



Infant and Child Studies Centre

FROM THE DIRECTORS

The Infant and Child Studies Centre at the University of Toronto Mississauga would like to start off by thanking all the families who have participated in our online and in-person studies over the past year. We are learning so much about early development in infants and children and your help has allowed our graduate students and postdoctoral fellows to continue their research. It is

our pleasure to share some of our recent findings with you. Please share this newsletter with anyone else you feel would be interested in learning more about our studies

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DIRECTORS

Dr. Christina der Nederlanden
Dr. Elizabeth Johnson
Dr. Tina Malti
Dr. Samuel Ronfard
Dr. Doug VanderLaan

VISIT US ON
INSTAGRAM!



POSTDOCS

Dr. Holly Bradley
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Priscilla Fung	Emily Shroads
Emma Galarneau	Madeleine Yu
Anna Liu	



NEWS AND ANNOUNCEMENTS

- The Child Language and Speech Studies (CLASS) Lab would like to welcome our newest member Dr. Holly Bradley! She will be using EEG to study language processing in infants.

PARTICIPATE
IN-PERSON AND
ONLINE!

- Congratulations to Dr. Christina der Nederlanden and Dr. Anna Czepiel of the Language, Attention, Music and Audition (LAMA) lab on being awarded a GRAMMY Museum grant to study neural tracking of song and speech.
- Congratulations to the LAMA lab's postdoc Dr. Anna Czepiel on being a recipient of the University of Toronto Mississauga's Postdoctoral Fellowship Award!

HOW DO I PARTICIPATE?

For more information on how you can participate, email us at:
juniorscientist@utoronto.ca

WITHHOLDING MORAL JUDGEMENTS

Often times, moral judgments are fairly clear cut. For example, if someone does something bad on purpose, we think they are mean and if someone does something bad by accident, we tend not to judge them negatively. But other times, we don't know what happened and it's not clear how we should judge someone. In those cases, withholding our judgments until we know more may be the best solution. In the ChiLD lab, PhD student Alexa Sacchi investigated whether children can withhold their moral judgment when it is not clear whether someone did something bad on purpose or by accident. She showed children stories about a character doing something bad on purpose, by accident, or without giving information about intent. We asked children what they thought happened including if the character should or should not get in trouble, and if the character was mean or not mean. For all questions, children could say "I'm not sure, I need more information." We found that adults frequently said that they were not sure and needed more information when they did not see what happened. This was not the case for children. Instead of saying they were not sure, children frequently stated that the person was nice or mean. One reason why children do not withhold their moral judgements may be that children may feel uncomfortable being uncertain and would rather pick a side. In a follow-up study, we will explore whether children still make moral judgements when they do not know why someone did something bad even when they're told it's okay to say, "I'm not sure."



WHY ARE SONGS CATCHIER THAN SPEECH?



Ever wondered why songs are catchier than regular speech? Researchers at the Language Attention, Music & Audition (LAMA) lab set out to find a metric of how much of a beat different vocal sounds have. That is, they looked into how easily people thought they could tap or clap along to the people speaking or singing, or whether the rhythm wasn't steady enough to clap along with. Participants rated "how easy it would be to tap or clap" to the sounds. Songs were rated as easier to tap to than speech overall, but regardless of whether people listened to speech or song, vocal sounds with longer syllables and fewer changes in dynamics (more similar loudness and energy within and between words) were considered easier to tap to. Although people in this study had a hard time making a consistent definition of rhythmic regularity, when we asked them to tap or clap along with vocal utterances, people could consistently estimate the beat in speech and song. One big difference between speech and song lies in the requirement that music has a strong beat for dancing or synchronizing movements. So next time you and your kids are listening songs or speech on your favorite streaming app, ask your kid how easy it is dance to someone talking vs. someone singing – and then watch the funny dance moves unfold!

SHOULD I TALK TO SOMEONE WHO DISAGREES WITH ME?

