
FALL 2017 NEWSLETTER



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Dear Families,

Welcome to the first DAX Center newsletter! We are so grateful for your contributions to our research. You have helped us expand knowledge on children's morality, learning capacities, and problem solving — and none of it would have been possible without your participation. Thank you! We hope to keep families informed with this new, regular newsletter. Please enjoy the short summaries that follow, describing projects your own kids may have been involved in.

Thank you and happy reading!
The DAX Center

General DAX News

Welcome to our two new DAX Faculty!

Kristi Leimgruber and Alex M. Moore joined the F&M community this August and are excited to begin their involvement with DAX!

DAX goes to Portland, Oregon!

The DAX Center had 6 different talks and posters accepted for presentation at the Cognitive Development Society conference in October! Conferences like this allow us to share our research outside of F&M. This Newsletter will give you an idea of the kind of projects we presented.



Laboratory Directors

Krista Casler, PH.D.

Child Development Lab

Joshua Rottman, PH.D.

Developing Moral Values Lab

Lauren Howard, PH.D.

Early Social Cognition Lab

Kristi Leimgruber, PH.D.

Visiting Assistant Professor of Psychology

Alex M. Moore, PH.D.

Visiting Assistant Professor of Psychology



CHILD DEVELOPMENT LAB

Tool Learning and Use: Possible Different Patterns of Strengths for Children With and Without Autism

Past research in the CDL has made it clear that children and adults don't choose tools and objects based on physical features alone. For example, a fork has the right physical parts for poking and lifting food, of course, but it could be used for other purposes too. So why do we use forks almost exclusively for eating? Well...because that's what forks are *for*. There are strong social expectations that govern how most of us learn about and use tools. In a recent and ongoing project, Dr. Casler, Madeline Kaplan, and Jennifer Thal have been investigating how differences in sensitivity to social information might influence this type of tool learning and use. They have focused on children diagnosed with Autism Spectrum Disorder (ASD), who are typically less attuned to social information and expectations. Preliminary results suggest that lower social sensitivity may help children with ASD be more flexible than typically developing children in how they use tools. **We are still recruiting for this brief (20 minute) study, so if you know of a child with ASD between the ages of 7 and 12, please get in touch!**

Your Trip Around Mexico! A Storybook Study Exploring the Effects of Helping and Outgroup Exposure on Children's Empathy Development

In the past year, Rafael Benitez and Julia Chirls completed a research project in the CDL exploring whether a storybook could be used to improve young children's empathy toward outgroup members (i.e., people who are different from them). They found that when children heard travel stories that involved characters helping them, the children's empathy scores increased!

The Influence of Function Knowledge on Object Exploration, Perception, and Use

Previous research in our lab has demonstrated that children, from as young as 24 months, understand that tools are designed for particular purposes. They effectively learn a tool's purpose from social clues around them. In a set of studies set to begin soon, the CDL will explore in more detail how and when function information impacts children's and adults' flexibility and perception of a tool. Why does having knowledge of a tool's function lead us to use it in a restricted way? Does function information shape our perception of the features of a tool? Does the timing of function information matter? Answering these questions will help us better understand what details support flexibility and/or innovation in tool-based problem solving.



Research Projects

Autism Spectrum Disorder and Innovation



Scale Errors



Functional Fixedness



DEVELOPING MORAL VALUES LAB

Children's Attitudes Towards Dirty People

Throughout history, people have used words like “nasty,” “disgusting,” and “dirty” to fuel hatred toward specific groups. Why do perceptions of dirtiness lead to such negative attitudes, and where does this tendency come from?

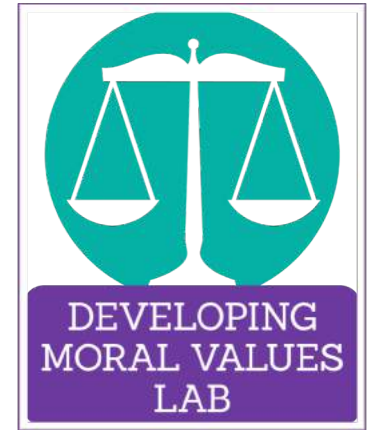
To start answering this question, we have been bringing 5–9 year-old children into our lab at F&M to see how they treat other children who are sick or physically unclean. We are doing this by showing participants photographs of other children their age, and then asking a range of questions about the predictions or beliefs they may have about the sick/unclean children and the healthy/clean children.

