# THE UNIVERSITY OF Center for Early CHICAGO Childhood Research Newsletter



### **Research Updates**

Infants develop early understanding of social nature of food
Children pay attention to hands
Children use a person's language to predict his or her likely actions.
Early cultural learning in US and Mayan infants
How does a child's understanding of intention influence other social skills?
Infant brain activity predicts social development 2.5 years later
Parent language and child vocabulary: A naturalistic observation.
Learning to think about multiple perspectives
How does moving your hands help you learn math?
Stereotype threat impacts math learning
Do children consider the "spirit of the law" when making moral judgments?
Is the sharing of more resources a cue children use to predict friendship?
How do children categorize biracial faces?

## Calling all 9-month-olds!

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The Infant Learning & Development Lab has a new EEG study examining the brain activity of infants as they watch other people move an object. If you have a child who is 0-9 months old, we would love to hear from you!

January 2017

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## Who We Are

The Center for Early Childhood Research consists of several researchers in the Department of Psychology at the University of Chicago that share an interest in understanding how infants and children learn and develop. We investigate motor development, social understanding, language acquisition, early math and science learning, and more. Research methods include experimental studies, naturalistic observations, eye-tracking, and recording brain activity.

## Laboratory Directors



#### Jean Decety

Irving B. Harris Distinguished Service Professor of Psychology and Psychiatry Child NeuroSuite, childneurosuite.org



#### Susan Goldin-Meadow

Beardsley Ruml Distinguished Service Professor of Psychology and Comparative Human Development; Goldin-Meadow Lab, Goldin-Meadow-Lab.uchicago.edu



#### Katherine Kinzler

Associate Professor of Psychology and Human Development, Cornell University; Research Associate, Development of Social

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### Susan Levine

Rebecca Anne Boylan Professor in Education and Society; Cognitive Development Lab, cogdevlab.uchicago.edu



#### Lindsey Richland

Associate Professor of Comparative Human Development; Learning Lab Learninglab.uchicago.edu



#### Alex Shaw

Assistant Professor of Psychology Developmental Investigations of Behavior and Strategy Lab, dibslab.uchicago.edu



#### Amanda Woodward

William S. Gray Distinguished Service Professor of Psychology, Infant Learning & Development Lab, woodwardlab.uchicago.edu



### Daniel Yurovsky

Assistant Professor of Psychology Communication and Learning Lab, callab.uchicago.edu

## Our labs in the media

Babies' brains may process social thinking via motor systems. Psychology Today, April 2016 (Infant Learning & Development Lab)

**Babies watching people eat.** New York Times, August 2016 (DCS & Infant Learning & Development Labs)

When and why do children give others the bigger piece of the pie? Medical Xpress, Nov. 2016 (DIBS Lab)

<u>Habituation</u> (Response to the Edge Annual Question), Edge, January 2017 (DCS Lab)

Brain waves predict which kids will share. Futurity. December 19, 2014 (Child NeuroSuite)

#### A Small Dose of Bedtime Math Goes a Long Way.

Brookings Institute - Skills for Changing World Blog, May 24, 2016 (Cognitive Development Lab)

#### Have you recently moved?

Do you have a new baby?

## Do you have friends who might be interested in our program?

We are always recruiting new participants. We have a wide range of studies for infants and children between the ages of 5-months through 11-years-old. Please pass our contact info on or sign up online:

Email: babylab@uchicago.edu Phone: (773) 834-9791 Website: <u>babylab.uchicago.edu</u>



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## **Congratulations to our Graduates!**



**Eliza Congdon** has accepted a position as Assistant Professor of Developmental Psychology at Bucknell University beginning Fall 2017. She is currently a Visiting Assistant Professor of Developmental Psychology at Williams College. Her research focuses on how elementary school-aged

children learn new ideas and concepts by interacting with their environments through actions and gestures, primarily in the domain of mathematics. Your 3rd or 4th grader may have participated in a math eye-tracking study she collaborated on with Miriam and Elizabeth (see below). The findings from their study were presented at the <u>Annual Conference of the Cognitive Science Society.</u>

**Courtney Filippi** graduated in June 2016 and is now a postdoctoral researcher at the National Institute of Mental Health Section on Development and Affective Neuroscience. Her doctoral research identified a direct link between neural responses



from the motor system and overt so-

cial behavior in infants. Her research has recently been published in <u>Psychological Science</u> and featured in <u>EurekAlert!</u> and <u>Psychology Today.</u>



**Zoe Liberman** is now an Assistant Professor at the University of California, Santa Barbara. In her doctoral dissertation, she demonstrated that even 1-year-old babies expect people to share food preferences, unless those people belong to different groups, suggesting that human rea-

soning about food preferences is fundamentally social. Her research has recently been published in the <u>Proceedings of the National Academy of Sciences</u> and profiled in the <u>New York Times</u>.

