



Emory Infant and Child
Development Research Laboratory
Newsletter
Spring 2015

Letter to Parents:

Article by: Philippe Rochat Ph.D.
Head of the Emory Infant and Child Lab

Another productive and busy year here at the Emory Infant and Child Lab, thanks to the joint effort of many individuals: the diligent care and supervision of our Lab Coordinator Theresa Nettles, all the good work from our visiting scholars, graduate, as well as volunteering undergraduate students. And again, thanks to the parents and children who came to visit the Lab and participated in our studies over the past year. As always, the goal of the Infant and Child Lab is to contribute to the scientific understanding of how the minds of children grow. We could not do it without you.

Let me mention a few cardinal moments from the past year at the Lab. We welcomed a new graduate student, Sara Valencia who quickly embarked on a Master's project on the development of self-consciousness and the sensitivity to approval looks from adults in 1-2 year-olds (see pg. 4). Shensheng Wang passed, with flying colors, his comprehensive exam on the topic of "Shadenfreude", trying to explain in the perspective of the development of pleasure one might gain from the misfortune of others and is now preparing his Ph.D. dissertation project around the large topic of social comparison by young children and adults (see pg. 3). The Lab also hosted Laurent Cordonier, a visiting Swiss research scientist and Ph.D. student from Lausanne who conducted a study on social conformity in 3 to 7 year-olds in collaboration and with the help of Theresa Nettles (See pg. 2). We are currently writing up the results suggesting that by 5 years children intuitively anticipate that someone would forget about what is true and pretend otherwise to align with a majority opinion to gain friendship and affiliation. We

hope to show that by 5 years, and not prior, children become strategic in understanding the value of compromise and belief adjustment to fulfill basic affiliation needs. Since the beginning of the year, Amélie Deschenaux, yet another visiting Swiss scholar, joined the Lab to start a project on young children's understanding of imitation, in particular the role of imitation in forging close social affiliation by 2-5 year-olds (See pg. 5). We will keep you posted on her progress but the project is promising and Amélie is almost ready to start collecting data with, once again, the diligent help of Theresa Nettles.

Otherwise, my book on the "Origins of Possession: Owning and sharing in development" was published by Cambridge University Press in October 2014. Our major cross-cultural study on ownership reasoning across 7 cultures was published in the flagship journal *Cognition* and many more papers and chapters are in press or were submitted, including a research on sharing by Tibetan preschoolers attending a traditional Buddhist school in Dharamsala, India, where the Dalai Lama resides. The study was run by one of our Honors undergraduate students, Steven Starr, who is now finishing his thesis on the effect of short-term compassion training by elementary school children in an Atlanta school (See pg. 7). Finally, Emma Burgin, another undergraduate student, tested more than 40 children and is now about to defend an Honors Thesis on the topic of color preference and reputation by 3 to 7 year-old children (See pg. 6). A busy year indeed!

Once again, to all the parents and children who came or are planning to come to the Lab: thank you for all your help. Do not hesitate to contact us for any further input or information. We hope you will enjoy the newsletter. As usual, please circulate and spread the word...

Meet the Lab: Philippe Rochat

Philippe Rochat was born and raised in Geneva, Switzerland. He was trained by Jean Piaget and his close collaborators, and received his Ph.D. from the University of Geneva, Switzerland in 1984. He then began a series of Post Doctoral internships at Brown University, the University of Pennsylvania, and Johns Hopkins. The main focus of his research is the early sense of self, emergence of self-concept, the development of social cognition and relatedness, and the emergence of a moral sense during the preschool years in children from all over the world. His research emphasizes differences in populations growing up in highly contrasted cultural environments, as well as highly contrasted socio-economic circumstances.



What was really in the box?

Article by Theresa Nettles

Last summer we welcomed the opportunity to explore the idea of conformity and friendship. We wanted to explore if children conformed to the opinions of their peers to enhance social integration. Is conformity a type of social affiliation? When the preschool age child sees a social interaction, do they anticipate strong conformity from a person who is not friends with the others? These are some of the questions that we asked.

