



## Letter from the Director of the Child Study Center



Dear Parents,

We hope you and your children have been having a delightful summer, full of the kinds of things kids like to do in hot weather.

We're enjoying the summer, while continuing to bring into the lab as many children as we can to participate in the many studies we have going on. We appreciate enormously the support you've provided for our research program and want to update you on some of the current activities in the lab and some of the results of our research.

You can also learn more about the general goals and outcomes of much of the research that goes on at the CSC by picking up an issue of the August *Scientific American*. It includes an article in which I summarize much of the research that I and my wonderful students and colleagues have been doing for many years.

Many of your children participated in the studies described in the article. (A copy of the upcoming article is available on the CSC website.)

An important piece of news we want to make you aware of concerns a major change for the other developmental psychology labs at UVA. Because of construction in Gilmer Hall, the Child Language and Learning Lab (headed by Vikram Jaswal) and the Early Development Lab (headed by Angel Lillard) will move to Millmont Center on Millmont St. (behind Barracks Road shopping center). The **Child Study Center** will remain at our current location in Gilmer Hall at UVA.

The three labs will all be part of a new entity—**Child Development Laboratories**. We know that many of you participate in studies at all three labs. When we call you for a study, we will be sure to emphasize which location you should come to.

Thank you again for your continuing support for our efforts. We enjoy the opportunity to share with you some aspects of your children's development. What could be more fascinating!

A handwritten signature in black ink that reads "Judy DeLoache". The signature is written in a cursive, flowing style.

Judy DeLoache  
Director of the CSC  
William R. Kenan Professor of Psychology

## Current Research Projects

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### *Learning Letters and Numbers from Picture Books*



When you buy a book for your child or children, how much thought do you give to the specific characteristics of the book? Recent research in the CSC lab by graduate student **Cynthia Chiong** might help you make choices in the future.

Cynthia has done a series of studies asking how the nature of a picture book aimed for very young children affects how well they learn from a picture book interaction. In one study, she compared how well 2-1/2-year-old children learned to identify letters from three different alphabet books. One book was a simple, rather old-fashioned book with a single picture and an alphabet letter in plain font. Another book was a “manipulative” book—an alphabet book with multiple pictures for each letter, as well as levers to pull and flaps to lift up to reveal some of the letters and pictures. The third was a Curious George book in which each letter was embedded in a picture (e.g., the letter “L” was part of a lion, “G” was the neck of a goose, and so on).

As we predicted, the children learned best from the plain book. We expected this result

because we thought the irrelevant features of the other books would distract children’s attention from the letters themselves.

Although the children enjoyed playing with the moveable and pop-up elements of the manipulative book, and the pictures in the Curious George book were quite charming, the irrelevant complexity of those books actually seemed to interfere with learning. Cynthia has found the same result in a study teaching young children to recognize numbers.

These studies tell us that if you have the goal of using a picture book to teach something to a young child, you should choose a simple book. If you just want a book for entertainment, pop-up books are fine.

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### *Children’s Understanding of Scale Models*

You may have noticed that a lot of space in the lab has recently been taken up by a large white tent—a tent more commonly known as the home of “Freddy the Frog”. We have been using this tent to study young children’s ability to understand the relation between a scale model and a larger room. Several years ago, Dr. DeLoache found that 2-1/2 year-olds have great difficulty applying what they know about a model to the room it stands for.



The task seems extremely simple: After seeing a miniature toy hidden somewhere in the model, children are asked to find a larger

version of the toy that is hidden in the same place in the room. Three-year-olds are extremely successful, but 2-1/2-year-olds almost never find the hidden toy. The problem seems to be that the younger the children, the more difficulty they have thinking about the model itself and the room it represents at the same time. They know where the little toy is in the model, but they don't use that knowledge to figure out where to find the larger toy in the room.

To test whether the younger children's problem really is their difficulty thinking of the model and what it stands for at the same time, Dr. DeLoache and colleagues conducted the "shrinking room" study. They convinced a group of 2-1/2-year-olds that a "shrinking machine" could transform the large tent into the small model of it. The reasoning behind this rather strange-seeming study was that if a child could be convinced that the model actually was the room itself after having been shrunk, then they would not have to think about the model and the room at the same time. To the child, there would simply be a single room. Believing the two spaces are the same, it should be easy for them to use their knowledge of where the toy is hidden in one to find the other toy in the other space. As predicted, 2-1/2-year-old children, who would fail the standard scale model task, were quite successful in the shrinking room task. The original shrinking room study was published in *Psychological Science* and is included in a list of the "20 most fascinating" studies in developmental psychology.



Graduate student **Megan Bloom** has recently been following up this result by telling

children that we would "pretend" to shrink a room. The same machine was used, but instead of convincing the children that it *really* could turn a large tent into a model, we said, "Let's *pretend* that this machine can shrink the tent."



In this case, the child knows there are two separate things—a big tent and a small model. Thus, the prediction was that the pretend shrinking event would *not* make it easier for young children to find the toy.

The predicted result was found telling us that if a young child knows there are two spaces, it is difficult for them to apply what they know about one to the other. Only when a child thinks the two spaces are actually the same do they transfer their knowledge from one to the other. More generally, this result tells us that using symbolic objects requires appreciating their dual nature—the fact that objects like pictures, models, and maps are both real objects *and* representations of something else at the same time.

