

EARLY DEVELOPMENT RESEARCH GROUP



2016 NEWSLETTER

WHAT IS THE EDRG?

The **Early Development Research Group** is a group of six research centres in UBC's Department of Psychology. We study the development of language, learning, and social understanding in infants and children of all ages!

THANK YOU, PARTICIPANTS!

We would like to extend our **sincere thanks** to all the parents and children that have supported our research this past year by participating; we would not have been able to do it without you!

WOULD YOU LIKE TO PARTICIPATE WITH YOUR CHILD IN ONE OF OUR DEVELOPMENT STUDIES?

SIGN UP ONLINE AT
EDRG.PSYCH.UBC.CA

OR CONTACT US AT
(604) 822-9540
EARLYDEV@PSYCH.UBC.CA

RECENT FINDINGS FROM THE LANGUAGE DEVELOPMENT CENTRE

The **Language Development Centre (LDC)**, directed by Dr. Geoff Hall, focuses on how children learn the meanings of words.

Infants begin to produce their first words at around one year of age, but recent research indicates that by six months of age they already understand a number of labels. Among infants' earliest words are labels for caregivers, such as "Mommy" or "Daddy". In our lab, we have been examining infants' early understanding of these words. In a series of studies, we asked whether infants understand the labels for their caregivers as words for specific individuals (i.e., for only their own parents) or for entire categories of individuals (i.e., for any woman or man). In our first study, we showed infants images of their mother and father and tested them on the labels for their caregivers (e.g., "Mommy", "Daddy"). In this study, we found that by 6-months of age, infants understand the labels "Mommy" and "Daddy" as referring to their own parents and not to unfamiliar women and men. In a second study, we examined whether infants extend the label for their mother (e.g., "Mommy") to other familiar people (such as grandmother, aunt, nanny). We found that infants restrict the label "Mommy" to their own mother and do not simply extend this label to any familiar woman. Additionally, infants who saw their grandmother for only a few hours a week showed an understanding of the label for their grandmother. This work provides evidence that infants understand words for caregivers as labels for individuals and understand labels for multiple familiar people from the same gender category.

DID YOU KNOW?

Typically, the first emotion that children understand is **HAPPINESS!!**



RECENT FINDINGS FROM THE CENTRE FOR INFANT COGNITION

The Centre for Infant Cognition (CIC), directed by Dr. Kiley Hamlin, studies the role of evaluative processes in infants' every day cognitions about the world.

Previous studies from the CIC have shown that infants reliably prefer helpful characters over unhelpful characters. Even 3-month-olds look longer at a character that returns a dropped ball than at a character that takes the ball away. However, additional studies have also shown that infants do not always prefer helpers over hinderers. For example, 14-15-month-olds also consider who is being helped or hindered. In this study, infants saw characters that helped or hindered a puppet similar to the infant (shared the infant's food preference) or dissimilar to the infant. Results show that infants prefer those that help similar others and prefer those that harm dissimilar others. In recent adaptations, infants saw similar or dissimilar characters be helpful to one character and unhelpful to another character. We found that infants prefer characters that received the helpful action from the similar character and prefer the character that received the unhelpful action from the dissimilar character. These results suggest that infants may consider that "the enemy of my enemy is my friend" when making social evaluations.

We are also interested in infants' own performance of helpful and generous behaviors. Recent studies have also shown that 20-month-olds are more likely to direct positive behaviours toward prosocial individuals and negative behaviours toward antisocial individuals.



This is demonstrated when, after watching a puppet show where one puppet is helpful and one puppet is unhelpful, 20-month-olds were more likely to give toys to the helpful puppet than the unhelpful puppet. Additionally, 20-month-olds are more likely to give the helpful puppet the toy the puppet liked. In another study we found that 23-month-olds smile and express happiness when sharing treats with stuffed animals. Toddlers at this age are especially happy when giving a stuffed animal one of their own treats, compared to giving the animal one of the experimenter's treats. In contrast, 16 to 18-month-olds are equally happy when giving the stuffed animal one of their own treats and one of the experimenter's treats. We are interested in exploring how positive emotions, such as happiness, are related to the performance of prosocial behaviours across development.

EXCITING ED RG NEWS!

Kiley Hamlin meets the Dalai Lama!

Dr. Kiley Hamlin had the honour of presenting her research, during an intimate panel discussion, to the Dalai Lama.



Dr. Hamlin's research on early moral cognition suggests that infants are born into the world with an appreciation of generosity and liking niceness!

Janet Werker Wins Gold Medal!

Dr. Janet Werker has been awarded the 2015 Gold Medal from the Social Sciences and Humanities Research Council of Canada. Janet is the first UBC Professor to receive this award, SSHRC's highest distinction, given to individuals whose sustained leadership, dedication, and originality of thought have inspired colleagues and students alike. Her work has shown that the foundations of language begin in early infancy, and that acquiring two or more languages from birth comes as naturally as learning a single mother tongue. Please join us in congratulating Janet on this spectacular achievement!



CENTRE FOR COGNITIVE DEVELOPMENT

We are delighted to introduce to you the newest member of the EDRG!

