



# Social Learning Lab: Spring 2017

We have had a great start to 2017 at the Social Learning Lab, representing the lab across the country at different conferences and events. Not only this, we have finished data collection for some of our exciting projects and have started several new studies. In this newsletter, you can read more about our work from this year and the exciting plans we have for the summer and fall.

## Completed Research

### The Development of Critical Thinking Skills in Preschoolers

Critical thinking—disciplined thinking that is rational and informed by evidence—is an important aspect of child development. The goal of this study was to explore how adults can assist preschoolers in learning critical thinking skills. We specifically asked:

*Does adult assistance help children solve a critical thinking puzzle? Can children remember this explanation and use it to solve a similar critical thinking puzzle later?*

Preschoolers (ages 4-5) were presented with a critical thinking puzzle 'What Goes in My Basket'. In this activity, they were invited to put items into a basket by following certain rules about what can and cannot go in, such as color.

**First**, children took part in this activity in one of the two ways—they either played the game without an adult's help or with an adult who helped them by highlighting what doesn't go in the basket.

**Then**, children repeated the basket task and participated in story and computer-based tasks that looked at their awareness of their own thoughts and self-regulating abilities.

Though we are in the process of analyzing our results, if our hypothesis is confirmed, it would mean that children display enhanced critical thinking skills with adult assistance. This would further suggest that children have the capacity to learn these skills at earlier ages than previously found and shows the importance of guided learning.



### Cultural Differences in the Imitation and Transmission of Inefficient Actions

Children learn a lot about the world from observing and imitating the actions of others. This study explores:

*(1) Children's imitation and transmission of an action presented by either an individual or a group of people (a social cue).*

*(2) Children's ability to recognize the differences in the rationale between an individual and their own (a task-specific cue).*

Children watched a video of people choosing between an apparently inefficient tool and an efficient alternative to complete a task. Two different videos were shown, one with an individual choosing the inefficient tool and the other with three people who come to a consensus to use the inefficient tool. After watching one of these videos, children were invited to choose a tool on their own.

It was found that Chinese American children imitated the group decision (social cue) significantly more than Caucasian American children when asked to make decisions of their own.

Caucasian American children were more likely to use task-specific cues, choosing the more efficient alternative, whereas Chinese American children chose to adhere to social cues despite their inefficiency.

These findings suggest cultural differences in the cues that are privileged by children when learning and transmitting information.

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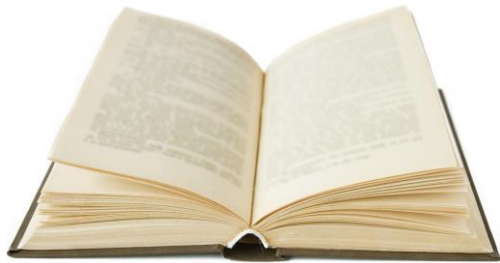
# In Schools/Current Studies

## Text and Children's Trust

*Do children find written or spoken language more trustworthy?*

In this study, children (ages 4-6) are asked to watch a video of two people naming an unfamiliar object. One person reads the name while the other person says the name. The child then decides which informant is more trustworthy. The children's readership and reading levels are also taken into consideration.

The goal of this study is to see if children generally think written or spoken language is more reliable.



## Scientific and Religious Cognition

*How do children form ideas on religious and scientific claims that they can't see?*

This study is currently looking at what children (ages 5-7, 9-11) think of scientific and religious concepts that they can't touch and how other people feel about these concepts.

Children are presented with several cards that have a variety of words such as "germs", "big foot", "angel", and "soul", all of which are invisible or abstract. To get a better understanding of what children think of these words, they are asked a series of questions such as "What do you think the word looks like?", "How do you know it's real or not real?", and "What do other people think of that word/concept?".

This study is being run in countries around the world including China and Iran. The goal of this study is to examine how children form their ideas around religious and scientific claims and compare it between cultures.



## Continuum & Racial Constancy Study

*What is children's understanding of social categories and how does this impact the way they think about people of different races?*

We teach children to categorize as early as preschool and it is a very useful skill. However, when children apply this technique to social categories (e.g. race), it can have negative consequences, such as stereotyping and discrimination. Consequently, the purpose of this study is to explore an intervention that encourages children to notice more similarities and subtle differences. We hypothesize that more flexible thinking will impact their social judgments.



Additionally, our goal is to increase our understanding around how children are thinking about race and whether they appreciate it as an unchanging characteristic.

Much of the research is outdated and does not reflect today's racial climate, so it is our hope that this study will shed light on children's conceptualizations of race and provide insight around interventions to minimize tendencies to generalize and stereotype groups of people.

