



Dear Parents and Families,

Welcome to the annual publication of the Child Learning and Development (CLAD) Lab's newsletter! This summer, we are celebrating our tenth year of research in the lab, and are excited to share some of our recent work with you! This newsletter reports on several of the studies conducted during the past year. I hope you enjoy reading about this work, especially the studies in which you and your children participated.

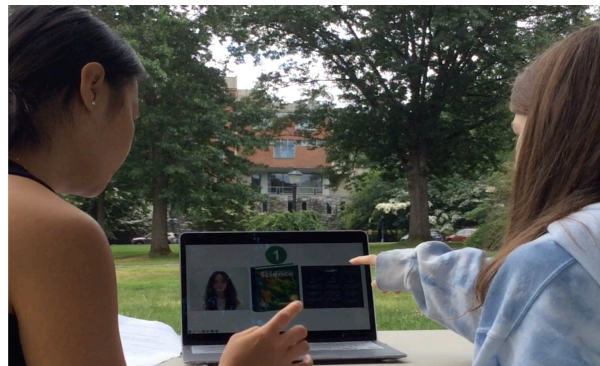
Thank you for participating in the research being conducted in the lab. Without your support and participation, I would not be able to carry out my research or train the next generation of developmental scientists. We are happy to share that our research has returned mostly to in-person appointments. We are so happy to see you all again face to face! To keep up to date on all things CLAD Lab-related, visit our website at bitly.com/cladlab.

A handwritten signature in black ink that reads 'Carolyn Palmquist'.

Carolyn Palmquist
Director, Child Learning and Development Lab

Research Updates

What do children think of ChatGPT?



With the rapid development of AI (artificial intelligence), OpenAI launched an AI chatbot known as ChatGPT (Chat Generative Pre-Trained Transformer) in late 2022. The software model is known to answer users' prompts in a conversational way, providing responses that can be altered in length, format, style, level of detail, and language used. This program is unique because it draws on previous conversations with users to learn how to respond to future prompts and tailor its response as best as possible. Given the increasing interest in AI chatbots and how they influence our day-to-day lives, we chose to explore children's perceptions of ChatGPT and whether they trust it as a source of information.

Past research about children's perceptions of the Internet and VAs (voice assistants) has revealed that as children get older, they perceive the Internet and VAs as more trustworthy with factual information (i.e. scientific and historical facts) than human sources (Girouard-Hallam & Danovitch, 2022). Prior to this technology, children also demonstrated preferences for non-human, print-based sources (via written text or online) as compared to information shared by human informants (Tong et al., 2023). In the current study, we were interested in exploring the intersection of these areas of research to ask how children think about text-based AI

(ChatGPT) and whether they view it as a more or less reliable source than humans or other text-based sources (e.g., textbooks).

In the study, 10-year-old participants are presented with information from a human, a textbook, and ChatGPT. As each source provides a response to an unfamiliar question, the participants share how accurate they think each source is and also rank the sources on who they would prefer to ask for different kinds of information (e.g., facts, personal information, etc.). The final two parts of the study involve asking children about their perceptions of the different sources (e.g., are they alive?) and a parent survey about children's prior engagement with technology.

Preliminary findings so far show that children are showing significant preference towards different sources based on the type of information being asked. For example, relying on the textbook to ask about stable information (e.g., facts), but relying on the person to ask about personal information (e.g. qualities about the child, hobbies, etc.) This indicates that children are actively evaluating what each informant is capable of answering and have set choices on who they seek as reliable for specific domains of knowledge. Further analysis will be needed to determine other relationships and possible findings within our data. We are eager to share the results and implications of this work with you in the future!

What cues do children prioritize when picking a potential informant?



Previous work in our lab has explored what kind of cues effect children's selective trust. We found that in many cases, preschoolers value behavioral information (e.g., whether they know the correct function for different objects) over appearance when deciding whether someone is competent or not. However, what is less clear from our previous work is whether children are explicitly aware of their preferences for particular kinds of information and whether they consciously view certain information as more useful (i.e., behavior) than other pieces of information (i.e., appearance). In this current study we wanted to explore whether preschool age children are able to determine the relevance and value of different cues. We also explored whether individual differences in children's metacognition (understanding your own thoughts), theory of mind (understanding that others' thoughts are separate from your own), and need for cognition (curiosity for information) affected children's preferences for certain kinds of information.

A two-part study was designed to explore these questions. In the first visit, children were presented with a new object and 2 potential informants (represented by colored silhouettes). They were told that they needed to decide which of the two informants they wanted to ask for help to figure out what the new object was called. Before they made this decision, children were given the option to learn the following things about the informants: what they looked like, what they knew about other objects, and how they played with their friends (3 different cues). The child could choose how much or little they wanted to learn, but our main interest was what they wanted to learn first (what they thought would help them the most for identifying who would know about unfamiliar objects). After learning as much or as little as they wanted to about the informants, we then asked them to choose who they wanted to ask for help. In theory, the knowledge cue would be the most logical to pick as it is a knowledge-based task.

