



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 thank all the families who have participated in our 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.



## COMMUNITY DAY

On November 8, we hosted a Community Day to bring families, students, and community members together to play, learn, and explore science and art. Guests enjoyed hands-on learning that helped children discover how the brain works and build skills like emotion regulation and empathy. The day included an author reading and a music-and-mental-health activity.

One of the most exciting parts of the event was Flip the Fair, a science fair with a twist: children served as the judges!



## CHILDREN'S ACCENT UNDERSTANDING

Imagine you are on the subway and you hear someone speaking. You can tell they didn't learn English in Canada, but can you tell *where* they learned English? Research suggests that adults who lived in many different locations are better at telling apart and identifying accents than people who lived in one place. This may be because people who lived in many different locations had exposure to more accent

variation. We predicted that a similar pattern would be seen with 6 - 12 year old kids in the GTA, with those who hear a lot of accent variation being more likely to identify a non-Toronto accented speaker as "not from here" than those who have very little accent exposure. We found that children's ability to identify the local accent improved with age, however, our prediction that children with more accent exposure would be better at identifying non-Toronto accents as "not from here" was not borne out. This may be

because all children in the GTA have a lot of exposure to accent variation or because children with a lot of exposure to accent variation might not see accent as the key dimension along which to decide if someone is "from here" or not.

## HOW DO I PARTICIPATE?

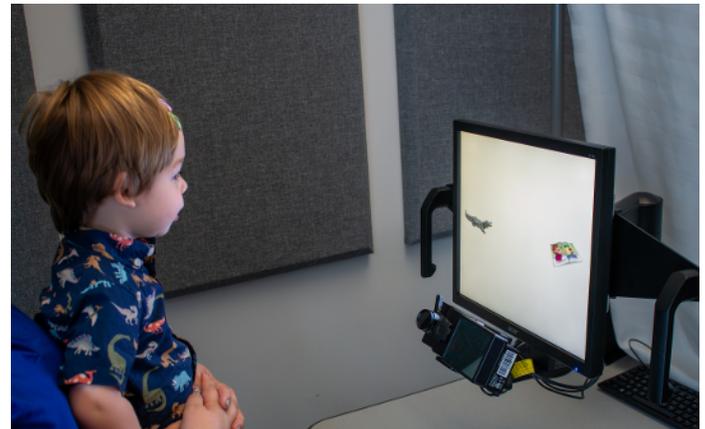
To learn more about us you can email us at [utmchildstudies@utoronto.ca](mailto:utmchildstudies@utoronto.ca) or visit our website [here](#).

## CHILDREN'S RESPONSE TO PEER GENDER EXPRESSION

Early in childhood, children begin to learn traditional stereotypes about how boys and girls are expected to behave. As a result, children may react negatively to peers who do not follow these expectations—for example, when a boy plays with a doll or a girl enjoys rough-and-tumble play. To better understand these reactions, researchers from the University of Hong Kong and the University of Toronto Mississauga examined the emotional responses of children ages 4 to 9. Children watched short stories featuring boys and girls who either followed or did not follow typical gender expectations in areas such as toys, activities, clothing, hairstyles, and playmates. Using computer software to analyze facial expressions, researchers found that children showed more signs of fear when viewing a boy who did not follow traditional gender norms compared to a boy who did. Children who showed more fear were also more likely to say that the gender-nonconforming boy seemed less happy. These findings suggest that breaking gender stereotypes may trigger discomfort or uncertainty in young children. Future research aims to better understand these reactions.



## YOU SAY POTATO, I SAY PO-TAH-TO



Adults are good at adapting to differences in how words sound across accents – so good that we often stop noticing pronunciation differences altogether! But some pronunciations differ more than others. For example, an Australian speaker may say the word *cat* much like someone who grew up in Canada, but say *shark* more like how Canadians say *shock*. We are investigating when infants begin to recognize words in unfamiliar accents and whether they succeed earlier on with “easy” words that change little from the pronunciation they usually hear versus “harder” words with greater differences. In a study with 16-month-olds, infants see a pair of pictures and hear a voice name one of them (*Look! Where’s the cat?*) while we measure where they look in response. By presenting different talkers with different language backgrounds saying various words, we create both “easy” and “hard” scenarios for infants to recognize words they are likely to already know. Results suggest that infants are more successful comprehending words in new accents when the pronunciation changes little. This is important because this describes *lots* of words across accents! Since prior research has not accounted for degree of changes in pronunciation, we may have been underestimating young infants’ abilities to cope with variation in how words sound and over estimating how much difficulty they have understanding unfamiliar accents. Next, we will investigate whether infants can leverage their understanding of “easy” words to recognize “harder” words.

