Sometime during the past two years, your child participated in a study at our lab. In this newsletter, you can find descriptions of some of the experiments that have been published or that are still underway. These projects do not represent all our projects, and your child might have participated in something completely different. If you would like a copy of one of these or any of our published reports, you can download them at our website:

https://www.brown.edu/research/labs/causality-and-mind/home

Just click on the "Academic Publications" tab

Remember, our lab is able to contribute to scientific research because of good word of mouth. If you enjoyed your experience, please pass along our contact information to a friend. We would also love to hear from you if you would like to participate again! You can call us at (401) 863-3527 or email us at candmlab@gmail.com.

Thank you again for volunteering your and your child’s time!

Dr. David Sobel  
Professor of Cognitive Science and Psychology  
Cognitive, Linguistic and Psychological Sciences  
Brown University
Partners in Research

For over ten years, the Causality and Mind Lab at Brown University (CML) has collaborated with the Providence Children’s Museum (PCM) has provided researchers from the Causality and Mind Lab’s (CML) the opportunity to interact with and recruit families for studies at the Museum. CML and PCM solidified its partnership in 2010 and deemed it Mind Lab, with a joint mission to understand and support children’s and caregivers’ learning about learning. The next big step came in 2012, when CML and PCM were awarded a National Science Foundation (NSF) grant which included a museum-based study to explore children’s learning and behavior in the Museum’s exhibitions. This grant also created a cross-site museum researcher position and gave the Mind Lab a dedicated research space within the Museum. CML’s researchers now go to the Mind Lab space 4 times a week to recruit families to participate in ongoing studies and talk with them about the purpose of the CML’s work, while PCM shares related information with staff and visitors regarding children’s learning and development and implements research findings into their practice via exhibitions and trainings.

Together CML and PCM have raised over three million dollars to study children’s learning. This year, CML and PCM have embarked on their third NSF grant to examine how children engage in a museum visit, how this engagement relates to their conceptions of learning and how they see themselves as learners. To do this, study participants, ages 6 to 9, are asked to wear a GoPro camera to record their time playing the Museum’s exhibition ThinkSpace. These recordings provide researchers with videos documenting children’s perspective of their play. A researcher also wears a GoPro to capture the third-person perspective, noting any particular moment she believes learning may have taken place. After ten minutes of play, the researcher and participant move off the Museum floor to watch his/her first-person video. While watching, the participant is asked open-ended questions about what s/he was doing and thinking throughout her/his play and whether s/he believes s/he was learning throughout that play. The researcher concludes by asking the participant’s thoughts on what learning is and how it occurs. After all of this information is collected, it is taken back to the Lab and uploaded onto a secure server. First-person and third-person videos are then synced together so researchers can watch both perspectives while they start to analyze and code the data by categorizing what participants say and do in their play and throughout the questioning. Piloting for this project started this summer and data collection will continue throughout the next year. Stay tuned for the lab’s findings!

Read about research related to this collaboration (all available our website):

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Laura Stricker joined the Causality and Mind Lab and the Providence Children’s Museum as a Museum Researcher in March of 2018. In this cross-site position, she researches children’s learning and development in the museum setting. She holds a MA in Museums and Galleries in Education from the University College London’s Institute of Education and a BS in Human Development from SUNY Binghamton. Prior to this position, Laura worked as the Manager of Youth and Family Programs at the Bruce Museum, in Greenwich, CT, where she created engaging museum programming for the Bruce’s family visitors.
Sharing & Ownership

In the first few years of life, children show clear preferences for people who distribute resources fairly. Infants expect others to distribute resources equally and are more likely to reach for distributors who share equally versus unequally. As children mature, they begin to appreciate the role of that merit and social relations play in judgments about equity. For example, they give a larger resource to someone who worked harder and give more treats to a helper over a hinderer.

At the same time, children also learn about other important social norms that pertain to resources – especially ownership. Three-year-olds recognize that others place special value on things they own more than identical items that are not owned. Preschoolers also understand that giving an owned item is a legitimate transfer, but stealing is an illegitimate transfer. Despite extensive research on social factors concerning fair resource allocation, and a growing literature on ownership understanding, it is surprising that little is known about how children reason about fairness norms surrounding sharing resources that are owned. Adults have social norms about sharing owned items – no one expects anyone to share half of everything they own. We sought to examine when children come to recognize this social norm.

