S.E. Paterson

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COVID-19 infection can have neurological impacts, raising concerns about its long-term effects on cognition and daily functioning. Previous research has examined contributing factors (e.g. education level). This study quantitatively assesses relationships between neurological symptoms and psychosocial, socioeconomic, and health-related predictors, respectively, in a group of patients seeking care for Post-COVID-Condition (PCC). Using survey data from the Post-COVID Interdisciplinary Care Clinic Network of BC, we will assess neurological sequelae in adults who have experienced PCC. Findings will inform healthcare providers' assessment and management of PCC and may enhance prevention of persistent symptoms by shedding light on potential non-biological factors of importance.

Poster Session 3 (Saturday, May 10th: 11:45 - 13:15)

1. The Effect of Multisensory Integration on Reward Processing

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The real world is multi-sensory, yet multi-sensory reward processing is understudied. This study aims to assess the significance of different feedback modalities (auditory, visual, and audiovisual) on the reward positivity (RewP), a neural index of reward processing. Participants completed three versions of a standard two-choice reward task. Rewards were either visual, auditory, or audiovisual. Our results suggest that audiovisual feedback occurs faster compared to either audio or visual feedback alone and is potentially related to underlying cognitive processes linked to multi-sensory integration. These findings have important implications for understanding reward processing and how the brain integrates multi-sensory real-world feedback.

2. LLMs and Thematic Analysis: A Collaboration of Humans and Machines

Abby Hunter, Tove Jensen, Jonathan Kiss, James Tanaka

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The analysis of qualitative data is time-consuming for many researchers. We explored the potential of using large language models (LLMs) as a tool to streamline the analysis process for human researchers. LLMs are a form of artificial intelligence that can understand and produce human language. Recent studies have demonstrated their effectiveness in thematic analysis. We compared the performance of OpenAI LLM models GPT-4o and GPT-4o mini in identifying themes within self-reported textual data. Participants reported their strategies following a study that investigated the learning ability of "fast" and "slow" learners. Our research aims to support LLM and human collaboration on qualitative psychological data analysis.

3. Assessing Locus Coeruleus Activity in Goal-Directed Tasks as a Function of ADHD Tendencies

Kelsey L. Hazelwood, Aaron A. N. Richardson, Evan Caldbick, Nadja Jankovic, Vince Di Lollo, Thomas M. Spalek

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According to Adaptive Gain theory (Aston-Jones & Cohen, 2005), the locus coeruleus norepinephrine (LC-NE) system is highly involved, via arousal, in ongoing utility assessments. LC-NE activity is thought to regulate whether the individual will exploit their current response option, or explore alternative options, to maximize reward. Attention-deficit-hyperactivity-disorder (ADHD) is thought to involve a dysregulation of arousal. The present study explored whether individuals with ADHD tendencies show altered LC-NE activity and utility assessment impairments relative to neurotypical individuals. Contrary to expectations, pupillometric results suggested no early LC-NE differences, and the ADHD tendencies group scored higher on the utility task.

4. Surviving the Semester: The Longitudinal Impact of Exercise, Sleep, and Workload on Attention

Alix Chong, Thaskani Mtawali, Mathew Rocha Hammerstrom, Olave E. Krigolson

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Fluctuations in a variety of lifestyle factors such as sleep, exercise, and workload are common for university students due to the academic demands. Our longitudinal study examined how weekly variations in these functions may impact cognitive function across a semester. Participants self-reported these measures while completing experiments measuring attention using electroencephalography (EEG) every week for a semester. Additionally, environmental changes such as the weather, time of year, and hours of daylight were recorded for further analysis. The findings of this study provide insight toward how lifestyle and environmental factors may impact attentional performance over time for university-aged individuals.

5. Muddying the Waters: The Effects of Disinformation on the Perceptions of Truth, Consensus, And Knowledge States

Kirandeep K. Dogra , Ellie Mack, Vi Ly, Serena Calkins & Ira E. Hyman Jr.

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Disinformation is spread with the deliberate intention to mislead. Disinformation consequently convinces people to adopt that position, creates doubt concerning true information, and leads people to be less convinced of an agreed upon position. We examined how flooding individuals with conflicting, controversial information affects their beliefs in truth, consensus, and knowledge states. Some people viewed one-sided (true or false only), or mixed information. Compared to false information, exposure to mixed information led to higher truth and consensus ratings, but not for knowledge states. Flooding people with both mixed information can muddy the waters, making it harder to discern the truth.

6. Automatic ensemble coding of task-irrelevant visual features: Insights from MEG-based (magnetoencephalography) decoding

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Ensemble coding enables the visual system to extract summary statistics (e.g., average) from multiple objects regularity, without processing individual item individually. This global information helps overcome limitations in attention and working memory, supporting coherent representations of visual environments and guiding behaviour. However, the automaticity of ensemble processing and underlying neural mechanisms remain unclear. We examined spatiotemporal patterns of neural responses to changes in a task-irrelevant ensemble feature (average orientation) while participants focused on color of gratings, with neural activity measured with MEG. Representational similarity analysis revealed distinct neural patterns for different average orientations, suggesting automatic ensemble coding without a task demand.