**Miriam Novack** graduated in June 2016 and is now a postdoctoral fellow at Northwestern University in Evanston. Much of her research investigates how humans learn new ideas, and how gesture (i.e., representational hand movements) affects learning processes. Her research on



adult gesture has recently been published in <u>Psychonomic</u> <u>Bulletin & Review</u> and in <u>Cognition</u>. Her research comparing adult gesture and child gesture is forthcoming.

## How do you know what my baby is thinking?

While older children can tell us what they are thinking, for younger children we have to rely on other methods to figure out what is going on in their brains. One exciting method we use is EEG (electroencephalogram). EEG is a passive, baby-friendly method to record brain activity. The child wears a special EEG hat like the one in the pictures. The hat looks like a stretchy net and has soft sponges which are soaked in saline solution and baby shampoo. The hat allows us to pick up the brain waves produced by the child's brain cells. EEG is an established method used in many research centers all over the world, and is a successful way of getting to know more about the development of babies and young children.





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## Welcome to the Communication and Learning (CaL) Lab!

The Communication and Learning Lab (CaLLab) is the newest lab in the Center for Early Childhood Research. It is led by Dr. Dan Yurovsky, who joined the department in 2016. Dr. Yurovsky received his PhD in Cognitive Science at Indiana University, and was a postdoctoral Fellow at Stanford University.

Research in CaLLab is focused on understanding how we learn from the people around us, and especially how children learn language. Children learn the meanings of thousands of words by the time they can run down the street. Yet, these same children continuously forget where they left their hats and coats. Work in this lab is aimed at figuring out this puzzle by trying to understand how parents and children work together to make rapid learning happen. To this end, the lab pursues three main questions:





**Experimental Studi** 

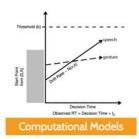
#### 1. What are the basic mechanisms children (and adults) bring to learning language?

When we hear a new word, how do we know what it means? Children can use a stunning variety of information to solve this problem: Where the speaker is looking, what kinds of words this new word sounds like, what they have been talking about recently, etc.

We design games for children to play that help us understand how they use different kinds of information, and also how their learning changes as they get older.

#### 2. What do children's environments look and sound like?

A powerful source of information about the meanings of words is the so-called "statistics" of their use. Because speakers often communicate about the things around them, learners can discover the meanings by keeping track of the different contexts where they hear a new word (e.g. "ball" might frequently be heard while playing with small round objects). We use audio and video recordings of interactions between parents and children to try to understand what children have available to learn from.





#### 3. Can the combination of learning mechanisms and environment predict the learning outcomes we observe?

In our third line of work, we use computational models to combine what we know about how children learn with what we know about the environment they learn from. We can use these models to make predictions about how quickly children will learn, which kinds of words they should learn first, and how learning will vary in different environments. These models can help us explain the tremendous variability in learning across children, and to figure out what questions to ask next!

> Communication and Learning (CaL) Lab Dr. Dan Yurovsky callab.uchicago.edu





## Infants develop early understanding of social nature of food

Did your child participate in a study where he/she saw two people talk about food? Infants develop expectations about what people prefer to eat, providing early evidence of the social nature through which humans understand food. Published in June in the *Proceedings of the National Academy of Sciences*, our study found that infants expect

people to share food preferences unless they belong to different social groups. Their understanding changes when it comes to disgust toward a food, with infants expecting such reactions to transcend the boundaries of social groups. "Even before infants appear to make smart choices about what substances to ingest, they form nuanced expectations that food preferences are fundamentally linked to social groups and social identity," said Zoe Liberman, a University of California, Santa Barbara assistant professor who completed the research while a UChicago doctoral student.

In past studies researchers found infants could watch what other people ate in order to learn whether a food was edible. The new study looks beyond learning objective properties about foods to examine the expectations infants hold around who will agree or disagree on food preferences.

