



Child Development Laboratories  
at UVa

Dear Parents,

Thank you for participating with your children in the research being conducted at the Child Development Labs at UVa. Without your support and participation, we would not be able to carry out our research into early development or to train the next generation of developmental scientists.

Given all of the construction taking place next door to us here on Millmont Street, several of you have asked about plans for "The Cottage." The short story is that we will be in this same location at least for the coming academic year. But in 2014, we will be adding two new faculty members to our group, and so we may outgrow our space! We will keep you posted. You can keep up to date about all things CDL-related by following us on Facebook at [www.facebook.com/childdevelopmentlabs](http://www.facebook.com/childdevelopmentlabs).

As usual, we report here on several of the studies conducted during the past year. We hope you enjoy reading about this work, especially the studies in which you and your children participated.

Our fifth annual Open House will be on September 28, 2013. We hope that your family can attend, and we encourage you to invite your friends with young children who might enjoy the chance to get together with other parents and children. This will be a good opportunity for you to learn more about the current projects at the CDL, as well as for your children to enjoy a number of fun activities!

Vikram Jaswal  
Child Language and  
Learning Lab

Angeline Lillard  
Early Development  
Lab

## Family Fun Day September 28<sup>th</sup>!

Last year, we held our fourth annual CDL Family Fun Day and it was a huge success! We had over 390 people come through during the day. Visitors enjoyed live music, dance performances, snacks from some local businesses including Arch's and Revolutionary Soup, and activities like face-painting and finger-painting. Families also had an opportunity to have their children fingerprinted by the Albemarle County Sheriff's Office, learn CPR from the Charlottesville-Albemarle Rescue Squad, and talk to faculty members about the research going on here at the Child Development Labs. Thank you to all the friends and families (new and old!) who helped and attended. The Open House wouldn't have been possible without you!

We hope you'll join us for the event this year, on Saturday, September 28<sup>th</sup>, from 9 AM to 2 PM, rain or shine! Once again, it will take place at 1023 Millmont Street. We'll have games, performances, food and giveaways!



## About People

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The Early Development Lab welcomes new graduate student, **Katie Boguszewski** and visitors from Central China Normal University: graduate student **Hui Li** and visiting scholar **Fuxing Yang**.

We've had several graduate students and postdoctoral researchers finish their time here this year. They are all moving on to do great things and will be sorely missed!

- **Tony Byers** is moving to Lenox, MA where he will work at the local elementary school towards principal licensure. He hopes to put what he has learned at UVa into practice in public education.
- **Robyn Kondrad** is beginning a tenure-track Assistant Professor position at Appalachian State University in Boone, North Carolina.
- **Matt Lerner** is beginning a tenure-track Assistant Professor position at Stony Brook University in Stony Brook, New York.
- **Carrie Palmquist** is beginning a tenure-track Assistant Professor position at Amherst College, in Amherst, Massachusetts.
- **Kasey Soska** is beginning a position as a postdoctoral researcher in the Infant Development Lab at Florida International University in Miami. He will be working on a project examining how early visual and auditory perception relates to children's social and language learning.

## Recent Publications

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Ma, L. & Lillard, A.S. (2013) What makes an act a pretense one? Young children's pretend-real judgments and explanations. *Child Development Research*.

Smith, E.D., Englander, Z.A., Lillard, A.S., & Morris, J.P. (in press). Cortical mechanisms of pretense observation. *Social Neuroscience*.

Dore, R.A. & Lillard, A.S. (in press). Theory of mind and children's engagement in fantasy worlds. *Imagination, Cognition and Personality*.

Dore, R.A. & Lillard, A.S. (2013). Do children prefer mentalistic descriptions? *Journal of Genetic 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>

## The Reviews Are In!

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**The critics are raving about the Child Development Labs!** (These are real comments from children who have participated in studies at the CDL.)

*"I love it when my mommy takes me to the experiment place."*

*"I had unimagined fun!"*

*"Thank you for experimenting with me!"*

*"I love this building. It looks just like school, except here you don't have to stand in line."*

## What's going on at the Early Development Lab

### What do children learn from storybooks?

Graduate student, **Eric Smith** is currently investigating whether reading children a prosocial storybook encourages prosocial



tendencies immediately thereafter. The story revolves around a school day for two bears, with one always helping another in

one form or another (see picture). It is too early to report any findings yet, but please stay tuned for further updates.