So far, we're finding that our participants tend to trust information from healthy children rather than information from sick children. We are also finding that children tend to give more “good” items (e.g., a stuffed animal, a box of candy, a fidget spinner) to clean children and more “bad” items (e.g., a broken toy, an old floppy disk, a crushed soda can) to dirty children. Finally, our participants think that healthy/clean children have more positive traits (e.g., intelligence, friendliness, honesty) than sick/dirty children.

Our results show that negative attitudes toward dirtiness exist even in early childhood. We're currently planning additional studies to follow up on our current findings in order to better understand what causes these attitudes to form -- and we'd love for more families to participate, so feel free to spread the word!

Study report by Anastasiia Grigoreva and Josie Benitez

The Developing Moral Values Lab has also been busy conducting research with adults, focusing especially on the roots of environmentalist values. We're planning to start designing a few studies investigating the development of these attitudes, and we'll start recruiting kids for these studies soon. Stay tuned 😊



Research Projects

The Impacts of Disgust on Social Attitudes



Roots of Environmental Ethics



EARLY SOCIAL COGNITION LAB

Do children remember intentional actions more than accidental ones?

By the time they are two years old, most kids are great at figuring out whether you did something on purpose or by accident. However, it's not currently clear whether children are more likely to remember purposeful actions more than accidental ones. The ESC lab is currently conducting a series of experiments that further explore whether 4 to 6 year old children remember situations differently while listening to and seeing a story with accidental and intentional actions. After hearing the stories, participants are asked to remember what they heard. This study is still very new, so we don't have results to report yet, but we hypothesize that children might remember the actions that they were told were intentional more than the ones that they were told were accidental.

Study report by Hannah Rodriguez

Can children see things from someone else's point of view?

It is generally accepted that young children are egocentric (that they tend to see the world primarily from their own point of view), but this isn't always the case. Our lab was curious to know whether 3-9 year old children had the ability to take the visual perspective of someone in a picture. Children were presented with pictures that showed either a person or sitting at a table or an empty chair at a table. After viewing the pictures, children were asked to remember the order of some objects that were placed on the table. We are finding that children tend to place the blocks according to the woman's perspective when she is present in the picture, but according to their own perspective if no person is in the picture. This shows that even young children may be able to see things from the perspectives of other people.

Study report by Fiona Waters

Worldwide project exploring infant preferences for "baby talk"

This summer, the ESC lab partnered with over 70 other labs across the world to explore whether babies prefer infant-directed speech (aka "baby talk") over adult-directed speech. Previous research has found that babies in the US pay particular attention to infant-directed speech because it features a sing-songy rhythm, a high pitch, and includes slow repetition of the words they are trying to learn. What is unknown is whether this preference is found across cultures, across various areas of the United States, and if it maintains across early development.

For this study, infants between the ages of 6-15 months came into the lab and sat on their parent's lap in front of a computer screen. The computer played



Research Projects

Memory for Social Events



Learning from Social Partners



alternating audio clips of an adult speaking in infant-directed speech or speaking in an adult-directed speech. The infant's attention to the videos tell us what type of speech they prefer. So far, our results are consistent with the original studies, finding that babies prefer infant-directed speech over adult-directed speech.

The anonymous data from our lab will be sent to Stanford University where it will be combined and analyzed with data from across the world. In this way, we will be able to explore whether infants prefer "baby talk" in multiple contexts. Data collection is ongoing, so if you know any babies that would like to be scientists, please let us know!

Study Report by Lauren Howard

Does thinking about actions improve children's memory?