For this experiment we ran two sets of participants (ages 3-5 years of age) with only a slight difference between the two experiments. In both experiments the child was shown a group of three puppet “friends” and one puppet who was not friend (lets refer to him as “other”) with the three. The “other” puppet really wanted to be included in the games that they were playing, but the “friend” puppets did not want him to. Next we explained that the “friends” went on a treasure hunt and found a box. As the “other” was walking by he saw them about to open the box and asks them if he can also look. This is where the two experiments differ. In the first study, the participant did not know what was in the box, in the second study the participant placed the items in the box before the “friends” found it. The “friends” let “other” look in the box with them.

Once the puppets have looked in the box, I asked if they would tell me what was in the box. They agree to “whisper” the answer in my ear. (See picture below). So each puppet takes a turn telling me what is in the box (inside the box is both a blue ball and a



yellow duck). The three friends tell me the same answer, while “other” tells me the opposite answer as the friends. Once they have all taken a turn I ask the participant to tell me what each puppet said was in the box. This is to make sure they understood that different things were said. I then ask the puppets to tell me what they saw “out-loud.”

So the first puppet says his answer, the other two quickly agree with the first puppet. However, I pause and ask the participant. “What do you think he will say is in the box” after they answer I remind the child that “other” really wants to their friend. Then I ask the question “What do you think he should say.” We predicted that the children would change their answer between the first and second question. We hoped to show that children pick up on these mild social cues.

What did we find? Five year olds significantly changed their answers between the first question and the second question. These changes were from what “other” originally whispered to what the “friends” said out-loud. Thus, confirming our hypothesis. However, not satisfied that this relationship was strong enough (maybe they thought they had to change their answer) we decided to run a third study.

In the third study, everything was the same, except instead of asking what should he say if he wants to be friends we changed it to “what should he say if he wants to go home alone.” With the new framing of the question the participants stopped changing their answer. We hope to submit this experiment for publication very soon.

Meet the Lab:

Theresa Nettles

Theresa Nettles (formally Moehrle) has been the Lab Coordinator at the Infant and Child Lab for 5 years. She received her Master’s In Experimental Psychology from the University of Texas at Arlington in 2009 and joined the lab shortly after.

Theresa is mainly involved in overseeing the administrative duties of the lab. This includes scheduling participants, coordination of studies, upkeep of the website and the editing of the newsletter, just to name a few. Her main research interest is in the development of group affiliation and friendship, specifically the effects of group affiliation on those friendships.

Besides her duties in the lab she currently teaches Introduction to Psychology, and Human Development at Chattahoochee Technical College. In her spare time she attends Kennesaw State University in the Education Department.



Can you identify which faces are real? Your Baby can!

Article by ShenSheng Wang

Faces are crucial social stimuli for people to interact with each other. Preference for face-like stimuli is present among newborn infants.

The preference for faces over non-faces has been found in various visual stimuli, including veridical faces, schematic faces and geometric face-like patterns. Among these face-like stimuli, however, the extent to which infants perceive their realism or human likeness is less known.

To bridge this gap in the literature, I conducted an eye-tracking study examining how 6-12 months old infants perceive human and artificial faces (e.g., androids, dolls, wax figures, and mannequins), which were previously judged by adult participants as comfortable and uncomfortable, respectively.