Our current project investigates children’s trust in social partners who share and distribute owned resources. In two experiments, four-year-olds received resources (smiley-face stickers) from animal characters who shared either half or less than half of their own resources (Exp. 1), or received equal resources from two characters who either owned or gained resources from a windfall (Exp. 2). After receiving resources, children participated in a trust task where the two animals gave advice about the location of a hidden prize. We were interested in whether young children would selectively choose to rely on the animal who was more generous because (a) they generously shared more resources, or (b) they generously shared an owned resource versus a distributed one. In Experiment 1, children trusted a partner who shared half of their owned stickers over one who shared none, but did not differ between a partner who shared half of their stickers (2/4) as opposed to one who just shared one sticker (1/4). Giving a little was enough to foster trust. Experiment 2 found that children trusted a partner who gave 1 out of 4 of their stickers more often than a partner who made an analogous distribution of 3 stickers for them and one sticker for the child. Giving is generous, even if it still creates inequity, but generating an uneven distribution is unfair.

This is among the first empirical evidence to show that young children evaluate distributors as a function of who owns the resources. Four-year-olds recognize that givers of owned property are different from those who simply distribute resources – and generalize the generosity of giving to other prosocial domains, such as trust. These findings contribute to research investigating children’s understanding of equity versus equality in different contexts of ownership.

Read more:

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Jayd Heilbrun joined the Causality and Mind lab in June of 2017. She received a B.S. from University of California, San Diego, a M.A. from California State University San Marcos, and is currently a second-year PhD student at Brown. She is interested in how children reason about others’ thoughts and behaviors – particularly the trustworthiness of others with various mental states. Jayd’s other interests include children’s developing concern for social and economic norms, such as fairness preferences for resource distributions between advantaged and disadvantaged individuals.
Changing Your Beliefs

When children’s pre-existing beliefs are challenged, they have to adjust their belief system to accommodate for conflicting information. Children can revise their beliefs in the face of counterevidence, but are they sensitive to the contexts in which they encounter the counterevidence?

Our current project explores the extent to which social context affects 4- to 8-year-olds’ ability to revise their beliefs. We investigated the degree to which two factors influence children’s tendency to revise an uncertain hypothesis in light of counterevidence: (1) who makes the initial hypothesis and (2) the way counterevidence is presented. Four- to 8-year-olds were shown ambiguous data about what type of flowers attract bees. Participants in the Other conditions saw an ignorant peer (a hedgehog puppet), endorse one of two equally plausible hypotheses, while children in the Self conditions were asked to make this endorsement themselves. Following this, children received evidence indicating that the initial hypothesis was incorrect. In the Verbal conditions, participants were told through verbal testimony that the initial endorsement was incorrect and that there was counterevidence in support of the alternate hypothesis. Children in the Observed conditions witnessed three pieces of counterevidence that the initial endorsement was incorrect and that the other hypothesis was correct. After this, the children were asked again about what types of flowers attract bees. They were able to maintain the original hypothesis or change their endorsement to match the counterevidence.

As children got older, they were less likely to revise their beliefs from verbal information and more likely to revise their beliefs from observed information when it was their own belief (Self conditions). When assessing another’s belief (Other conditions), all children were likely to revise when given verbal information, but older children were more skeptical of others’ counterevidence for their own hypotheses, but also more persuaded by observed data.

Read more:

Zoe Finiasz joined the Causality and Mind Lab in the Fall of 2017. She received a BA in Cognitive Science from Franklin & Marshall College. She is interested in the social constraints of children’s learning and the development of social cognition.

Other Announcements
The Lab is thankful to the National Science Foundation for its continued support. We are currently supported by grants 1420548 and 1661068.
We also congratulate Carol Medina and Maya Lennon who successfully defended their senior thesis projects and graduated with honors. Both Carol and Maya are now pursuing doctoral degrees in developmental psychology. Carol is starting her graduate studies at the University of Chicago, while Maya is will begin at Northwestern University in the Fall. We also congratulate Estee Feldman, Colton Lacy, and Julia Fein, who all graduated with degrees in Psychology in Spring of 2018. Estee is also starting her graduate studies at Rosalin Franklin University of Chicago in the Fall.