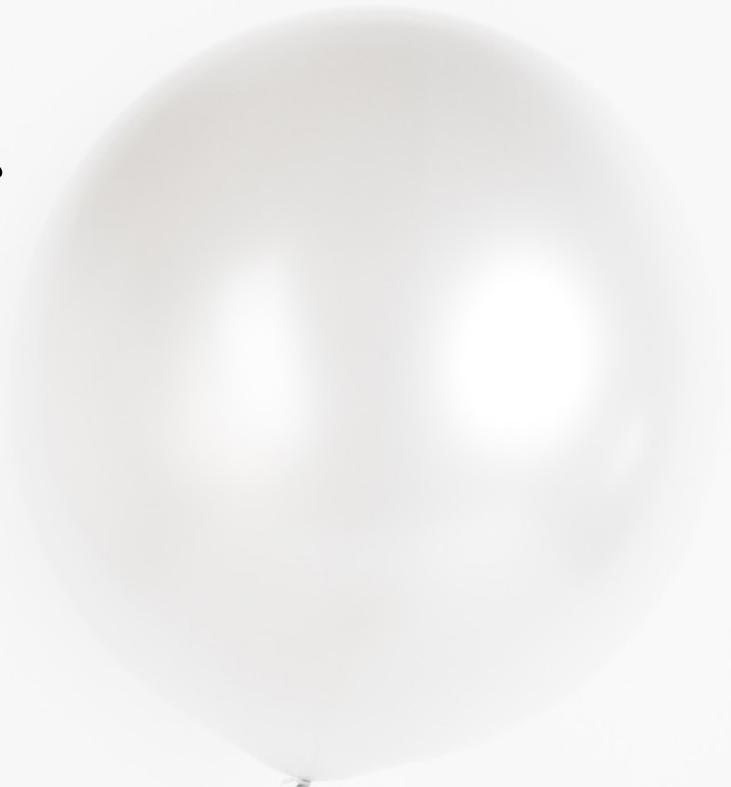


EARLY DEVELOPMENT RESEARCH GROUP

2022

Newsletter



THE UNIVERSITY
OF BRITISH COLUMBIA
Department of Psychology
Faculty of Arts

ABOUT US

Since 2004, the Early Development Research Group has been advancing knowledge of how language, learning, and social understanding develop in infants and children. We're composed of seven research centres in UBC's Department of Psychology. In our ongoing studies, we are trying to answer many fascinating questions about how children learn at different stages of development.

WHAT IT'S LIKE TO PARTICIPATE

Participating in a study involves either a visit to one of our centres or a computer at home from where you can access our online platforms. Both encompass an involvement of around 30-45 minutes and generally involve your child watching a video, puppet show, or playing a game with our researchers. At the end of your visit, your child will receive an honorary UBC degree certificate, as well as a gift (in-person studies) or gift card (online studies). For our in-person studies, we provide free parking or compass tickets.

SIGN UP TODAY!

On our website:
edrg.psych.ubc.ca

By email:
edrg@psych.ubc.ca



THE EDRG DURING COVID-19

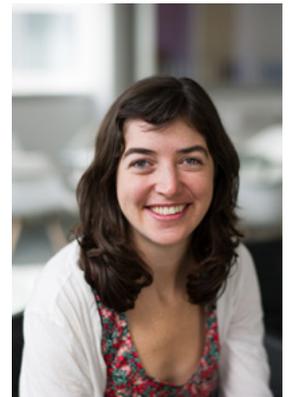
These past two years have been a whirlwind for many of us. We had to close our doors and transition most of our studies online. In 2022, under the guidance of the PHO and our ethics board, many of our studies are resuming in-person visits.

We've really missed our participating families and hope to see you at UBC in the coming months! Our researchers are vaccinated and working diligently to ensure all safety protocols are in place. A big thank you to you all for your sustained support of our research during these difficult times!

EXCITING NEWS

During the past year, Dr. Lauren Emberson and her outstanding research team at the Baby Learning Lab joined the EDRG. We're so thrilled that the EDRG has grown into a group of seven research centres now!