Dr. Darko Odic joined UBC's Department of Psychology as Assistant Professor last July. His research centre, the **Centre for Cognitive Development**, recently opened in September 2015 where a new set of studies investigating how children learn to reason about the world around them have begun!

Darko is a developmental psychologist – he earned his Ph.D. in Psychological and Brain Sciences at Johns Hopkins University – interested in the origins of language and thought. He is especially interested in how children understand number, time, and space, and how they learn words that refer to these concepts (e.g., how do children learn to count). For example, his experiments have shown that children have an intuitive, approximate sense of number that they use from birth. As adults, we even use this gut sense of number in everyday situations, like when estimating how many items are in our shopping cart. Ongoing work explores how the basic sense of number relates to later math learning, and how children learn to communicate about it using words like “more” and “many”. Darko and his team look forward having your family visit their Centre for a new study sometime soon!



RECENT FINDINGS FROM THE INFANT STUDIES CENTRE

The Infant Studies Centre, directed by Dr. Janet F. Werker, focuses its research on the development of language.

For a long time, researchers in infant language development have focused on the role that infants' auditory systems (their hearing) play in helping them learn the sounds of their native language. However, we are now discovering that infants use many more sensory and even motor processes to help when listening to speech. In our current studies, we are testing this question directly. For example, when an infant is watching someone speak, but the shape of a speaker's mouth doesn't match the speech that the infant hears, does that change how an infant perceives speech? Or, if an infant has something in her mouth that occupies her tongue and lips, does that change her speech perception? To explore these questions, we're working with infants at three different age groups (6, 9, and 11 months), who each are at different stages of language development. Because we can't ask infants what they're perceiving, we use a small camera called an eyetracker to see where on a television screen infants are looking while listening to speech sounds and watching them being spoken by a model. Our research to date shows that infants do expect the speech they hear to match the speech they see, and that this becomes more precise to the native language across the first year of life. We have also found that changing the mouth movements infants make also influences the way they hear speech. We hope that the results of this study will not only help us to learn more about the basic development of speech perception, but will also help us understand better the different ways that infants with sensory or oral-motor impairments may learn language.

RECENT FINDINGS FROM THE K.I.D. STUDIES CENTRE

The **knowledge, imagination, and development (K.I.D.) Studies Centre** focuses its research on topics related to children's social reasoning, and is directed by Dr. Susan Birch.

From the words for colours to how to tie a shoelace, children have lots to learn — and for the most part, they depend on others to teach it to them. But whether deliberately or inadvertently, other people sometimes provide misinformation. Our centre is interested in how the confidence of the speaker influences how children learn. In one recent study we found that, around the age of five, children become wary of information provided by people who repeatedly make overly-confident claims. For this study, 96 four- and five-year-olds were shown short videos of two adults talking about familiar animals. The speakers would either: A. Make true statements about the animal in a hesitant voice, e.g., “Hmm, I guess whales live in the water?” or B. Make false statements about the animal in a confident voice, e.g. “Oh, I know! Whales live in the ground!”. The children were then shown videos of the same two adults speaking about animals that were unfamiliar to the children. The previously confident speaker would state new facts with confidence, and the previously hesitant speaker remained hesitant while stating different facts. The participants were then asked whom they believed. At age four, it was a 50/50 split: they were as likely to believe the confident but error-prone adult as they were to believe the hesitant truth-teller. As the children neared the age of five, however, they were more likely to believe the previously accurate but hesitant individual, suggesting a year can make a big difference in how children learn. This research shows us that, even though kindergarteners have a reputation for being gullible, they are actually pretty good at critically evaluating sources of information. Of course, the development of critical skills does not end at age 5. Follow-up research underway in our lab shows that even much older children (and adults) are sometimes overly-swayed by the confidence of the speaker, likely because confidence is usually (but not always) a fairly reliable indicator of knowledge. The bottom-line? It's important to remind our children that not everything they hear or read is true.



THE SOCIAL COGNITIVE DEVELOPMENT LAB AND THE LIVING LAB AT SCIENCE WORLD

The **Living Lab** is an exciting partnership between UBC and **Science World** that provides opportunities for museum visitors to participate in real research studies while engaging science experts in areas from psychology, linguistics, neuroscience and education. We're open 7 days a week and have active studies for anyone over 6 months of age, including parents! The living lab is directed by UBC's Dr. Andrew Baron (livinglab@psych.ubc.ca).

In one of our studies with infants (6-12 months old), we are examining whether infants understand dominance relations between two social groups. Thus far, we have found that young infants think that an individual from a larger group should succeed in a right of way competition against an individual from a smaller group. This is interesting because infants appear to understand that there are “strength in numbers” such that if your group is larger, you may have more individuals to help you.

In another study, we explored the flexibility of 5 to 14 year olds' unconscious (or implicit) preferences for social groups. We discovered that these preferences might be more flexible at younger ages even though, with age, children gain greater cognitive flexibility. This finding is really cool because it suggests that there might be a critical period in development during which parents, educators, and caregivers may have the best opportunity to shape more egalitarian views in the minds of children. For more updates about our research, please visit www.scienceworld.ca/lab.

