Department becomes Psychological & Brain Sciences

What’s in a name? A better reflection of the modern discipline of psychology and especially of the cutting edge research carried out here in the new Department of Psychological & Brain Sciences at UCSB, according to Chair Greg Ashby.

“Aided by the development of noninvasive technologies that make it possible to study the functioning human brain, scientific psychology has dramatically embraced neuroscience research methods. Our department has been at the forefront of this new revolution,” noted Ashby. “Changing our name to reflect what we do well just makes sense. It also sets us apart from more traditional UC psychology departments like UCLA and Berkeley.”

In the last decade, the department has established the UCSB Brain Imaging Center (which houses a high strength magnetic resonance imager or MRI), two laboratories that also use

Gazzaniga elected to National Academy of Sciences

Michael Gazzaniga, Professor in the Department of Psychological & Brain Sciences and Director of the Sage Center for the Study of the Mind, has been elected to the National Academy of Sciences (NAS). Election to the NAS is one of the highest honors that can be accorded a U.S. scientist. Gazzaniga’s election recognizes his distinguished and continuing achievements in original research in cognitive neuroscience and split-brain research. His work with special patient populations using a variety of methodologies, including visual psychophysics, brain imaging, and anatomy, reveals how the brain enables mind.

Gazzaniga’s election to the NAS comes almost exactly 50 years after he began his first experiments in split-brain research. “Those experiments served as a foundation for my life’s work and we made a large contribution to neuro-psychology and the field of psychology,” Gazzaniga noted. In the past 20 years, new technologies in brain imaging, many of which Gazzaniga has helped develop and support, have caused an explosion in the capacity to assess the human brain in action, allowing for many advances in the field of cognitive neuroscience.

Gazzaniga joins an elite group of only 64 NAS members previously elected in the Division of Psychological and Cognitive Sciences.
Psychology Researcher wins National Academy of Education Fellowship

Andrew Stull, a postdoctoral researcher in the Department of Psychological & Brain Sciences at UC Santa Barbara, is one of 20 scholars nationwide to be awarded a prestigious Spencer Fellowship by the National Academy of Education to examine the educational merit of the use of instructional models in chemistry. Although instructional models are widely used in educational settings, there are no empirical studies that document the cognitive factors and instructional conditions under which these models contribute to meaningful learning, Stull noted.

"The award will allow me to investigate the interaction between a learner’s internal representation and the external representations that we construct for teaching," he said. "Although chemistry is the discipline that I am investigating, my work is relevant to any situation where we interact with real or virtual objects during the course of learning."

Stull earned his Ph.D. in psychology at UCSB in 2009 under the mentorship of psychology professors Mary Hegarty and Richard Mayer. Stull’s research interests encompass multimedia design, diagrammatic reasoning, instructional technology integration, and teaching and learning in science domains as they relate to human cognition. His collaborative research with Hegarty focuses on the cognitive and perceptual affects of employing concrete and virtual reality models in science education. Previously, he taught high school and community college courses in biology.

Spencer Postdoctoral Fellowships are administered by the National Academy of Education, an honorary educational society that advances education research and its use in policy formation and practice. Now in its 24th year, the fellowship program has more than 600 alumni who include many of the strongest educational researchers in the field today. The awards enhance the future of education research by developing new talent in the many disciplines and fields represented by the selected scholars.

Department becomes Psychological & Brain Sciences, continued

electroencephalography (EEG) to record electrical activity in the brain, as well as a lab that uses the new technology of transcranial magnetic stimulation. At the same time, an increasing number of faculty are supplementing more traditional avenues of research with the investigation of genes and hormones to help explain a wide variety of behaviors. Added to the faculty already studying neuropsychological patient populations and the department’s traditionally active group of researchers using animal models to study behavioral neuroscience, more than two thirds of the current faculty are actively engaged in brain-related research activities.

These activities reflect wider trends in the field. As psychology has become increasingly interdisciplinary, it has embraced neuroscience as contributing potential answers to some of the discipline’s most long standing and complex questions. Developments in the departmental research facilities and faculty research pursuits have positioned the department uniquely to contribute such answers, and the change to Department of Psychological & Brain Sciences both reflects and signals that potential.

Department Donors July 2010—June 2011

The Department thanks the following individual and organizational donors for their philanthropic support in providing essential resources for student fellowships, faculty research, and departmental programs and priorities.