# In the Museum of Science

## Sibling Imitation Study

*How does watching peers influence children's learning?*

Previous research has shown that copying others' behaviors plays an influential role in children's social and cognitive development. We are interested in exploring the types of behaviors children are likely to imitate from peers and whether having siblings affects this.

In this study, children (ages 4-5) are asked to watch two videos of an older child performing actions with both familiar and unfamiliar objects. After each video, children are invited to play with the same objects.

We predict that children are likely to imitate the older child's actions when exploring the unfamiliar toys and those with older siblings will be more likely to imitate.

This research will help us better understand how children use selective imitation when learning from their peers. This study is being conducted at Boston Museum of Science at the Living Laboratory.



Museum of Science.

## Science Thinking

*Do children learn science more effectively using lecture or structured question based learning?*

This study looks at how children (ages 4-6) and parents play together using different science toys.

The child and parent go through three activities. The first activity has the child and their parent play with a scale like they would play at home. The second activity has the experimenter model the playing conditions, either reading from a script or guiding them through an abbreviated version of scientific inquiry, while playing with a snap circuit board. Lastly, the parent plays with their child using gears, while recreating the method of interaction the experimenter just modeled.

Ultimately, the goal of this study is to determine a more effective way of parents interacting with children when learning about science.



## Independent Evaluation

*How does social dominance and reason effect who children choose to learn from?*

Research has found that children between the ages of 4 and 5 can differentiate between good and bad arguments. With that said, a person's power or social dominance can influence whether a child chooses to trust the information provided to them. Past studies in Maya cultures have shown that reason trumps power: children would rather trust a subordinate with strong explanations than a dominant with poor explanations.

Children are first presented with decision-making scenarios that will indicate a puppet's social dominance, shown through one puppet constantly deferring to the other puppet's decision. Once social dominance is established, the child will have to determine which puppet answered a scientific question correctly: the subordinate puppet with the strong reasoning or the dominant puppet with the weak reasoning. Then, a second trial will be done, but the children will be asked about objects they have never seen before, rather than scientific knowledge they already know.

We predict that children are more likely to prefer the strong explanations, even if they come from a subordinate informant. This information will help us better understand how children learn from their peer, teachers, and parents.

## Eastern Psychological Association (EPA) Poster Conference

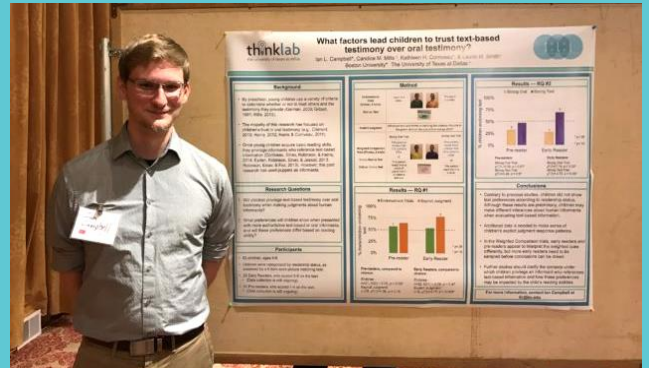


This March, members of the lab attended the EPA conference at the Park Plaza Hotel. Our two Lab Managers, Rosie Brett and Amy Macmillan, and two Research Assistants presented their work.

Posters included 'The role of expertise and explanation quality in children's evaluation of informants' and 'How do parental religious beliefs affect children's religious and scientific learning environments?'

## School of Education (SED) Teaching and Research Conference

The Social Learning Lab was also represented at Boston University's School of Education (SED) conference this April.



Congratulations to our doctoral student, Ian Campbell, who won the Best Poster Award for his study exploring how children learn from different kinds of information sources like books and other people!

## Society for Research in Child Development (SRCD) Poster Conference

We attended to the SRCD conference in Austin, Texas last month and presented many of our studies as both symposia (research talks) and posters! Conferences like this allow us to talk to other researchers and brainstorm new ways to learn about child development.



## Thank you!

A huge thank you to everyone who has been part of the Social Learning Lab. You are helping us learn more about children's social and cognitive development. In particular, thank you to all of the families and schools listed below who participated in our research.

St. Joseph, Medford  
St. Joseph, Wakefield  
Lexington Montessori School  
Tobin Montessori School  
Pine Village Preschool  
Small World Child Care

Shattuck Child Care Center  
Riverside Children's Center  
Little Theatre School  
Little Folks Community Daycare  
Christian Family Montessori School

## New Research Assistants

Tanvi Dharap, Monica Abou-Ezzi, Olivia King, Gabrielle Dizenzo, Teya Lovell, Jordana Kulak