



The Language and Cognitive Development Lab 2018 - 2019 Zenith School Newsletter

Letter of Thanks

Dear Families, Teachers, and Staff of Zenith School,

Thank you very much for participating in our research this past winter! Our research is made possible by the generosity of families and communities like yours, and we greatly appreciate your support.

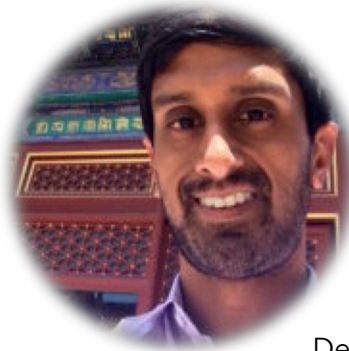
Our research focuses on how children learn different aspects of language, what this might tell us about the nature of cognitive and social development, and how these different aspects of development interact. This newsletter highlights some of the studies that your child or student may have participated in and gives an overview of our current findings.

If you have any questions about our projects, please feel free to contact us at +1 (510)-664-4494 or lcdlab@berkeley.edu.

Best wishes,

A handwritten signature in blue ink, appearing to read "Mahesh Srinivasan".

Mahesh Srinivasan, Ph.D.
Assistant Professor
Department of Psychology
University of California, Berkeley



Mahesh Srinivasan, Ph.D.

I am an Assistant Professor in the Department of Psychology and a member of the Cognitive Science Faculty at the University of California, Berkeley. Previously, I was a post-doctoral researcher in the Department of Psychology at the University of California, San Diego. Before this, I received a Ph.D. in Developmental Psychology from Harvard University in 2011, and received a B.S. in Symbolic Systems from Stanford University in 2005. Using empirical methods from developmental psychology and psycholinguistics, our lab's research explores how linguistic, cognitive, and social abilities arise and interact with one another during human development and across different cultures.

Rule origins

This study included children in the 1st through 4th standards. In this study we explored children's understanding of why different rules exist. For example, there are some rules that all students at Zenith school abide by, like wearing the school uniform, and moral codes of conduct such as not fighting with other children and helping the elderly. There are some rules that Hindu students abide by, and other rules that Muslim students abide by. We are interested in children's understanding of who created these rules, what function these rules serve, and children's attitudes toward these rules. The study itself consisted of an interview in which students were asked some questions about eight different rules.



Religious tolerance

This study included children in the 5th, 6th, 8th, and 9th standards. In a previous study at Zenith school, we found that Hindu and Muslim children from the 5th through 9th standards showed remarkable religious tolerance. For example, Hindu children said that it was okay for a Muslim person to not follow Hindu rules (like wearing a bindhi) and Muslim children said that it was okay for a Hindu person to not follow Muslim rules (like fasting during Ramadan). Additionally, children said that although God could change religious rules, moral rules, like the rule to never hit another person for no reason could not be changed by anyone. In this study, we are extending this study to younger children. The study consisted of a one-on-one interview with children.

Representing time using space

This study included children in the 1st through 9th standards. In this study, we investigated when and how children represent time using space. Children heard short stories in which a character does two activities and were asked to create diagrams to help them remember the order in which the activities occurred. Children were also shown diagrams and asked to interpret them (e.g., if shown a character with a book in front of her, children were asked whether the character read a book yesterday or is going to read a book tomorrow). This study will therefore help us understand not only how children think about time, but also whether demonstrating a consistent spatialization of time (e.g., viewing future events as being in the front and past events as being in the back) helps improve children's memory for temporal order. In addition, by learning more about how children use spatial diagrams to remember temporal order, this study may help us come up with new strategies that children can use to improve their memory and temporal reasoning skills.



Ariel Starr, Ph.D.

I am a postdoctoral researcher in the Language and Cognitive Development Lab and in Dr. Silvia Bunge's Building Blocks of Cognition Lab. Previously, I received a PhD from Duke University in 2015 and a BA from Wesleyan University in 2007. I am interested in how language influences the way children represent and reason about the world. My research focuses on interactions between language and other cognitive domains, including reasoning, memory, and numerical cognition.



Monica Ellwood-Lowe

I am a second-year doctoral student in the Language and Cognitive Development Lab. Before this, I received a BA in Psychology from Stanford University. I explore how variation in children's early social environments contributes to individual differences in their language use. I'm particularly interested in the ways that observed language differences might lead to worse academic performance for some children – particularly those of lower socioeconomic status and/or racial/ethnic minority status – and how existing social structures may reinforce these patterns over time. To help me answer these questions, I use cognitive, behavioral, and neuroimaging methods.