The study has important implications for policymakers working on public health, particularly obesity. The findings underscore the need to look beyond just teaching children which foods are healthy when combating obesity to focus on the social nature of decisions surrounding what to eat. "For humans, food choice is a deeply social and cultural affair. These new findings show that infants are tuning into critical information for understanding the social world, as well as for reasoning about food," said Amanda L. Woodward, the William S. Gray Professor of Psychology at the University of Chicago. Additional authors of the study were Kathleen R. Sullivan, social science analyst at the U.S. Department of Health and Human Services; and Katherine Kinzler, associate professor at Cornell University.

In conducting the study, researchers used a method based on the duration infants look to determine their expectations: Infants tend to look longer at events they find relatively more surprising. For example, monolingual infants in the study consistently looked longer when actors who spoke the same language disagreed on their food choice. The same was true when actors who spoke different languages agreed on their food choice. The reactions suggest monolingual infants expected food preferences to be consistent within a single linguistic group, but not necessarily the same across groups.

Excerpted from Uchicago News article (https://news.uchicago.edu/article/2016/08/22/infants-develop-early-understanding-social-nature-food)

> Infant Learning & Development Lab Dr. Amanda Woodward woodwardlab.uchicago.edu

## Children pay attention to hands

When children listen to an adult they not only pay attention to the words that the person says, but also pay attention to what the person's hands are doing. For example, in a collaborative study between the Infant Learning and Development Laboratory and the Goldin-Meadow Laboratory, we found that 2.5-year-olds pay attention to cues in someone's hand in order to infer what kind of object the person wants. Children were shown two objects that were the same kind, but different sizes - like a small truck and a large truck. An experimenter would then reach for the trucks, using either a wide open grasp, or a narrow grasp (like she was reaching for a cheerio).



We discovered that by 2.5-years, children are experts at making sense of these reaching cues. They easily gave the experimenter the large truck when she used an large grasp, and a small truck when she used a small grasp. However,





if the experimenter used her hands to gesture about the trucks, holding her large grasp or small grasp in front of her chest instead of reaching out toward the objects, children had a much harder time knowing which toy the experimenter wanted. This suggests that some kinds of actions, like reaching toward object, may be easier for young children to make sense of, than other types of actions like gesturing about objects.

Infant Learning & Development Lab

## Children use a person's language to predict his or her likely actions

Past developmental psychology research shows that children prefer people who speak their own language compared to people who speak a foreign language. That is, infants are more likely to approach native speakers, and toddlers and older children are more likely to imitate and learn from native speakers. Here, we asked whether children also use a person's language to form expectations about that person's actions and character. Specifically, Nathan Vasquez conducted an honor's thesis project with children (between 3 and 11-years old) at the Museum of Science and Industry investigating whether children expected native speakers and foreign speakers to perform different types of actions.

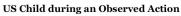
In the study participants saw pictures of two children side by side on a computer screen and were shown that one child was an English Speaker (native language) and the other was a French Speaker (foreign language). Then, participants were told that one of the children did an action (e.g. "shared cookies with his friends") and were asked to point to which child they thought did that action. The actions varied in terms of whether they were moral (involved harming or helping), or were instead about non-harm based social conventions (e.g. being quiet or noisy in the library).

The results suggest that participants expected native speakers to be more likely than foreign speakers to follow social conventions, but did not expect native speakers to be more likely than foreign speakers to be nice or helpful. This difference, between reasoning about conventional and moral violations, is important because it shows that children do not generally believe that native speakers are better or nicer people, but they do understand that people in their social group (native speakers) are more obligated to follow the social groups rules and conventions.

Infant Learning & Development Lab

## Early cultural learning in US and Mayan infants

Child-directed interactions, one-on-one interactions that directly engage a child, are thought to hold special value for early cultural learning, such as learning that we use a fork to eat food, not to comb our hair. These interactions contain cues (direct eye gaze, infant directed speech, etc.) that let the child know the information they are about to receive is important. Child-directed interactions are thought to be universal and essential for this early cultural learning; however, there are many cultures around the world where children are rarely directly addressed by adults. For example, on the Yucatec Mayan peninsula, children spend most of their time with similarly aged peers and learn through observational interactions.