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### ***Comprehension of Displaced Reference***

If you refer to your spouse in front of your infant, does he or she give any indication of knowing what you're talking about? Post-doctoral fellow, **Patricia Ganea**, is studying when and how very young children first develop the ability to understand displaced reference, that is, to comprehend what

someone means when they refer to something that is not present. This is a crucial ability; think how little you would know if you had to depend on direct experience rather than learning from what someone tells you!

In her earlier dissertation research on this topic, Dr. Ganea found that whether 13-month-olds responded to hearing the name of a familiar object that was out of sight depended on many things, including how far away it was and how recently they had been exposed to it. Her results indicated that this ability develops gradually in the first months of the second year of life. (Her paper on that research will appear this fall in *Child Development*, a highly-respected professional journal. A copy of the manuscript is available on the CSC website.)

She has recently studied when children are able to update their mental representation of an absent object. In this study, 18 to 20-month-olds heard that something had happened to a toy (a stuffed animal named “Lucy”) they had been playing with earlier that was now out of sight in another room. They were told that someone had spilled either some water or some dirt on it. The question was whether the children would think about the absent object and update their image of it based on this new information. To find out, the children were shown two identical toys, one dry and the other wet (or clean versus dirty), and asked which was the one they had played with before.



To date, most 18- to 20-month-old children have picked the correct (wet or dirty) toy, showing that they had thought about the toy in its absence and updated their mental

representation of its current state. This research tells us that children can imagine changes to something they cannot see at a younger age than was previously believed.

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## RESEARCH SUPPORT

An important bit of good news we want to share with you is the fact that we have recently received three research grants from federal agencies. **Dr. DeLoache’s** major grant from the **National Institutes of Health** was just renewed for five more years to support our research on how young children come to understand about symbols of various kinds (it is currently in its 17th year of continuous funding). A collaborative grant with a colleague at Northwestern University was also renewed for three more years by the **Department of Education** for our studies of the effectiveness of various educational materials. Most exciting of all, post-doctoral fellow **Patricia Ganea** received a new grant from the **National Science Foundation** to support research on children’s learning from picture books. These awards are due in large part to your participation in our research.

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## TRANSITIONS

In addition to **Patricia Ganea** receiving her first research grant, two important transitions occurred this year for graduate students **Cynthia Chiong** and **Vanessa LoBue**, both of whom received their Master’s Degree from UVa in May.

Also, several of our invaluable and delightful undergraduate research assistants graduated from UVa: We will miss **Natalie Brito**, **Christina Danko**, **Danny Drachsler**, and **Amanda Johnson**. The participation of undergraduate students in research laboratories is an important part of their education, and we enjoy their presence and benefit from their many contributions.

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## Must-see Websites!

Our lab website has a new look! Please visit [www.faculty.virginia.edu/childstudycenter](http://www.faculty.virginia.edu/childstudycenter) for updated information about our research, recent publications, information for parents, and much more!

Also, visit [www.childbehaviorsurvey.com](http://www.childbehaviorsurvey.com) for an interesting survey designed to find out how common **scale errors** are. If you don't know what we mean by scale errors, don't worry—the website makes it quite clear. Responding to the brief survey should take only a few minutes and would provide us with very important information.




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## PASS IT ON

We ask for your help in finding other children to participate in our research. Although we recruit many of our participants using the *Daily Progress* birth announcements, it is impossible to learn about kids who were born out of the area or were not listed in the paper.

**By telling your friends about the Child Study Center, you help us greatly.** In the past, many of our parents have been very helpful by giving us names of friends who might be interested or simply by telling others about our research. We greatly appreciate this effort!

If you know of parents who have children ages 6 months to 7 years, please share this newsletter with them. Any interested parents should call **434-243-5234**, visit our website at [www.faculty.virginia.edu/childstudycenter](http://www.faculty.virginia.edu/childstudycenter), or e-mail [childstudycenter@virginia.edu](mailto:childstudycenter@virginia.edu). Again, thanks for your participation. We look forward to seeing you and your child again!

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## CSC on the Town

Another way for us to recruit new participants, which we all greatly enjoy, is to attend events such as *Fridays after Five* or Barracks Road Shopping Center's *Mommy & Me* to meet new families. Keep an eye out for our colorful Child Study Center balloons—we'd love to say hello and tell you about our latest research!




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## WHAT'S NORMAL?

If you have any concerns about your child's development and he or she is under the age of 3, contact the Infant and Toddler Connection of Virginia: 1-800-234-1448.

If your child is 3 or older contact your local school system: *Albemarle*, Angie Amburn and Robin Aldridge, 973-2490; *Charlottesville*, Shawn Carey 245-2814; *Fluvanna*, Susan Daly, 589-4342; *Greene*, Kathryn Payne, 985-1307; *Louisa*, Meredith Wilkinson (540-967-1108), Shelia McCalla (540-967-0042), Kathy Wash (540-872-3931); *Nelson*, Joe Bolling, 263-7100.

For concerns about a child's speech, hearing or language development, contact the UVa Speech and Hearing Center at 434-924-6354.

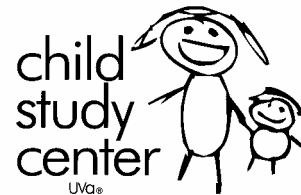


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From all of us at the Child Study Center and the Child Development Laboratories at UVA, we thank you again for your interest and participation in our research! Have a wonderful summer!

**Child Development Laboratories  
at UVA**



**Child Language &  
Learning Laboratory**

**Early Development  
Lab**