



Emory Infant and Child
Development Research Laboratory
Newsletter
Spring 2013

Letter to Parents:

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

Our mission at the Infant and Child Lab is to contribute to the understanding of how children develop. Ultimately, all research conducted at the Lab is geared toward a better approximation of what seems to drive our psychology, one that begins prior to birth and continues to develop all through the lifespan.

The past year has been particularly fruitful. Let me briefly summarize some of our research accomplishments:

First of all, we are welcoming a new Graduate student to our Lab, Shensheng Wang who comes to us straight from Mainland China. Shensheng is starting to work on the perception of artificial vs. real face. He is exploring why perception of artificial faces sometimes feels uncanny or uncomfortable as compared to real faces. We are excited about this new line of research and are very happy to have him with us. We will keep you posted on his progress in future newsletters.

In collaboration with Bentley Gibson (Ph.D. candidate) and Erin Robbins (fresh Ph.D., bravo!), we completed our research on racial identification and preference by 3-7 year-olds from various ethnic and cultural backgrounds (African and Euro American, Polynesian, Melanesian and children of Indian descent), showing that there is an early white preference bias that cuts across social classes and cultures. This research shows that racial and ethnic prejudice has deep and enduring developmental roots. It shows us how children are sensitive to and influenced by their perceptions and responses to group differences. In another effort to better

understand prejudice and minority psychology, Bentley Gibson is now testing the implicit and explicit social attitudes of African American adults and children toward other and own racial groups. This is something that is not well documented and should yield important information. We will be able to report new findings in the next Newsletter.

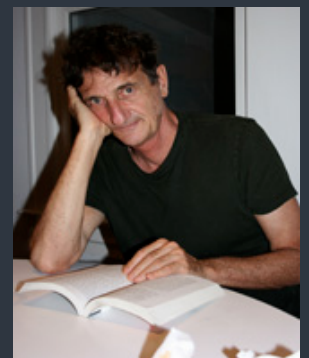
Supervised and spearheaded by Theresa Moehrl (Lab coordinator), we also finished investigating the propensity of 3-7 year-old children from various ethnic origins to engage in so-called "stigma by association" based on skin color. For example, does a child prefer a black doll that is depicted as being friends with a white doll rather than a black doll? The data we analyzed yielded little evidence of such phenomenon in 5-7 year-olds, something that we did not expect and that needed to be demonstrated.

In collaboration with Katherine (Kit) Jayne (who finished and defended her Master's degree, and is now on her way toward a Ph.D, bravo!), we also completed research on spontaneous generosity and equity in children and their parents. We looked at inter-individual differences and how parental propensities to give and to share might be predictive of how their 5-7 year-olds are more or less inclined to share, as well as how robust their sharing propensities might be over time. Although we observed marked differences in sharing propensities among children, we found that these differences cannot be readily predicted by how their parents either view their child or express an inclination to be generous. We conclude that children's varying degree of spontaneous sharing with peers cannot simply be related to the inclination and potential modeling of their parents.

Finally, in completing her Ph.D. dissertation looking at the developmental origins of inequity aversion (early negativity toward unequal distribution), Erin Robbins (Continued on page 2)

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, emerging 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.



Continued from page 1

tested numerous children in various economic and sharing games demonstrating that from at least 5 years of age, and possibly younger, children's economic decisions and relative economic risk taking is greatly determined by competition and the fear of losing relative to what others might gain, as erroneous as this fear might be. A few weeks ago, we had the opportunity to collect more data on sharing and economic decisions among young children on a remote coffee plantation in Chiapas (Mexico), comparing young Guatemalan and Mexican populations of strikingly different socio-economic backgrounds. Our goals, as always, in our cross-cultural forays, is to assess the role culture and relative material

abundance play in shaping children's social and cognitive development. We are currently analyzing the data and will be able to let you know what we found in the next year's newsletter.

As always, more research is on the way, and for this we need all the help we can get from parents like you who are so generously willing to bring your children to play with us. Once again, we thank you for your support and look forward to future collaborations.

We certainly depend on and need you in our shared passion for the study of infant and child psychology, here and all over the world, across all economic, ethnic and cultural backgrounds! Do not hesitate to contact us for more updates and information. We are always eager to share our research progress.