Beliefs about nationalism

This study included children in the 7th and 8th standards. In this study, we were interested in how children come to develop beliefs about what it means to be a citizen of their country. For example, do children think a “true” Indian is somebody who follows laws and treats people equally, or do they also think that it is important to have been born in India, speak a certain language, or follow a certain religion. In this study, we are following up on a previous study that we did two years ago with some of the same children to see how their beliefs may have changed over time. Children were given a computer game and also completed a pencil and paper survey. This research can help us understand how children come to develop understandings of what it means to be Indian, and what leads them to shift their beliefs as they grow up.

Explanation Transmission



This study included children in the 3rd, 4th, 6th, and 7th standards. How do stories, theories, and explanations change as they are passed from person to person? In this study, one student heard three stories, and then was asked to re-tell these stories to another student. The next student heard the first student's recording, and retold the story they received for the next student, who retold the story for the next, and so on. The first students in these 'transmission chains' heard different versions of the same set of stories explaining the customs of another group (e.g., why in a country

far away, the doors of their home always face East) using religious, scientific, or mixed explanations. We're interested in how these different types of explanations changed as they traveled down the chain, and how this may interact with the student's own attitudes toward science and religion.

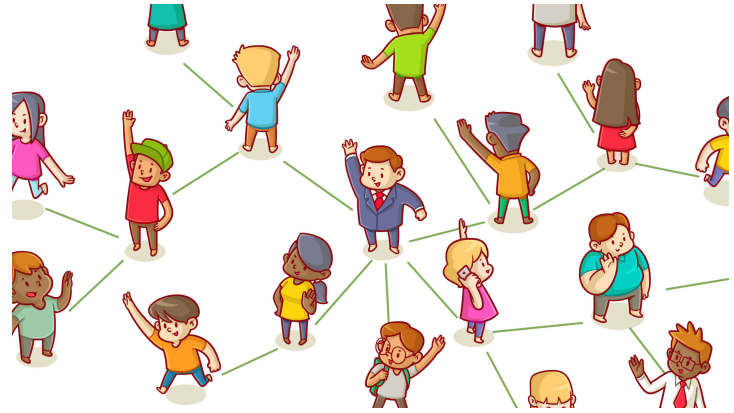
Ruthe Foushee

As a graduate student in the LCD Lab, I am interested in what language learners can tell us about the composition of meaning, what their performance on linguistic tasks reveals about their conceptions of language itself, and the implications of those developing linguistic assumptions for methodologies in the field. Many of my projects explore how we negotiate the meaning of vague or subjective language in conversation, and how children leverage their implicit social and statistical knowledge to understand these terms. I am also interested in qualitative differences in linguistic input, experimental methods in linguistic fieldwork, sociolinguistic development, and applications of cognitive science in museums.



Friendship networks

This is the third year in which we are doing this study, in which we asked children to list their seven best friends in their class. From children's responses, we are able to understand



the friendship networks that exist at Zenith school, and how they change over time. We are particularly interested in why some students sometimes have many friends from different social groups (e.g., a boy being friends with a girl, a Hindu child being friends with a Muslim child), while other students have fewer. We attempt to understand these individual differences by also asking children to fill out a survey that measures their attitudes toward different social groups and their openness to others. From this study, we are also able to understand which students in the school may be the most influential (e.g., those students who are most often nominated by other students as friends), and most effective at transmitting school norms.



Jonathan Wehry

I am the lab manager at the Language and Cognitive Development Lab. I received a B.A. in Psychology from the University of Pennsylvania in 2018. I am interested in studying word flexibility in the language of young children: how word flexibility influences children's understanding of words that label objects and their construal of those object categories. I am also interested in studying how our perception of events and people around us interacts with our language comprehension and social development. That is, how does what we perceive and think about the world around us relate to the words we use to describe and label objects, people, and events?



Nadya Vasilyeva, Ph.D.

I am a postdoctoral researcher working across three labs, Dr. Mahesh Srinivasan's Language and Cognitive Development Lab, Dr. Alison Gopnik's Cognitive Development Lab, and my primary advisor Dr. Tania Lombrozo's Concepts and Cognition Lab. In my research I explore connections between explanation, inductive inference, causal reasoning, and language processing, and examine how these cognitive processes are shaped in the process of development.