Mayan Child during an Observed Action



In an ongoing study, we are coding the natobservations uralistic of 18-month-old US and Mayan infants to better understand the types of interactions that naturally occur in their environment. We videotaped infants for one hour in their home and then coded when people in their environment performed an action and whether that action was 1) directed to the child or 2) an action the child could

observe. Initial results indicate that while US infants see higher base rates of actions, the proportion of directed actions and observed actions is the same across cultures, with observed actions accounting for over 85% of input. These findings call into question the importance of child-directed interactions in early cultural learning as many learning opportunities occur outside of these interactions.

Infant Learning & Development Lab





## How does a child's understanding of intention influence other social skills?



We are currently launching a new project that will help us learn about infants' social-cognitive abilities. We are curious about how the social abilities that rapidly emerge in children around 18 months relate to each other. From early on in development, children think about

other people's intentions or goals through observing their actions. In this study, we are examining how children's understanding of other people's intentions may influence other social abilities that start to develop around the same age. We will combine eye-tracking and observational data from social interactions to better understand how understanding intentions relates to other social behaviors.

Infant Learning and Development Lab

## Infant brain activity predicts social development 2.5 years later

Talking about and reasoning about the thoughts, intentions, and beliefs that guide behavior is a hallmark of social cognition. However, to date, it remains unclear what mechanisms support the development of this important social skill. In a new research project, we investigate what brain processes support the continuous development of social cognition. To do so, we contacted families who brought their baby in for a study at 7-months of age to follow-up about their child's development 2.5 years later.

Originally, when we looked at the 7-month brain wave data, we found that in infancy, brain waves over the motor cortex predicted children's imitative behavior during a grapsing task. In this new project, we found that infant's brain wave data predicted their social development at three years. Our results suggest that brain activity in the infant sensorimotor system were linked to changes in children's ability to plan, organize and complete tasks (i.e., the development of what we call executive functioning abilities). Interestingly, this link also predicted children's ability to reason about others' mental states. Together these results suggest that the development of the motor system in infancy may support the development of planning skills later in life and these planning skills may further support the development of social skills.

Infant Learning & Development Lab

## Parent language and child vocabulary: A naturalistic observation.

It is widely believed that reading to preschool children promotes their language and literacy skills. Yet, research findings have been conflicting regarding whether early parent-child book reading is a unique predictor of children's later outcomes. To address this question, we asked whether parent-child book reading interactions between 1 and 2.5 years-of-age predict elementary school language and literacy outcomes. We videotaped naturalistically occuring parent-child book reading interactions that take place in children's homes.

Our results showed that the amount of parent-child book reading interactions predicts children's later receptive vocabulary, reading comprehension, and internal motivation to read. The results relations remained even after we accounted for differences in how much parents talk overall, chlidren's language skill as well as parent education and income. Book-reading interactions did not predict children's decoding skill, external motivation (e.g. reading for an award, or math skill). Importantly, we also find that parent language that occurs during book reading interactions is more sophisticated than parent language outside book reading interactions in terms of language complexity, providing a possible mechanism for the positive effects of early parent-child book reading.

Overall, results suggest that interventions encouraging parents' talk around books may be easier and more manageable than increasing the richness of children's language input by attempting to change the content and complexity of parents' spontaneous talk. These rich interactions might better prepare children for later challenges of school.

> Cognitive Development Lab Dr. Susan Levine cogdevlab.uchicago.edu





## Learning to think about multiple perspectives

An important way in which children develop throughout the preschool years is learning to think about situations from the perspectives of different people. One way of communicating these different perspectives is using passive voice (the sheep was tickled by the goat) as opposed to using active voice (the goat tickled the sheep). A common pattern across the languages of the world is that children learn passive voice later than active voice.



One reason for this difference might be that children have trouble thinking about a situation from the perspective of someone being acted upon (the sheep), rather than the perspective of someone acting (the goat). We brought children into the center and asked them to describe videos - we measured their use of passive voice as well as where they were looking while they watched the video. This study is still ongoing, but our results so far suggest that children do in fact have more difficulty than adults in thinking about multiple perspectives.