Dr. Emberson is Assistant Professor in the Psychology Department at UBC. Her research explores how babies use their experiences to build an understanding of the world around them. She uses a combination of both behavioural and neuroimaging techniques in her work.



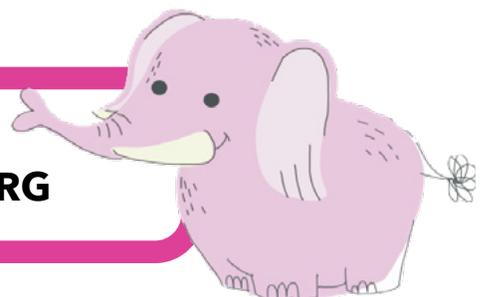
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UBC EDRG



SOCIAL COGNITIVE DEVELOPMENT LAB

Dr. Andrew Baron directs the Social Cognitive Development Lab at UBC and the Living Lab at Science World. Our lab explores how infants and children think about social groups.

Currently, we are exploring when in development children internalize gender stereotypes about math and science and how these stereotypes can influence their interest in and engagement with these subjects. Through our work, we aspire to develop strategies to increase children's interest in and engagement in STEM (<http://successinstem.ca>).

This year we began a project that seeks to understand if and how young children understand the concept of structural inequality. In this study, 3 to 8-year-old children are read a story about a school where a game is being played in two different classrooms. The game involves throwing a pebble into one of two buckets, green or yellow, to gain a prize. If the pebble is thrown into the green bucket, the student wins a very desirable prize. If the pebble is thrown into the yellow bucket, the student wins a less desired prize. The size of these buckets differs in each classroom, making it more difficult for one of the groups to gain the 'desirable' prize, which creates unequal opportunity between the two classrooms. The children are then asked questions about the story and about why the game may produce different results in each of the classrooms. This study will help us learn more about whether young children perceive inequality built into the structure of a game.

LANGUAGE DEVELOPMENT CENTRE

The Language Development Centre, directed by Dr. Geoff Hall, studies how infants and young children learn the meanings of words in their native language.

As adults, we understand that brand names (like "iPhone") are labels that pick out products made by a specific maker (Apple Inc.). In a recent study, we investigated when and how children learn the meanings of brand names for the countless manufactured objects they encounter in their daily lives (e.g., phones, shoes, toys).

In this study, children saw photos of familiar branded products (e.g., a shoe with a Nike "Swoosh" logo) and were asked to label each one. If children provided a brand name for a product (e.g., "Nike"), we asked them to extend that brand name to one of two other photos showing similar products (two other shoes). One of these was described as having the same maker as the first object, and the other was described as having a different maker than the first object. We varied whether these other products had the same brand marker/logo as the first object (e.g., a "Swoosh") or a different brand marker/logo. By four years of age, children often extended familiar brand names to objects with the same maker. It appears that even preschoolers understand that brand names are terms of categories of products that share a maker.



K.I.D. STUDIES CENTRE

The K.I.D. Studies Centre, directed by Dr. Susan Birch, examines children's perspective-taking, social learning, and social-emotional health.

In recent research, we were interested in the relationship between children's social perspective-taking and social-emotional functioning. Social perspective-taking involves reasoning about others' mental states. Individual differences in perspective-taking are present early and continue into adulthood, with better perspective-taking predicting many positive outcomes (e.g., better peer relationships). Previous research has relied on lab-based measures that assess only one or two aspects of perspective-taking. Our research expanded on earlier work by including a parent-report measure that captures several aspects of mental state understanding (e.g., perceptions, desires, intentions, knowledge, beliefs, emotions). Parents of 768 children ages 3-12 completed measures of their child's perspective-taking and social-emotional functioning. Three hundred ninety-two (392) parents also completed a measure of their perspective-taking.

The results revealed that children's perspective-taking predicted a broad range of social-emotional skills, with the largest effects observed in communication and cooperation. In contrast, lower levels of mental state understanding were associated with greater social-emotional difficulties, especially conduct problems and hyperactivity and impulsivity. Analyses also revealed that the more complex aspects of mental state understanding (e.g., complex emotion and intention understanding) are of particular importance to children's social-

emotional functioning. Results also revealed that a mother's perspective-taking was a predictor of their child's perspective-taking and social-emotional functioning, consistent with a body of work showing that parents' discussions of their thoughts and emotions with their children can help foster children's mental state understanding and social-emotional wellbeing.