Racial Preferences in Children and Adults

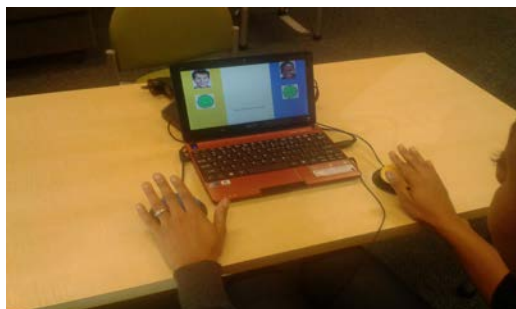
Article by "Ginger" Gibson

This year, Bentley began collecting data for her dissertation which is further examining the development of implicit racial attitudes in African Americans from age 6 to 22 (college aged). Currently, 175 participants have been tested. The majority of studies that have examined implicit racial attitudes/biases have tested people of European descent.

What are implicit racial attitudes? They are our unconscious attitudes about race and propensity to associate certain words with groups of people. The measure Bentley is using is called the *Implicit Association Test*. Bentley's goal is to balance the literature by providing research conducted on children and adults of color. Her dissertation is one of the largest developmental studies of African American's implicit racial attitudes. Of particular interest, is what predicts African American tendency to have positive attitudes about their racial in-group. Several potential contributing factors are being examined: How

individuals identify with their own racial group, the impact of racial socialization (parental racial attitudes/ behaviors), race composition of school and socio-economic status. So far, results show that racial composition of school is **not** the driving factor of the development of African Americans racial attitudes. The main contributing factors are the specific types of messages parents send their children about African American history and culture and how strongly they identify with their racial in-group. Please stay tuned for final results. To participate in a national IAT campaign visit:

<https://implicit.harvard.edu/implicit/demo/>



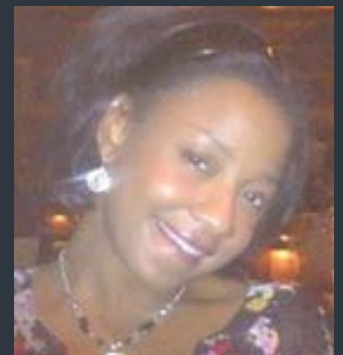
Meet the Lab:

Bentley "Ginger" Gibson

Bentley (Ginger) Gibson has spent the past five years studying the development of minority children's racial preferences and racial identity. She received her Master's replicating the original Clark and Clark (1947) doll study on modern-day African American preschoolers.

Her research goal is to continue to examine how people become racialized. Some of the questions that drive her research are:

What role does our racial identities and stereotypes play on the way we think and our behaviors? When do children develop racial attitudes and racial identities? What racial stereotypes stand-out to children and do these stereotypes change over time or remain the same?



What Does it Mean to be Fair?

Article by Erin Robbins



How do children experience fairness?

This is the driving question behind the several years of research that culminated in the dissertation I defended in December. Several factors influence how children develop a sense of fairness, including inequity aversion (the unease people feel when things are not shared equally) and loss aversion (the sense that losing something hurts much worse than gaining something feels good). In general, our findings suggest that children who share equitably tend to be less competitive and less risk-taking than their peers when it comes to gambling tasks and games of skill. However, the personal experience of gaining and losing valuable resources also influences whether children share fairly. In another study children participated in a guessing game where they had to estimate how much valuable “magical sand” had been added to or removed from an opaque tube. We found that fair-minded children tend to overemphasize how much they have lost while also underestimating how much they have gained. Together, these patterns of inequity aversion and loss aversion tend to become stronger over development, particularly between 3-7 years.

But other questions remain. Once children identify that something is unfair, how do they decide what is the best way to fix it? One possibility is to punish someone who has been unfair or selfish another possibility is to reward someone who has been generous. Our research suggests that

young children (3 years old) are more likely to punish wrong-doers, but by 7 years children start to reward those who have acted with good will toward others. In some cases, older children will even sacrifice some of their own resources to make sure this unfairness is corrected, in what we call acts of strong reciprocity or costly punishment.