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Alumni Spotlight: Peter Cobb Benjamin 1976

In the early 1960s President John F. Kennedy encouraged Americans to get outdoors, and to do so with “viggah.” Peter Benjamin needed no prompting.

A third generation Goletan, Benjamin grew up surfing Hendry’s and Rincon, and hiking the foothills above his grandparents’ Patterson Avenue lemon orchard. By the time he was a UCSB junior, trips with friends up the eastern side of the Sierras, from Kearsarge to Tioga, had him hooked on climbing and backpacking.

UCSB was a natural choice for a local boy whose mom had graduated from the campus’ predecessor, Santa Barbara State College. “I was caught in a philosophy/psychology bind,” Benjamin recalls. “It was the late ’60s; I was interested in the touchy feely side of things, the big issues about the nature of the universe. But working in Jerry Jacob’s lab, being exposed in classes to the impact external stimuli had on nerves, ganglia, hormones, the physiological side was beginning to make sense.” Benjamin remembers one of Jacob’s graduate students convincing the younger research assistants they would die if they came into the lab while he was etching the recording electrodes. “I know they used sodium cyanide to do that back then. But he was exaggerating. Wasn’t he?” Science won out anyway, with Benjamin choosing to major in psychology rather than philosophy.

In March 1972, with enough credits to graduate but the paperwork unfiled, Benjamin made the decision that recharted his future. With $10,000 borrowed from friends and family, he and a couple of UCSB friends launched Granite Stairway Mountaineering in downtown Santa Barbara. “We were as ignorant about running a business as we could be,” chuckles Benjamin, “no bank would even consider loaning us anything. We just loved the product and everything it symbolized. Every day was like Christmas when the boxes from our suppliers arrived.”

Benjamin turned out to be a quick study on the business front. By the time he filed his degree in 1976, he had five retail stores across California and an international wholesale division. In 1978 he helped create Black Ice, an outdoor equipment and apparel manufacturing company. Benjamin served as President and CEO until engineering the company’s sale in 1983.

Time for another change. A visit to the Chinese Trade Fair back in 1976 – a UCSB Mandarin tutor wrote the application for him – had sparked both a cultural and business interest in Asia. Benjamin moved first to Hong Kong and then in 1985 to Tokyo, where he founded Odyssey Japan, manufacturing and sourcing products for the Japanese outdoor market. But his organizational acumen was in demand, and in 1992 he was recruited as COO first for The North Face and later for Deckers Outdoor Corporation, where he served as President until 2004.

Benjamin credits his psychology training with helping him learn to listen, a skill he finds crucial in helping people reorganize themselves. “Most people know what needs to be done to make situations better,” he says. “But in many corporate environments they aren’t given permission to do so, so they just keep adapting to bad environments, repeating the same old mistakes. Often “dynamic” or “big picture” leaders don’t pay attention to details, and can wreak havoc in an organization without even knowing it. It can take months of discussions for people in those situations to trust that they are actually being allowed to fix them.” Benjamin is widely admired in the industry as an organizational catalyst, restructuring and reorganizing situations until the people in them can solve the problems themselves.

Since 1993 he’s also owned Pacific Resources, a brand, sales and sourcing agency for the Asian outdoor market, which has nicely married his knowledge of the industry with a passion for languages, culture, and travel. He and wife Miyuki now live in Sausalito, with Benjamin splitting his time between the Bay Area and Tokyo. Having gone through the catastrophic earthquake in Japan has left him with nothing but admiration for the resilience of its citizens.

Despite a still hectic schedule, Benjamin makes sure to indulge the lifelong passion that changed his future. At home in Sausalito, he heads into the coastal foothills four or five times a week, finishing a routine four-mile urban hike with a stop at the local coffee shop.
Psychology major Mungo wins Jeremy D. Friedman Memorial Award

Janelle M. Mungo, graduating with a major in psychology and a minor in Black Studies, was the 2010 recipient of the Jeremy D. Friedman Memorial Award, which recognizes outstanding leadership, superior scholarship, and contributions to undergraduate life on campus. During her time at UCSB, Mungo has had a tremendous impact on the campus through her passion and persuasiveness. In the words of her nominator, “Janelle’s real strength is in connecting students — she is amazing at bringing them together to work on common goals.”