FUN FACT!

During the past year, we had
more than

1,400

**babies participate in our
studies**

Thank you for being a part of
the EDRG family!

BABY LEARNING LAB

The UBC Baby Learning Lab is directed by Dr. Lauren Emberson, a professor from Princeton University who is now joining UBC as an Assistant Professor. Dr. Emberson grew up in Toronto and completed her undergrad in Cognitive Systems at UBC. Soon after, she headed off to grad school and started her academic career in the US. She's thrilled that her career has led her back to UBC and is beyond excited to be joining the EDRG this year.

Dr. Emberson's research at the Baby Learning Lab explores how babies use their experiences to build an understanding of the world around them, using a combination of both behavioural and neuroimaging techniques. In particular, they employ a neuroimaging method (fNIRS) that is very infant-friendly - infants wear a cap with light-weight sensors to detect brain activity while they sit in their parent's laps and learn something new! The Baby Learning Lab's research projects ask questions about how babies learn from their everyday experiences (i.e., looking at objects or listening to adults speak), so most of the studies focus on infant learning in the context of vision, language, and attention.

As part of the EDRG, Dr. Emberson and the researchers of the Baby Learning Lab hope to further our understanding of young infants' incredible capacities to learn. The lab is currently setting the foundation for a number of new studies on infant learning, and families will be contacted soon for the chance to participate in early 2022!



CENTRE FOR COGNITIVE DEVELOPMENT

The Centre for Cognitive Development, directed by Dr. Darko Odic, studies how children intuitively represent the world around them. Specifically, how they reason about concepts such as number, time, and space, and how the acquisition of language enriches these representations.

In a recent study, we found that young children engage in the strategic division of cognitive labour. Participants identified which of two sides of an image had more dots and were asked to allocate rounds of varying difficulty to themselves or a more or less skilled partner. We found that at 7 years of age, children will readily allocate difficult questions to a more skilled partner. In comparison, 5-year-olds assign themselves easier questions regardless of their partner's skill. In third-party collaborative tasks, 5-year-olds assign the more skilled partner the challenging question. Our work here demonstrates that young children hold an early comprehension of strategic collaboration that is subject to self-serving biases.

In another recently completed study, 5-year-old children were shown a collection of three dots and told that they are together called a "toma." They were then shown collections of between 15 and 63 dots and asked how many tomas they saw. Incredibly - and despite the fact that not all of the children in our sample were even familiar with high number words like "sixty-three" - they responded that they could see about "five tomas" when they were shown 15 dots, about "twenty-one tomas" for 63, and so on. Children intuitively divided 63 dots by 3 (the "toma") to arrive at the correct answer, despite having no formal education in division.

INFANT STUDIES CENTRE

The UBC Infant Studies Centre, directed by Dr. Janet Werker, investigates language learning and development in infants across the first years of life. This past year has been one of transition, and we are very excited to once again be inviting families back to the centre to participate in in-person research!

We recently completed an exciting project looking at monolingual and bilingual toddlers' word-learning strategies. While there are differences in the language monolingual and bilinguals hear, we also know that word learning often occurs in face-to-face interactions, and that there is speech information in talking faces. Thus we were curious if being able to see lip movements might help both monolingual and bilingual toddlers remember newly learned words.

To answer this question, Postdoctoral Fellow (and now Assistant Professor at Dalhousie) Dr. Drew Weatherhead tested toddlers' ability to remember newly learned word-label pairs with and without seeing visual lip movements. Twenty-four-month-old bilingual and monolingual toddlers saw videos of unfamiliar objects and either heard or heard and saw someone

producing novel words. The results revealed that despite some differences, both bilingual and monolingual babies better remembered the newly learned words when lip movement could be seen!

This study showed that even though bilingual and monolingual babies have different language experiences, both are able to use rich visual speech information to learn new words! Watching your face helps them even in word learning! If you would like to read more about this exciting research, visit this website (<https://www.mdpi.com/2076-3425/11/1/114>) to access the recently published article.