Imagine you want to learn more about a topic. You can either talk to someone who agrees with you (which may be easier) or someone who disagrees with you (giving you the chance to learn something new). In the Childhood Learning and Development (ChiLD) Lab, we are exploring how children weigh the costs and benefits of talking to someone who disagrees with them. In one study, adults and children (4-8 years) watched videos about a child who wants to learn more about something. In each video, the child can talk to someone who agrees or disagrees with them. We found that adults are more likely than children to say the child should talk to the person who disagrees. However, the subject the child wants to learn more about matters. For example, when the child wants to learn more about a personal preference, then they choose the disagreeing child. But when the disagreeing child has an immoral belief (that stealing is okay), both adults and children are more likely to choose the agreeing child. Children value talking to someone who agrees with them more than adults do, but the subject matter influences both children's and adult's choices.

CAN GIRLS PLAY WITH TRUCKS AND BOYS PLAY WITH DOLLS?

By 3 years of age, North American children display gender stereotypical knowledge. For example, they are more likely to associate boy-typed toys (e.g., train) with boys and girl-typed toys (e.g., doll) with girls and these beliefs increase as children get older. Would these developmental patterns also be seen in other cultures? In a cross-cultural study, Dr. Doug VanderLaan and his team investigated 4- to 9-year-olds' development of gender-toy stereotypes in three different countries: Canada, China, and Thailand. They found



that children in all three countries demonstrated gender-toy stereotypes, but the stereotypes developed differently in the three countries. While the strength of the stereotypes increased across age in Canadian children, they remained relatively stable in Thai and Chinese children (with Thai children exhibiting stronger stereotypes and Chinese children exhibiting weaker stereotypes). Researchers speculate that differences in gender norms and how gender is reflected in languages play a role in these cultural differences. Future studies will examine what other factors influence the development of gender stereotypical beliefs in young children.

Children excel at recognizing voices of people that they spend a lot of time with, but how good are they at recognizing unfamiliar voices? Are certain voices easier for kids to recognize than others? In the Child Language and Speech Studies (CLASS) Lab, PhD student Madeleine Yu, is investigating this question with 6-, 9-, and 12-year-olds. Early results indicate that up until the age of 9, children's ability to recognize voices is still developing and they struggle much more with speakers of certain varieties of English (e.g., Mandarin-accented English). Why is this? Help us get to the bottom of this mystery! If your child would like to participate, please email us for more information.

WHO SAID THAT?

HOW DO CHILDREN LEARN WORDS?



If a mother says 'dog' while walking with her child, how does the child know which object the mother is referring to? Should the child attach the label to the trees, the bird flying overhead, or the four-legged creature that is barking? PhD Student Priscilla Fung in the Child Language and Speech Studies (CLASS) lab investigated how children solve this word-referent mapping problem by putting adults in babies' shoes. Adult participants were shown a series of videos where caregivers were trying to teach their 11-month-old child a Dutch word at different times. After that, participants were asked to guess what the target word means.

Despite the difficulty of this task, adults performed much better than we anticipated! They were able to figure out the word meaning by tracking the co-occurring pattern of the target word and its referent across multiple scenes. And their performance was boosted when gesturing cues were provided. Interestingly, participants who knew more languages were better at solving this mapping problem. Future work in our lab will replicate this study in children and investigate whether multilingual children learn words differently

WHY DO CHILDREN ASK SO MANY QUESTIONS?

Children love to ask questions to learn about the world around them. As adults, we know that sometimes it is better to wait to ask a question rather than interrupt someone. When do children acquire this knowledge? To answer that question, adults, 4- & 5-year-olds, and 7- & 8-year-olds watched videos of a child who had a question and had to decide whether the child should ask an adult "right now" or wait. All participants were more likely to say that the child should ask a question when the adult was doing

nothing than when the adult was busy. However, younger children were more likely than older children and adults to say it was okay to interrupt someone who was busy. We also asked 500 mothers about their child's question-asking. We found that younger children asked more questions than older children to someone who was busy, but asking questions to someone doing nothing did not change with age. These results show that as children get older, they pay more attention to their environment when deciding whether or not to ask a question.



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