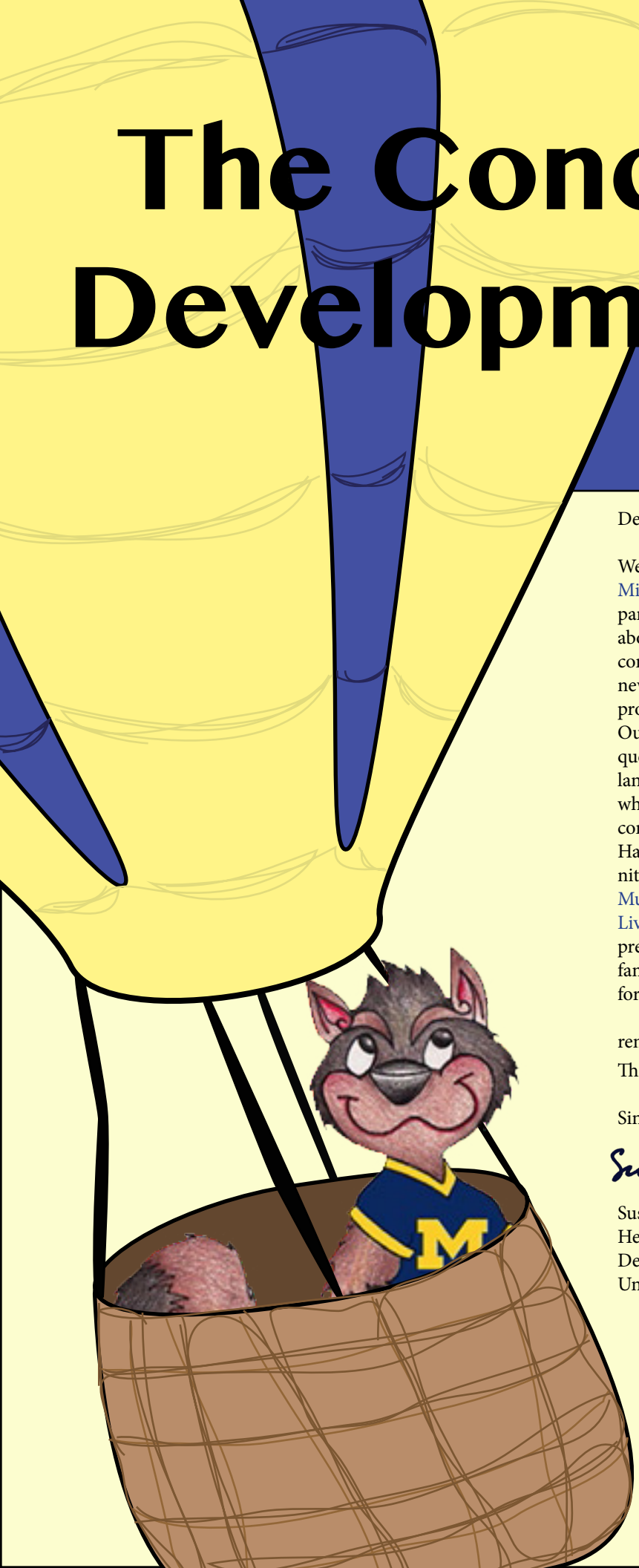
The Conceptual Development Lab



Dear Parent,

We are grateful for your support of our research at the University of Michigan Conceptual Development Lab. When you and your children participate in our research, you help us answer important questions about how children grow and learn. Without your help we couldn't continue making discoveries about child development! This is our newsletter for the 2015 research year. Here we describe some of the projects we are currently conducting and have recently completed. Our studies investigate a range of topics that relate to four basic questions: How do children form concepts? How do children learn language? What is the relation between language and thought? And what is the role of parents in these processes? Much of our research continues to take place in our child-friendly, on-campus lab in East Hall. We also continue to conduct some of our studies in community-based labs at the Ann Arbor Hands-On Museum and the U-M Museum of Natural History, thanks to the University of Michigan Living Lab program. Additionally, we conduct some studies in local preschools and after-care programs. We are excited that we can offer families a number of ways to participate in our research, and grateful for the opportunity to partner with these outstanding organizations.

We hope to see you at one of our lab sites soon! And please remember that you can sign up online to participate in our research. Thank you again for your ongoing support of our research!

