



Child Development Laboratories
at UVa

Dear Parents,

We thank you for participating with your children in the research being conducted at the Child Development Labs at UVa. Your enthusiastic support allows us to carry out our research, developing new insights into child development that will help inform the content of textbooks tomorrow.

We are tremendously excited about two new faculty members in the Child Development Labs – Toby Grossmann and Amrisha Vaish. We thought this would be a good opportunity to tell you a bit about their new labs and their research.

Toby Grossmann's Babylab focuses on early social and emotional abilities that enable infants to interact with others. By using non-invasive and child-friendly methods such as electroencephalography (EEG), functional near-infrared spectroscopy (fNIRS), and eye-tracking technology, Toby's research examines changes in infant brain function while important developmental milestones are achieved. He studies these processes across a range of situations in which infants can glean social and emotional information from faces, voices, and body motion. One of his recent studies showed that, already by the age of 7 months, infants are able to read very subtle social and emotional cues from the eyes. Toby also studies what factors explain differences in infants' early social and emotional development.

Amrisha Vaish's Early Social Development Lab is focused on how young children perceive and respond to their social worlds, in particular how children become moral and cooperative people. These include developing social

emotions (such as sympathy, guilt, and gratitude), cognitions (such as the ability to evaluate moral actions and intentions), and behaviors (such as helping and sharing). One of Amrisha's recent studies showed, for instance, that the moral emotion of guilt emerges by 3 years of age: When children of this age cause harm to someone, they show guilt and attempt to repair the harm. Amrisha also studies the development of more basic social and cognitive skills such as the ability to understand the emotions, desires, and actions of others.

Toby's research focuses on infants between 4 and 12 months of age, and Amrisha's research focuses on children between 1 and 5 years of age. If you have a child at these ages, we may be contacting you soon to participate in studies in these new labs!

As always, you can keep up to date on all things CDL-related by following us on [Facebook](#). If you know of other parents who might be interested in having their children participate in our studies, please pass our information on to them as well as to other venues such as school newsletters! We are always looking for more children who might participate to help us better understand children's development.

We are excited to update you in this newsletter about several of the studies conducted at the CDL during the past year. We hope you enjoy reading about this work, and we hope to welcome you to the CDL again soon!

Vikram Jaswal
Child Language and
Learning Lab

Angeline Lillard
Early Development Lab

Toby Grossmann
Babylab

Amrisha Vaish
Early Social
Development Lab

Visit us at the Discovery Museum!



Another new development in the Child Development Laboratories is a partnership with the [Virginia Discovery Museum](#). You'll see us there with rotating exhibits on Thursday mornings from 10:30-12:00! We'll be bringing the science of our discoveries to parents, babysitters, and others while the children explore the museum, with the option to participate in a short experiment there if they would like.

About People

The Early Social Development Lab and Babylab welcome new graduate students **Meltem Yucel** and **Caroline Kelsey** to the Child Development Labs! Meltem is interested in the development of social cognition and morality and Caroline plans to study how the brain supports social development in infancy and early childhood.

Graduate student **Rebecca Dore** of the Early Development lab recently defended her dissertation. She is moving on to do great things and will be sorely missed! This fall she began a post-doctoral position at the University of Delaware where she is exploring the role of fiction and media in children's education.

Recent Publications

- Drell, M. B. & Jaswal, V. K. (in press). Making amends: Children's expectations about and responses to apologies. *Social Development*.
- Li, H., Boguszewski, K., & Lillard, A. S. (in press). Can that really happen? Children's knowledge about the reality status of fantastical events on television. *Journal of Experimental Child Psychology*.
- Dore, R. A., Jaswal, V. K., & Lillard, A. S. (2015). Real or not? Informativeness influences children's reality status judgments cognitive development. *Cognitive Development*.
- Dore, R. A., & Lillard, A. S. (2015). Theory of mind and children's engagement in fantasy worlds. *Imagination, Cognition, and Personality*.
- Lillard, A. S., Drell, M., Richey, E., Bogusweski, K., & Smith, E. D. (2015). Further examination of the immediate impact of cartoons on children's executive function. *Developmental Psychology*.
- Lillard, A. S., Li, H., & Boguszewski, K. (2015). Television and children's executive function. In *Advances in child development and behavior*.
- Dore, R. A., & Lillard, A. S. (2014). Do children prefer mentalistic descriptions? *Journal of Genetic Psychology*.
- Hopkins, E. J., Dore, R. A., & Lillard, A. S. (2014). Do children learn from pretense? *Journal of Experimental Child Psychology*.
- Oishi, S., Jaswal, V. K., Lillard, A. S., Mizokawa, A., Hitokoto, H., & Tsutsui, Y. (2014). Cultural variations in global versus local processing: A developmental perspective. *Developmental Psychology*.