CENTRE FOR INFANT COGNITION

The Centre for Infant Cognition, directed by Dr. J. Kiley Hamlin, explores the early origins of social and moral thought from a developmental perspective in infants, toddlers, and preschoolers. Particularly, we explore the tendency to judge individuals' actions as good or bad, as deserving of reward or punishment, and as morally praiseworthy or blameworthy, as well as developing capacities to think about others' mental states.

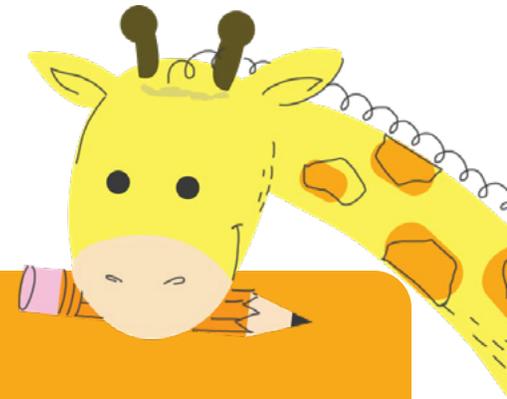
Two years ago, we started a long-term research project which looks at infants' social development from birth until the third year of life. Every few months, we continue to invite families to visit our Centre or to meet with us online for puppet shows and engaging activities that allow us to further understand how infants' early capabilities and environmental influences work in conjunction to produce early social and moral thinking and behaviour. We have been extremely lucky to maintain active data collection



throughout the pandemic; approximately 300 families are currently participating, and we are so thankful for their generous support! We are still recruiting infants who are 6-months-old and under for this project, so if you or someone you know is interested in participating, please email us at ubcbaby@psych.ubc.ca for more information.

In addition to this project, we now conduct a number of our studies online -- during the pandemic and have had over 500 families participate. These studies are ongoing, but we are

excited to see the results of online data collection and how it compares with in-person research. As of September 2021, we have fully re-opened our Centre and have resumed several additional in-person studies that were placed on hold at the start of the pandemic. We are excited to finish up ongoing studies and to start new ones!



WONDER KIDS!

Our 2022 virtual talk series

During the Fall of 2021, we launched a new Wonder Kids series, Ask A Developmental Psychologist! This series features a monthly Q&A session with the directors of the EDRG, where you can ask them all your questions on child development. We invite you to join the conversation on language, learning, and social development!

Date	Speaker	Topic
October 28, 2021 8pm	Dr. Kiley Hamlin	Social and moral development in infants and toddlers
November 18, 2021 8pm	Dr. Janet Werker	Language acquisition in monolingual and bilingual infants and toddlers
January 29, 2022 1pm	Dr. Susan Birch	What children know about the mind
February 26, 2022 1pm	Dr. Darko Odic	Early math education
March 31, 2022 8pm	Dr. Andrew Baron	Infants and children's understanding of social groups and social dominance
April 21, 2022, 8pm	Dr. Lauren Emberson	Infant perception

You can visit our website for event details and to RSVP: <https://edrg.psych.ubc.ca/events>

You can also watch the recordings of all our past Wonder Kids talks on our website: <https://edrg.psych.ubc.ca/about-us/past-events/>

Thank You Families!

We want to thank all the wonderful families that have participated in our research throughout the years! Our work would not be possible without continuous support from our community.

Now more than ever, we need your help in reaching more junior scientists!

Do you have a friend or family member with an infant or young child who would love to participate in our exciting research studies? Yes? Then please share our website or social media pages with them.

Due to the impact of COVID-19 on our usual recruitment efforts, we are actively seeking new infants and children (from birth through 12 years) whose families might not have heard about us yet. Several of our research centres focus specifically on the first 2 years of life, whereas others study older children. Any effort in helping us reach more families will have a significant impact on our research, and we would be deeply grateful to you if you are able to help us spread the word!

If you're also part of a parent-focused community group or institution and think parents in your community would love to join in on the fun too, please reach out to us. We'd love to work with you to reach more families.

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