Sincerely,

Susan A. Gelman

Susan A. Gelman
Heinz Werner Distinguished University Professor
Departments of Psychology and Linguistics
University of Michigan – Ann Arbor

In This Newsletter

Recent Studies

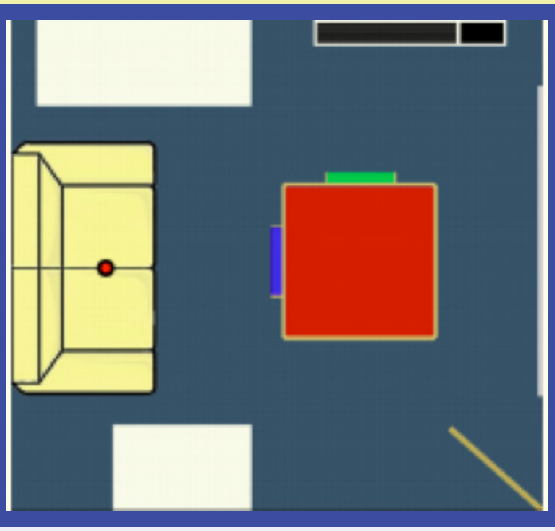
GPS: The Morality of Tracking

- Natalie Davidson

This recently finished study delved into how children and adults feel about the morality of GPS tracking devices. There were 305 participants, including children ranging in age from 4 to 10 years and adults. The study took place at our lab on the UM campus and at the Living Lab site at the Ann Arbor Hands on Museum.

The experiment began with a demonstration for children of how a GPS tracking device works. Children placed a small button in different places and look on a computer to see where the tracker was. The button appeared on the computer (or iPad) as a dot on a bird's-eye view of the room (see picture on this page) and it moved based on where the child placed it. Later, the participants were asked how they felt about using such a button (a) to track their own objects (e.g., their special object, elbow, pet, or backpack) and (b) how they felt about a child their own age, named Sam, tracking their objects. These two types of questions allowed us to assess participants' opinions of tracking their own objects versus someone else being able to track their objects.

Participant opinions about the morality of a tracking device varied greatly by age. Adults rated



Sam tracking their objects negatively, while children did not. Children were much more likely to note the functional benefit of Sam having access, because Sam could help them if their objects were lost. Older children were more likely to note some potential negative consequences of Sam knowing the location of their objects (i.e., "He could steal my backpack."). But younger children did not often conceive of privacy issues (the possible costs of tracking).

In a second study, we asked children and adults how they felt about Sam placing an ordinary button (with no GPS tracking function) on their objects. Adults did not rate Sam placing a button on their objects very negatively, because they saw little harm in the action. Children, on the other hand, rated this rather negatively, because they did not like Sam touching their objects without permission, especially when the button served no functional benefit.

In short, children do care about their objects and who has access to them and they are often wary about others touching their objects. However, they were very positive about the GPS device, because they were able to quickly perceive a positive result of Sam having access to it. In contrast, adults were quick to note how Sam's intrusion was morally wrong and could have negative consequences to their privacy. It would be interesting to continue this research to see how technology and ownership intertwine to influence a child's perception of risk.

The Blankie Study- Natalie Davidson

This study was designed to examine an issue that has long perplexed parents: Do preschool children really prefer their own old, worn object (like a blankie) to a brand new, clean object? Parents often are baffled by how strong their child's attachment is to a particular toy, preferring it even if it is old, worn, and dirty. Attempts to either wash the object or replace it with a new one may be rebuffed by the child. This study examined this question in a controlled experiment in which children were explicitly asked whether they prefer their own old object to a brand new version of their object.

Thirty-six 3-year-olds participated at our lab on campus. Children brought three of their toys/objects from home: an object they sleep with (e.g., a blanket, stuffed animal, etc.), an animate toy (e.g., a stuffed animal, doll, or action figure), and an inanimate toy (e.g., car, doctor kit, phone, etc.). We paired the child's own object with a brand new version of the child's object to form the Focal Object pairs. We also had similar paired objects that the children had never seen, provided by the lab: sleep objects (an old, worn blankie and a new version of the same blankie), animate objects (an old, worn stuffed dog and a new stuffed dog), and an inanimate object (an old, scratched up boat and a new boat). Examples of the objects in the study are show in the picture on this page. We presented the pairs of objects, side by side, and asked the children to choose which object they preferred – the new or the old item. We also asked children to predict which items the experimenter preferred when presented with the same pairs of objects.