While at UCSB, Mungo assumed leadership roles in several student organizations, which included serving as appointed representative of Associated Students Finance Board, and playing a major role in the UCSB Coalition Against the Budget Cuts. This group has worked to raise awareness among students and campus leaders of some of the most pressing social justice issues affecting students, including immigration and the rights of undocumented students, as well as budget cuts and reductions in services crucial to student academic success.

Mungo has also shown tremendous dedication to women’s issues through her work on the Womyn of Color conference coordinating committee, and as supporting coordinator of Womyn’s Commission, a student organization that addresses women’s equality, safety, and representation on the UCSB campus and in the surrounding community.

Extending her activism beyond the campus, Mungo has brought UCSB students together to respond to broader community and global issues. She served as president of the Human Rights Group at UCSB, and co-founded the UCSB Human Rights Council, a coalition of student groups addressing human rights violations and international disaster relief on a campus wide level. With the Human Rights Council, Mungo helped raise over $50,000 for Haiti relief, and co-founded the Black Studies Haiti Relief Fund. She has also worked with Associated Students Queer Commission and the Student Commission on Racial Equality, and has held a number of jobs, including resident assistant and front desk manager in the Office of Housing and Residential Life.

Aaron Ettenberg receives Outstanding Graduate Mentor Award

For his dedication and exemplary mentorship of graduate students, Aaron Ettenberg has been awarded an Outstanding Graduate Mentor Award. A member of the faculty in the Department of Psychological & Brain Sciences for 29 years, Professor Ettenberg has chaired 19 Ph.D. committees and since 1989 he has served as member of another 19 doctoral committees.

One colleague describes Aaron’s attitude toward mentoring: “Simply put, graduate mentoring fits in the big picture along with scholarship and teaching for Aaron.” One of his current graduate students shares an illustration of this philosophy: “A visiting collaborator once asked each member of the lab, ‘At the end of your career, what would you like to be your greatest accomplishment?’ To this, Aaron replied, ‘I want to be known for contributing to the next generation of scientists.’”

By all accounts, Professor Ettenberg succeeds in accomplishing this goal. His nominator cites the impressive statistics that are a testament to his success: “Seventeen of his doctoral students have earned Ph.D.s under his tutelage. Most impressively, every one of these students secured employment and has remained in their field of study. Thirteen are currently employed at universities, ... one is employed by the federal government (FDA), and three are employed as research scientists in the pharmaceutical industry. This is a very impressive list of successes.”

Beyond the numbers, one of his students describes him as “famously friendly” and states that his “style allows students to feel like partners, rather than academic subordinates.” Finally, a former student who is now an associate professor of psychology states, “To this day, I am thankful that I agreed to begin my research career in Aaron’s lab at UCSB. I would not be the scientist, or the person, I am today without his guidance. He is a kind, generous, and honest man – a true role-model who inspires those around him.”
“Are you listening to me?” Doesn’t matter whom you’re asking, the answer, more often than we’d like to think, is “No, sorry, what were you saying?” Our partners, students, patients, employees aren’t listening: Their minds have wandered off. And we do it too. Recent research suggests that we’re not thinking about what we’re supposed to be doing – having a conversation, driving home, reading a sales report, scanning for approaching planes – around 30-40 percent of the time.

Mind wandering occurs when the mind’s train of thought gets derailed, or at the very least, switches tracks. And although it might violate the rules of etiquette, lower productivity, and wreck havoc with communication, Jonathon Schooler, Professor of Cognition, Perception, and Cognitive Neuroscience at UCSB, thinks there’s also a mental upside to the mind’s tendency to engage in task unrelated thought.

“The mind is always trying to wander, every chance it gets,” says Schooler. “And that makes you wonder, is it wired to wander? What could possibly be good about that?”

To answer such questions, Schooler and his colleague Jonathon Smallwood had college students read passages from “War and Peace” and other books. The volunteers pushed a button every time they noticed their thoughts straying, and that happened regularly. But even more surprisingly, when the volunteers were interrupted at random and asked what they were thinking, “we regularly caught people’s minds wandering before they noticed it themselves,” Schooler said. He calls mind wandering without awareness “zoning out.” About 13% of the time, people were completely unaware that their thoughts had strayed.