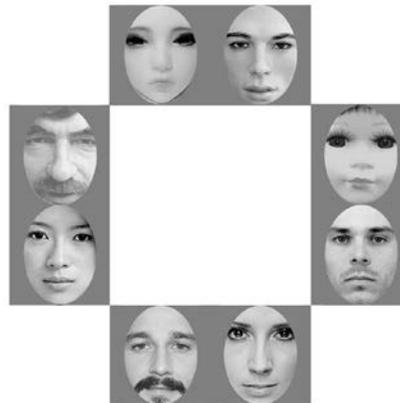
Using a modified visual searching paradigm, 8 faces (4 human and 4 artificial) were simultaneously presented on a wheel display on an eye-tracker screen. Infants sat on their moms' laps and freely looked at the 8 faces while their eye movements were recorded. The results showed that infants discriminated between human and artificial faces, and spent a larger proportion of time looking toward human than artificial faces. These findings suggest that young infants not only distinguish faces on the dimension of realism but also demonstrate real face preference.

In the following study, I examine the cognitive mechanism whereby this human face preference emerges. Possible mechanisms include face form and face animacy perception (Looser, Guntupalli, & Wheatley, 2013). Face form perception is based on detection of global face configuration which is shared among all types of facial stimuli, including human, monkey, and artificial faces. In contrast, face animacy perception relies on the detection

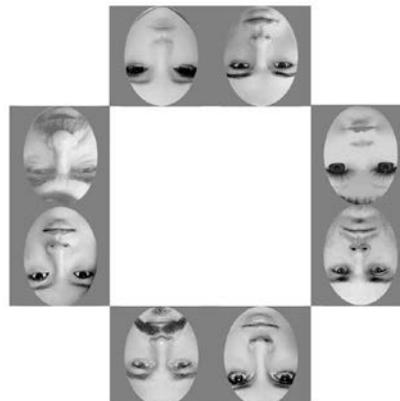
of life or the human mind unique in human faces. Testing these two tentative explanations could lead to deeper understandings of the role of face perception in social interaction: What do people see in faces?

In addition to the ongoing study on infant face perception, I study Schadenfreude, a prevalent social and/or moral emotion that has not received much attention in the literature. I am interested in the cognitive underpinnings of Schadenfreude, its developments in children, its cultural variations, and its social implications.

Upright faces



Inverted Faces



Meet the Lab: ShenSheng Wang

Shensheng Wang was born and raised in Tianjin, China. He came to Emory with a Bachelor of Science degree in Psychology from Nankai University (Tianjin) in fall 2012. Since then, he has been studying face perception in infants as well as adults under the supervision of Dr. Philippe Rochat.

ShenSheng received his Master's Degree in the Spring of 2014. He is now working on his PhD and continuing his work discovering the complexities of Shedenfrued.

In his spare time, he enjoys music and sports. In college, he was a member of the Student Choir and participated in numerous choir competitions and performances worldwide. At Emory, he joined the GSPN and serves as the coordinator of "Thinking Thursday," an event for promoting intellectual conversation in the psychology community.



Compassion Based Cognitive Training

Article by: Steven Starr

The study that I'm currently working on is investigating the benefits of a compassion training curriculum for conducting pro-social outcomes in elementary school children. Compassion in this sense is regarded as an attitude of concern for others that compels a person to try to alleviate their distress and promote their happiness and well-being. Though compassion science is a considerably new field of scientific inquiry, studies have shown that compassion training can enhance people's capacity for compassion and also reduce stress and increase positive affect, social connectedness, and altruism. From these understandings, there is springing much interest to bring compassion training into school classrooms where children can form early tendencies of empathy, kindness, and compassion.

Specifically, the study that's being conducted looks to validate the efficacy of a compassion training protocol developed here at Emory known as Cognitively-Based Compassion Training (CBCT). CBCT is based on a Tibetan Buddhist mind training method, though it doesn't carry any religious sentiments so it can be taught to anyone in any setting. CBCT typically lasts 8-10 weeks and covers 6 modules, which are 1) developing attention and stability of mind, 2) cultivating insight into the nature of mental experience, 3) cultivating self-compassion, 4) developing equanimity and impartiality, 5) developing appreciation, affection, and empathy for others, and 6) realizing engaged compassion. CBCT has been or is currently being used with undergrads, medical students, adolescents in foster care, women inmates, women suicide attempters, male PTSD-diagnosed combat veterans, and elementary school children to name a few.

undergrads, medical students, adolescents in foster care, women inmates, women suicide attempters, male PTSD-diagnosed combat veterans, and elementary school children to name a few.