Results showed that, for the focal objects, the children showed a preference for their own old object for the sleep objects and animate objects. They showed no preference for their own inanimate object. Children who have an attachment object (e.g., a special comfort object) showed an even stronger preference for their own objects. But children didn't show a general preference for old things. This preference for old objects was true only for their own objects. With the objects from the lab (the ones they'd never seen before), they preferred the new objects. Children also demonstrated an early understanding that people have different preferences. They predicted that the experimenter preferred the new objects, not the child's own old objects. But for the lab's objects, children predicted the experimenter preferred the old worn objects (like the old torn blankie) instead of the new ones, suggesting that the children understood that other people might have attachments to old objects, different from their own old objects. This result shows that children have an early appreciation that their attachment objects are special only to themselves.

Ongoing Studies

Children's Preference for Scarce Items and Variety

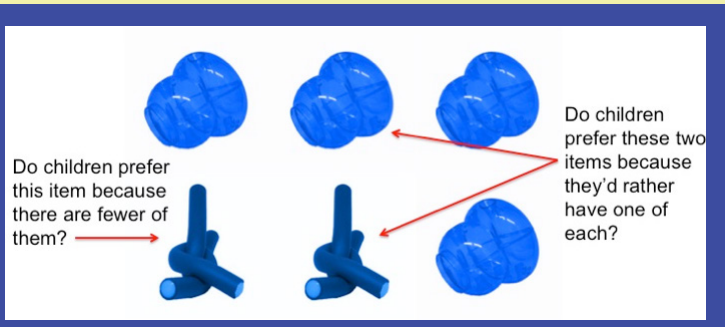
- Margaret Echelbarger

Children, like adults, make a large number of decisions each day, and many of these decisions are affected in some way by concerns over scarcity and variety. We know that scarcity and variety play a role in adults' decision-making, but much less is known about the role it can play in children's decision-making. In this set of studies, we tested whether children preferred scarce items and variety sets of items to non-scarce items and non-variety sets of items. We also tested whether children think people will pay more for scarce items and variety sets of items than non-scarce items and non-variety sets of items. We found that children as young as 4-5 years prefer variety sets of items, but not scarce items. We also found that children as young as 6-7 years think people will pay more for variety sets of items, but not scarce items. We are excited about following up on these results to determine why children place higher values on variety sets and when children might prefer scarce items.

Thinking About Foods

- Jasmine DeJesus

We are excited to be starting a new study that looks at children's eating behaviors and attitudes about different foods. This study involves a one-time visit to the lab in which children will take part in a series of fun activities with one of our researchers. At the end of the session, children will be offered a food to eat and we will measure how much food children eat and how much children say that they like or dislike their food. This study will help us understand the factors that influence children's food choices, an important topic with real-world implications. We are looking for 3- to 6-year-old children to participate, so please let us know if you are interested!



Novel Stereotypes

– S. Othello Roberts

Children use social categories to make predictions about individuals (e.g., if someone is a "boy" they are expected to behave in certain ways). Interestingly, children make these predictions even with regard to novel categories (e.g., if told that "Zarpies" chase shadows, they expect newly encountered Zarpies to also be alike even on novel features). In this study, we are looking at how children evaluate people who violate their predictions. For instance, how do children react to a Zarpie who does not chase shadows (does not conform to the group)?

We've tested hundreds of children. We introduced them to a fictitious world of Hibbles and Glerks who were described as having a certain feature (e.g., Hibbles eat these kinds of berries). We then introduced children to individual characters who either conformed or did not conform to their group (e.g., Look, this Hibble is eating these [other] kinds of berries). Younger children (4 to 6) really did not like it when someone did not conform to their group. Older children (7 to 13) also did not like non-conformity, but not to the same extent as younger children. These findings suggest that at young ages, children not only expect people to conform to their group, but they also negatively evaluate those who do not conform! Data collection for this study is complete, but if you have additional questions please do not hesitate to contact Steven Roberts (sothello@umich.edu).

If you are interested in any of these studies please email conceptlab@umich.edu.

The Spending & Saving Study

- Craig Smith & Margaret Echelbarger

How do children think about saving and spending money, and how does this change with age? What explains differences among children with regard to money spending and saving behavior: child temperament, parenting practices, understanding of number, the ability to plan for the future? We are exploring these questions and many more in an exciting study with many real-world implications.

The study involves a one-time visit to the lab. In the lab, children participate in a series of fun activities. For example, children take part in enjoyable number estimation tasks, impulse control tasks, and some simple math exercises. Children also answer questions about what they typically do when they have money to spend. Meanwhile, parents are invited to fill out a survey about their children's behavior, and about their own approaches to parenting. At the end of the study, each child is given some money and is allowed to save it or spend it on some of the fun items we have in our little store (see photo). This study will shed new light on the factors that influence financial behavior in childhood, and we hope that our findings can offer helpful guidance to parenting and educational efforts designed to teach financial competence to children. We are looking for children aged 5-15 to participate; let us know if you're interested!