Visit our website to download publications, see news coverage of our research, and view previous newsletters:

<http://www.virginia.edu/psychology/childdevelopmentlabs/news.html>

What's going on at the Early Development Lab

Learning from stories

It is a commonly held idea that it should be easier for children to identify with story characters who are similar to them. Relatedly, children may learn more from stories when they identify with the characters more.

Graduate student **Rebecca Dore** conducted a study to examine whether children would learn more from a story with a character who was similar to them than from a story with a character who was dissimilar. Six- to 8-year-olds were read a story about a child going on a field trip to learn about how TV news is made. Children either saw a White character (own-race for most children who participated) or a Black character (other-race for most children); see picture.

The results showed that children were more likely to experience strong identification



n with own-race characters than with other-race characters. Furthermore, although children did not correctly answer more questions about facts and story events after seeing a story with an own-race character, they did freely recall more information from the story with an own-race character.

Children's perceptions of race and hardship

In a previous study, graduate student **Rebecca Dore** examined when children begin to show an adult-like racial bias to rate Black people as feeling less pain than White people. Results showed that 5-year-olds did not show the effect, the effect is small, but beginning to

emerge by age 7, and is strong and reliable by age 10. In adults, this bias is related to perceptions of hardship: Adults rate Blacks as feeling less pain than Whites if they perceive Blacks as experiencing more hardship. This year, Rebecca

conducted a study to examine whether hardship perceptions would also explain the development of the bias in children. 5- to 10-year-olds rated the amount of pain a Black child and a White child would feel in different situations, like biting their tongue. Then, children were asked to guess which of two items belonged to the Black child and White child. Items were either low- or high-value (e.g. old, worn toys or nice, new toys; see picture). The results showed that although children as young as 5 recognize racial group differences in status and hardship, perceptions of hardship did not account for the development of racial bias in pain perception.



Fantastical television

Executive function abilities, which include attention, memory and problem solving skills, are important for life success. Previous studies in the EDL have found that fantastical television shows, such as *SpongeBob SquarePants*, temporarily deplete executive functioning. This might happen because of the effort needed to understand the fantastical events. Graduate

students **Katherine Boguszewski** and **Veronica Weser** are further investigating this using electroencephalography (EEG) to monitor brain activity while children are watching either a fantastical cartoon, such as



SpongeBob SquarePants, or a realistic cartoon, such as *Phineas and Ferb*. In this study, children watch the cartoon while wearing an EEG cap. Afterwards, children play several Simon-Says type games to measure how watching the show influenced their executive functioning. Learning more about how the brain acts while watching and processing these television shows can help us better understand why children's executive functioning skills are depleted after watching fantastical cartoons. Thanks to all the families and kids that have already participated and worn our awesome EEG cap!

What's an iPad for?

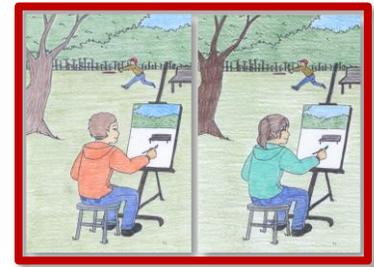
Young children are using touchscreen devices more than ever, but very little research has explored how children think about these devices. Do children understand that touchscreen devices are multifunctional, unlike traditional media such as televisions and home telephones? Graduate student **Sierra Eisen** surveyed children and adults to find out how they differ in their understanding of touchscreens. Preschoolers and undergraduates were shown images of media tools—including an iPad, a computer, an iPhone and a TV—and answered questions about the functionality of each device. Adults recognized that touchscreen devices are highly multifunctional and can be used for all the same functions as a computer. Children, however, did not recognize many of the functions of touchscreen devices, regardless of how much they used touchscreens themselves. For example, half of the children did not think an iPad could be used for learning! We're following up this study with an exploration of how children learn from educational apps.



How do children identify with fictional characters?

Distinguished majors student **Andrea Yuly** explored the influence of gender on children's identification with fictional characters. Four- and five-year-olds all heard the same story, but for half of them the character was of their same gender and for the other half the character was of the opposite gender (see picture).

Unexpectedly, Andrea found that children did not identify more with a same-gender character: They did not say they were more



likely to understand the character's feelings or imagine being the character. However, these stories did not include gender cues that are often present in real storybooks, such as a girl wearing a dress. So we don't know yet if children might identify more with same-gender characters when such cues are included. Continued research on this will help us understand how fictional characters impact children's thinking and behavior, which is of particular interest when considering the prevalence of fictional characters in children's everyday lives.