> Goldin-Meadow Lab Dr. Susan Goldin-Meadow Goldin-Meadow-Lab.uchicago.edu

## How does moving your hands help you learn math?

The Math Learning study is investigating how teaching children to move their hands helps them learn a new mathematical concept. We are extending past research which suggests that asking children to produce specific gestures helps them learn better than when given verbal instruction alone. In particular, we are using a belt that measures autonomic nervous system activity to see if there are differences in heart rate variability and other physiological measures between children who do and do not learn from gesture instruction.



Participants wear this physio belt around their chest to measure their heart rate during the study.

Past work has found that children who express different strategies for solving math problems in their speech and co-speech gestures are more likely to learn how to solve a newkind of math problem from a subsequent lesson than children whose gestures and speech convey the same information. Through measuring physiological activity while children talk about math problems, we will be able to better understand the cognitive and biological processes underlying this enhanced readiness to learn in such gesture-speech "mismatchers." We are also investigating whether gesture instruction might be particularly beneficial for children with certain spatial abilities or attitudes about math.

This study is still ongoing, so if your child is 7-9 years old and interested in participating, please let us know at ucspatiallearning@gmail.com!

Goldin-Meadow Lab

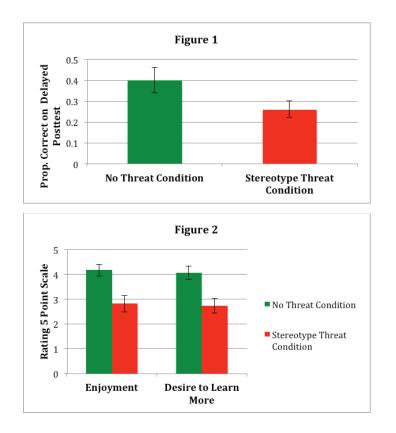
#### Stereotype threat impacts math learning

Analogical math instruction that asks students to compare and contrast different ways of solving a problem promotes deep understanding and knowledge that can be applied across contexts. But engaging with this type of instruction places high demands on students' cognitive resources, including working memory. Students must hold both solution strategies in their working memory and work to draw inferences and connections between the two strategies! When students don't have adequate cognitive resources available during this type of instruction, they will instead focus on surface features and pure similarity, resulting in less flexible and transferrable learning. Stressors including stress and anxiety can tax cognitive resources, making it more difficult to learn from analogical instruction. One such stressor that can be present in classroom contexts and may interfere with learning from analogical instruction is stereotype threat- the fear of confirming a negative stereotype about oneself or one's group.





In this study, we tested how experiencing stereotype threat during analogical math instruction impacted 5th grade students attending two predominantly African American schools in the Chicago area. We found that students who were asked to identify their race prior to instruction retained less learning over time (Figure 1), enjoyed the lesson less, and reported a diminished desired to learn more (Figure 2).



This is one of the first studies to address the impact of stereotype threat in learning, as opposed to testing, contexts. While stereotype threat has been well documented to harm test performance, the finding that its effects can extend to initial learning suggests that stereotype threat's contribution to achievement gaps may be greatly underestimated, and that research that will help to better understand and ameliorate these effects is needed.

> Learning Lab Dr. Lindsey Richland Learninglab.uchicago.edu

## Do children consider the "spirit of the law" when making moral judgments?

In one famous episode of Sesame Street, Big Bird perfectly portrays the question that inspired this project. Big Bird wants to play with his friend Maria, but Maria is busy working. Bird Bird approaches Maria and pretends his teddy bear is a fire truck, making loud noises and disrupting Maria's work. When Maria asks him nicely to stop, Big Bird stops and agrees not to play fire truck anymore. Almost immediately, Big Bird disrupts Maria again, this time pretending his bear is a racing car. Maria exclaims, "Big Bird, I asked you to stop doing that!" Big Bird immediately replies that she had asked him to stop playing "fire truck" not "racing car." Even though it was the noise that bothered Maria, Big Bird felt he had not violated Maria's request, per se, because he was now making racecar noises, not fire truck noises.