If you are interested in this stufy please email conceptlab@umich.edu.

A Bilingual Advantage?

- Maria Arredondo

This study is being run in the Kovelman Lab

What can we learn from bilingualism, to help us understand reading skills? Research finds that bilingual children have to continuously attend to the language in use, and restrain from using their other language. Thus, research suggests that speaking more than one language may help children's attention and memory skills. See http://www.scientificamerican.com/article/the-bilingual-advantage/

Language and attention skills are crucial for all children's reading acquisition! In this project, we are investigating how language is interacting with attentional skills (in the brain) during the early school years, especially when children are learning how to read.

We are currently inviting 7-9 year old children (English monolinguals and Spanish-English bilinguals) to take part in this project. The study consists of one 2-hour session, in which your child will complete some language and reading tasks, and then play a few language and attention games on the computer while wearing a child-friendly and safe cap that measures brain activity using light (functional Near-Infrared Spectroscopy [fNIRS]).

As a thank you for participating, your child will receive a small gift from our lab (e.g. Frisbee and token prizes), and your family will receive a monetary gift and your child's language and reading scores! Appointments are available at your convenience, and we are available on weekends! This study is being conducted in the Kovelman Lab. If interested contact Maria Arredondo (mmarre@umich.edu).

Who's in charge: mommies or kids, girls or boys?

– Selin Gülgöz

Do children understand that parents are in charge? Or do they think they are the boss? In one of our studies, we told children fun, short stories describing different kinds of power struggles between two people. In each story, there was one person in charge, and children were asked to guess which of the two people were older. We found that even 3 and 4-year-olds think that the person in charge is older across a variety of situations. For example, 3- to 9-year-old children think that the person who is able to get more candy bars, or denies permission to others is the one who is older. However, in situations where one person gets what they want (e.g., being able to cross a narrow bridge first or having the final say in what kind of dessert to eat), about half the time 3- to 9-year-olds believed that the powerful person is older, but half the time they believed that the powerful person was younger. Adults, however, believed that the one who gets what they want should be older. This suggests an interesting divergence in how children and their grown-ups might view their daily power struggles: while parents think they are in charge, their children might not always think so!

In a similar, ongoing study, we are examining children's beliefs about whether girls and boys differ in terms of how powerful they are. We will be recruiting 3- to 9-year-old children, starting in January 2016. Participation in the study takes only about 10 minutes, kids really enjoy participating, and they get to pick out a small prize at the end! So, if you and your kids would like to contribute to science, make sure to contact our lab!

Ownership Tracking

-Merranda McLaughlin

Ownership is an important aspect of human thought, and even toddlers care about who owns what (as evidenced by children squabbling over ownership: "That's mine!"). But one challenge that young children face when reasoning about ownership is that it is invisible. One cannot tell who owns an object, just by looking at it. Instead, ownership can only be determined by examining an object's history – what has happened to it, and where it has been. Sometimes, however, history leaves a visible clue or trace. For example, an adult might use scuff marks, fingerprints, or stains to identify the history of an item and therefore who it belongs to. Do children understand these subtle indicators of object history, and can they use these clues to detect ownership? In an earlier series of experiments, we found that 3- and 4-year-olds are surprisingly good at understanding that history can leave a visible trace on an object, and that they can use that history to identify an object's owner. The current study extends this question to 2-year-old children. We are finding that 2-year-olds often search for traces of an object's history, but they are still learning how to use these traces to figure out ownership judgments. We are excited to discover early developmental changes in children's ownership concepts.

Click below to see one child completing the warm-up trial!

If you are interested in any of these studies please email conceptlab@umich.edu.

Contact Us!

If you are interested in any of our studies please contact us using the information below. We are typically available weekdays 9am to 5pm.

