Working at Boston's Museum of Science

Paul L. Harris
Harvard University

Smith, Blake and Harris (2012)

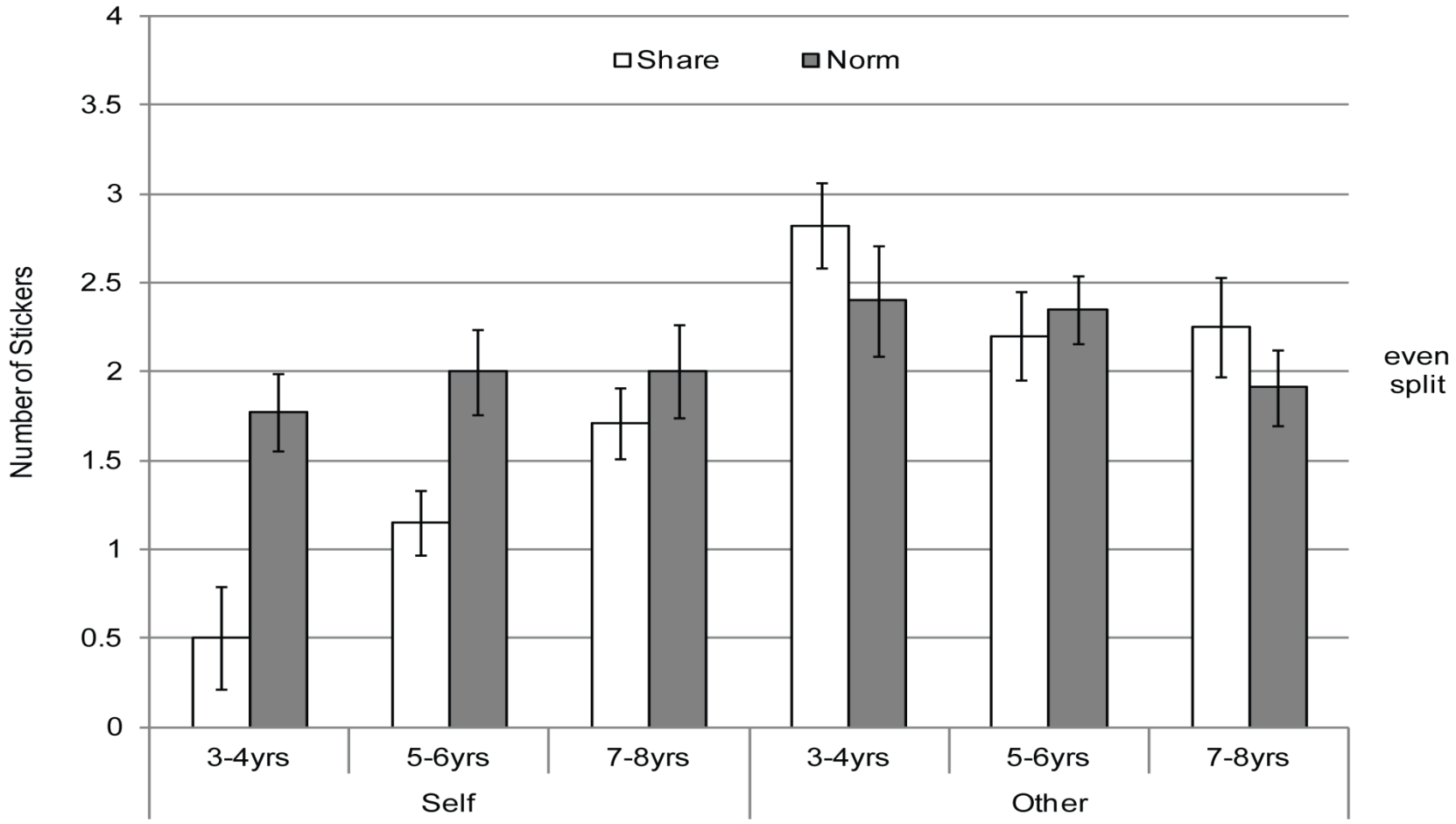
- Children are given a set of stickers and told that, if they like, they can leave some for the next child in an envelope.