### How does fantasy affect what children learn from storybooks?

Past research has suggested that children are less likely to learn a problem-solving strategy from a fantastical storybook than from a realistic one. Graduate student **Emily Hopkins** is building on these findings by investigating which aspects of storybooks impact children's ability to learn from them. In this study, children were read a picture book where a character solved a novel problem. We used several different versions of the book, ranging from completely realistic to highly fantastical. After reading the book, children were asked to solve a similar problem to see if they learned the



solution that was presented in the story. Thus far, it seems that children are less likely to learn from a book that looks fantastical (the grass is orange and the sky is green) than from one that looks realistic, consistent with what other researchers have found. However, we see the most learning when the story contains impossible events like flying or walking through walls! This surprising result suggests that the *type* of fantasy in a story may be more important than the overall *amount* of fantasy in determining whether children will learn novel information from a storybook.

### Children adopt traits of fictional characters

Graduate students **Rebecca Dore** and **Eric Smith** have investigated whether 7- and 10-year-olds adopt the stereotypical traits and behaviors of the character in a narrative. In this study, children listened to a recording of a cheerleader or a professor describing a typical day in their life. We measured how much children took the perspective of the character. Results showed



that the more children took the perspective of the professor, the more they played with an analytical toy (a Rubik's cube) and the higher they scored on an analytical reasoning task. On the other hand, the more children took the perspective of the cheerleader, the more they played with a non-analytical toy (a yo-yo) and the lower they scored on an analytical reasoning task. We are currently running a follow-up study in which we give children instructions to either take the perspective or not take the perspective of a character. These findings suggest that children might adopt the traits of characters that they read about in books or watch in TV shows or movies.

## Cartoons and executive function

Executive-function abilities, which include attention, memory, and problem solving skills, are important for life success. Previous research from the EDL showed that 4-year-olds who watched a 9-minute clip of *SpongeBob SquarePants* (a fast-paced fantastical cartoon) performed significantly worse on a set of executive-function measures than children who spent the same amount of time drawing or watching *Caillou* (a slow-paced realistic cartoon). Along with **Angeline Lillard**, graduate students **Marissa Drell**, **Katherine Boguszewski**, and **Eric Smith** wondered whether this previous finding was due to *SpongeBob*'s fast pace or high level of fantasy. To tease this apart, they recently conducted a study in which children watched an 8-minute clip of a show that was either fast- or slow-paced and fantastical or realistic. Children who came into the lab watched one of the following four shows: *SpongeBob SquarePants* (fast-paced fantastical), *Phineas and Ferb* (fast-paced realistic), *Little Einsteins* (slow-paced fantastical), or *Little Bill* (slow-paced realistic) and then completed a set of executive function tasks, such as a card sort task. Results showed that children who watched the fantastical shows performed significantly worse on these tasks than children who watched the realistic shows, regardless of pacing. Therefore, processing a large number of fantastical—and unpredictable—events is cognitively taxing for children, regardless of the pace of presentation.



## Can mindfulness restore executive function?

Executive function abilities, as noted above, are important skills for children to possess. However, these abilities are limited resources that can be exhausted. Contemplative practices, such as meditation, have been shown to improve executive function in adults. Can they also be used to aid recovery of depleted executive function in preschool aged children? This is what **Angeline Lillard** and graduate student **Katherine Boguszewski** are investigating in a new study at the EDL. Children who participate will view a television show, like *SpongeBob SquarePants*, that previous studies in the lab have found depletes executive function. Some children will then engage in mindfulness tasks such as breathing and focused attention exercises. All children will then complete a set of executive function measures. If your child is the right age for this study you may be hearing from us soon. We hope to see you in the lab this fall!