Structural explanation

This study included children in the 8th and 9th standards. In this project, we examined whether children could reason flexibly about properties of social categories. Previous research shows that both children and adults tend to “essentialize” many social categories: see them as natural clusters of properties stemming from a deep, inherent essence. For example, they may think that women tend to work as nurses because they are inherently more drawn to caring and nurturing professions, while men often work in finance because they are inherently more ambitious and risk seeking. In this study we examined whether providing cues about systematic external constraints on choices of category members would help children acknowledge the structural origin of some category properties. In this study, children first read one of three different explanations about why different social groups have different properties; then, all children



filled out a survey, answering questions about familiar (e.g., gender, caste) and unfamiliar social categories, designed to measure how strongly they believe the properties of category members are tied to category “essence” vs. produced by external structural constraints.

Self-assessment of academic abilities




This study included children in the 9th standard. Many subtle cues lead people to believe that maths is a domain more well suited for boys than girls, even though both genders tend to perform equally well. Paired with this is a potentially even stronger stereotype that girls have more natural talent in verbal domains. For this project, we asked how students perceive their ability in maths and reading/writing since this is a way students might be internalizing these kinds of gendered stereotypes. Specifically, we gave students a maths test and a reading/writing test and ask them to guess how well they think they did on each. Based on previous work, it is likely that girls underestimated their score on the maths test more than boys, but that boys underestimated their performance on the reading/writing test. Children also filled out various surveys about their beliefs about stereotypes and general feelings about these subjects to see how related these are to their performance estimates.



Rachel Jansen

I am a Ph.D. student in the Computational Cognitive Science Lab, advised by Tom Griffiths and Anna Rafferty, as well as working in the Language and Cognitive Development Lab. I am passionate about employing methods from machine learning and probabilistic modeling to the study of mathematics cognition and education. I am specifically interested in understanding more about how people learn math so that I may work towards improving both teaching practices and online educational tools. One branch of my research is centered on math learning in adults using an online algebra tutor developed by my advisors and I. I am using this tool to explore ways in which we can influence motivation and alter students' perceptions of mathematics, to ultimately remove emotional and psychological barriers so that more people may appreciate and excel at the subject.



Language and Cognitive Development Lab
Vadodara Research Assistants

Yusuf Kapadia

Poonam Patel

Sakina Dahodwala

Saba Baldiwala

Renuka Verma

Mushir Shaikh

Dhiraj Jagdale

Dhriti Agrawal

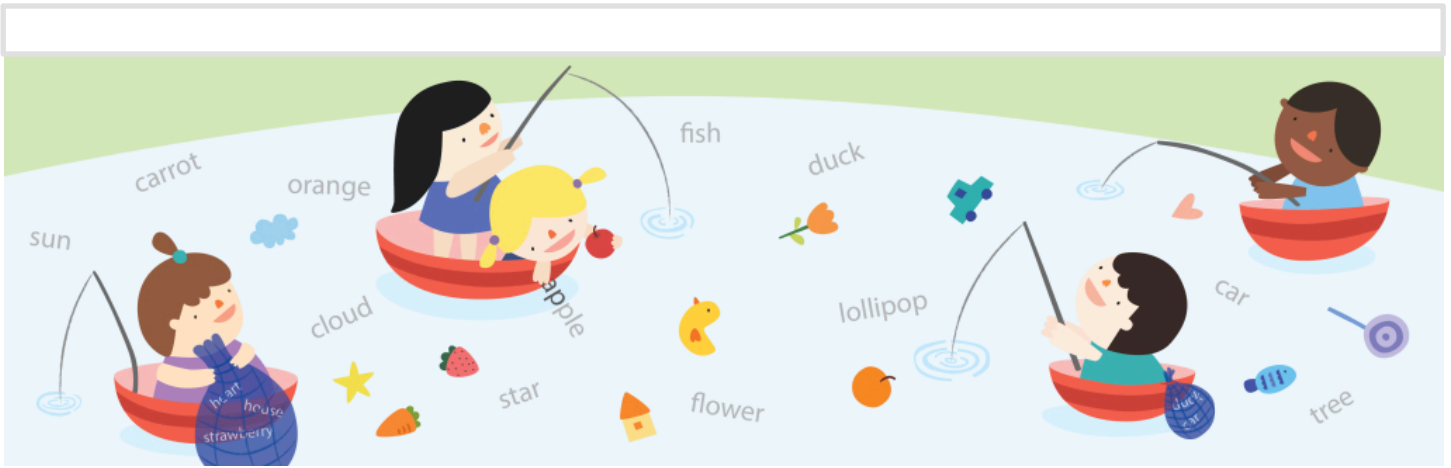
Prachi Talwar

Neha Singh

Gauri Joshi

Marishka Mehta

Huda Patel



For more information about our research, please visit our website.

<http://lcdlab.berkeley.edu>



Phone Number

+1 (510) 664-4494

Email Address

lcdlab@berkeley.edu