What’s going on in the brain when the mind wanders? To find out Schooler and an international team of collaborators had people in a functional magnetic resonance imaging (fMRI) scanner perform a routine perceptual vigilance task: They had to report every time particular numbers appeared on a screen. From time to time the researchers asked participants if they were paying attention to the task and if they weren’t, whether they knew their attention had drifted off or not. Participants reported mind wandering 43 percent of the time, and in nearly half those cases, they said they hadn’t been aware of zoning out until the researchers asked.

Brain activity looked quite different when people were focused on the task and when they weren’t. When the mind is wandering, the brain processes both task relevant and unrelated sensory information in a less detailed manner. Those findings explain why mind-wandering reduces performance; why, for example, people reading a text but mind wandering miss important information and fail to draw subtle inferences and implications.

“Mind-wandering demands cognitive resources,” notes Schooler. “It leads to very shallow processing when people are reading. Any kind of task that’s attention-demanding is going to suffer when people are mind-wandering. We can only speculate about how often errors by pilots or air-traffic controllers or other professions can be attributed to mind-wandering.”

But just as interesting as what’s not happening in the brain during mind wandering, is what is. One place that lights up during mind wandering is a network cont’d p.9


**Where Are They Now? Psychology ClassNotes**

### 1950s

**Jane (Silver) Carlisle 1958** continues to work on campus at Counseling Services (since 1971) as a psychologist (was Associate Director for 10 years between 1995 and 2005). Also has a small private practice.

**Bill Collins 1959** and wife (then Rita Mattern) celebrated their 50th anniversary in early 2010 with a wonderful month’s trip in Australia and New Zealand. They followed that up later in the year with two weeks in Prague and a river trip on the Danube to Vienna and Budapest. Bill continues to be active in the stock market and thinks of it as a part-time job and hobby in retirement. They both are active, walk a lot, and play a bit of bridge and cribbage. The wonderful years on the then “New” UCSB Campus are still quite fresh in mind.

### 1960s

**Arnold Golub 1963** completed a Ph.D. at Michigan and post-doctoral training on the east coast before settling in Sacramento, CA, where I taught and did research for half of my career and was a department chair or university administrator for the other half. I am proud of having chaired the Department of Psychology at CSU Sacramento for four different and non-sequential three-year terms over a three-decade period. I also served in the university’s administration for six years. In May, 2010, I fully retired and am still living in Sacramento.


**Gregory (Greg) Cermak 1968** got a Ph.D. in psychology at Stanford in 1972. Spent his career in industrial research, first at the General Motors Research Labs, then at the GTE/Verizon/Verizon Wireless Labs. Retired in 2010. His specialty was applied psychophysics: human response to traffic noise, air quality, visible paint quality, IP telephony, and video quality. Also published regarding methods for collecting and analyzing consumer data from the lab and from surveys. Currently living in Cambridge, UK.

### 1970s

**Seedia (Heidar) Modaresi 1970** lived on 6th floor of San Miguel with Randy Umland, Dan Thistlewait, Herb Weingart, Lester Powell, Fred Buddinger, and Bill Greenwalt. International student from Iran; girlfriend was Gayle Eipper. Received Ph.D.in experimental psychology from UCR, then 15 years later went back and got a Ph.D. in clinical psychology from U of South Carolina. Is now a clinical psychologist and university professor in South Carolina, married to Ingrid, and has two daughters, Anahita and Shirin, and two grandchildren, Cyrus and Kai. modaresih@winthrop.edu.

**Michael P. Levine 1971** \*1979 is currently Samuel B. Cummings Jr. Professor of Psychology at Kenyon College. Next year he will be retiring after 33 years at Kenyon. He continues to work in various aspects of the fields of body image and eating disorders.

**Jon (Jonathan) Eymann 1972** married Juliette Griffin, ’72 in their senior year and still enjoys her company, living together in Camarillo. Their three grown sons all still live in Goleta and all graduated from UCSB. Jon and Julie were ordained as Christian ministers in 1974 and began a non-denominational charismatic Protestant church in Goleta, which they continue to pastor. Jon earned an MA in clinical psychology in 2003 and has become licensed as a marriage and family therapist, with a private practice in Goleta in addition to his role as practitioner and clinic manager for SB County Mental Health’s adult outpatient clinic.