Website: umconceptlab.com
Email: conceptlab@umich.edu
Phone number: 734-647-2587
Address: B464 East Hall
530 Church St
Ann Arbor, MI 48109

Recent Publications

Baptista, M., Gelman, S. A., & Beck, E. (in press). Testing the role of convergence in language acquisition, with implications for creole genesis. *International Journal of Bilingualism.*

Gelman, S. A., & Gottfried, G. M. (in press). Creativity in young children's thought. In J. C. Kaufman & J. Baer (Eds.), The Cambridge companion to creativity and reason in cognitive development, 2e. Cambridge: *Cambridge University Press.*

Gelman, S. A., Manczak, E. M., Was, A. M., & Noles, N. S. (in press). Children seek historical traces of owned objects. *Child Development.*

Gelman, S. A., Mannheim, B., Escalante, C., & Sanchez Tapia, I. (in press). Teleological talk in parent-child conversations in Quechua. *First Language.*

Ho, A. K., Roberts, S. O., & Gelman, S. A. (in press). Essentialism and racial bias jointly contribute to the categorization of multiracial individuals. *Psychological Science.*

Meyer, M., Gelman, S. A., & Stilwell, S. M. (in press). Frequency and informativeness of gestural cues accompanying generic and particular reference. *Language Learning and Development.*

Sánchez Tapia, I., Gelman, S. A., Hollander, M., Manczak, E. M., Mannheim, B., & Escalante, C. (in press). Development of teleological explanations in Peruvian Quechua-speaking and U.S. English-speaking preschoolers and adults. *Child Development.*

Sutherland, S. L., Cimpian, A., Leslie, S.-J., & Gelman S. A. (in press). Memory errors reveal a bias to spontaneously generalize to categories. *Cognitive Science.*

Ware, E. A., & Gelman, S. A. (in press). The importance of clarifying evolutionary terminology across disciplines and in the classroom: A reply to Kampourakis. *Cognitive Science.*

Roberts, S. O., & Gelman, S. A. (2015). Do children see in black and white? Children's and adults' categorizations of multiracial individuals. *Child Development,* 1-18. doi:10.1111/cdev.12410

Brandone, A. C., Gelman, S. A., & Hedglen, J. (2015). Children's developing intuitions about the truth conditions and implications of novel generics versus quantified statements. *Cognitive Science*, 39(4), 711-738.

Gelman, S. A., Frazier, B. N., Noles, N. S., Manczak, E. M., & Stilwell, S. M. (2015). How Much Are Harry Potter's Glasses Worth? Children's monetary evaluation of authentic objects. *Journal of Cognition and Development,* 16(1), 97-117.

Gelman, S. A., Leslie, S. J., Was, A. M., & Koch, C. M. (2015). Children's interpretations of general quantifiers, specific quantifiers and generics. Language, *Cognition and Neuroscience*, 30(4), 448-461.

Gelman, S. A., & Roberts, S. O. (2015). Cognitive science and the cultural challenge. *Social Anthropology*, 23(2), 208-210.

Gelman, S. A., & Meyer, M. (2014). Generics. In P. J. Brooks & V. Kempe (Eds.), Encyclopedia of Language Development (pp. 235-236). *SAGE Publications*.

Gelman, S. A., & Meyer, M. (2014). The inherence heuristic: A basis for psychological essentialism? Commentary on Cimpian and Salomon. *Behavioral and Brain Sciences*, 37(5), 490. doi:10.1017/S0140525X13003737

Gelman, S. A., Ware, E. A., Kleinberg, F., Manczak, E. M., & Stilwell, S. M. (2014). Individual differences in children's and parents' generic language. *Child Development*, 85(3), 924-940. doi:10.1111/cdev.12187

Geraghty, K., Waxman, S. R., & Gelman, S. A. (2014). Learning words from pictures: 15- and 17-month-old infants appreciate the referential and symbolic links among words, pictures, and objects. *Cognitive Development*, 32, 1-11.

Gülgöz, S., & Gelman, S. A. (2014). Children's recall of generic and specific labels regarding animals and people. *Cognitive Development.* doi:10.1016/j.cogdev.2014.05.002

Lane, J. D., Harris, P. L., Gelman, S. A., & Wellman, H. M. (2014). More than meets the eye: Young children's trust in claims that defy their perceptions. *Developmental Psychology*, 50(3), 865-871. doi:10.1037/a0034291

Legare, C., & Gelman, S. A. (2014). Examining explanatory biases in young children's biological reasoning. *Journal of Cognition and Development*, 15(2), 287-303. doi:10.1080/15248372.2012.749480

Noles, N. S., & Gelman, S. A. (2014). You can't always want what you get: Children's intuitions about ownership and desire. *Cognitive Development*, 31(1), 59-68. doi:10.1016/j.cogdev.2014.02.002

