



Infant & Child Studies Newsletter

Fall Winter 2012/13 Newsletter

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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.



At the Infant & Child Studies Centre...



• We welcome Dr. Katie Corrigall as a postdoctoral fellow. She recently completed her PhD at McMaster University.

• The Infant Language & Speech Lab recently underwent a makeover! To see the completed work, visit us on Facebook.

• Dr. Marieke van Heugten is now a postdoctoral fellow at the LSCP in Paris, France.

• Congratulations to graduate student Michael Weiss on the publication of his MA thesis in *Psychological Science*.

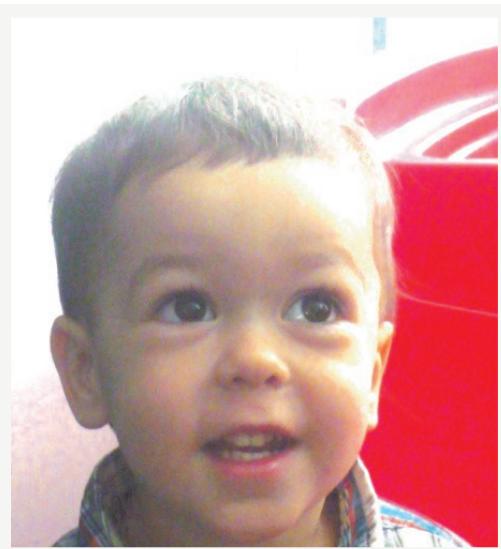


How do I participate?

For more information on how your child can become a junior scientist, call us at **(905) 828 5446** or visit us online at: www.utm.utoronto.ca/infant-child-centre

What Makes Music Sound Pleasant or Unpleasant?

Some combinations of notes sound pleasant to adults, while others sound unpleasant. Many experts believe that these judgments are inborn, while others suggest that combinations of notes we hear more often sound better to us. In Dr. Trehub's Music Development Lab, we sought infants' opinion on this matter by comparing how long they listened to sound combinations that adults considered pleasant or unpleasant. To our surprise, infants listened longer to music that adults considered unpleasant, which indicates that such music did not sound unpleasant to them. In a subsequent study, we had infants listen to 3 minutes of the pleasant-sounding or unpleasant-sounding music (according to adults' opinion) before giving them an opportunity to listen to each version for as long as they wanted. In these circumstances, infants listened longer to the familiar music regardless of whether it was pleasant- or unpleasant-sounding to adults. Our findings suggest that familiarity is important in shaping musical preferences. Perhaps it is no surprise, then, that listeners from different cultures like different music.



Understanding Australians

Have you ever listened to a speaker of an unfamiliar variant of English, such as an Australian English, and found it a little difficult to understand them? Infants face similar difficulties recognizing words spoken in unfamiliar variants of English. In Dr. Johnson's Infant Language & Speech Lab, we are currently investigating how children between 20 and 28 months of age adapt to unfamiliar accents. Results to date suggest that before their second birthday, Canadian infants start developing the ability to recognize words in an unfamiliar Australian accent after only a few minutes of prior exposure to the speaker. We would ultimately like to explain what information children use to adapt to unfamiliar accents.



Which Kinds of Kids Take Music Lessons?

Different kids have different interests. Some kids like to play sports, some love to draw, and some are happiest when they're singing and dancing. But what attracts particular kids to certain activities but not others? At Dr. Schellenberg's Music and Cognition Lab, we wondered whether children's personalities would influence their likelihood of taking music lessons and sticking with those lessons for many years. Two personality characteristics interested us the most: *conscientiousness* is the tendency to be self-disciplined, organized, and achievement-oriented (such as getting good grades in school), whereas *openness-to-experience* is the tendency to be curious about learning new things, to appreciate art, music, and poetry, and to prefer variety over routine. We found that 10- to 12-year-old kids who were high in conscientiousness and openness-to-experience were more likely than other children to take music lessons for many years. For younger kids (7- to 9-year-olds), we found that those most likely to take music lessons had *parents* who were high in openness-to-experience. Our research suggests that being curious and willing to try new things is one of the most important factors in learning to play a musical instrument.

Infants' Memory for Music

Caregivers around the world sing to their infants, and there is ample evidence that infants find such music engaging and memorable. At Dr. Schellenberg's Music & Cognition Lab, we recently found that adults remember vocal melodies better than instrumental melodies, so we wondered whether infants would show a comparable vocal advantage. In Dr. Trehub's Music Development Lab, we had 6-month-old infants listen to three melodies presented vocally or on piano. Then we tested their recognition of the melodies that they heard before. Although we hoped that infants would remember the vocal melodies but not the piano melodies, we found that infants remembered the melodies regardless of their mode of presentation. What is clear is that infants have excellent memory for melodies. We know that vocal music is advantageous for infants in other respects, but we are attempting to document the circumstances in which vocal music is more memorable than instrumental music.



Seeing and Hearing Language

Does what we see affect what we hear? Does visual information help language processing? In Dr. Johnson's Infant Language & Speech Lab, we have addressed these questions by presenting adults and 6-year-olds with a simple made up language. Some participants heard the language accompanied by still pictures of cartoon characters. Other heard the language accompanied by cartoon characters moving consistently on either the first or last syllable of every word. Preliminary results suggest that both adults and children can learn our made up language, and that visual information affects adult language processing more than it affects children's language processing. Moreover, in adults, seeing large visual movements seems to make adults perceive accompanying auditory syllables as stressed.



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Is That a Question?

Often the words in a sentence tell us whether it is a question or a statement. Questions usually begin with words such as *what*, *where*, or *who*? At times, however, questions (It's raining?) are distinguished from statements (It's raining.) by intonation alone (e.g., rising or falling pitch). In Dr. Trehub's Music Development Lab, we are examining whether children of different ages use intonation patterns to decide if a sentence is a statement or a question. For older children, we are also inquiring whether they make those judgments even before hearing the last word. These tasks are embedded in games that children find interesting and enjoyable. Children are helping us learn about their ability to attend to the pitch contours as well as the words of sentences.

Thank You!

We thank the Peel Regional Health Unit, Credit Valley Hospital, Trillium Hospital, and the Ontario Early Years Centres for helping us reach out to families. We also thank all of the families that have participated in our studies! If you know anyone who would be interested in participating in our studies, please pass on this newsletter as we are always looking for more junior scientists!

Thank you to the National Sciences and Engineering Research Council of Canada (NSERC), the Canadian Institutes of Health Research (CIHR), the Social Sciences and Humanities Research Council of Canada (SSHRC), and the National Science Foundation (NSF) in the US for continued funding of our research.