7. Causal Evidence that Success Spells more Success in an Online Word Search

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The winner-loser effect suggests prior success increases future success, while failure reduces it. Human studies have been largely correlational, though, limiting causal conclusions. We provide the largest (and first preregistered) experimental test to date (n = 835), predicting winners would outperform losers using a novel wordsearch task developed here. Consistent with predictions, winners outperformed losers, and—in contrast to previous work finding effects specific to men—this winner-loser difference was of similar magnitude in women and men. We propose that previous gender differences in the winner effect may have depended on the type of task (physical vs non-physical), an important question for future research.

8. The Influence of Emotional Valence and Sex Differences on Picture Perception

Jenny Lee, Nada Alaifan, Dr. Peter Graf

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Emotions play a crucial role in shaping perception and cognitive processes. This study investigated the impact of emotional valence on image perception and explored potential sex differences in this process. Eighty-eight participants viewed and described 60 pictures categorized as emotionally neutral, positive, or negative. Descriptions were transcribed and coded, focusing on the quantity and type of details provided. Analyses also considered sex differences and the influence of experimenter scripts. The findings enhanced the understanding of emotional processing, with implications for emotional disorders and therapeutic interventions.

9. Exploring the Effectiveness of a Myth Buster Intervention on Self-Ageism and Depression

Jessica Pike & Danika Veigh, Joelle Kool, Serena Beckett, Shawn Geniole, Andrea Hughes, Lesley Jessiman, Valentina Proietti

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An important component of ageism involves the cognitive distortions commonly associated with old age, with older adults often stereotyped as "frail," "slow," or "less capable." These negative and often inaccurate stereotypes are frequently internalized, leading to lower physical and psychological well-being and poorer self-perception. This study (n = 132) investigated whether a cognitive restructuring intervention aimed at challenging aging-related misconceptions could reduce self-ageism and depressive symptoms. Contrary to our expectations, the intervention did not reduce depressive symptoms and, unexpectedly, led to an increase in self-ageism, possibly by making age-related beliefs more salient.

10. Weighing on Your Mind: Effects of Stress on Types of Thought

Cecilia Liu, Chris Clark, Julia Kam

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Stress can cause our thoughts to shift off-task, but it is unknown how stress influences how thoughts unfold over time. This study investigates the relationship between stress and four types of thoughts (automatically constrained, deliberately constrained, freely moving, and task-unrelated) in daily life using Ecological Momentary Assessment. Preliminary analyses indicate that higher momentary stress level predicts increased automatically constrained, deliberately constrained, and task-unrelated thought and decreased freely moving thought. Understanding how stress specifically impacts different types of thought is a vital foundation for future research investigating strategies to mitigate its negative effects.

11. Comparing Human versus Machine Approaches to Measuring Autobiographical Memory Consistency

Sabrina Co & Kimberley Marty, Victoria Wardell, & Daniela J. Palombo

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Humans can recount memories in rich and vivid detail. However, over time, autobiographical memories can change. Yet, no standardized protocol for measuring autobiographical memory narrative consistency has been developed. We present a scoring procedure to fill this gap in the literature. Participants (N=513) recalled two memories at two time points, two months apart. We evaluated the consistency of memories across recalls using both a novel hand-scoring procedure and natural language processing approaches. We then compared the outputs to determine when each is most appropriate to use based on their respective strengths.

12. Photos Increase Belief in News Headlines

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Truthiness is the tendency for people to rate photo-present claims as true more often than photo-absent claims. Most research to date has used trivia claims to demonstrate this effect. We used real-world headlines, collecting political orientation and response time. Consistent with previous studies, we observed truthiness: participants rated photo-present claims as true more often and faster than photo-absent claims. Political orientation had no effect on these results. Unlike previous literature, we observed an interaction: truthiness only occurred when the claim was true, not false. Truthiness for headlines has important real-world implications, highlighting the need for critical evaluation of media.

13. A Lifespan Longitudinal Analysis of Receptive Language

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Although normal aging is generally associated with cognitive decline, crystallized intelligence tends to improve with age. One type of crystallized intelligence is receptive language – the ability to comprehend spoken and written language. We investigated longitudinal change in receptive language ability using the Kaufman Brief Intelligence Test (KBIT) over a 2-10 year period in 697 participants ages 3-98. We found significant improvement from ages 3 to 57, no change from ages 57 to 65, and significant decline after age 65. Overall, we conclude that receptive language ability varies across the lifespan.

14. Development of cerebellar function for visuomotor adaptation: a magnetoencephalography (MEG) study

Max Garson, Alex Cook, Deborah Giaschi, Hee-Yeon Im

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The cerebellum is a brain region that is essential for motor and cognitive functions. Using magnetoencephalography (MEG), we measured cerebellar activity in children and adults during an eye-hand coordination task. Despite its potential for developmental studies, little research has explored cerebellar function with MEG due to challenges in localizing signals from this deep region. Our time-frequency analyses with customized deep-source localization revealed the dominance of faster (gamma; >30Hz) oscillations in children compared to those in adults (beta; 13-30Hz). Our study sheds light on the maturation of visuomotor control and highlights the feasibility of including the cerebellum in future studies.