In the study, whole 1st and 4th grade classrooms have been assigned to receive one of three different 10-week training programs—CBCT, mindfulness, or no training—and will be tested before and after the trainings in measures of conflict resolution reasoning, sharing, and bullying prevention. The basic hypothesis is the classes that receive CBCT training will have the largest gains in these measures compared to the active control group of mindfulness (a very popular contemplative practice movement even within schools that entails present moment awareness) and a genuine control group that receives no training. The difference between this study and the original elementary school CBCT study, where certified instructors carried out the trainings, is that now the classroom teachers have been trained to teach the program. Also to note, in addition to the pro-social measures, classroom observation and teacher/student exit interviews will be conducted to get a more qualitative sense of how well the children were able to understand and use CBCT's concepts and also what the successes and challenges were of the program in order to improve future programs. From this study, we hope to see that compassion training can instill significant gains in pro-social reasoning and behavior and perhaps provide a case that compassion training can begin to find an integral way into education as social-emotional training tool in schools as a reputable and empirically grounded venture.

Spotlight on the Students:

Steven Starr

Steven Starr was born and raised in Charlotte, NC. He is currently a senior at Emory University studying Psychology and Educational Studies. He was taken into the Rochat lab last year before going abroad to Dharamsala, India where he helped conduct a fairness development study with 3- and 5-year-old Tibetan children.

Currently, Steven is completing a thesis under the guru-ship of Dr. Rochat and Dr. Robbins investigating the effects of a compassion training curriculum on first and fourth graders' social reasoning, sharing, and bullying prevention. He is interested in clinical social work or psychology.



Emerging Sensitivity to an Evaluative Audience

Article by: Sara Valencia

Self-consciousness is a human trademark. Think about the last time you had to give a speech in public. For most people, such memory comes with a bit of anxiety and apprehension at the thought of standing in front of an audience. What about the last time something embarrassing happened to you, such as falling down some stairs? Chances are, you were embarrassed because you were concerned of what other people were going to think about you. These day-to-day instances indicate that we care what other people think, and are sensitive to the evaluative gaze of others. This concern not only brings about self-conscious emotions (such as embarrassment) but it also alters our behavior. In the literature, the perceived presence of an audience (others watching) influences or changes one's behavior, known as social influence. For instance, research has shown that people are more likely to perform better, be more generous, and conform to the majority when other people are watching.

Therefore, the presence of others influences our behavior, suggesting that the perception of an evaluative audience is pervasive throughout the lifespan. However, research has yet to explore the emergence of this evaluative audience perception. The question of interest is, when do we become sensitive to the evaluative gaze of others? And what cognitive milestones are possible precursors to becoming sensitive to the evaluative gaze of others?

This is what the Audience Perception Study aims to find. We recruited 14-24 month olds. The study consists of two parts: one where children are tested to measure their objectified sense of self (arising around 18 months of age) and one to test their sensitivity to the evaluative gaze of others.

To measure their objectified sense of self, they will be given a Mirror Mark Test to see if they can identify themselves in the mirror. To test their sensitivity to the evaluative gaze of others, they will be given a remote control to play with while the experimenter either watches them for 30 seconds (condition A) or looks away for 30 seconds (condition B).

Because infants who pass the mirror mark test also begin to display self-conscious emotions, we predict that those infants who can recognize themselves in the mirror will behave differently in condition A and B. In other words, those infants who recognize themselves in the mirror will be inhibited by the presence of an experimenter. In contrast, infants who do not pass the mirror mark test will not behave differently in the conditions, because they will not be sensitive to the evaluative gaze of others. Further, we expect that infants who can recognize themselves in the mirror will look toward the experimenter significantly more before and after a behavior as a source of self-evaluative feedback.