## What's going on at the Child Language and Learning Lab

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### Children do not prefer helpful pointers

While previous work in the CLLL has shown that children prefer to seek information from someone who has used pointing helpfully in the past over someone who was less helpful, recent follow-up studies suggest that children may be using cues other than helpfulness to make their decisions. Former graduate student **Carrie Palmquist** discovered this twist by having preschoolers watch as two different actors took turns hiding toys under one of two cups. The more helpful, unambiguous actor pointed to

one of the two hiding locations while saying “It’s in the cup”, the less helpful, ambiguous actor simply pointed to a picture of the hidden object (instead of a hiding location) while



saying, “It’s in the cup”. After each hiding event, children were asked to pick where they

thought the hidden object was. For one group of children, this meant that they were more likely to find the hidden objects after the unambiguous actor pointed than after the ambiguous one did. However, for another group of children, Palmquist rigged the outcome of children’s choices so that they were equally likely to find the hidden object with both actors. Later, when children were given a choice of which actor they would rather have help them find new hidden objects, only children who were more successful with the unambiguous actor showed a preference for her. Those who participated in the rigged outcome version were equally likely to want the help of the unambiguous and ambiguous actors. In other words, children seemed to be monitoring their own success with both actors, not how helpful the actors had been in the past.

### Children do prefer accurate pointers

A great deal of previous research has found that children prefer to learn from people who have spoken accurately in the past over those who have spoken inaccurately. Former graduate student **Carrie Palmquist** was interested in whether

children would demonstrate similar preferences for accurate



pointers over inaccurate ones, given previous work that has found that children have similar

expectations about the communicative importance of both pointing and spoken language. To test this, preschoolers watched a short video in which two actors took turns pointing out the hiding location of several animal figurines. Importantly, these animals were hidden in clear boxes, so children could evaluate whether the actors were pointing accurately or inaccurately. Later, when children were asked whether they would like to receive help from the previously accurate pointer, or the previously inaccurate pointer, they preferred the actor who had been accurate in the past.

### Children know when they don’t remember

Children may need to ask parents, friends, or teachers for help when remembering past experiences. When do children decide to answer themselves versus asking for help? Graduate student **Shaina Rowell** recently examined whether five-year-old children will



choose to skip questions about things that are hard to remember. Children do skip more difficult

questions, and are also more accurate on questions that they decide to answer. In a second study currently underway, we are examining whether preschool children will defer to someone else when that person’s memory is likely to be stronger than their own.

### "I remember you!"

Which is more likely: remembering a nice kid and the nice things that kid had done, or remembering a mean and the mean things that kid had done? As part of her dissertation work, former graduate student **Robyn Kondrad**

asked this question of 5-year-olds. Children looked at pictures of several characters and learned how each had behaved. Some characters were nice (e.g., complimenting someone), some psychologically mean (e.g., teasing someone), and some physically mean (e.g., hitting someone). Overall, children

recalled more information about mean kids than they did nice ones.

Children specifically recalled more information about physically mean kids than they did about psychologically mean or nice kids. It is difficult to overcome bad first impressions - one reason may be because we are more likely to remember those who make bad impressions than good ones.



### "That's so easy!"

Previous work in the CLLL has shown that young children are more likely to trust someone who is confident than someone who is uncertain. Former graduate student **Robyn Kondrad** and current graduate student **Marissa Drell** wondered whether 4- and 5-year-olds recognize that the ease with which someone provides information may be an indication of how knowledgeable she is. In this study, an experimenter tells a child that two women



correctly identified familiar objects; one person did so easily while the other found it difficult. Later,

children were more likely to ask the "easy" speaker for the name of a novel object. However, once children heard both speakers confidently provide a label for the novel object, they trusted the two speakers equally. In a

follow-up study, children only heard the speakers say whether it was easy or hard to name novel objects (there was no information regarding accuracy). Now, children not only asked the "easy" speaker for information, but they also endorsed what she said. By age four, children recognize that the amount of effort necessary to access information provides clues about a person's knowledge, but this clue is ignored when children have information about a speaker's previous accuracy.

### "Sorry!"

Although parents and caregivers often encourage children to apologize for having committed a minor transgression, we don't know if children who are victims of a transgression actually feel better after receiving an apology. In graduate student **Marissa Drell's** work this year, 6- and 7-year-olds played a game that involved building a tower out of cups. As they neared completion, an adult

accidentally knocked it over, and then either apologized spontaneously, apologized after being prompted



to do so, or did not apologize. Results suggest that children who heard the spontaneous apology thought the adult felt more remorseful than children in either of the other groups. But there were no differences in how children themselves felt as a function of what kind of apology (if any) they had heard. In follow-up work, Marissa is investigating whether an act of restitution—an offer to help rebuild the tower—will lead children to feel better.

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