December 2013

The State of the Department

William S. Gray Professor and Department Chair Amanda Woodward highlights some of the department’s most important news—from a new faculty hire to graduate student accomplishments to new research centers. Full Story

The Center for Gesture, Sign, and Language

Susan Goldin-Meadow and linguists Diane Brentari and Anastasia Giannakidou have created the Center for Gesture, Sign, and Language to address some of the most basic questions about human language and development. Full Story

Research at the New Child Neurosuite

Jean Decety’s new Child Neurosuite is establishing and using neurological methods within a developmental framework to understand better the neural mechanisms involved in social, affective, and moral behavior in infants and young children. Full Story

Daniel Casasanto Joins the Faculty

Our most recent hire Daniel Casasanto is conducting innovative research on how linguistic, cultural, and bodily experiences influence how people think, feel, learn, and make decisions. Full Story

Alumni Gifts Create New Opportunities for Students
Several new gifts to the Psychology Department have allowed us to offer a new alumni lecture series as well as undergraduate funding for conference travel and summer research. **Full Story»**

**The Leading Edge: Student Research at Chicago**

Their projects span a wide range of important topics, and illustrate the collaborative and often interdisciplinary nature of work being carried out in the Department. **Full Story»**

**Life after Chicago: Career Paths for Recent Graduates**

Over the past two years, thirty-two students have completed their PhDs in the department and are now pursuing exciting careers. **Full Story»**

**Support the Department**

Gifts from alumni and friends provide vital support to our department, ensuring that our faculty and students can advance their research.
The State of the Department

It has been an exciting and productive year for the Psychology Department. I’m happy to be able to convey some of the innovative new research directions and accomplishments of our faculty and students.

This summer, we welcomed a new faculty member, Daniel Casasanto, to the department. Casasanto’s groundbreaking research recruits behavioral, cognitive neuroscience and cross-cultural methods to investigate the ways in which linguistic, cultural and bodily experience shape human thought. Casasanto is this year’s recipient of the Association for Psychological Science Janet Taylor Spence Award for Transformational Early Career Contributions.

Casasanto is joined by several others in the department in receiving the recognition of a major professional award this year. Sian Beilock received the Early Investigator Award from the Society of Experimental Psychologists, Jean Decety was awarded the J. L. Signoret Neuropsychology Prize by the Fondation IPSEN, David Gallo received the Early Career Investigator Award from the Federation of Associations in Behavioral and Brain Sciences, Leslie Kay was honored by her alma mater, receiving the St John’s College Alumni Association Award of Merit, and Steven Shevell was elected a Fellow of the American Association for the Advancement of Science.

Psychology is a "hub science," uniquely positioned to forge connections across diverse disciplines. In this newsletter, we highlight two faculty initiatives that illustrate this breadth of influence. This spring, Susan Goldin-Meadow launched the interdisciplinary Center for Gesture, Sign and Language. The Center is both a culmination of Chicago's tradition as the birthplace of gesture studies and a forward-looking enterprise that unites new discoveries in the Social Sciences and the Humanities. In an initiative that integrates neuroscience with developmental psychology, Jean Decety has created the Child Neurosuite. This state-of-the-art laboratory brings together technology for investigating neural, physiological and behavioral processes in the early development of moral judgment and empathy.

We are fortunate to have a very talented group of graduate students in the department. Their research is appearing in top journals and they are active in presenting their findings at national and international conferences. This year, we had a record number of doctoral graduates -- 16 students completed their degrees. We are extremely proud of their accomplishments and excited to watch their careers move forward. Many of this year’s graduates are embarking on academic careers, taking postdoctoral and faculty positions at colleges and universities around the country. Several recent graduates are taking a different path and finding demand for their scientific training and talent outside of academia.
College students are a vital part of our department community. In the last year, nearly 200 undergraduate students engaged in research in our laboratories, working as part of research teams and, in some cases, on their own independent projects. Indeed, 26% of our graduating class completed honors level independent research projects.

This year, alumni and friends of the department have enriched the intellectual life of the department and the experiences of our students in critical ways. We are very grateful for their continued support, and we have highlighted some of their contributions in this newsletter.

Warm wishes for a happy holiday season,

Amanda Woodward
William S. Gray
Professor and Chair
The Center for Gesture, Sign, and Language

This year, Susan Goldin-Meadow and linguists Diane Brentari and Anastasia Giannakidou created the Center for Gesture, Sign, and Language in an exciting endeavor to bring together research from all three areas into a unified whole. The goal of this center is to explore the interplay among gesture, sign, and language and in so doing, address some of the most basic questions about human language and development.

