GROWING WITH BROCK

SPRING 2022

THIS ISSUE

New Grant for the CNA Lab

Research Updates
Recent Publications and Successes

Call For Research Participants

In The Media

Try This Fun Experiment At Home!

Fuke, T. S. S. & Mahy, C. E. V. (2022). **Executive and retrospective memory processes in preschoolers' prospective memory development**. *Cognitive Development, 62, 101172*. LINK

Thierry, S. M., & Mondloch, C. J. (2021). **First impressions of child faces: Facial trustworthiness influences adults' interpretations of children's behavior in ambiguous situations.** Journal of Experimental Child Psychology, 208, 105153. *LINK*

Matthews, C. M., & Mondloch, C. J. (2022). **Learning faces from variability: Four-and five-year-olds differ from older children and adults.** Journal of Experimental Child Psychology, 213, 105259. *LINK*

CAMPBELL LAB AWARDED A CIHR GRANT TO LOOK AT AGE DIFFERENCES IN MEMORY

The Campbell lab has been awarded a $340,000 Project Grant from the Canadian Institutes of Health Research to look at the cognitive and neural mechanisms underlying age-related declines in associative memory and to develop a novel technique to improve older adults' memory for everyday life events.

Associative memory, or the ability to link different pieces of information together (e.g., a face and a name), underlies our ability to remember entire events from our lives. This type of memory helps you remember details such as where you were and who you were with during a particular life event. Associative memory is known to decline with age and is one of the first forms of memory to be affected by dementia, which currently afflicts over half a million Canadians at an annual cost of $10.4 billion. Despite the significant cost to Canadians, both financially and in terms of quality of life, we still have a poor understanding of why associative memory declines with age.

Thus, the primary goal of the proposed research is to advance our understanding of the cognitive and neural mechanisms underlying age-related declines in associative memory and to develop a simple technique that older adults can use in everyday life to improve their memory for events.

RESEARCH UPDATES FROM THE GWB LABS!

DO MASKS INFLUENCE OUR FIRST IMPRESSIONS OF FACES? - *Face Perception Lab*

Seeing masked faces has become an everyday occurrence during the COVID-19 pandemic. We know that masks make it more difficult to both recognize people and recognize emotional expressions, but do masks also influence the first impressions we form of new people? In three separate studies, young adults rated child, young adult, and older adult faces on how trustworthy they looked.

We found that masks made no difference in which faces were rated most versus least trustworthy across the lifespan. Although half of our face is covered when wearing a mask, these results tell us that face masks do not have a large impact on how we form first impressions of others.

You can read more about the study here.

Twele, A., M Thierry, S., & J Mondloch, C. (2022). Face masks have a limited influence on first impressions: evidence from three experiments. *Perception*, 3010066221091729. Advance online publication. https://doi.org/10.1177/03010066221091729. *LINK*

CAN TODDLERS THINK ABOUT THE FUTURE? - *Developing Memory and Cognition Lab*

A recent study from the Developing Memory and Cognition lab examined how 2 and 3 year old children think about the future. We asked parents to fill out several questionnaires about their child's ability to think about the future, as well as about their memory and language skills.

We found that young children engage in saving behaviour, delay gratification, and think about future episodes as early as 2. Two years olds weren't very good at planning or remembering to carry out a future intention, but 3 year olds were better at these two abilities. Finally, we found that children's memory and use of metaphors for time (e.g., sleep for days) was predictive of their future thinking ability.

This study is the first to examine the emergence of future-oriented cognitive abilities in the toddler and early childhood years and we hope to submit a paper to an academic journal very soon.

MORE RECENT PUBLICATIONS

Guardia, T., Geerligs, L., Tsvetanov, K. A., Ye, R., & Campbell, K. L. (2022). **The role of the arousal system in age-related differences in cortical functional network architecture.** *Human brain mapping, 43*(3), 985–997. https://doi.org/10.1002/hbm.25701. *LINK*

Mahy, C. E. V. (2021). **The development of children's prospective memory: Lessons for developmental science.** *Child Development Perspectives, 16*, 41-47. *LINK*

Laurence, S., Baker, K. A., Proietti, V. M., & Mondloch, C. J. (2022). **What happens to our representation of identity as familiar faces age? Evidence from priming and identity aftereffects.** British Journal of Psychology. *LINK*

Davis, E. E., Matthews, C. M., & Mondloch, C. J. (2021). **Ensemble coding of facial identity is not refined by experience: Evidence from other-race and inverted faces.** British Journal of Psychology, 112(1), 265-281. *LINK*

Mazachowsky, T. R., McKenzie, K., Busseri, M., & Mahy, C. E. V. (2021). **"These pretzels are making me thirsty" so I'll have water tomorrow: A partial replication and extension of adults' induced episodic foresight.** *PLOS ONE, 16, e0259424*. *LINK*

Celebrating Success

Alison O'Connor and **Breanne Wylie**, PhD students from the SCDLab, were both awarded SSHRC Postdoctoral Fellowships.