Do children enjoy "just thinking"?

There is a common belief that daydreaming and letting our mind wander is a pleasurable activity. However, researchers here at UVA have found that adults who had just spent five minutes entertaining themselves with their thoughts typically reported disliking the experience. Graduate student **Jessica Taggart** wondered, do children, who routinely entertain themselves with pretend play, like sitting and thinking more? Preschoolers were asked to sit and think about anything for five minutes, and then they compared their experience to various other activities such as eating ice cream or

scraping their knee. Afterwards, they completed a Simon-Says-like game as a measure of executive function (their ability to pay attention and inhibit their behavior).

Overall, children did not enjoy thinking any more than adults (saying it was “just okay”), although children with greater executive function did enjoy thinking



more than other children. Surprisingly, how much children pretend at home was unrelated to their enjoyment of thinking. Future research will look at how parents feel about “just thinking.” (Spoiler: It looks like parents enjoy this more than children or other adults!)

What’s going on at the Child Language and Learning Lab

“She didn’t even say sorry!”

Children expect people who cause harm to say, “I’m sorry.” But when the harmdoer doesn’t apologize, will children interact with that person again? Graduate student **Marissa Drell** recently investigated whether children are better at remembering when someone hasn’t apologized than when they have apologized. Six- and seven-year-olds listened to stories about characters who committed accidental transgressions (e.g., dropped a piggy bank in a store) and then said, “I’m sorry,” or “Oh well.” Afterwards, children participated in a memory task where they were asked to identify old characters from new ones and report whether or not the character had apologized.



Results showed that when children recognized an old character, they were better at remembering when the character had said, “Oh well,” than when the character had said, “I’m sorry.” Enhanced memory for people who cause harm and don’t apologize may help children avoid these individuals in the future.

I’ll answer it!

Ever forgotten about something and decided to ask a friend to help you remember what happened? Children might also need to ask parents, friends, or teachers for help when trying to remember. Graduate student **Shaina Rowell** wanted to know how children decide whether to ask for help or rely on their own memory. Seven-year-olds saw a series of pictures and were told that they would need to remember them for later. Then they played a game where they decided whether to try to remember each picture themselves or pass it to a helper. Previous work in the CLLL showed that 5-year-olds passed to the helper when they felt unsure about their memory, but they didn’t think about whether or not the helper was likely to remember the pictures. The older 7-year-olds did think about the helper: Even if there was a picture that children thought was hard to remember, they didn’t ask for help when the helper wasn’t likely to remember. This study shows that while 5-year-olds mainly focused on whether or not they themselves would remember something, 7-year-olds knew that they should also think about whether the helper would really be able to help them.



Do I need to say I'm sorry?

Have you ever said, "I'm sorry," when you didn't know who was to blame? For example, perhaps you stepped on someone's foot as you tried to squeeze through the aisle in a crowded movie theater. Interestingly, women apologize more frequently than men in situations where both parties are at fault. Distinguished majors student **Shannon Savell** wanted to find out when in development these gender differences in apology behavior emerges. In this study, 5-, 7-, and 10-year-olds rated how serious they thought it was to, for example, accidentally step on someone's foot, and how important they thought it was to apologize.

She found that younger children rated the events as more serious than older children, but



there were no gender differences: Boys and girls rated them as equally serious. When judging how important it would be to apologize afterwards, boys and girls reported that it was equally important to apologize across all three age groups. Although older children rated the events as less severe than younger children, they still believed that it was just as important to apologize. This study suggests that no matter how minor a transgression is, children learn from an early age that they should apologize to maintain positive relationships with others.

Are you really sorry?

Can young children tell the difference between a sincere and insincere apologizer? As adults, we tend to believe that individuals who apologize in private are more genuine than those who apologize in public; public apologizers seem to be motivated more by concerns about reputation than genuine concern for the victim. Distinguished majors student **Sydney Sampson** asked whether 6- and 10-

year-olds shared this belief. She presented children with stories where, for example, one character accidentally brushed sand into another character's eyes and then either apologized when the victim was alone or when the



the victim was surrounded by peers. Ten-year-olds (like adults) indicated that the private apologizer was nicer than the public apologizer, and that the public apologizer seemed to have ulterior motives. Six-year-olds, in contrast, did not consistently distinguish between the two apologizers—they sometimes preferred the public apologizer and sometimes the private one, and they did not seem to recognize that the public apologizer could have ulterior motives.

From all of us at the Child Development Laboratories at UVa, we thank you again for your interest and participation in our research!