For example, what are the conditions that have contributed to the way language is structured? Goldin-Meadow, Giannakidou, and Brentari have been collaborating on joint linguistic studies of homesigns, the gestures developed by deaf children whose hearing losses are so profound that they are unable to acquire spoken language and whose hearing parents have not exposed them to a codified sign language. Homesigns contain many of the properties of natural language, i.e. resilient properties of language that can be developed without linguistic input.

But the resilient properties do not constitute all of the properties that define language. The original language formed by homesigners in Nicaragua has continued to evolve, changing as each new generation of young signers acquires the system. These progressive changes allow us to determine which properties of language are added when language is transmitted from one generation of users to another. The differences among these iterations can tell us how approaching a linguistic system with a fresh mind changes that system.

Another question the Center explores is what role the manual modality can play when it is not serving as a primary communication system. Gesture is not just handwaving—it conveys substantive information that is often different from the information conveyed in the accompanying speech. These gestures can tell us what people are thinking, and can thus play a role in communicating those thoughts to others. Moreover, producing gesture can itself help the gesturer think and acquire new information, and can thus play a role in cognition.

While Goldin-Meadow has been examining the role of gesture in relation to spoken language for many years, she and her colleagues at the Center will focus on the gestures native signers use as part of the Center’s first large project “The Body’s Role in Thinking, Performing, and Referencing.” Supported by the Neubauer Collegium, the project builds on Sian Beilock’s studies of expert and novice golfers’ swings. The researchers will compare the movements in those swings to the movements in the gestures expert and novice speakers and signers produce.
when they talk or sign about their golf swings.

In another approach to this topic, the Center is working with well-known deaf storyteller Peter Cook to examine whether the delivery of his stories changes during performance compared to a more conversational setting. Cook performed at the Center’s inaugural conference in March 2013, and his involvement is an example of the interdisciplinary approach the founders of the Center are taking. The Center not only provides a home for the collaborations between members of the Departments of Psychology, Linguistics, and Comparative Human Development, but also serves as a catalyst for new research activities that span the social sciences and the humanities.
Research at the Child Neurosuite

Recent years have seen a dramatic increase in the number of studies aimed at understanding the neural mechanisms involved in social, affective, and moral behavior. Establishing and using neurological methods within a developmental framework provides a more complete account of social and cognitive competencies, bridging the gap between behaviors and the brain. Now, Professor Jean Decety has created the Child Neurosuite (www.childneurosuite.org) at the Department of Psychology for conducting developmental social neuroscience research with infants and young children.

The Child Neurosuite is equipped with high-density EEG systems (Brain Products, Germany), eye-tracking systems, physiological recording equipment for measurements of the autonomic nervous system, genetic polymorphisms, and video cameras to monitor children's behavior and facial expressions. Currently the Child Neurosuite is conducting a number of projects examining, with a social neuroscience multi-level approach (from genes to behavior), the development of social evaluations, moral judgment, prosocial behavior, and empathy in infants and children.

"Our goal," says Jean Decety," is to investigate and illuminate fascinating and exciting questions such as: What is the developing interplay between moral judgment, perspective-taking, prosocial behavior, and caring for others? What neurobiological and genetic mechanisms underpin moral sensitivity and moral judgment? How do these develop normally in infants and children? When do individual differences in moral sensitivity and prosocial motivation emerge? To what extent are social hierarchies and in-group/out-group status impacting moral judgment and moral behavior? Are these dispositions, behaviors and social evaluations expressed differently across cultures and situations?"

Decety combines high-density EEG, emotional reactivity, eye-tracking and genetics with behavioral tasks that assess various basic elements of morality, including sensitivity to fairness, self regulation, social reasoning, distinguishing between good and bad actions, empathy and sharing in infants (from 1 year of age onwards). In older children and adolescents, he also uses functional MRI with eye-tracking to study prosocial behavior and decision-making from a developmental neuroeconomics perspective. Some of these studies are conducted in
Canada, China, Colombia, Jordan, Turkey, Kyrgyzstan, and South Africa, to examine how moral development unfolds in different cultural contexts.
This summer, the Psychology Department welcomed a new Assistant Professor, Daniel Casasanto. After spending the last several years at the New School in New York City, Casasanto has brought his Experience and Cognition Lab to Chicago.

The focus of Casasanto’s research at Chicago will be on studying the mind in context, or rather how linguistic, cultural, and bodily experiences influence the way people think, feel, learn, and make decisions. His work has already advanced research in the field of linguistic relativity: the controversial theory that people who speak different languages also think differently. By developing ways to test this theory with completely non-linguistic methods, Casasanto and his colleagues have shown for the first time that speakers of different languages think differently even when they are not using language.