## CAN I LEARN FROM SOMEONE WHO DISAGREES WITH ME?



Disagreement is common, but we rarely seek it out, missing out on learning opportunities. Though disagreement can be challenging, it offers valuable opportunities to think about what we believe and to recognize that our reasons for believing something might be wrong or incomplete. Previous research found that children are more likely to suggest that *other people* should learn from someone who disagrees with them. But are *they* willing to learn from someone who disagrees with them? To find out, we asked 6- to 11-year-old children what they believed, then showed them a video of someone who agreed with their belief and someone who disagreed. When asked who they would talk to if they wanted to learn more, children overwhelmingly chose the person who agreed with them, choosing disagreement less often than they suggested others should. However, after being taught about the benefits of different perspectives, older children, but not younger children, became more willing to talk to the person who disagreed with them. These findings suggest that while we tend to prefer those who share our views, we can help children benefit from disagreement by teaching them about its value for learning.

## WHAT DO YOU MEAN WHEN YOU SAY "IT'S OKAY"?

Imagine that you invite a friend over for dinner and you tell them you are making lasagna. They respond: "Lasagna's okay". Based on their response it is unclear whether you should make lasagna for them. To resolve ambiguity in this situation, we can think about what they've said in the past. If they often say good things about food, "Lasagna's okay," might mean they don't like lasagna. However, if they generally make negative comments about food, "Lasagna's okay", might mean that they like lasagna. Our research examined whether 5- to 8-year-old children and adults use speakers' past



evaluations to infer speakers' true preferences following the ambiguous statement "It's okay". We found that by age 5, children use this strategy, but only when told that "It's okay" is ambiguous; otherwise, they default to interpreting it as a sign of liking. By 7, children no longer need this scaffolding. We also found that with increasing age, participants' tendency to positively interpret "It's okay" decreased. These results contribute to our understanding of how children and adults make sense of ambiguous statements.

## SHARING OUR KNOWLEDGE WITH COMMUNITIES

Ever wonder what we study? At our free "Mind Explorers" events, we share what we know about psychology with families through fun and educational activities. A favourite of ours is making brain hats! Kids collect stickers as they learn about the brain, language, music and more! At the end, children receive a small prize. Parents also have a chance to connect with researchers to learn more about the work taking place in our Infant and Child Studies Centre. If you and your children would like to visit our next event, we'd love to see you there! Follow us on our social media pages to learn about upcoming events.



## UNDERSTANDING HOW MUSIC SUPPORTS PERFORMANCE



Adults use music to change how they feel and to prepare for activities, such as an upbeat track before a run or calming music when they need to focus, but we know less about how children think music affects their feelings and energy. Our research explores how children understand the emotional qualities of music. 5 & 8-year-olds and adults listened to instrumental clips that differed in tempo (fast or slow) and mode (major or minor). They told us how they thought a story character would feel after listening to each song. All age groups reported that fast songs

made the character feel more energized, while slow songs made them seem calmer. However, only adults recognized the music might make the character feel more positive or negative - a difference cued by major vs minor modes. We then asked whether children could *apply* what they know by selecting the type of music that would best prepare someone for a task. 8-year-olds & adults made choices that matched the demands of each task more often, while younger children did not, suggesting this skill develops later in life.

## ARE CHILDREN INTELLECTUALLY HUMBLE?

Our world is full of different beliefs, perspectives, and constantly changing information. Children need to learn how to weigh what they already know and believe against new information coming in and update their beliefs when needed. One important skill that can help is intellectual humility—recognizing the limits of what we know and accepting that our beliefs might be wrong. In adults, intellectual humility can help reduce conflict, lead to more constructive conversations, and improve learning. But how does this develop in children? Until now, we didn't have a tool to measure it in children. To answer this question, we worked with colleagues in the U.S. and Europe to create a way to measure intellectual humility in 6- to 10-year-old children. We asked children and their parents to answer questions about how they think and how they behave. These questions explored 1) how children think about the limits of their own knowledge, 2) how they value others' perspectives, and 3) their willingness to revise beliefs when they realize they might be mistaken. We discovered all three components contributed to children's intellectual humility and that it becomes more consistent as children get older. Future research will explore how this skill works across different cultures.

## CAN BABIES DIFFERENTIATE SPEECH AND SONG?

Parents naturally blend speech and song into their daily interactions with their babies. While adults can easily tell whether someone is speaking or singing, it's not clear that babies know how to do this. To investigate when babies begin to differentiate speech and song, 4- & 11-month olds watched a fun visual display while listening to spoken and sung recordings of "George and Martha" storybooks. We measured how long babies attended to our recordings to determine if they noticed when they changed from a spoken version of the story to a sung version. We found that older babies can tell the difference between speech and song but younger babies cannot. These results suggest this ability gradually emerges during the first year of life.



Thank you to the National Sciences and Engineering Research Council of Canada, the Canadian Institutes of Health Research, and the Social Sciences and Humanities Research Council of Canada, for funding our research.