We’d like to start by expressing our gratitude to everyone who has helped us with our research! Whether you have brought your child(ren) in to participate in a study— or many studies—or have helped spread the word about our work, we couldn’t have done it without you! You are the reason we are able to continue learning and discovering what children know, and the reason our work has been featured in outlets like the New York Times, Time Magazine, and Good Morning America. Thank you!

Now that you have taken the time to make our research possible, we would like to take the time to update you on the progress of our studies.

Research that travels!

Some of our newest research findings were presented at the 2017 Cognitive Development Society Meeting in Portland Oregon, and at the 2018 International Conference for Infant Studies in Philadelphia. Lab manager Alex Silver presented her research on infants’ decision making. Graduate student Jasmin Perez shared her work on how infants can use surprise to learn about new objects. Finally, newly graduated Dr. Jenny Wang presented her findings on infants’ developing counting abilities!

Anyone can be a math person!

Many people think of math as an ability one is born with, something inherently fixed and unchanging. For example, we often hear people say things like, “I’m just not a math person.” It seems that people talk about math in a way that emphasizes being born good or bad at it, rather than it being something you can practice and improve at. In the Beliefs about Math Performance Study, we want to know whether the way we talk about the origin of math and other abilities influences children’s actual math performance. So far, we find that children who hear about the importance of practicing math later score higher on a math test than children who hear about the importance of just being born good at math—and this effect was strongest in children who reported having some anxiety about math and math-related situations. Our findings suggest that some messages—even messages about excelling in math—can hurt children’s math performance when they emphasize innate skill or just being born good at it. Thus, even well-intentioned stories (think, for example, of the recent movie “Hidden Figures”) may have negative consequences for the math achievement of some children. But adults can help by emphasizing the importance of practicing and working hard!

New scientists!

The Lab for Child Development welcomed a lot of new researchers this year. Our two new graduate students, Emily Sanford and Qiong Cao are interested in how children represent number and how they use these representations to make inferences and decisions. Dr. Nicolò Cesana Arlotti also joined the lab as a post-doctoral fellow. He is looking forward to exploring how infants use logical reasoning. The lab also welcomed a new lab manager, Alexis Smith, who is curious about how infants’ interactions with their parents and siblings shape their social and emotional development. Interested in learning more about the new studies going on? Visit us at labforchilddevelopment.com.
Can counting help babies remember more?

Like adults, babies have a limited capacity to remember things. They can remember up to 3 hidden objects, but they fail to remember 4 or more. Can counting help babies remember more objects? Although children do not understand the meanings of individual count words until roughly preschool, much younger babies often are exposed to the counting routine at home. Do babies recognize that this counting routine is “about” number? To find out, we play a hide-and-seek game with 14- and 18-month-olds, where we hide a number of toys in a box. Sometimes the toys were counted; other times not. So far we are finding that babies were better able to remember 4 hidden toys when the toys were counted aloud before being hidden, compared to when the toys were pointed out but not counted. This suggests that not long after their first birthdays, many babies already recognize that counting refers to quantities—seeing counting encourages babies to pay attention to number. Pretty cool!

Where do children think abilities come from?

Research in psychology and education has shown that different abilities are acquired in different ways. Some abilities (like the ability to see) are present at birth and don’t require learning. Other abilities, like reading, require learning and instruction. In this study, we want to know what children believe about the origin of different abilities and traits in people and animals. We show children pictures of different people and animals demonstrating different kinds of abilities. Then we ask children where they think these abilities come from. Our question is whether children share the same kind of intuitions about different abilities as adults do. We have found so far that, like adults, 5- to 8-year-old children tend to think that human knowledge relies on learning and experience, much more so than animal knowledge or human personality traits. This study tells us that children have an intuitive understanding of the origins of the mind, and these intuitions differ depending on the specific aspect of mind or type of mind.

 Surprise! How did that happen?
 Babies want to know!

Research shows that babies look longer at events that are surprising than events that are expected. And previous research from our lab shows that they not only look longer at surprising events, but they also learn new information better following surprising events, and test the properties of objects involved in surprising events (like banging a ball against a surface after having seen it go through a solid wall)!

In our Expectation Exploration Studies, we want to know more about how babies and older children explore and learn about objects that are involved in different kinds of surprising events—for example, events in which an object “magically” changes its identity, like a shoe turning into a duck. One group of 12-14-month-old babies saw something expected (a toy shoe going into and being emptied out of a bucket), and one group saw something surprising (like a toy shoe going into the bucket, but then emerging as a duck). We then gave babies an opportunity to play with the shoe and the bucket. We found that unlike babies who saw the shoe go into and come out of the bucket, babies who saw the surprising identity change explored the bucket more, and repeatedly put the shoe into the bucket and overturned it, as if to recreate the surprising event or to figure out how it happened!

Come Visit Us Again Soon!

Thank you for your participation in our research! We hope you come back to visit us soon! If you’d like to see if your child(ren) are eligible for any of our new studies you can give us a call at (410) 516-6068 or email us at infant.research@jhu.edu. We also have studies at the Maryland Science Center in the Inner Harbor for children 4 and older. Stop by and visit us on Saturday afternoons!