Casasanto proposed the theory of bodily relativity: the idea that people with different kinds of bodies, who interact with their environments in systematically different ways, come to think differently as a consequence. Tests of this theory show that people with different bodily attributes (like right- and left-handers) create different meanings for the same words, form different mental images, and tend to make systematically different judgments about what they like, what they might buy, who they will trust, and for whom they will vote. This research has led to a new theory of how emotions are organized in the brain on the basis of the way people use their hands to interact with the world around them.

Casasanto’s research combines a variety of methods: from analyses of spontaneous gesture to virtual reality, multimodal psychophysics, neuroimaging (fMRI and EEG), studies in brain injury patients, and interventions on the brain. To chart effects of experience over time, the lab studies infants, children, and adults. They have conducted fieldwork in Spain, Greece, Turkey, The Netherlands, Indonesia, Singapore, Morocco, and Brazilian Amazonia in order to test cognitive variability across languages and cultures.

In addition to Casasanto’s ambitious research program, plans are currently underway for an exciting new educational outreach project called The Think Tank (TTT), a mobile cognitive science lab that aims to bring cognitive science to the public. The Think Tank will pull up alongside schools, museums, parks, and public sidewalks throughout Chicago and beyond to give students hands-on experience with cutting-edge neuroscience technology. By staging sidewalk talks and demonstrations at public events, The Think Tank will disseminate information about the latest discoveries from cognitive science to a broader audience with the ultimate goal of promoting greater diversity in the STEM fields (Science, Technology, Engineering, Mathematics). We are excited.
to see where Casasanto’s research and community outreach lead him.
Alumni Gifts Create New Opportunities for Students

Norman Henry Anderson Undergraduate Travel Awards

Over the past three years, the Norman Henry Anderson Fund has allowed the Psychology Department to make 96 awards to graduate students to assist with research-related expenses and travel to domestic conferences. Thanks to an exciting new gift from Mr. Anderson, undergraduates can now apply for funds to present their research at conferences. We anticipate that this new travel award will lead to an increase in conference participation by our undergraduates, exposing our students to a broader academic network and fostering their interest in pursuing careers in psychology.

Starkey Duncan Memorial Lecture

This past May, a generous gift from the Duncan family allowed us to initiate an annual lecture featuring our distinguished doctoral alumni. Mark Blumberg, an alumnus of the department who completed his doctoral work with Martha McClintock and is now the F. Wendell Miller Professor of Psychology at the University of Iowa, was invited to deliver the Starkey Duncan Memorial Lecture. Starkey Duncan, who passed away in 2007, was the Director of Undergraduate Studies in the department for many years and was known for his dedication to students.

Consistent with Starkey Duncan's commitment to the student experience at Chicago, this lecture provides a wonderful opportunity to acknowledge our distinguished doctoral alumni and promote connections among our past and current students. The conception of this new lecture series highlights the importance of building and sustaining networks between our alumni and our students who are soon to enter the field.

Blumberg gave inspiration to students by beginning his talk with a passionate discussion of how his doctoral work has continued to inform his current research. What followed was a fascinating talk about his research entitled "Beyond dreams: Developing sensorimotor memories in our sleep."

We are grateful to the Duncan family for their support and hope to be able to continue to offer annual talks by alumni through future support of this new alumni lectureship.

Hanavi-Montgomery Summer Research Fellowship
In 2011, Lisa Montgomery and Ron Hanavi made a generous gift to the Infant Learning and Development Lab to support research projects related to child development. The Hanavi-Montgomery Summer Fellowship awards a research stipend to one undergraduate each year to support a student's research in an area of interest without having the burden of needing to find additional summer employment.

Last summer, Rebecca Schmidt received the fellowship for her honors thesis project investigating young children’s reasoning about others’ preferences. Rebecca interviewed children at the Museum of Science and Industry and at the Lab School for this project, and she presented her findings at the meetings of the Society for Research in Child Development this past spring. Rebecca is now working with young children as a Teach for America volunteer in Chicago. This summer’s fellowship winner, Anna Pfautz is also undertaking an honors project that focuses on young children’s social reasoning. She is investigating children’s use of statistical patterns in others’ behavior to draw conclusions about their mental states.