In this case, Big Bird did not break the "letter" of the rule that Maria had instituted—"Do not play fire truck"—but he did violate the "spirit" of (or intentions behind) the rule-"Do not disrupt Maria while she is working." Beyond the T.V. screen, in court rooms across the country, juries and judges are asked to evaluate law-breakers by drawing on knowledge of the law in question, as well as whether the intention behind the law was violated. Making these distinctions is critical for a developed understanding of the rules that exist in human society, but it is unclear how children develop this ability. To begin addressing this, researchers Isabel Wellbery, Jessica Bregant, and Dr. Alex Shaw considered times when it may be acceptable to break a rule (the strict "letter of a rule") if this does not violate the reason the rule was created (the "spirit of the rule"). For example, imagine there is a rule in a local park that no one is allowed to drive electric vehicles. Technically, a child driving a toy electric car in the park would break this rule. However, as adults we think about rules in a more complex way and understand that in this instance the violation should likely not be punished and the action is less bad than an adult driving a motorized scooter.

To investigate if and when children begin to believe it is less wrong to violate the letter of a rule if one does not violate the rule's spirit, the research team developed a task where children were shown a short video about a boy, Timmy, breaking a rule (see picture). The rule was that children were only allowed to take four books home from the library. However, the intention behind the rule differed.

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Half the time, the reason was because there would not be enough books left for other students. The other half of the time, the reason was because more than four books is a lot to carry, and so students who take more may drop them and the books could become dirty. Timmy breaks the letter of the rule and takes six books home from school, four for himself and two for a classmate who is at home, sick. Half the time, Timmy's action breaks the letter of the rule ("Do not take more than four book home"), but not the spirit, because since Timmy's classmate is sick at home, there are extra books at school and still plenty of books for other students. The other half of the time, Timmy's action violates both the letter and the spirit of the rule, as the books may still get dirty when Timmy takes too many.

Presenting children with these two cases, the researchers found that by age 4, children recognized the rule had technically been broken in both cases, but they were much less likely to make negative moral evaluations of Timmy for violating the rule if he only broke the letter of the rule, not the spirit of the rule. The researchers also found that children increasingly differentiate between violations of the letter of a rule and violations of the spirit of a rule as they mature.

> Developmental Investigations of Behavior and Strategy (DIBS) Lab Dr. Alex Shaw dibslab.uchicago.edu

## Is the sharing of more resources a cue children use to predict friendship?

In the DIBS Lab, researchers investigate the factors children consider when forming expectations about who is friends with whom in their communities. As adults we pick up on many signals and use them when thinking about whether individuals in our environment are friends: how much time the people spend together, how much they share with each other, how similar they are, how often they agree—just to name a few. Do children also use these cues to decide who is more likely to be friends, and which of these features do children think is most indicative of friendship?

In this project, Dr. Alex Shaw and Dr. Zoe Liberman wondered whether children infer friendship based on how people share, and specifically, whether they expect that a distributor who gives one person more resources than another is better friends with the recipient of the spoils. To ask the question, children were told a short story about cartoon characters, where a distributor had five erasers that he could share with two other characters. First, the distributor gave equally, sharing two erasers with each character. Then, he gave the final eraser to one character over the other so that in the end one had three erasers and the other only had two. When asked who the distributor was better friends with, children between 4 and 9-years old chose the person who had received more erasers, suggesting they use unequal treatment as an indication of friendship.



Image of the characters used in the experiment. The top character distributed five erasers among the two characters below.

Interestingly, older children, between 7 and 9-years old, cared about the method that created the inequity, while younger children in this study did not. Although 4 to 6-year olds inferred friendship between the distributor and the recipient of more erasers when the distributor intentionally chose to give

the recipient more and when the recipient ended up with more erasers based on a random procedure, such as rolling a fair die, 7 to 9 year olds did not infer friendship in the latter impartial case. Taken together, this research suggests that children can use resource distribution to make inferences about patterns of friendship, and that over time children become more sophisticated when reasoning about which features of the distribution, such as partiality versus impartiality, are important. In future studies, Dr. Liberman and Dr. Shaw will be investigating what other cues children use to make predictions about friendship.

DIBS Lab





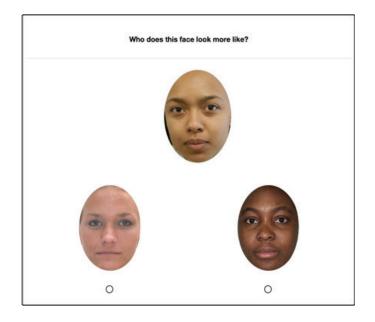
## How do children categorize biracial faces?