In addition to developmental differences, there is also cultural variation regarding what acts are perceived as fair or unfair. For example, although individuals in most cultures agree that monopolizing resources is unfair, not everyone agrees on the best way to fix this injustice. Over the last two years we have been very fortunate to work with children and adults living in very different cultural contexts—primarily small, traditional, subsistence-style villages in the South Pacific (Samoa and Vanuatu). Thanks to the efforts of two former research assistants (Yoana Villareal and Marianna Ruiz) we were also able to work with Mexican and migrant (Guatemalan) adults and children living on a coffee plantation in Custapec, Mexico, as well as adults and children living in a traditional Bribri village in Costa Rica.

On average, children and adults in the US tend to restore justice by punishing an unfair sharing partner. This is not necessarily the case in other cultures where participants live in villages that tend to be more traditional and collectivistic (like Vanuatu, and to a lesser extent Mexico and Costa Rica). Here, adults and children tend to restore justice by rewarding or compensating someone who has been victimized by unfair sharing. These data are exciting to us because they suggest that although a sense of fairness may be universal, the means for creating and maintaining fairness may be culturally-specific.

Meet the Lab:

Erin Robbins

Erin Robbins earned her Ph.D. from Emory University in December. She has been a fellow of the National Science Foundation Graduate Teaching GK-12 initiative and was awarded the Howard Hughes Medical Institute Teaching Award. Her research centers on the emergence of social cognition in infants and children, with a specific interest in the role that culture plays in shaping development.



Mere Proximity Effect

Article by: Theresa Moehrle and Erin Robbins

Cues regarding group membership and affiliation inform social evaluations. At 5 years kinship and close affiliation are shown to influence children's sharing (Olson & Spelke, 2008), and proximity may also be an important evaluative cue: 5-10 year olds associate traits and judgments about an individual with persons that have been seen in close physical contact with them (e.g., people seen with obese friends are rated as less desirable than those seen with non-obese friend; Penny & Haddock, 2007).

Here in the lab we wanted to investigate the influence of race and proximity cues in children's social evaluations. Based on existing literature on race discrimination in children (Aboud, 2003), we hypothesized that by 7 years, children might show an effect of mere proximity to same- or different-race individuals in their social evaluations. In other words, when a person is merely seen with someone of a stigmatized group, does that stigma "rub off" on the other person, no matter what the relationship is between the two people?

We tested 24 5-7-year old Euro-American children. In each of four conditions, children viewed photographs of three dolls (gender-matched to the participant) arranged side by side with no relationship given (See Figure 1). Children rated the middle doll on six dimensions including 1) attractiveness, 2) intelligence, 3) niceness, 4) wealth, 5) popularity, and 6) the extent that they would want to be friends with this doll. Children rated the doll on each dimension using a "liking line", with lower numbers indicating less liking (or lower ratings) and higher numbers indicating more liking (or higher ratings). In various orders, children evaluated a white doll paired with two identical white dolls (Condition 1); a white doll paired with two identical black dolls (Condition 2); a black doll paired with two identical white



Figure 1: Condition 4

dolls (Condition 3); and a white doll paired with two identical black dolls (Condition 4).

In general, we found that 5 year old children rated condition 4 (white with two-black dolls) significantly higher than the control and condition 4 (black with two-white dolls) significantly lower than the control. In other words, when a white doll was paired with two black dolls the white doll received a higher rating than a white doll paired with two other white dolls. In contrast, when the black doll was matched with two white dolls it received a much lower rating than the black doll paired with two other black dolls. However, we did not see any significant trend with the 7 year old children. In other words, who the person was with did not affect the ratings. There was also no significant difference based on the race of the dolls which was surprising.

Children always have the ability to surprise us. We discover more and different things about them every day. In this case, we did not discover what we had planned to find. However, we did discover that 5 year olds are more likely to be affected by a contrast effect than by a proximity effect. Contrast effect happens when two items are lined up side by side; the differences between them become more obvious. This has led me to question the differences between how children process what we think of as a "controllable" stigma like obesity vs. an "uncontrollable" stigma such as race. Over the next year, I hope to dive more into research that might help me answer this question.

Meet the Lab:

Theresa Moehrle

Theresa Moehrle is the Lab Coordinator at the Infant and Child Lab. 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 the daily running of the lab, the scheduling of appointments, and overseeing the administrative duties. She is also in charge of making sure all studies meet the requirements of Emory's IRB.

Her research interests includes "Stigma by Association," discrimination and group processes.