Contemporary Social Cognition

- How sensitive are young children to another's distress especially when they have caused it (Craig Smith)?
- How sensitive are they to another child's claim on a fair distribution of resources (Peter Blake)?
- How sensitive are they in choosing someone to learn from (Kathleen Corriveau)?
- How sensitive are they to members of their own ingroup as compared to members of their own outgroup? (Eva Chen)?

Sharing with the next child?

Did (white bars) vs. Should (grey bars) for Self and Other



Advantages for Researchers

- Relatively easy and efficient to recruit a sample of children (even if the sample is not always representative).

Advantages for Researchers

- Simpler to obtain parental consent than going through schools and teachers.

Advantages for Researchers

- Opens up the possibility of testing the child together with the parent.

Advantages for Researchers

- Researchers learn how to describe their studies for the general public.

Advantages for parents

- If parents have questions or concerns about the study, they can discuss them with the researcher immediately and face-to-face.

Advantages for Parents

- Parents can get to appreciate the goal of the study and watch how their child performs. If they have questions abut what their child did or said, they can ask the researcher directly.

Advantages for Parents

- Participating in a given study helps to familiarize parents with research in child psychology more broadly, hopefully making them receptive to learning about other studies (beyond the one their child is involved in).

Advantages for Museum Educators

- Enhances the museum's capacity to convey information not just about the products of science but also about the process of doing science.

Advantages for Children

- Offers children an activity that can be fun without any disruption to their school day.

FIN

Children's use of others to learn about the world

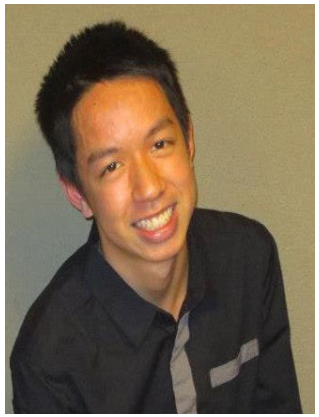
Kathleen H. Corriveau
Assistant Professor
School of Education
Boston University

NLL Preconference
March 18, 2015

Social Learning Lab at Boston University

BOSTON UNIVERSITY

S L L
Social Learning Lab at Boston University



What we have studied in the Living Laboratory

- To date: approx 3500 participants

- Children's use of epistemic and social cues when learning novel labels
  - Chen, Corriveau & Harris (2011, 2013); Fusaro, Corriveau & Harris (2011); Gaither et al. (2014)

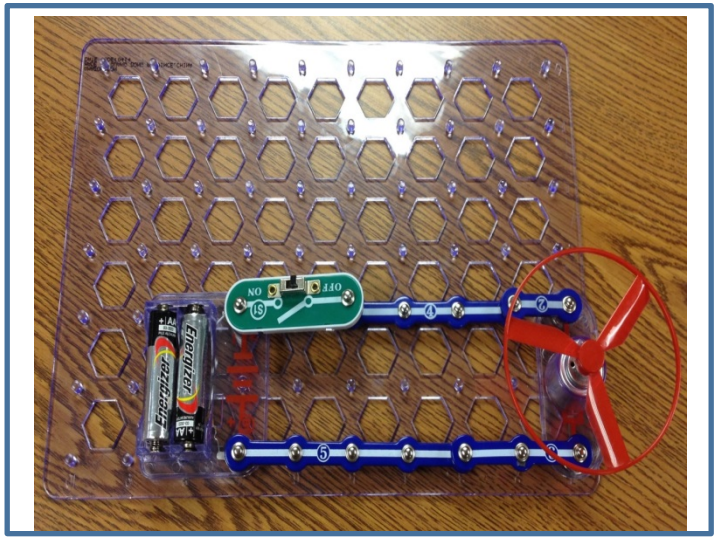
- Children's understanding of real and pretend narratives
  - Corriveau et al. (2009); Corriveau & Harris (2013)

- Children's trust in oral versus written information
  - Corriveau et al. (2014)

- Children's monitoring of an adult's explanation when learning scientific concepts
  - Corriveau & Kurkul (2013); Kurkul & Corriveau (under review)

The relationship between parental explanations and children's learning

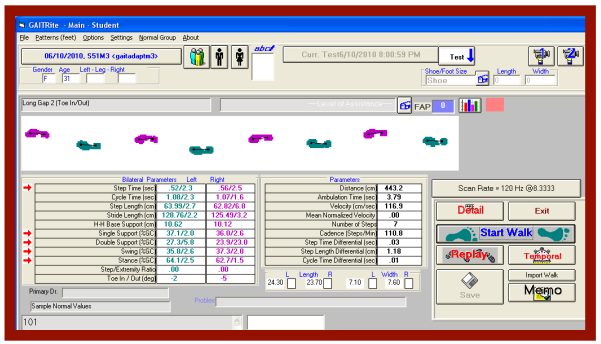
- Method:
  - Children and parents play with novel toy
  - Parents asked to explain features of toy. Explanations used to determine parental epistemic stance
  - DV1: Children asked to assemble the toy with no assistance.
  - DV2: Children asked to assemble a new toy with no assistance.