Children tend to remember an event better when there is a person in it as opposed to an event in which no person is present. One possible reason for this is that children unconsciously activate their own motor system when thinking about or seeing another person acting on objects, and this activation helps children learn information in a more multimodal fashion. In a new study, we tested this hypothesis by asking children to complete a number of actions on objects (aka activate their own motor system) before learning something new. Thus far, we are finding that children remember more about the videos if they are asked to think about their own actions at the same time. This suggests that asking children to reflect on actions while learning information may result in stronger memories over time.

Study Report by Hye Rin Lee

Children's memory for ingroup and outgroup members change depending on the action

Does the language someone speaks affect children's memory for their actions? In a recent study, 3-9 yr old participants were shown a picture of a child who either spoke in English or in French, and were told that each one completed a certain action. Some of the actions had to do with social rules that might vary across societies (like being quiet in certain buildings), while some actions were related to foundational moral beliefs that are often consistent across societies (like hurting someone). We found that children were more likely to remember the actions of the French vs. English speaker if the action related to social rules, which may be because children are monitoring whether people from another culture would follow or break our norms. However, children were more likely to remember the moral actions of the English vs. French speaker, which could be due to the fact that children are following whether people who are 'like them' and could affiliate with them are doing good deeds.

Study Report by Tess Flanagan

SUMMER AT DAX

American Psychological Association

The Development and Experience Center was one of only five centers in the country chosen to receive a national grant from the American Psychological Association! This grant helped the DAX center have six additional full-time research assistants over the summer. We were able to have a busy summer with more research assistants and some of the students that you met may have been funded through the grant. We are grateful for the APA grant and also for our directors who worked hard in getting this grant!

"The Gardener and the Carpenter"

To take a break from our busy schedule, the DAX center met once a week to read and discuss Alison Gopnik's book, "The Gardener and the Carpenter." The book allowed us to discuss certain topics such as childhood exploration, western styles of parenting, and the evolution of parenting. Fortunately, we were able to sit down and talk to Alison Gopnik at a conference this summer. Getting to ask her specific questions we had was a wonderful experience and enriched our excitement in the book!

Society for Philosophy and Psychology Conference

The entire DAX Center was able to attend the Society for Philosophy and Psychology Conference this summer at Johns Hopkins University! At the conference, we attended different presentations, met some of our favorite researchers, and explored Baltimore. This was the first conference for most of the students so it was a wonderful experience and we came back to F&M excited to continue our research! One of our lab directors, Joshua Rottman, had two projects presented at the conference! One was on children and adult's disdain to dirtiness and the other was on moral attitudes toward eating meat.



Weekly book club reading "The Gardener and the Carpenter"



Students talk with Alison Gopnik at Society of Philosophy and Psychology Conference

WELCOME TO OUR NEW FACULTY

Dr. Alex Moore

Professor Moore received his Ph.D. in Cognitive Psychology from the University of Nevada Las Vegas, and worked as a postdoctoral researcher in Cognitive Development at the University of Missouri. His research attempts to explain how cognitive mechanisms such as working memory and attention aid in mathematical problem solving, and how negative emotional arousal associated with mathematics anxiety serves to disrupt mental processing critical for success in the domain. Related areas of research include the formation of mathematical concepts throughout childhood, the development of problem solving strategies that are predictive of later success in mathematics, and the societal and personal factors that influence the pursuit of careers in the science, technology, engineering, and mathematics (STEM) fields.

Dr. Kristi Leimgruber

Dr. Leimgruber received a Bachelors of Science in Zoology and Biological Aspects of Conservation from the University of Wisconsin-Madison and earned her Ph.D. in Developmental Psychology from Yale University in 2014. Before coming to Franklin & Marshall, she was a Postdoctoral Research Fellow in the Social Cognitive Development Group at Harvard University. Dr. Leimgruber studies the developmental and evolutionary roots of uniquely human cooperation. Specifically, her research focuses on the role that factors such as reputation management, positive affect, prospection, and social experience play in the emergence of prosocial behaviors. When she is not studying children and monkeys in the lab, Dr. Leimgruber loves hanging out with her husband (Christian), her sweet baby (Penelope June), and her two mutts (Porter & Harley). She also bakes a mean peanut butter cookie.



Dr. Alex Moore



Dr. Kristi Leimgruber