In the DSC Lab, researchers investigate how children categorize the world around them into different groups. Humans use many criteria to think about the communities we belong to; for instance, gender, age, language, and race are all social categories humans perceive from a very young age and consider when classifying the world. Lately, DSC Lab researchers have been especially interested in the intersection of these categories and have studied how belonging to multiple categories affects development. In past research, for example, researchers from the DSC lab have explored questions with children who grow up in multilingual homes or are regularly exposed to multiple languages. As it turns out, exposure to multiple languages improves children's perspective-taking abilities (for a New York Times article on this http://www.nytimes.com/2016/03/13/opinion/ project: sunday/the-superior-social-skills-of-bilinguals.html?\_r=1). Also, in last year's newsletter, we discussed a project from the DSC Lab which revealed that thinking about their multiple social identities aids children's flexible thinking and problem-solving abilities.

Dr. Gaither and Dr. Kinzler are particularly interested in how children perceive people who belong to more than one racial group.

This past year, they explored how children from different racial backgrounds categorize the faces of people who are Black/White biracial. Prior work had shown that White adults identify Black/White biracial faces more often as Black, but until now very little work had considered how children perceive these faces, and also how children and parents from other racial groups consider these faces, too.

In this task, DSC Lab researchers showed 3-to 6-year-old children and their parents pictures of biracial Black/White faces, and then they asked parents and children individually who the faces looked more like: a Black target face or a White target face (see picture). Dr. Gaither and Dr. Kinzler found that White children and their parents typically categorize the biracial faces as Black, but Black children and parents tend to categorize these faces as White. Children from mixed-race families appear not to show a preference



for seeing these faces as either White or Black, which suggests that the social perceptions of children from mixedrace backgrounds may vary greatly.

This was one of the very first projects to investigate how children of different backgrounds categorize biracial faces, and so Dr. Gaither and Dr. Kinzler have a lot of work ahead of them as they continue investigating how biracial social categorizations vary across groups and environments. Dr. Gaither will be continuing this line of work in her new lab at Duke University!

> Development of Social Cognition (DSC) Lab Dr. Katherine Kinzler dsclab.uchicago.edu

### **Calendar of Events**

Members of the Center for Early Childhood Research presented findings at the following conferences in 2016:

- International Congress on Infant Studies (ICIS), New Orleans, May 26-28, 2016
- International Society for Gesture Studies (ISGS), Paris, July 18-22, 2016
- Cognitive Science Society, Philadelphia, August 10-13, 2016
- Boston University Conference on Language Development (BUCLD), Boston, November 4-6, 2016

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### Postdocs coming...

## What is a postdoc?

You may have heard some of our researchers describe themselves as a postdoc during one of your visits. A postdoc, or postdoctoral scholar, is someone who has completed his or her

PhD and is now spending some time doing research under the supervision and mentorship of a more senior researcher as a career-building step on the path to a more permanent position. Postdoctoral researchers play an important role in spearheading research activity in the US.

We are excited to welcome Marlene Meyer, a new postdoc in the Infant Learning and Development Lab!



Marlene Meyer recently moved to Chicago from the Donders Institute for Brain Cognition and Behavior at Radboud University in the Netherlands. She is continuing a line of research using EEG, a child-friendly method used to measure brain activity of babies and young children. In her

research she studies the brain activity of babies when they observe or play with other people. Now she will look into how learning new actions can change babies' brain activity when they observe others. This will give us insights into how babies learn to understand other people.

### ...and going

Congratulations to recent postdocs who have moved on to tenure-track faculty positions!

**Elizabeth Wakefield** graduated from Indiana University and spent two years at the University of Chicago as a postdoc. She is now Assistant Professor of Developmental and Neuroscience at Loyola University. She and Miriam Novack collaborated on a study examining how the actions we produce and ob-



serve every day have the power to help us learn and change the way we think.



**Sarah Gaither** has accepted a position as Assistant Professor in the Department of Psychology & Neuroscience at Duke University. She graduated from Tufts University and then spent 2 years at the University of Chicago as a postdoc. Her research focuses on how a person's social

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identities and experiences across the lifespan motivate their social perceptions and behaviors in diverse settings. You and your elementary schooler may have participated in her study on biracial social categorizations!

### Thank you for your participation!

You and your child's contribution to our work is vital, and we appreciate every time you visit our labs. Thank you so much for your continued support of our research program!

#### **Questions?**

Please contact us or find more information on our website: babylab.uchicago.edu

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