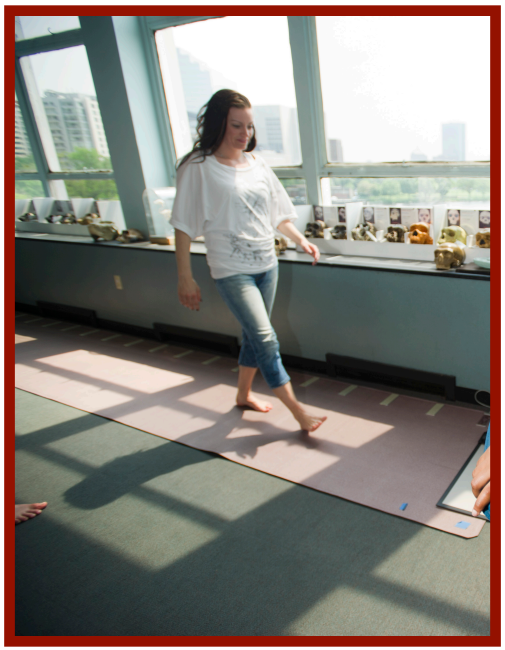


- Results:
  - Parental explanation style is related to children's ability to 1) assemble the familiar toy and 2) transfer that knowledge when assembling a novel toy

The relationship between the foot arch and walking

- Team
  - Faculty: Dr. Simone V. Gill & Dr. Jeremy M. DeSilva
  - Undergraduate & Masters Students, Lab manager
- Method





Simone V. Gill, Ph.D., OTR/L
Assistant Professor of Occupational Therapy & Medicine
Presentation at National Living Laboratory Academic Meeting
March 18th, 2015

The relationship between the foot arch and walking

- Museum of Science, Boston
- Data collection: June 2011 to August 2012

Group	Age in Years	Mean Age in Years (Standard Deviation)	Number of Participants
Children:	1 to 3	2.33 (0.87)	9
	4 to 5	4.39 (0.50)	28
	6 to 7	6.55 (0.50)	38
	8 to 9	8.53 (0.50)	60
	10 to 11	10.46 (0.50)	65
	12 to 13	12.31 (0.47)	29
	14 to 17	15.45 (0.50)	25
			Total: 254
Adults:	18 to 80	38.54 (14.86)	Total: 384
			Overall total: 638

The relationship between the foot arch and walking

- Structure of the foot arch predicts walking
- Arch height predicts children's step length Measures are critical

1. DeSilva, J. M. & Gill, S. V. (2013). A midtarsal break in the human foot. *American Journal of Physical Anthropology,* 151, 495-9.
2. Gill, S. V., Lewis, C. L., & DeSilva, J. M. (2014). Arch height mediation of obesity-related walking in adults: Contributors to physical activity limitations. *Biomed Research International: Physiology*. *2014, 1-8.*
3. DeSilva, J. M., Bonne-Annee, R.*, Swanson, Z.*, Gill, C. M.*, Sobel, M.*, Uy, J.*, & Gill, S. V. (in press). Midtarsal break variation in modern humans: functional causes, skeletal correlates, and paleontological implications. *American Journal of Physical Anthroplogy.*
4. Gill, S. V., Keimig, S*, Kelty-Stephen, D., & DeSilva, J. M. (2014). The relationship between foot arch measurements and walking parameters in children. Manuscript under review.

