



Infant and Child Studies Newsletter

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About Us

The Infant and Child Studies Lab at the University of Toronto Mississauga (UTM) was established in 1973 for the purpose of studying children's perception of speech and music. Every year since then, hundreds of families from the surrounding communities have visited the campus to participate in our studies. While infants and children engage

in game-like tasks at our state-of-the-art facility, we gather valuable information about the early development of listening skills. Over the past few years, our research has been presented at conferences throughout North America and Europe. Our work has been published in journals as diverse as Psychological Science and Current Biology. The lab

also is home to many graduate students who are pursuing their own research interests.



It's Not What You Say, But How You Say It!

When speaking, your tone of voice often gives a listener more information than the actual words you use. When describing little things, you typically have a different tone of voice than when you are describing big things. Children are exposed to a person's various tones from infancy, but can they use this information to determine what a speaker is referring to? Our early findings suggest they can!



Australian English is English Too!



Babies develop the ability to understand a large number of words long before they begin talking. However, some research has suggested that children have great difficulty recognizing words when they are spoken in an unfamiliar variant of English, such as Australian English. In an ongoing study, we are investigating how infants come to

recognize words spoken in unfamiliar dialects. In this line of work, we play 12- to 18-month-old infants lists of familiar words (e.g. pretty) and lists of words that you generally wouldn't use when talking to infants (e.g. lofty). Some children hear these lists pronounced in Canadian English and some children hear them pronounced in Australian English. If children recognize the familiar words, we expect them to prefer to listen to the familiar word list over the unfamiliar word list. We have found that children recognize the familiar words in Canadian English before they recognize the same

words in Australian English. In everyday life, though, and especially in the GTA, children will (eventually) hear many different accents, and accommodating these accents is important for understanding people. For this reason, we are now investigating whether exposure to Australian English in our lab may help children work out the mapping between Canadian English and Australian English. The ultimate goal of this line of research is to explain how infants become more like adults and learn to adjust to the way English speakers all around the world pronounce words.

“We are investigating how infants come to recognize words spoken in unfamiliar dialects.”

When adults talk to children, they often use a speech register commonly referred to as baby talk. Some feel that baby talk will hinder a child's development, whereas others have suggested that baby talk is helpful because it is well suited to children's cognitive and perceptual capabilities. Regardless of how parents feel about baby talk,

most adults (including fathers) use it when conversing with infants and young children. Why do parents do this? What are the consequences? We are currently investigating how parents from different cultures speak to their children and hope that our research will help us better understand how different aspects of baby talk affect children's

cognitive development.



Talking and Singing to Infants

The presence of their baby influences the expressiveness of mothers' speech and singing across cultures. Infants prefer this infant-directed way of speaking and singing over adult-directed speech and singing. A previous study in our lab found that infants preferred videos of their own mother singing vs. a video of her talking. We wanted to explore what aspects of infant-

directed singing made it more interesting for the babies. Infants watched silent videos of an unfamiliar mother singing to her infant and of that same mother talking to her infant. The babies looked longer at the silent video of singing than talking providing evidence that aspects other than vocal characteristics contribute to infants preference for singing. In a se-

cond study, we presented infants with only the audio recording of a mother singing and the same mom talking to her infant. This time, infants showed no preference between talking and singing. This suggests that mothers' movements and facial expressions play a role in infant preference for singing over talking.



Infants' Preference for Consonance/Dissonance

Adults usually think of dissonant music as unpleasant and consonant music as pleasant. However, in previously reported studies, we found that infants showed no preference for a consonant song over a disso-

nant song. This suggests that musical preferences may be learned. To further investigate this, we had infants first listen to either a consonant or a dissonant song for 3 minutes, and then we tested to see which one

they preferred. Infants preferred to listen longer to the song they heard just before testing. This provides evidence familiarity plays a role in listening choice.

“Mother’s movements and facial expressions play a role in infant preference for singing over talking.”

Naughty or Nice

Can babies tell the difference between someone who is naughty or nice? Findings from our lab indicate that in at least some circumstances they can. We wanted to see if kids judge someone as being socially desirable or undesirable based on the emotional tone in their

voice. We presented children with one voice that was happy and another that was stressed. Then we examined their preference for the speakers' neutral voices. The initial results suggest that after hearing the two speakers, children preferred to listen to the neutral voice

of the speaker that was happy.





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Infants Prefer Atonal Music to Tonal

Atonal music, which is not composed according to the rules of western classical music is more dissonant than tonal music which follows those rules. Dissonance is thought to be one reason

that many adults find atonal music unpleasant. We presented infants with recordings of piano music of both tonal and atonal pieces. Both 6 and 12 month old infants preferred the atonal music

suggesting that we are not born with a preference for consonant music, but that this develops based on the type of music that is most familiar to us.

“These are Wugs!”

Children can use grammar to work out the meaning of a word! Evidence from recent research suggests that 2-year olds can figure out what a word means based on whether it was used in the plural or the singular

form. Children were presented with two pictures on a screen, one picture was of a singular object and the other depicted a pair of objects. When they heard the sentence “These are wugs.” they reasoned that the word

“wugs” must refer to the object that there was two of! Conversely, when they heard “This is a wug.” they learned that “a wug” must be the object that there is one of!

Can Children Read Body Language?

We know that infants can match a happy face to a happy voice. But, what about body language? Can children read whether you are happy or sad based on your posture alone? In this study we presented children with two videos side by side of

actors making large emotional gestures (i.e., happy, sad, angry, etc.). Then they heard a passage said in a tone that matched one of the emotions. We looked to see if children would look at the gesture that matched the emotion they heard in the passage.

Preliminary results suggest that they can! Ongoing research in this lab hopes to explore what kinds of emotional information they understand at various points in development.

Thank You

Thank you to the many organizations for assistance in informing parents about our program including Peel Regional Health Unit, Credit Valley Hospital, Trillium Hospital, and the Ontario Early Years Centers. Most importantly, thank you to all the families that have participated in our studies! If you know anyone who would be interested in participating, please pass on this newsletter as we are always looking for more Junior Scientists!

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