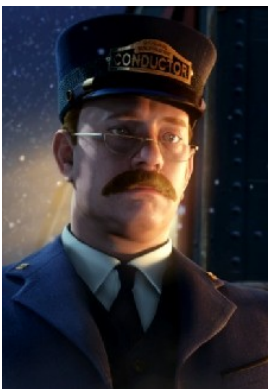
She currently teaches Intro to Psychology and Human Development at Georgia Highlands. She also works with adults and youth through the Cobb Literacy Council helping them obtain their GED.



The “Uncanny Valley” and Why Tom Hanks Creeps Me out

Article by: ShenSheng Wang with an introduction by Theresa Moehrl

A few years ago, a wonderful movie called the Polar Express was released to theaters. My kids were so excited. I let them wear their warm pajamas to the theater and we sat down anticipating cinema magic. The graphics were so real and quite intense. One of the fun games we like to play is to figure out who the famous voices belong to. However, when the train conductor walked down the aisle I knew without a doubt it was Tom Hanks. I literally felt a little dizzy and sick. WHY? Why was such a beloved man making me literally nauseated? I have seen dozens of animated movies, what makes this one different? That weird feeling we get when we see a real person so realistically animated to the point that they look almost human is called the “uncanny valley”. It’s a phenomenon says that the more realistic a rendering of someone looks (i.e., animation, wax figures, and androids) it causes us to have a strange feeling. Although, the lab is normally concentrated on children’s development, we are also curious about this phenomenon in adults. Just today NPR released an article about how the new animation in videos games is breaking the Uncanny Valley. Maybe we can help explain why animated movies are “creeping” parents out.



In 1970, Masahiro Mori, a Japanese roboticist proposed the hypothesis, that the more human a robot looks, the more familiar it is, the more uneasy human observers felt. A variety of theories about mechanism of the uncanny valley are blooming in Psychology. Particularly, some researchers have proposed that the appearance of android robots generates a violation of expectation, which elicits uneasiness in adults. Other researchers are interested in determining whether one’s reactions to androids is hardwired in the brain or developed through exposure to human faces. However, current findings on the uncanny valley have not reached any consensus. This problem is partly due to researchers’ limited knowledge about the emotional response-of uneasiness or “creepiness”. Although previous studies have provided valuable insight into the emotional responses, they neither explained what eeriness is nor provided an objective measurement of this emotional response. What I am working on is to objectively explore the emotional responses in the uncanny valley phenomenon to enrich our understanding of the uncanny valley. I am interested in determining what the emotional response of eeriness or “creepiness” is in adults.

The exploration of the emotional responses in the uncanny valley is valuable because it will help illustrate the nature of uncanny valley, lead future researches to objectively measure the uncanny valley, map human likeness and other properties of android robots to a reliable index of people’s emotional responses in the uncanny valley, and finally detect certain types of imperfection in androids to guide robot designers to avoid the uncanny valley and optimize human-robot interaction.

Meet the Lab: ShenSheng Wang

Shensheng grew up in Tianjin, China, where he earned a BS in Psychology from Nankai University before moving to Atlanta to join the Emory Infant and Child Lab.

He has a broad interest in face processing, social cognition and cross-cultural studies. For the past semester, he navigated through several topics, including infant habituation and familiarization, face space theory, dynamic information in face recognition, and finally determined to study the uncanny valley.

With the present study on the nature of the uncanny valley, Shensheng is most interested in the emotional responses in the uncanny valley phenomenon, particularly whether the so-called “eerie” feeling is disgust or fear in origin.



Development of Sharing Behaviors in Children

Article by: Kit Jayne

Our lab, among others, has done much work to help explore the origins of children's understanding of fairness. For example, some of our work has demonstrated that children from many diverse cultures all demonstrate a similar shift from self-hoarding and self-maximization at age three to a greater tendency toward fairness and equity at age seven. Similar findings also showed a shift between the ages of three and seven, with more seven year-olds preferring equitable or fair outcomes.

While these findings probably won't surprise many parents, they do present us with some interesting questions. For example, if children are generally fairer at seven and more selfish at three, why are some three years-olds perfectly fair, and some seven year-olds self-maximizing? Further, would the children tested on these different fairness tasks behave similarly across different tasks or at different points in time? The project this article focuses on was based on these questions. On the one hand, I was interested in finding out if any other factors were related to differences in children's fairness behavior. On the other hand, I was also interested in seeing how stable children were in this behavior.