Rhodes, M., Gelman, S. A., & Karuza, J. C. (2014). Preschool ontology: The role of beliefs about category boundaries in early categorization. *Journal of Cognition and Development*, 15(1), 78-93. doi: 10.1080/15248372.2012.713875

Ware, E. A., & Gelman, S. A. (2014). You get what you need: An examination of purpose-based inheritance reasoning in undergraduates, pre-schoolers, and biological experts. *Cognitive Science.*

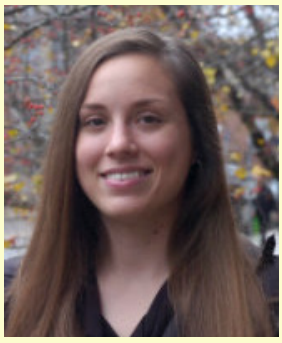
Our Researchers

Dr. Susan Gelman is a Heinz Werner Distinguished Professor of Psychology & Linguistics. She is an author of over 200 scholarly publications including a prize-winning book *The Essential Child* (Oxford University Press, 2003). Her main interests are in the development of concepts and language in young children.

Dr. Selin Gülgöz is a visiting Assistant Professor of Psychology at Kalamazoo College. Her main interests are how language and culture help facilitate children's acquisition of knowledge and categories. Her latest study seeks to understand the relationship between gender and power.

Dr. Craig Smith is a Research Investigator at CHGD and the Director of the UM Living Lab Program. His main areas of interest include moral cognition, and the development of emotion understanding and fairness norms.

Steven Roberts, a doctoral student, is interested in children's social cognitive development. Specifically he examines children's understanding of race, genetics, status, personality, and social essentialism. His research is supported by the National Science Foundation and the Ford Foundation.



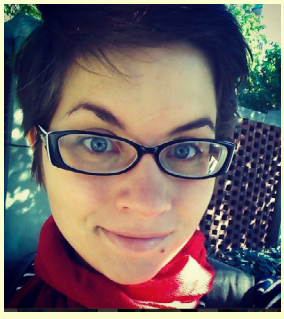
Margaret Echelbarger is a doctoral student and the Living Lab Coordinator. Her main interests are how children develop and understand economics. Her most recent studies look at spending/saving behavior as well as how children value objects differently based on scarcity and variety.

Maria Arredondo, a doctoral student, is interested in how children acquire knowledge through language and cognitive development with many of her studies involving bilingualism. She is currently finishing her dissertation, which utilizes brain imaging (fNIRs) to study language and attention in the Kovelman Lab.

Jasmine DeJesus is a postdoctoral research fellow having recently obtained her PhD from the University of Chicago. Her research investigates the way language transmits information about social groups and important conceptual knowledge, as well as children's developing reasoning about food.

Danielle Labotka, a doctoral student, is interested in children's language development and how it relates to social cognition. She recently graduated from the University of Chicago with a BA in Comparative Human Development and Anthropology.

Dr. Natalie Davidson is the Research Manager for the Conceptual Development Lab. Her main interests are how children develop their relationships with objects. Specifically, she is interested in understanding the mechanisms by which some children develop attachments to particular objects.



Merranda McLaughlin is the lab manager for the Conceptual Development Lab. She plans to go to graduate school for child Clinical Psychology. At the lab, her main interest is the mechanism by which the history of objects affect an individual's perception of it.

Lab Staff

We would like to thank all of our wonderful undergraduate research assistants and research staff for their hard work and dedication in making our research possible!

Thank you Abigael Lucas, Ashley Pikula, Dhara Gosalia, Mi Mi Choi, Kary Richardson, Meghan Samyn, Jennifer Alpert, Nirali Kadakia, Stephanie Podolsky, Sydney Freedman, Victoria Sanderson, Akemi Tsutsumi, Juna Kim, Carolina Fuentes, Tanya Madhani, Vanessa Lee, Elizabeth Garcia, Kerrie Leonard, Jacqueline Leeka, Kevin Ma, Anna Wendorf, Kit Yin Wong, Laura Conn, Kristina Ljucovic, Karen Tze Hui Tan, Taylor Hautala, Avery Katz, Ergest Isak, Emma Ward, Tanvi Kulkarni, Antonio Malkoun, Nikea Turner, Jasen Garborg, Juhi Rattan, Rachel Wlock, Hannah Lee, Jaya Thyagarajan, Coral Lu, Lulu Dessailly, Kaitlyn Wilson, Gabrielle Graves, Aric Gaunt, Daniella Kotlyar, and Kelly Wilton!

Join us again at Ann Arbor's 2016 Summer Fesitval!