**Robert Most 1973** got a doctorate in Cognitive Psychology from Wayne State University in Detroit. For 10 years was VP of R&D for Consulting Psychologists Press (now CPP, Inc.) and in 1994 started Mind Garden, Inc. in Menlo Park, CA. Mind Garden publishes psychological assessments instruments and provides tools for psychological assessment. bobmost@msn.com

**Bruce Shapiro 1973** in Psychology and Zoology completed MS in Biology at the University of Nevada, medical degree at University of Nevada School of Medicine, residency in Obstetrics and Gynecology at Yale New Haven Hospital, fellowship in Reproductive Endocrinology and Infertility at Yale University, and Ph.D. at the University of Amsterdam in the Netherlands. He is sub-specialty board certified in Reproductive Endocrinology and Infertility. He established and is the director the Division of Reproductive Endocrinology at the University of Nevada School of Medicine. He founded and is Medical and Laboratory director at The Fertility Center of Las Vegas.

**Jan Grossman 1974** thought he had graduated in 1973 as he boarded an Icelandic Airlines flight out of JFK to spend a few months bouncing around the continent, only to find that he was 2 classes and 4 units short of graduation. A quick stint at UCLA summer school made the world right. Subsequently went on to law school in LA; member State Bar of CA since 1981; member State Bar of Arizona since 1996; currently residing with wife, Gayle (married 1983), and practicing law, in Scottsdale, AZ. Boy-girl twins, Bryan and Erica, born June 4th, 1986; and, younger sister, Mallory, born June 4th, 1987; (yes, you read that correctly). Notwithstanding, memories of the entire UCSB / Isla Vista experience continue to haunt this writer who may and wants to be reached: (480) 226-9067 jan.grossman@azbar.org.

**Mary McGrath 1975** is a freelance writer, photographer and musician based in Los Angeles. Some of her credits include: Newsweek, AOL, Good Housekeeping, LA Times, and many other publications and web sites. Recently, she was profiled in the Wall Street Journal regarding her creative efforts. She specializes in fine dining, soft adventure, personality profiles, and humor. grathy@aol.com

**Judith (Malmin) Weber 1976** earned an MBA in Market Research from UMass, Amherst; has spent 30 years working as a marketing research consultant in the SF Bay area (Weber Associates, in Portola Valley). Married to Joe Weber 1976 UCSB Chemistry graduate, has three children, one grandchild.

**Paula Lapinski Loehr 1976** in Psychology and Anthropology and husband Dennis Loehr \*1979 Chemistry have lived in coastal Florida since 1980; have three sons. Paula is a registered nurse, writer and teacher. Her primary writing interests include family travel, camping, and health/wellness. Her work has appeared in national magazines such as *Child, Family Circle* and *Highways*. Currently produces monthly travel articles for Camp Club USA and CyberSam online, as well as a quarterly column for Radius Magazine - a print publication written by healthcare professionals. Paula is an adjunct faculty member for Florida Hospital College of Health Sciences online Bachelors degree programs for nurses and radiologic technologists. Ploehr777@aol.com.

**Ann Lowell Leatherbury 1976** I loved going to UCSB but the in the very difficult job market of the mid 70s moved to LA where my husband found work. I had past retail experience so was hired by Bullocks (Federated) department stores (now Macy’s), became a
1980s

August John Hoffman 1981 received a MA in clinical psychology from Radford University in 1982 and Ph.D. from UCLA in 1995. Currently Associate Professor of Psychology and director of graduate psychology at Metropolitan State University. Finishing a book that will be published this year: Improving Intergroup Relationships via Community Service Work: Pluralistic Goals within an Ethnically Diverse Society. This text explores the positive psychological effects of community service work among ethnically diverse societies. Stay in touch. auguist.hoffman@metrostate.edu.

Randy Ross 1983 completed medical school at Yale, psychiatry and child psychiatry residencies at the University of Washington and a research post-doctoral fellowship at the University of Colorado in Denver. At the University of Colorado School of Medicine since 1993 and now Professor and Director of Research for the Department of Psychiatry and Director of Medical Student Research for the School of Medicine. Active researcher exploring the developmental pathway to psychosis and plays an active role in teaching research to undergraduates, medical students, psychiatry residents, and research post-doctoral fellows.

Robin Baneth 1983 went on to receive a M.S. (Ergonomics, NCSU) and M.A. (I/O Psych, UNH) and is now Chief Information Officer, NC Museum of History, Raleigh, NC rbaneth@mindspring.com

Debra Rosenfeld 1988 received an M.A. degree in Counseling Psychology from National University and a Marriage and Family Therapist license in 1993. Has a private therapy practice in Redwood City, CA: Specialty is treating depression and anxiety associated with chronic pain and health problems, acute illness, life-changing medical events, accidents, and illness in the family. therapy@debrarosenfeld.com.

