Child Development Laboratories at UVa

September, 2010

Dear Parents,

First, let us thank all of you for your children's participation in research in the Child Development Labs at UVa. It is only with your help that we are able to learn more about how children develop in the early years of life.

This newsletter reports on several of the studies conducted in the four labs of CDL during the previous year. We hope that you enjoy reading about this work that owes so much to you and your children.

We will be having our second annual Open House on September 18 (details inside). We hope that your family can attend, and we encourage you to invite any of 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 everyone to learn more about the ongoing projects at the Child Development Labs.

Judy DeLoache
Child Study Center

Vikram Jaswal
Child Language and Learning Lab

Rachel Keen
Early Childhood Lab

Angeline Lillard
Early Development Lab

Child Development Labs' Open House

Last year, we held the first annual CDL Open House in August 2009. It was a huge success! 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 had roughly 120 families visit the Millmont Cottage behind Barracks Road Shopping Center last August. Visitors enjoyed live music, snacks from Sticks and Happy Family Foods, games, finger-painting, and giveaways. 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 get an insider's view of the research conducted by the Child Development Labs here at UVa.

Our first annual Open House was so successful; we will be hosting our second annual event this fall, on **September 18th from 9-2**! We are located at 1023 Millmont St. There will be new games, more vendors, new safety information and instruction, exciting giveaways, and a lot more fun! We hope you will join us at the Millmont Cottage on September 18th! For additional information, please call (434) 924-3986.

About People

Post-doc **Medha Tare** accepted a position as research scientist at the University of Maryland.

Post-doc **Veronica Ramenzoni** accepted a position as researcher in the Communication before Language group at the Max Planck Institute in Nijmegen.

Graduate student **Eric Smith** received a Graduate Student Fellowship from the National Science Foundation.

Recent graduate **Jennifer Peterson** won the award for best Distinguished Major's Thesis which showed that children who watch a certain very popular children's television show for just 9 minutes afterwards had significantly lower executive function than children who had drawn with markers or watched a slow, realistic television show.

Recent graduate **Adrienne Schubert** created and submitted a video about her Distinguished Major's Thesis examining preschooler's preferences for pets vs. toys in emotional situations. ACCIAC Fellows in Creativity and Innovation choose her as one of the winners.

Lab coordinator **Kai Sherman** received the Accomplished Services in Arts and Sciences, an award to "recognize, reward and motivate Arts & Sciences employees who perform their duties in an outstanding manner."

The Early Development Lab welcomes new graduate students **Rebecca Dore** and **Rekesha Greenwood**.

The Child Study Center and the Early Childhood Lab welcome new post-doc **Dr. Kasey Soska**.

What's going on at the Child Study Center

Children's learning from museum settings

Parents often take their children to museums to learn interesting new information. A great deal of research has examined family interactions in museums and the kind of conversations that occur around particular exhibits. Our general question was *how much* young children actually learn from these interactions and how parents' conversational strategies affect what they learn and how well they remember it. Do children remember information from these visits a few days later? Do they transfer the concepts from one example to another? In collaboration with the *Virginia Discovery Museum*, we are studying young children's learning of biological information from interactions focused on museum exhibits, specifically the live bee exhibit.

Attuned to Animals

The human mind appears to be particularly attuned to other living things. This presumably helps us to quickly recognize other members of our species and to detect threats such as predatory animals. This preference may explain why so many young children are

Child Development Labs • University of Virginia
info@childdevelopmentlabs.org • (434) 243-5234
www.childdevelopmentlabs.org

so excited to encounter animals when they're out in the world and why so many children develop rich and lasting relationships with their pets. Many of you may remember participating in a study where there were many interesting toys, a hamster, and a fish in a room. We simply had children explore the room and we observed what they did. In a follow-up to this study, we had the top four toys of interest from the first study and a hamster and a fish. We also added a spider and a snake. The first part of the study was similar to the first study, where children explored the room and we observed what they did. The second part of the study involved the parents interacting with their child and the various objects and animals in the room. We are currently analyzing the data from the two studies to see if children had a preference for the toys or the animals and whether parent and child reactions differ depending on the item.

Children's feedback preferences

Graduate student **Anthony Byers** is investigating children's responses to adult feedback. Young children exist in a world of adult feedback. Teachers and parents seek to guide children's efforts through praise, guidance, and critique. We are working to understand how children make sense of the different kinds of feedback they receive and how their interpretations change over time.

What's going on at the Early Childhood Lab

Learning to use tools

As adults we navigate through unfamiliar challenges by applying strategies we learned from past experiences. Do children also apply what they know to help them solve new

problems? We explored how 2.5-year-old children used tools to solve a task, and whether they used knowledge they gained from one task to decipher a more difficult problem. In this task children used tools (rods) to push out disks that were stuck inside clear tubes. A easier version of the task offered children tools of different lengths and a harder version of the tasks offered children tools that varied in length and width. We found that when children were asked to solve the tasks from easier to harder, they developed better strategies and were successful in solving both problems, then when the order of the problems was reversed. This study demonstrated that information children gained through experience solving simpler problems helps them understand and develop approaches to tackle more challenging problems.

Look what you can do!

We examined young babies at different stages of motor development, from babies that were not yet crawling to skillful walkers. In a series of experiments, we studied which visual displays babies preferred to look at - point-light displays of a crawling or a walking adult. Point-light displays are videos of moving dots that reflect the movement of a person's body (arms, legs, torso and head). We discovered that infants' prefer to look at the kind of motion they are currently engaging in. These results are striking. Even though babies watch others walk more frequently than they see others crawl, their preferences are modulated by what their locomotor abilities and not what they see others do.