15. Adventures in Multimedia Design for Learning: Do design features interact?

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The literature on multimedia design for learning describes a variety of design principles - an easy set of rules for educators to follow that will improve students' learning. The findings suggest that the effects of implementing these principles should be robust; however, researchers tends to study the principles in isolation. We were interested in whether the effects would interact. Here we tested the impact of slide builds to evaluate the temporal contiguity and signaling principles, and test if they interact with instructor presence. We will discuss the results in the context of what appears to be an over-simplification of the complicated process of learning from multimedia.

16. Eyes on the Prize: How Learnability Impacts Reward Processing

Abigail Oloriz, Cameron D. Hassall

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Many aspects of human behaviour are shaped by reward processing, including decision making and motivation. Electroencephalography (EEG) has identified a neural signal called the reward positivity (RewP), which represents the brain's interpretation of reward outcomes. The aim of this study is to see whether the RewP is affected by task engagement. Participants will complete the "doors task", a decision-making task where selecting one of two doors may result in a monetary reward. In one condition (the standard version), rewards will be equally probable (50/50), while in the other, one door will have an increased likelihood of reward, introducing a detectable pattern. We hypothesize that participants will become more engaged in the patterned condition, and that the RewP will be larger when they recognize and exploit this pattern. This would show that the standard "doors task" used to measure RewP lacks engagement and does not allow for learning, potentially limiting its effectiveness. These findings would have implications for researchers using the RewP as a biomarker for depression, ultimately improving the accuracy and applicability of EEG-based assessments in clinical settings.

17. Making Time for the Future: Effects of Emotion on Duration in the Mind's Eye

Omran K. Safi , Oliver R. Bontkes, Daniela J. Palombo

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Individuals tend to remember emotional events as having elapsed for longer than neutral events and longer than they were. Such temporal distortions hold implications for prediction and planning. In the present study, we examined whether participants would demonstrate such temporal errors in memory when imaging emotional versus neutral future events. We hypothesized that episodic simulation would follow the same pattern as recall. Across discovery and replication samples, duration estimates were significantly longer for positive versus neutral events, whereas we did not observe replicable differences for negative versus neutral events. These preliminary results shed light on the delicate dynamics of time in the mind

18. A Two-Phase Procedure to Investigate the 'Photo Truthiness' Effect

Bennett King-Nyberg, Kaitlyn Fallow, Hartmut Blank, Eryn Newman, D. Stephen Lindsay

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We examined how non-probative photos influence truth judgments of trivia claims (truthiness). In five experiments, we compared a standard 1-phase procedure - where claims and photos appeared together - to a 2-phase version with photos shown separately. We predicted stronger truthiness in the 2-phase condition, but found overall effect sizes were similar. However, item-level analyses revealed that both truthiness and "falsiness" effects were more pronounced in the 1-phase condition. The 2-phase procedure dampened both positive and negative item-level effects. These findings underscore the importance of item-level variability in understanding how related photos influence perceived truth.

19. More than a stylistic preference: Object-based effects show the connective power of the em-dash

Natalie Houle, Joan Danielle K. Ongchoco

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The em-dash has increasingly been used to 'propel' action forward in written language. Is this merely stylistic, or does the em-dash actually shape attentional processing as we read? We adapted a "same-object advantage" paradigm in which observers read sentences one word at a time. They simply pressed a key when presented with coloured words, pairs of which either occurred within the same clause or spanned a punctuation. Performance was disrupted when words spanned a segmented dash, but not an em-dash or semicolon. This suggests the em-dash is better able to "merge," rather than segment, independent clauses into a whole.

20. Just Asking Questions: Can an Implication Generate an Illusory Truth Effect?

Gwen Pane, Macallan Enns-Ford, Macy Kneipp, Isa Eigen, Annabelle Eckel, Madeline Jalbert, & Ira E. Hyman, Jr.

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People do not always directly state false information. Instead, they make an implication and leave their audience to generate the false claim. We present two experiments in which people read and generated true or false answers to trivia questions. We expected self-generated information to lead to false beliefs for a few reasons. First, statements encountered more frequently are rated as truer than statements people only see once. Additionally, self-generated information is easier to recall. People rated self-generated answers as truer than statements they read. People believed implied false information even though it was implied.

21. Hormonal & Emotional Responses to Competitive Social Stressors

Lynnea Lindsay, Nadia Montenegro, & Dr. Shawn Geniole

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Individuals vary in how they cognitively appraise social stressors—as challenges versus threats. We investigated whether testosterone fluctuations were related to such appraisals. Repeated social stressors (a string of losses versus wins in a virtual reality competition) increased threat-related appraisals/emotions, and testosterone rose during the interactions (regardless of outcomes), with greater rises among those who experienced more threat-related emotions. These findings suggest that testosterone may reflect the perceived significance/salience of competitive interactions, especially among those who lose and perceive such losses as threatening. Future work should explore how testosterone interacts with appraisal processes and cortisol in shaping post-competition emotional responses.