Montgomery and Hanavi’s interest in giving this gift stems from their own experience as parents of a child with autism. Since their twelve-year old son Sahm was diagnosed with autism, the Hanavi-Montgomery family has devoted themselves to trying to understand better childhood intellectual and emotional development. For Montgomery and Hanavi, one of the best ways to learn more and educate others about autism, is through the support of those who will become future leaders in their field. Their hope is that “talented students at Chicago who are interested in psychology will became ever more enthusiastic about its exploration having spent the summer involved in a project of their choosing. If that ultimately benefits our understanding of autism, great, but if it takes those students down other paths of inquiry, that is great, too.”

Lisa Montgomery’s connection with the University of Chicago goes back some twenty-seven years to her days as an undergraduate in the College. Since that time, she has held a number of administrative positions at the University, including the offices of Undergraduate Admissions, Development, and as Director of College Counseling at the Lab Schools. Though her husband is not an alumnus, Montgomery says, “He is very much part of the team now!” Montgomery and Hanavi now live abroad in London, but they still maintain strong ties to the University, explaining that, “There could be no better place, no better group of people, to receive our support. Education is about seeking the possibility for change – change to what we know, how we understand and interpret what we know, what we elect to do with that knowledge. We have every faith that whatever small gesture we can make to the University will lead to the inherent good that comes from knowing more.”
The Leading Edge: Student Research at Chicago

Tim Brawn is a doctoral candidate in integrative neuroscience working with Professors Dan Margoliash and Howard Nusbaum. Tim’s research explores how sleep is involved in the consolidation of memories. He has found that sleep improves human memory for sensorimotor tasks such as learning to play a video game and motor tasks such as learning to type a specific sequence of numbers or letters. Tim also trains starlings (a songbird) to classify different songs by giving a food reward for responding to some songs and a lights-out period for responding to other songs, a task the starlings learn. Tim has shown that memory for this type of auditory classification task also benefits from sleep, a finding that was reported in a recent publication in Psychological Science. Tim is currently incorporating electrophysiological measures into the starling auditory classification paradigm in order to connect the underlying neural mechanisms of sleep-dependent memory consolidation with the behavioral benefits of sleep. Tim was an invited speaker at the 2011 Gordon Research Seminar on Neuroethology for which he received a Norman H. Anderson travel grant, and was awarded the 2013/14 Harper Dissertation-Year Fellowship.

Molly Flaherty is a doctoral candidate in developmental psychology working with Professor Susan Goldin-Meadow. Molly is interested in how languages are born, where their structure comes from, and what studying that structure can tell us about the human mind. To address these questions she works with users of Nicaraguan Sign Language, one of the youngest languages in the world, as well as with deaf children and adults who have not been exposed to any accessible language (homesigners). Molly is the 2013-2014 recipient of the Benjamin Bloom Dissertation Fellowship and was awarded a Norman H. Anderson travel grant to present her research at the Boston University Conference on Language Development.

Zoe Liberman is a third year graduate student in developmental psychology working with Professors Amanda Woodward and Katherine Kinzler. Zoe’s research investigates infants’ understanding of their social world. For example, one of her recent studies suggests that even 9-month-olds can make inferences about other people’s social relationships. This study is highlighted in her article, Friends or foes: Infants use shared evaluations to infer others’ social relationships, in the Journal of Experimental Psychology: General. Like adults, infants use information about shared preferences to predict friendship patterns. Zoe is supported by a Graduate Research Fellowship from the National Science Foundation and was awarded a Norman H. Anderson travel grant.
to present her work at the Conference for the Society of Research in Child Development.

**Undergraduate Research**

**Brent Rappaport** is a psychology major currently working on an honors thesis studying the effects of social categories on aspects of infants’ social cognition, with Professor Amanda Woodward and graduate student Zoe Liberman. As an Earl R. Franklin Fellow, Brent is excited to explore his research interests in how aspects of, and interactions with, the social world affect infants’ and children’s understanding of other people.

**Natalie Stepien** is a psychology major interested in the use of psychophysical techniques to understand the neural mechanisms of color perception, and particularly how these mechanisms are related to organizing visual information to make sense of the external world. As an Earl R. Franklin Fellow, Natalie is working on her honors thesis with Professor Steven Shevell. She is exploring how individuals experience moving objects in the periphery in order to test hypotheses about processes that change how objects are perceived.

**Undergraduate Research Initiative in Psychology (URIP)**

In 2011, the Department of Psychology strengthened its commitment to undergraduate research by creating the Undergraduate Research Initiative in Psychology (URIP). URIP has successfully laid the foundation for offering more research opportunities and programming for our College students. With over fifty students graduating with a psychology degree each year, psychology continues to be a popular choice of major. Equally impressive are the close to 200 undergraduates who worked in psychology labs last year under the mentorship of faculty and graduate students.