Preliminary results allude to a significant difference between those who can recognize themselves in the mirror, and those who cannot. The results suggest that once infants begin recognizing themselves in the mirror (around 17-21 months), they will begin to be sensitive to other's gaze, and their behavior will differ when others are watching. This study is still in progress- Finalized results to come in the summer!

Meet the Lab: Sara Valencia

Sara joined the lab in the fall of 2014. She graduated from the University of Georgia with a BS in Psychology in May of 2014.

While an undergraduate she worked as part of Dr. Anne Shaffer's Family relations and Health research lab.

She plans on continuing her research about Emotional competence and complete some cross-cultural research.

Currently she is running the audience perceptions study that is the feature article of this page.



Color Preferences in Children

Article by: Emma Burgin

When you think of your favorite color, how quickly does it come to mind? How long has this color been your favorite? As adults, we have specific color choices and readily able to name and defend our favorite colors. We put an intrinsic value to colors, and they help us define and express ourselves. We paint our homes and pick out specific clothing colors. But when do we start to develop color preferences, and at what point do we understand that we can have a favorite color?

Research shows as young as four months old, we are able to perceive chromatic stimuli, and have specific color preferences (i.e. red and blue). As we age, we are better able to categorize and put names to colors, giving them specific values, allowing us to create affective responses to them. Similar to other preferences, color preferences are part of our self-concept development and we can use them, along with other aesthetic preferences to communicate something about the self to others.

My research aimed to explore color preferences and their affective role. We wanted to see if our favorite colors help define and establish our self-concept and how we reflect and use these preferences to communicate and present ourselves to others.

To examine these questions, we developed a series of tasks to explore color consistency in children in three- five-and seven-year-olds. In general, we showed children a color wheel, and asked them their most preferred and least preferred colors. To see if these preferences translated to social stimuli we then presented the same color wheel, but the colors were in the form of t-shirts. We asked them which color t-shirt they most preferred and least preferred to wear.

In other situations, we presented vignettes about a potential friend and a birthday party. The child was meant to pick a t-shirt to wear to the party and to give as a birthday gift. We framed the choice, so that the child could either express their own color and t-shirt preferences, or diverge from their preferences in order to affiliate or appease this potential friend.

Results showed that children by age three, already have a relatively stable color preference, and it does not change much as they develop. However, as children reach the ages of five and seven, we found that they were more likely to use these color preferences in their social environment. For example, the five and seven year olds were more willing to diverge from their own color preferences to affiliate, and they were able to understand a potential friend's color preference, and use that knowledge to then help with affiliation. In contrast, three year olds were less able to be flexible and diverge from their color preferences.

Overall, our results showed that as children reach the age of five, they are more likely to think of their own color preferences in relation to others. They start to use their aesthetic preferences as an extension of the self, deciding on their own "style", and referencing, comparing, and changing this "style" based on their peers and societal values. Ultimately, this study suggests that starting around age five, we use our color preferences and an increasing knowledge and understanding of others, and ourselves to better affiliate with our peers.



Spotlight on the Students:

Emma Burgin

Emma Burgin is a graduating senior with a major in Psychology and Art History.

She has worked for the Emory Infant and Child Lab as a research assistant since Fall 2013. She is currently an honor's student working on her thesis.

On the side, Emma works with a mental health advocacy group, Active Minds and volunteers time to do art projects with children at the Ronald McDonald House through Project Sunshine.

In the near future, Emma hopes to become an Art Therapist to continue her work and interest with children and their artistic development.



