UNIVERSITY OF TORONTO MISSISSAUGA

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 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 or would like to participate.

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HOW DO I PARTICIPATE?

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

NEWS AND ANNOUNCEMENTS

PARTICIPATE IN-PERSON AND ONLINE!

- We are exited to announce the gradual return of in-person testing! We will continue to offer online studies, but hope to see many of you in person soon!
- Listen to PhD student Priscilla Fung discuss her research on when gender differences in speech start to develop here.
- Congratulations to Dr. Elizabeth Johnson on being awarded a Canadian Foundation for Innovation grant to start her Baby Brain and Behaviour Lab (BaBBL).
- Congratulations to the CLASS lab's postdoc Dr. Thomas St. Pierre on accepting a professorship at Utrecht University!
- Check out Dr. Doug Vanderlaan's co-edited book "Gender and Sexuality Development" which was recently published.
- Congratulations to Dr. Tina Malti on being named recipient of Germany's most valuable research award, the Alexander van Humboldt Professorship.

WHAT ARE CHILDREN WATCHING (AND HEARING!)?

Everyone speaks with an accent, no matter where they grew up and while no accent is inherently better, our society tends to treat some accents as better than others. In the 1990s, researchers noticed that children's media showed biases in how different accents were depicted. The "standard" North American accent (the one people tend to think is "unaccented") was more likely to be used to depict cartoon heroes than were foreign and regional accents. Consider the Disney movie The Lion King, in which the hero Mufasa speaks with a standard American accent, while his evil brother Scar speaks with a British accent (was one of them adopted?). In an on-going project, we are asking whether cartoons still show these biases. We asked 7- to 9-year-olds what their favorite animated movies and TV shows were. We went through the top 38 movies and 34 TV shows (2838 characters total!) and coded whether each character spoke with a "standard" North American accent or not, and how good/evil the character was. The results show that even today, standard accents are still depicted more positively than other accents. Future questions are whether certain accents are more likely to be depicted unfavorably than others. Stay(car)tuned!

WHAT IS THE DIFFERENCE BETWEEN SPEECH AND SONG?

In daily life, you rarely struggle to know whether someone is speaking or singing to you. When do we learn that speech and song are different or are we born knowing that? The Language, Attention, Music, and Audition lab is examining how children and adults categorize speech and song. The first study had 4- to 17-year-olds and adults describe how speech and song differed. At age 4, children could describe differences between speech and song, but didn't describe them like adults. For instance, 4-year-olds said that song is louder than speech, but adults knew that is not always true. The second study had 4- to 8-year-olds and adults listen to spoken and sung utterances to see if they could categorize them. The ability to identify speech did not change with age, but the ability to identify song improved. In the end, all ages used the same 4 features to determine whether something was spoken or sung: stable pitch, strong pitch, longer sentence length, and fewer dynamic changes. However, the younger ages used several of these features less often than older participants. This tells us we are good at categorizing speech and song from as young as 4, but we are still learning to categorize them until at least 8. Next time you hear the radio change from speaking to singing, ask yourself "How did I know that?"

HOW DO CHILDREN DECIDE SOMETHING IS IMPOSSIBLE?

Adults and older children know that the existence of blue applesauce is unlikely, but preschoolers think it is not only unlikely, but impossible! In the Childhood Development and Learning (ChiLD) lab, we are investigating why preschoolers classify unlikely events as downright impossible! We found no evidence that adults and older children engage in more reflection before judging possibility than younger children. Instead, we found that people at *all* ages take longer to judge the possibility of unlikely events than ordinary or impossible ones. We also found that younger children, like older children and adults, appear to search their memories for evidence of an event's possibility before deciding whether is is possible or impossible. However, younger children appear biased to search for examples when the event does *not* occur, rather than examples of when the event *does* occur. This has led us to propose that a developmental shift in how memory is searched leads to a shift in how older children and adults judge the possibility of unlikely events, compared to preschoolers.

CAN GIRLS PLAY WITH TRUCKS AND BOYS PLAY WITH DOLLS?

Children tend to react less positively to peers whose behaviour does not conform to gender expectations. PhD student Laura MacMullin from the BIG lab designed and tested an empathy-based strategy aimed to help children be more accepting of gender-nonconforming peers. Children between the ages of 8 and 11 were read stories about a boy and a girl who received negative reactions from others about their gender-nonconforming behaviours. Half of the children were prompted to empathize with the characters and the other half were not. Children then answered questions about how strongly they endorsed gender stereotypes and about their attitudes toward boy and girl peers who did not fit gender stereotypes. Inviting children to empathize with these children did not improve their attitudes toward them. The study also showed that children who endorsed gender stereotypes more strongly tended to view gender-nonconforming peers less positively. Future work will examine whether reducing children's gender stereotyping might be one way of increasing children's acceptance of gender-nonconforming peers.

DO YOU RECOGNIZE THIS VOICE?

Children are pretty good at recognizing the voices of the people that they spend a lot of time with (e.g., Mom and Dad), but how good are they are recognizing the voices of less familiar people? Do certain factors make some voices easier to recognize than others? In the Child Language and Speech Studies Lab, PhD student, Madeleine Yu, is investigating this question with monolingual 6-, 9-, and 12-year-olds, by testing their ability to recognize a variety of different voices in an online game of hide-and-seek! This study is currently running, so if your child fits into this category and would like to participate, please email us for more information.

DO CHILDREN THINK BOYS AND GIRLS SOUND DIFFERENT?

Voices of adult men and women are often easy to distinguish because during puberty, males develop longer and thicker vocal cords than females, which results in a lower-pitched voice. It is more challenging to tell apart voices of boys and girls because biological differences in vocal tract have not yet developed, but a past study from our lab has shown that adult listeners *are* able to classify gender in children as young as 2.5 years of age. This must mean that children are socialized to produce gender differences in speaking style early in life. Working with Dr. Jessamyn Schertz, PhD Student Priscilla Fung of the CLASS lab also found that children as young as 3.5 years of age can detect gender differences in their peer's speech. And interestingly, children's ability to do so is related to their parents' attitudes towards gender or gendered behaviours. We are currently investigating whether parents' gender attitudes are also related to how early children adopt gender differences in their speech.

CHILDREN ARE SKEPTICAL OF WHAT ADULTS TELL THEM!

When children are told that the earth is round or that death is inevitable for all living beings, they often do not have the means to test these claims. There are, however, situations in which children can carry out a relatively simple investigation. The ChiLD lab examined whether children will verify what they have been told. Our research suggests that although young children can be encouraged to engage in simple exploration by a surprising claim, they may not conceive of this as a way to prove – or disprove – the claim. Young preschoolers readily engage in exploratory investigations following a surprising claim, but only older children conduct a more sophisticated verification aimed at confirming the truth of the claim. Much remains to be uncovered about the factors that drive this development. However, what is clear is that children don't just always believe everything they are told.

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