Claire Matthews from the Face Perception lab was awarded an NSERC Postdoctoral fellowship.

Sarah Henderson from the CNA Lab won a poster award at the Rotman Research Institute Conference for her poster "Event boundary perception and episodic memory for films in older and younger adults"

Alison O'Connor has accepted a tenure track Assistant Professor position at Mt. Allison University starting July 1st!

Dr. Karen Campbell of the CNA lab won the outstanding co-op supervisor of the term award.

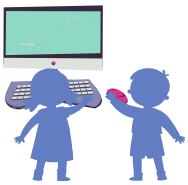
CALL FOR RESEARCH PARTICIPANTS!

TO PARTICIPATE CONTACT
SCDLAB@BROCKU.CA

Brock University

The Social-Cognitive Development Lab is seeking ER nurses with experience talking to child patients to participate in our new research study led by graduate student Breanne Wylie.

If you or someone you know is interested, please email us at scdlab@brocku.ca for a link to the survey.



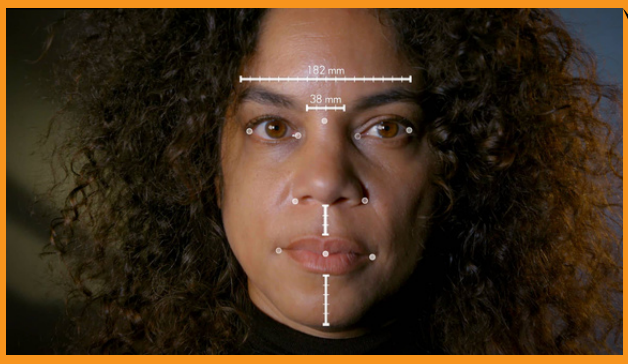
The Developing Memory and Cognition Lab is looking for children aged 3 to 5 years to participate in their current *virtual* studies investigating children's memory!

One study is examining the development of how children remember to *carry out their future intentions*.

A second study is examining the impact of *verbal reminders* on children's ability to carry out their future intentions.

If you're interested in either of these studies, please email us at dmclab@brocku.ca to set up a time to participate.

IN THE MEDIA



Dr. Cathy Mondloch contributed to an episode of *CBC's The Nature of Things* called **In Your Face**.

Click here to watch the CBC episode.

In case you missed it!

Dr. Angela Evans, Dr. Cathy Mondloch, and Dr. Caitlin Mahy presented a webinar on **Children's Social, Emotional and Cognitive Development - What's happening and why?** as part of the Lifespan Institute Speaker Series.

Click here to view the webinar recording!

EXPERIMENT AT HOME: MAKE YOUR OWN KALEIDOSCOPE!

If you are using an empty toilet paper roll, cut your mylar or mirrored sheets into 9.7cm x 3.5 cm sheets

What you will need:

- Empty toilet paper roll
- Mylar sheets or mirrored sheets
- Scissors and/or paper cutter
- Tape
- White cardstock
- Bendy straw
- Markers, stickers, or other decorative materials
- Optional: Paint for decorating your cardboard tube

Instructions:

1. If you are planning on painting your cardboard tube, do that first. Then set it aside to dry.
2. Cut your mylar sheets or mirrored sheets into three equal strips. You'll want the size to be just right so the finished kaleidoscope insert fits snuggly in your cardboard tube and won't fall out.
3. Line up your mylar strips, leave a tiny space between each one. Tape them together over the spaces.
4. Fold the taped mylar into a triangular prism and tape along the top to hold in place. This should fit snuggly inside your cardboard tube.
5. Cut off the bendy end of a flexible straw.
6. Tape it along the top of your tube with the flexible part of the straw hanging over the edge.
7. Cut out 3 circles from cardstock. We recommend 3.75 inches in diameter.
8. Poke a hole in the center of your circle. Decorate the circle using markers, stickers, crayons etc. Try out different designs, shapes, and letters!
9. Place the circle onto your straw with the design facing the kaleidoscope. You want the hole to fit over the flexible portion of the straw so it will turn easily.
10. Now look into your kaleidoscope and explore all the reflections created by your design!

To read more about this fun experiment at home, click here!

Some tips!

- If you have trouble getting your triangular prism to fit snuggly into your cardboard tube, it will work on its own. Simply tape the straw directly on top of the prism rather than using a tube.
- Make as many cardstock circles as you want and try them all out!