Our first step in addressing these questions took place last Spring. We collected data on the behavior of both five and seven year-old children, asking parents to bring their children to our lab at the Child Studies Center for an initial appointment as well as a follow-up appointment a month later. At the lab, children played two different, previously-used, fairness games. Each game involved the child deciding how to distribute a set of coins between themselves and a researcher or two dolls, or choosing between sets of coins that had already been distributed. These games allowed us to establish each child's relative preference for fairness. During follow-up appointments, children played the same series of games, thus



giving us a way to measure and compare how consistent children are in their sharing behavior over a short span of time.

In addition to information about differences in the consistency and equity of children's sharing behavior, we also collected data from parents regarding their own behaviors and their children's temperaments. Parents who were kind enough to fill out these questionnaires provided us with valuable information we compared with their children's behavior. Parental reports on children's behavior also gave us the opportunity to look at different behavioral styles as possible factors shaping different sharing styles.

Taken together, all these measures gave us several paths down which we approached the question of what might be related to individual differences. For my master's thesis, I analyzed all these data and found that, contrary to our hypotheses, no relationships between child temperament and behavior. Further, we found no relationships between parental factors and child behavior. We did find that seven year-olds were more consistent in their behavior between the first and the second appointment, while children in general did not seem to behave similarly on both games. These surprising and provocative findings have spurred further interest in these subjects. Additional analyses will take place this spring, and will hopefully point us toward another way of exploring this interesting topic! Thanks to all the parents who supported this research, and all the children who were patient enough to participate in my games!

Meet the Lab:

Kit Jayne

Kit Jayne started as an honorary lab assistant in 2010 after she graduated from Rutgers University with a degree in German Studies and Psychology. At the end of 2012 she received her Master's Degree and is now working on her PhD.

Since starting at the lab, she's worked on several projects, all of which examine factors that contribute to children's developing understandings of fairness and generosity. Now working on her own study, she's excited to see how different measures and perspectives can inform basic questions about how some children become more fair-minded than others.



Fairness Conference

Sponsored by the Provost Office, CMBC, The Emory Cognition Project, and The Emory Center of Ethics, we hosted a two-day conference on the concept of fairness. The goal for the Fairness Conference was to create an exciting intellectual event, with talks from prominent scholars from various disciplines to reflect and discuss the concept of fairness. Some of the questions we asked were: How do you describe fairness and how can it be accounted for? What might constitute and determine what individual's sense as fair or unfair? Are they universal and unequivocal ways of understanding and construing fairness? How might it originate in both evolution and development, what might be the constitutive elements and determinants of fairness in the individual, the group, or the law?

Together researchers in the social sciences came together to discuss the concept of fairness from an evolutionary, developmental, economics, ethics, political, anthropological, and philosophical point of view. Some of the speakers included: President Jimmy Carter, Jerome Bruner, Nicolas Baumard, Gustavo Faigenbaum, Elizabeth Spelke, Karen Wynn, Samar Zebian, and a number of notable Emory Faculty. To view some of the talks go to:

http://www.youtube.com/playlist?list=P_LDSBylqXf9oHfj6x5qdi5ydL1fKxnEkxq



Student Research Assistants

Top Row:

Lindsay Beers (Senior) is from FL. She is a Psychology Major. She is working on Mere Proximity and the Pirate Study.

Joy Mitchell (Senior) is from NY. She is a Psychology/Education Major. She has worked on KitShare and the IAT projects.

Eun Lee (Junior) is from Korea. She is a Psychology Major with a Visual Arts minor. She is currently working on the Sharing Study.

Bottom Row:

Albert Sol (Sophomore) is from GA. He is a Psychology and Theater Studies Major. He is currently working on the Uncanny Valley Study.

Scott Danielson (Senior) is from SC. He is a Neuroscience and Behavioral Biology Major and Philosophy Minor. He has worked on the Pirate Game.

Yaying Wang (Junior) is from TN. She is a Psychology Major. She has worked on the Sharing Study.

Not Pictured:

Claude Robinson (Senior) is from GA. He is a Psychology Major. He is currently working on the IAT Study.



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 a 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.

36 Eagle Row,
Atlanta, GA 30322

Free Parking is available. Check our website for directions:

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