Boston University Developing Minds Lab & Museum of Science, Boston

NLL Meeting March 18, 2015

Boston University Developing Minds Lab & Museum of Science

Our Team

PI: Melissa M Kibbe, PhD
Assistant Professor of Psychological & Brain Sciences

Kristina Brewer
Research Assistant

Michaela Buckley
Lab Manager

Our MoS Collaboration

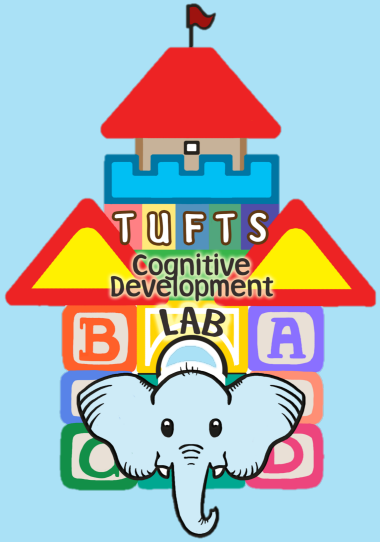
- With **MoS** since October 2014
  - Previously with **Maryland Science Center** for 3 years
- 1 3-hour shift/week
- Participants since October 2014: 169
- Educational Ops since October 2014: 170

Our Space

Our research: Early Algebraic Reasoning

Main Research Questions

- Can children reason algebraically before they have formal algebra training?
- What are the limits to this ability?
- Can children's early understanding of algebra help them acquire more formal concepts later on?



Tufts Cognitive Development Lab

- **Partner**: Museum of Science, Boston
- **Research team**:
  - Paul Muentener (Psychology Dept. @ Tufts)
  - Alex Pelliccione (Lab Manager)
  - Vanessa Torrice (Undergrad RA)
  - Amy Bu (Undergrad RA)

Discovery Center
Museum of Science

- **Length of collaboration:** October 2014
- **Research participants:** 60
- **Educational opportunities:** 69

Current research:
Development of Causal Exploration

- Do children believe all unexplained events are caused? (Muentener & Schulz, 2014)
- Are their limits on what children identify as possible causes?
  - How does this change over development?
- How do individual differences in exploration relate to other areas of cognitive development?

madison children's museum

THE UNIVERSITY of WISCONSIN MADISON

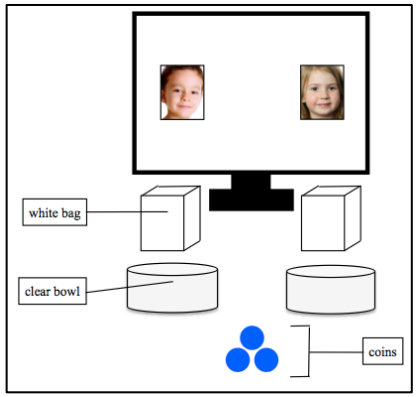
Participating Labs

- Chuck Kalish
- Karl Rosengren
- Jenny Saffran
- Kristin Shutts

Since 2012

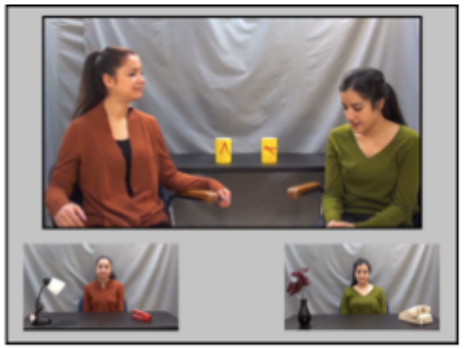
- 1,270 participants in research studies
- 1,273 educational opportunities

Graduate Student
Maggie Renno



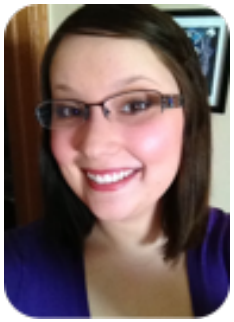
Renno, M. & Shutts, K. (in press). Children's social category-based giving and its correlates: Expectations and preferences. *Developmental Psychology.*

Graduate Student
Libbie Brey



Brey, E.L., & Shutts, K. (2015). Children use nonverbal cues to make inferences about social power. *Child Development*, *86*, 276-286.

Undergraduate
Rachel King



Brey, E.L., King, R., & Shutts, K. "Children infer social power from nonverbal behavior."
Talk to be presented here at SRCD on Friday morning.

Molly Yunker

Nigel Noll

Annie Riggs

Carol Coutinho

Poster #30: Learning Patterns from Directed and Neutral Exposure.
Session 5 Fri, March 20, 8:30 to 9:45am