This remarkable participation in psychological science by our College students is owed in large measure to the recent conception of the URIP. Under the direction of Dr. Anne Henly, URIP is designed to help students find research opportunities that fit their interests and learn how to use those experiences to further their academic and professional development. In order to excite student participation in the field, Dr. Henly organizes a variety of workshops, informational sessions, and career development events throughout the year to help students make the most of the many opportunities and research-related events available on campus and beyond. Events have included: Getting Involved in Research: Why and How?, a lab night to learn about research opportunities in the Department, Applying to Graduate School, Proposal Writing, Careers in Mental Health, Careers in Psychology, Summer Plans: Internships and Opportunities.

URIP also organizes activities to expose students to research beyond campus. This past July, Dr. Henly organized a visit to the Regenstein Center for African Apes at the Lincoln Park Zoo where students took a behind-the-scenes tour of the homes of dozens of chimpanzees and gorillas to learn about the variety of behavioral research being conducted by the Fisher Center. Participants also had the opportunity to network with established animal behavior scientists, many of whom are UChicago alumni.

We anticipate another great year of URIP events and look forward to welcoming new and returning undergraduates to our labs this academic year.
Life after Chicago: Career Paths for Recent PhD Graduates

Over the past two years, thirty-two graduate students have completed their PhDs in the Department of Psychology. With this impressively high number of students completing the program, we are seeing our graduates follow a variety of different career paths. While many of our graduates continue to follow traditional career trajectories that lead them to postdoctoral scholar and faculty positions at top universities, our students are also finding a demand for their training outside of academia. Here we highlight the career choices of four of our graduates.

Recent graduate Elizabeth Gunderson, who was a graduate student in Susan Levine's lab, decided to follow an academic career trajectory. After receiving her Ph.D. from the Department in developmental psychology last year, Dr. Gunderson accepted a faculty position as an Assistant Professor in the Department of Psychology at Temple University. Recently, Dr. Gunderson was awarded the Institute for Education Sciences (IES) Outstanding Pre-Doctoral Fellowship Award. Dr. Gunderson’s research focuses on the cognitive and socio-emotional factors that affect young children’s academic achievement, especially in the domain of mathematics. She is currently investigating how verbal interactions facilitate preschoolers’ development of number concepts; how visuo-spatial skills relate to children’s early numeracy skills and number line knowledge; how teacher’s and children’s anxieties influence students’ math performance; and how praise affects children’s development of achievement motivation.

Gerardo Ramirez, who was a graduate student in Sian Beilock's lab, has also accepted an academic job. As a graduate student, he received a dissertation fellowship from National Academy of Education/Spencer to examine the cognitive mechanism of math anxiety in early elementary school. After completing his degree this past summer, Dr. Ramirez accepted the University of California President’s Postdoctoral Fellowship. During this fellowship year, Dr. Ramirez will work with Jim Stigler at UCLA, where he will examine the behaviors and teaching strategies that characterize math anxious teachers. Following this fellowship year, Dr. Ramirez will join the faculty in psychology and education at UCLA. He hopes to continue an active program of research where he can examine how affective and motivational factors interact with cognitive constructs, such as working memory, to shape students’ interest and achievement in STEM domains.
Recent graduates, James VanderMeer, who was a graduate student in Boaz Keysar's lab, and Jessica Wong, who was a graduate student in David Gallo's lab, have chosen to pursue non-academic career paths. Both summer 2013 graduates have accepted positions at Insight Strategy Group, a strategy and research firm in Manhattan. Founded by two Psychology PhDs, Insight is unique among competitors for its utilization of psychological principles in market analysis and client consultation.

Dr. VanderMeer’s position at Insight will be working in the research and brand strategy group where he explains, “his training at the University of Chicago and his previous background in creative writing form a toolkit uniquely suited to Insight’s brand strategy group, which combines analytics and creativity in building brands that appeal to consumers.”

Dr. Wong will be working as a quantitative analyst in market research focusing on consumer behavior, where she will be designing surveys and analyzing data to assess consumer attitudes, interests, and brand awareness for certain products, informing the client’s future marketing directions. In graduate school, Dr. Wong developed skills in experimental design, data analysis, scientific writing, teaching, and cognitive aging. In her last year in graduate school, she faced the difficult decision of whether to accept postdoctoral fellowship offers, tenure-track faculty campus interviews, or industry positions. Ultimately, Dr. Wong says, “she followed her passion for industry because it offered the excitement of a fast-paced environment and the opportunity to use data to answer real-world questions that could benefit businesses and consumers.”