However, children may value a different cue despite the nature of the task.

In the second visit, children participated in 3 different activities, each measured a different individual difference. We drew on previous studies to find standardized measures for these individual differences. For metacognition we used a study conducted in 2023 by Dutemple et. al. Theory of mind is a well-studied and established measure so we used a study conducted in 2004 by Wellman and Liu. Finally, for need for cognition we used a study from 2017 led by Luong et. al.

Preliminary findings so far show that many children are choosing to first learn how the informants played with their friends, rather than the appearance or knowledge cue. This indicates that children may value an informant's social skills over their appearance (what they look like) and prior knowledge (what they know about other objects) when deciding who to ask for help. Further analysis will be needed to determine the significance of these results and if any of the individual measures have a large impact on the first activity. We are excited to share these results with you in the future!

Is a tendency to assign positive traits socially learned or innate?



The tendency to assign positive traits to others, regardless of what information is given about them, is known as the positivity bias and is a

widely accepted psychological phenomenon. Previous studies in our lab have suggested that children are more likely to assign positive traits to others, showing a positivity bias, when they are being observed than when they are reporting their answers anonymously. This tendency suggests that this bias may be the result of social pressure children feel to evaluate others positively, rather than deficits in cognitive skills related to trait attribution. The current study is a follow-up to these previous studies in which half our participants report their answers anonymously and half do so in a face-to-face manner.

The goal of this study is to determine whether children are socially influenced when giving answers about others' personality traits and therefore whether the positivity bias is cognitive or socially-driven. If it is the case that children's overly-positive inferences stem from social pressure, rather than an innate predisposition to view others in a positive light, children in our face-to-face condition will give more positive answers than those in the anonymous condition because they may, consciously or subconsciously, want to please the person witnessing their answers. When there is no one watching their answers, children may feel more willing and able to answer how they truly feel instead of they think they "should" respond. However, if the positivity bias is related to cognitive development, there should be a difference between the face-to-face and anonymous conditions in younger (5-year-olds), but not older (10-year-olds), children.

In the first iteration of this study, we presented children with videos of individuals behaving in a competent manner, incompetent manner, trustworthy manner, or untrustworthy manner. We then asked what children thought about these people's traits and behaviors.

Preliminary results indicated that children typically gave answers aligning with the behaviors presented in the videos. This

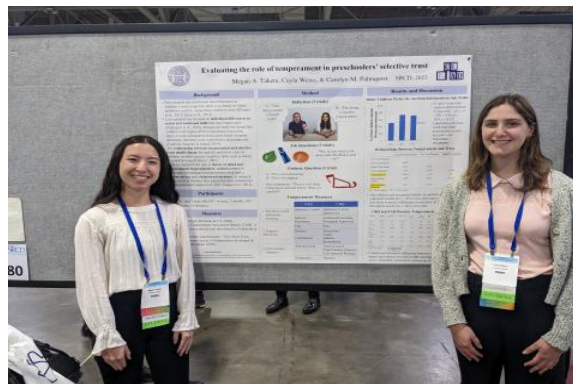
suggests that observing consistent behaviors may outweigh any sort of positivity bias for both 5- and 10-year-olds. For this reason, we conducted a follow-up study eliminating the behavior variable completely. In this iteration, we asked children to make predictions about individuals' traits without any previous information about them. We simply showed children images of individuals, then asked the same questions we did in the previous iteration of the study.

In this study, we hope to gain a deeper understanding of why the so-called positivity bias exists in children under the age of ten, determining whether it is innate or socially learned. This is important because it can help inform how best to educate children and foster healthy relationships.

Register with us!

If you are interested in learning more about the lab, you can contact us by calling 413-542-5670 or emailing cladlab@amherst.edu. If you are interested in participating in future research, visit our website at www.bitly.com/cladlab to register your family with our lab. If you register your family, we will contact you when there is a study that your child is of the right age to participate in.

Meet our Researchers



Thesis students, Megan Taketa ('23) and Cayla Weiss ('23) present their thesis work at the Society for Research in Child Development in Salt Lake City, UT.



The CLAD lab celebrates the beginning of the Summer 2023 term. Top: Prof. Palmquist, Mary Gum ('24), Eren Levine ('24), and Justin Ruiz ('24). Bottom: Lauren Yuen ('25), Ada Chen ('25), Yareli Calderon Romero ('25), and Vaughn Armeur ('25).



Our summer researchers attend the UMASS fireworks for the 4th of July. Vaughn Armeur ('25), Justin Ruiz ('24), Mary Gum ('24), and Ada Chen ('25).