



Early Childhood Cognition Lab

WHAT DOES THE ECC LAB STUDY?

We are interested in how young children think about the world, and how they learn from different sources of information (e.g., firsthand experience, the testimony of others, media). We offer unique opportunities for families to gain exposure to the science of psychology, with a specific focus on cognitive development and social learning.

HOW YOU CAN GET INVOLVED

We are always looking for families to help us with our research! Our flexible schedule means we are often able to book weekday, evening, and weekend appointments. If you are interested in having your child participate, please feel free to contact us!

E-mail: ecclab@ryerson.ca **Phone:** 416-979-5000 ext.2896

Website: <http://psychlabs.ryerson.ca/ecclab>

Current Studies

How do children prioritize information from different sources?

Preschool children are selective when learning from others and judge whether one person is a better source of information than another. Recent studies have demonstrated that children use the previous reliability of speakers to decide from whom to learn novel information. However, little attention has been paid to how children use social information transmitted by partners when deciding whom to trust. This question is explored through a series of studies examining how children use the claims of others to guide their selective learning. The current study examines how four- and five- year olds use information about third parties provided by multiple sources to make decisions about who to trust when learning new information.



Do children value and prefer scarce objects?

As adults, we tend to perceive items that have limited quantities available as more valuable; such as diamonds, gold or limited editions, compared to items with large quantities available. This is known as the scarcity effect, and research has shown that it tends to have an effect on the behaviour of adults, even in simple settings such as grocery shopping! In this study, we explore whether children are also prone to this effect by having them imagine that they're testing new products for the owner of convenience store. We pretend that others have tried the products before us, and that we're choosing between what is left for each product: a large pile of one flavour, and a small pile of a different flavour, so that one flavour is abundant while the other is scarce. We're interested in seeing how early this idea of scarcity>equals=higher-value enters our thinking with children between the ages of 3 and 7.



Study Results!

How do young children interpret sampling behaviour?

Past research has shown that when 2-year-olds observe an adult pick out the only 3 blocks from a box of 15 balls (i.e., a nonrandom sample), they take this to mean that the person prefers the blocks over the balls. However, nonrandom sampling does not always indicate a preference. The goal of our study was to explore how 2- and 3-year-olds make sense of nonrandom sampling across social contexts.

Each child was shown four jars, one after another, that contained two types of toys differing in quantity, for example, 50 spin tops (majority toy) and 6 balls (minority toy). The researcher then implied the social context of her sampling behaviour: (1) Preference context, "I like to have some toys to play with", (2) Dislike context, "I want to play but I don't like some of the toys here", or (3) Neutral-goal context, "It is time to clean up". Next, the researcher picked out the minority toys and the child was asked to choose which toy she liked better.

We found that in the preference context, 3-year-old chose the minority toy. They also did this in the neutral context, but to a lesser degree. They were less likely to choose the minority toy in the dislike context. Similar but weaker patterns were found in 2-year olds. These findings are the first to show that children take social context into consideration when interpreting another's mental state during sampling behaviour.



How do children form impressions of others?

Impression formation is a process through which people integrate small pieces of information to form a global impression about others. By "impression formation" we mean how children form impressions of other people (e.g., perceiving another person as nice or friendly). Biased impression formation can give rise to the formation of stereotypes. In this study, children viewed pictures that depicted two groups performing desirable and undesirable behaviours. The ratio between the desirable and undesirable behaviours is always 2:1 across the two groups. This means the two groups are equally friendly. However, we found that 5- to 10-year-old children are more likely to perceive the group with fewer members as less friendly because they tend to overestimate the number of undesirable behaviours performed by the group with fewer members. In addition, stereotyping in children can be reduced through the facilitation of unbiased impression formation (e.g., prompting children to critically think about the patterns of evidence in the behaviours of people from different social groups).



Study Results!

Do children place different levels of trust in adult speakers of different ethnicities?

People favour members of their own group over others across a variety of contexts, from their favourite sports team, to those that are the same gender or race. Some research shows that preschoolers prefer to learn from people that physically look and sound just like they do (e.g., ingroups) rather than those that do not (e.g., outgroups) when the two sources are in direct contrast. The goal of our study was to explore if preschool children would show this ingroup favoritism in their trust in what they are told by others. We addressed this question in two experiments by exploring whether preschoolers display selective credulity toward a false testimony based on the speaker's social group membership (i.e., gullible to only the ingroup members' false testimony). In our experiments, 3- and 4-year-olds received false testimony about a toy's hiding location that contradicted their firsthand observations, and were then asked to retrieve the toy. The false testimony was provided by either an ingroup (same race and spoken accent) or an outgroup speaker (different race and spoken accent).

In Study 1, we provide the first sign that 4-year-olds display "selective credulity" toward the false testimony of ingroup versus outgroup speakers. When asked to retrieve the toy, 3-year-olds were credulous toward the false testimony of both speakers, despite their firsthand observations. In contrast, 4-year-olds were credulous toward the false testimony of the ingroup but not the outgroup speaker. In order to tease apart the effects of race and accent, in Study two, 4-year-olds received the false testimony from either a speaker that was the same race as the child but that had an foreign accent, or from a speaker that shared the same spoken accent as the child but differed in race. When only one indicator of group membership was present, race or accent, young children were equally gullible towards both speakers.

In conclusion, 4-year-olds are credulous towards ingroup members, and only display skepticism towards the false testimony when provided by a non-native English speaker that also differs from the child's race. This selective credulity may have adaptive value. In cultural transmission, it is more adaptive for children to accept what they are told by individuals from their own group, as information from ingroup members may be more beneficial for problem solving and survival. However, when the false testimony is provided by an individual that has a single indicator of group membership (either race or spoken accent), it may not be strong enough to trump young children's confidence in their firsthand experiences.

Research outside of Ryerson University:



In addition to collaborating with local Child Care and Day Care Centres in the Greater Toronto Area, the Early Childhood Cognition Lab has also taken our studies to the Ontario Science Centre! In the past year, we have run a number of our studies at KidSpark, a child-friendly learning area located at the Ontario Science Centre. **For more information and posters from our past studies, feel free to visit:** <http://www.ontariosciencecentre.ca/researchlive/>