Mimicry Study

Article by: Amelie Deschenaux

Recent studies have focused on the affiliative effect of “moving together”. “Moving together” includes different kinds of behaviors such as imitation, emulation, synchrony or mimicry. Actually, evidence shows that such behaviors may have an affiliative effect in several ways and at various levels; increasing empathy, prosocial or cooperative behaviors, in the model, in the imitator and in the observer. Following this research, our study focuses more precisely on the affiliative effect of conscious and spontaneous mimicry in preschoolers. Indeed, previous observations in daycare centers indicated that preschoolers consciously and spontaneously play a lot, mimicking each other. These kinds of behaviors don’t seem to be specific to children, indeed, adults mimic either unconsciously (facial or postural mimicry) or deliberately (mimicry in a standardized context). By the way, previous studies on mimicking mainly focused on unconscious and deliberate behaviors.

According to a sociological standpoint, what interests us is the ability for detecting affiliations on the basis of the behaviors of others, or in other words, in the third person. For that purpose, we designed an experiment showing puppets moving on videos. More specifically, on each video, three puppets move together: two of them moving congruently with the condition and one of them moving incongruently. We manipulate temporal and behavioral similarity and obtain

4 different conditions: I. Synchronous Mimicry (temporal similarity and behavioral similarity), II. Asynchronous Mimicry (temporal dissimilarity and behavioral similarity), III. In Synchronous Non-mimicry (temporal similarity and behavioral dissimilarity), V. Asynchronous Non-Mimicry (temporal dissimilarity and behavioral dissimilarity). For each condition, it is - at least - one specific short video. The children observe the moving puppets on a big screen and then must predict which two puppets are the best friends among the three.

If it is true that preschoolers are able to detect affiliations between characters on the basis of their behaviors, then the two puppets moving congruently (either synchronous, or mimic, or synchronous and mimic) should be regarded as the two best friends, while the puppet moving incongruently (either asynchronous, or non-mimic, or asynchronous and non-mimic) should be regarded as the isolated one.

As we have just started to welcome children between 3 and 5 years old to the lab, we do not currently have data. If our predictions are correct, the future results will teach us some important points about how children perceive and detect social forms and about how it allows them to predict the evolution of their direct social environment, which is an exciting prospect!



Meet the Lab: Amelie Deschenaux

Amelie Deschenaux is currently a senior with a major in Social Sciences and a minor in Psychology from the University of Lausanne (Switzerland). As a PhD Student in Social Sciences at the Cognitive Sciences Center in the University of Neuchatel (Switzerland), she received a grant (Swiss National Science Foundation) to study social forms detection in children during one year (January 2015 to December 2015) at the Emory Infant and Child Lab.

Her interests in sociology and psychology vary from social play to imitative behaviors in preschoolers. Her work focuses on how children perceive and detect social forms in their environment and on how it allows them to predict the evolution of their own social environment.

Currently, Amelie is working on her own research project at the lab involving the affiliative effect of mimicry in developing children.



Student Research Assistants



Alexa Myers – Class of 2013
Psychology
New York



Daniel Kim-Class of 2017
Neuroscience/Spanish
Georgia



Arianna Arias- Class of 2016
Psychology/Creative Writing
Florida



Mahogany Dolberry – Darien High School
High School Intern
Georgia



Chloe Burell- Class of 2016
Psychology /Linguistics
Texas



Laura Holzman- Class of 2017
Psychology/Business
Illinois



Ruchi Ahuja- Class of 2017
Psychology/Dance
India

We couldn't do this without you:

You are receiving this newsletter because you and your child have participated in one of our studies or have expressed interest in taking part in one. We invite you to involve yourself in our current studies. If your child is under the age of 10, and you would like to be contacted about our studies, please call or email us at:

(404) 727-6199 or
tmoeuhl@emory.edu

Your visit will take less than half an hour, and your child will be given a small token of appreciation at the end. Thank you again; we cannot do it without you!

We are located on the Emory Campus, near Druid Hills, Decatur, Candler Park and other nearby Atlanta Neighborhoods.

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Free Parking is available. Check our website for directions:

www.psychology.emory.edu/cognition/rochat/lab