Perceiving others by how they move

In another project with point-light displays we asked whether infants identify the organism producing the motion as human. We wondered if infants saw the point light walker as a human being. We showed 7-8 month-old

Child Development Labs • University of Virginia
info@childdevelopmentlabs.org • (434) 243-5234
www.childdevelopmentlabs.org

infants point-light movies of a human walker either upright or inverted, followed by a pair of photographs: one of an attractive pet and one of a human face. Babies who saw the upright point-light walker preferred to look at the human face, while babies who saw the inverted point-light walker looked equally at the pet and the human. We took this as evidence that young infants can identify the point light walker as human.

What's going on at the Early Development Lab

Montessori Schools

EDL director, **Dr. Angeline Lillard,** found that children in really traditional Montessori classrooms-ones where all the available materials are the ones developed by Maria Montessori herself-had significantly better school year growth in terms of our academic, social, and personality measures than children in either really good private conventional programs and in Montessori classrooms that supplement with non-Montessori materials, like commercial puzzles and worksheets.   We are currently working on a randomized controlled trial of children in Montessori Magnet schools in Hartford CT-one of the lowest per capita income cities in the US-comparing them to children placed in other schools. This project is funded by the Brady Education Foundation.

When do children cease to pretend?

Piaget, a noted developmental psychologist, asserted that children stop engaging in pretend play around the age of six. To explore the accuracy of this claim, graduate student **Eric Smith** asked undergraduate students to complete a brief survey about their childhood memories of pretending. His preliminary results suggest that for most children pretend play persists well beyond the age of 6, with the average reported age of ceasing to pretend over 11 years old. In fact, 38% of the participants reported still pretending in their daily lives as college students. For example, one participant recalled pretending to be Jason Bourne, from the movie *The Bourne Ultimatum*, during an extended train ride home.

Substitution in pretend play

Eric as well as graduate student **Emily Hopkins** are investigating children's use of substitute objects in pretend play. We have found that, at 3 years of age, children can pretend using highly dissimilar substitutes (e.g., pretending that a baseball is a teapot), but that even older preschoolers have difficulty interpreting similar pretense in others. This age discrepancy may be due to several abilities that are developing throughout the preschool years, including theory of mind (the ability to reason about another's thoughts and beliefs) and inhibitory control (inhibiting obvious responses in favor of those more appropriate to the situation). Also related is the willingness to use an object for a function other than that for which it was designed.

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

Willingness to believe

Young children are willing to believe what adults tell them, but why? CLLL Director, **Dr. Vikram Jaswal**, investigated whether 3-year-olds have a general inclination trust in other people, or if this trust is limited to what

Child Development Labs • University of Virginia
info@childdevelopmentlabs.org • (434) 243-5234
www.childdevelopmentlabs.org

people *say*. In one study, children saw stickers hidden on a computer screen. A researcher told the children that the sticker was in the wrong cup, but some of the children saw a video with the researcher's face when she told them where to search, while other children just heard a voice recording. Kids who saw the researcher's face were more likely to be misled into searching in the wrong cup than kids who just heard the voice. It seems that three-year-olds don't just trust any information they get from someone else—they are inclined to believe what someone *tells* them, especially when that person is visible.

Trustworthy sources of information
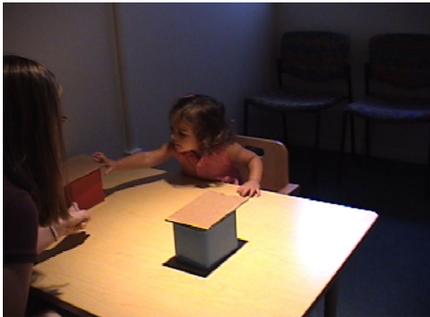
As children learn and mature, they must learn to choose reliable sources of information. While they rely on sensory cues from their environment, such as sights and sounds, they also depend on the help of others. For example, children are particularly receptive to others' gestures, such as pointing. Graduate student, **Carrie Palmquist**, has been investigating which source of information children prefer to trust when making a decision—environmental cues or social cues. Results have indicated that children are as likely to follow the correct point of a new experimenter, as they are to follow the correct point of a previously unreliable one. This suggests that children may be making decisions about the reliability of the pointing game itself, rather than the people who are providing the information.

Reasonable Error and Reliable Ignorance

Graduate student **Robyn Kondrad** thought the following, based on previous research, was puzzling - if forced to choose, why wouldn't young children prefer learning from someone who was relatively more accurate? Isn't it better to believe someone who made the lesser of two mistakes? To investigate this possibility, she gave the adult labelers a reason for making mistakes. Children in this study learned what two adults called several familiar objects, but the adults could only see a part of the object (e.g., the handle of the comb). When children were invited to learn the names for novel objects, they preferred to endorse the information provided by the reasonable labeler, even though she had a history of inaccuracy.

In another recent study, we asked if children would prefer to learn from someone who earlier admitted to not knowing what a comb was called, for example, or from someone who incorrectly called it a thunderstorm. It's not until almost seven years of age that children show a preference for endorsing the information provided by an ignorant speaker over a wrong one; 3- and 6-year olds equated ignorance with error.

Child Development Labs • University of Virginia
info@childdevelopmentlabs.org • (434) 243-5234
www.childdevelopmentlabs.org

102 Gilmer Hall
University of Virginia
P. O. Box 400400
Charlottesville, VA 22904

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

Child
Development
Laboratories
at UVa

child
study
center
UVa

Early Childhood Lab
A
B C
University of Virginia

Early Development
Lab

Child Language &
Learning Laboratory

Child Development Labs • University of Virginia
info@childdevelopmentlabs.org • (434) 243-5234
www.childdevelopmentlabs.org