1990s

Lisa Thomas Vance 1991 has been living in Santa Barbara with her husband and three kids for the past eight years. Enjoys teaching English Language Development, PE, and after school classes at my kids' elementary school. Life in SB is great!

Daniel Thomas Wellman III 1993 Now in Bali, been teaching internationally for quite some time and now starting up business for kids after school activities here in Bali Called Thumbs Up! Motivating positive attitudes through activities. Proud single father of two boys ages 5 and 8. twellman3@yahoo.com

Monica Bianco-Graham 1995 moved back to Milan, Italy at the end of 1995 and had a daughter, Tiffany, in July 1996. She is a fashion designer and owns a company that makes clothes and bags that she started to design when studying at UCSB. Often thinks about the times spent at UCSB and misses those great days, enjoyed every single moment, even the hardest ones, which actually made her stronger. “Through my studies and hard work I was able to achieve my goals and become what I am now. I cherish all the memories that will always be with me. I miss you class of 1995!!! Thank you UCSB!!! monica@monicabianco.com

Jeremy Handy 1996 is a Physician and Psychiatrist for Altru Health in Grand Forks, North Dakota after completing an MD at New York Medical College (Fifth Pathway Program) in 2004, residency in general psychiatry at University of Kansas-Wichita School of Medicine and a fellowship in Child and Adolescent Psychiatry at Tulane University School of Medicine. Interested in returning to Southern California and looking for a position possibly as part of a private practice somewhere along the coast, anywhere from San Diego to Santa Barbara. jhando@yahoo.com

1990s

Lisa (Hellwig) Wofford 1992 lives in Ventura with her husband and twin boys. Works as a school psychologist and program specialist with Deaf/Hard of Hearing students. Enjoys spending time with her family, traveling, and trying to keep up with her boys!

2000s

Shannon Ryan Brascia 2000 works full-time as a School Counselor for grades 7/8 in La Canada, CA. Married with two daughters, 1 and 4.

Greg Ngo 2000 moved to Chicago and received an MS in Financial Markets at Illinois Institute of Technology. Since 2005 he has been working as a Fixed Income Prop Trader at Breakwater Trading LLC in Chicago.

Lindsey (Reed) Pollack 2000 is an Associate at RS Investments in the Institutional Services Group, serving DCIO and Sub-Advisory clients. Prior to joining RS Investments in 2006, Lindsey was Client Service Administrator at Symphony Asset Management for over five years.

Lauren (Maney) McCracken 2006 received a MS in Psychology from Cal Poly San Luis Obispo and a Pupil Personnel Services Credential from CSU Fresno to be a school counselor. Currently working for San Luis Obispo County Drug and Alcohol Services as a bilingual addiction specialist. She has accumulated 3000 hours towards Marriage and Family Therapy licensure and is anxiously awaiting to take the exam.

Cheryl Ann Cohen *2008 began a postdoctoral fellowship at the Department of Psychology, Northwestern University with David Uttal and Derek Gentner on research related to spatial thinking and development funded, in part, by NSF’s Spatial Information Learning Center grant. Prior to her current appointment, she completed visiting professorships at Webster University in St. Louis, MO., and at Michigan Technological University, in Houghton, MI. She welcomes contact from UCSB faculty and friends at cheryl-cohen@northwestern.edu.

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♦ To check out what fellow class mates have been up to, browse ClassNotes by year at www.psych.ucsb.edu/alumni/classnotes/classnotes.php
Frontal lobe of the brain is key to automatic responses

Some people may excel at riding a bike, tying a tie, or playing the piano, but those same people may find it difficult to explain or teach those skills to someone else.

These motor skills are learned in one part of the brain, whereas classroom instruction and information read in a book are acquired in another area of the brain, explained Gregory Ashby, professor and chair of UCSB’s (then) Department of Psychology. This second area of learning is the frontal cortex — the area immediately behind the forehead — where executive function is located.

A study of different categories of learning is reported by Ashby and his research team (first author and postdoctoral fellow Sebastien Helie, and graduate student Jessica L. Roeder) in the current issue of the Journal of Neuroscience. A group of 16 UCSB undergraduates took part in thousands of visual tests, so the psychologists could study their responses. A significant number of the trials took place in the university’s brain imaging scanner using fMRI, which allowed the scientists to observe areas of the brain during testing.

The team found that tasks with explicit reasoning behind them were much simpler for test subjects. "When you can’t explain the reasoning, it takes test subjects about 10 times as many trials to master," said Ashby.

These areas without explicit reasoning are grasped in a lower part of the brain, the basal ganglia. "It is similar to the fact that you can’t explain what your fingers are doing when you are playing the piano," said Ashby.

However, he went on to explain that once a behavior becomes automatic, it becomes cortical. "Automatic behaviors are stored in similar ways, in the frontal cortex, regardless which system of the brain learned it first," he said.

Ashby cited the example of an excellent tennis player with Parkinson’s disease. He said that scientists used to think that tennis skills were stored in the basal ganglia, where they were learned, and the area of the brain affected by Parkinson’s disease. The player, however, was able to hit moving tennis balls with the same skill exhibited before he was diagnosed with Parkinson’s. According to Ashby, it is because it was an automatic response for him, one that is entirely mediated in the cortical area.

This could explain why people can react quickly with an automatic response to an event that is first perceived in sensory areas, such as seeing an oncoming vehicle and slamming on the brakes. Again, these automatic behaviors are stored in similar ways regardless of which brain system learned the behavior first.

Average brain activations in people who have each applied a simple categorization rule more than 11,000 times. Credit: Sebastien Halie

2010-11 Graduate Student Award Winners

Dean’s Fellowship
  Adam Cohen

Charles G. McClintock Graduate Fellowship in Social Psychology
  Lisa Jaremka

Graduate Division Dissertation Fellowship
  Jocelyn Sy

Graduate Division Opportunity Fellowship
  Thery Prok

Graduate Division Science & Engineering Research Grant Program
  Lisa Jaremka

Harry J. Carlisle Memorial Award
  Jennifer Wenzel

Marjorie Rose and Abdullah (Al) Nasser Scholarship
  W. Anthony Scroggins

National Science Foundation Graduate Fellowship
  Benjamin Baird
  Randy Corpuz
  Benjamin Mooneyham
of regions in the medial, frontal, and parietal cortex known as the default network. The default network is highly active even when people are sitting idly or resting with their eyes closed. It also fires up when people are thinking about themselves, reflecting on personal experience, or weighing personal goals.

The other region of the brain that seems to be active during mind wandering is the executive control system. Located mainly in the front of the brain, these regions direct our conscious and unconscious thought toward important goals. Increased activation in both the default and executive systems, especially during zoning out, makes Schooler think that mind wandering may itself be goal oriented. In his view, people aren’t concerned with completing just their current task, but also wrestle just below awareness with ongoing long term goals, like planning for the future, solving nagging problems, and weaving their pasts and presents into coherent wholes. Having our thoughts stray, especially if we are not aware of it, might make possible constructing and consolidating who we are.

That’s not to say that we want air traffic controllers solving identity issues while staring at a radar screen. Schooler’s latest research seeks ways to increase mindfulness, or awareness of one’s thoughts and feelings, to help control mind-wandering. “The key to reducing day-dreaming,” Schooler says, “is to have enough self-awareness to catch your thoughts straying but still allow for the occasional flight of fancy.”

Schooler earned his BA at Hamilton College and his Ph.D. at the University of Washington in 1987. He held faculty positions at the University of Pittsburgh and the University of British Columbia before joining UCSB in 2007. Schooler’s research on consciousness, memory, and problem-solving has been supported by national agencies and private foundations in both the USA and Canada.

### Department celebrates 2011 undergraduate award winners

#### Chairperson’s Award
Michaela Baer  Amanda Carr  Catlin Carroll
Ryan Doria  Mia Greenstein  Brian Marre  Katrina Pettersen

#### Distinction in the Major
Ilya Altshteyn  Kaitlyn Fladeboe  Evan Gordon  Brandon Holbert
Stephanie Leal  Oren Ofer  Martha Oropeza  James Scott  Chelsea Simon  Mary Yeagley

#### Exceptional Academic Performance
Ilya Altshteyn  Mia Benton  Kathryn Bodden  Sarah Cain  Allison Carroll  Tran Dinh
Niklas Edlinger  Abbey Freed  Richard Gavan  Evan Gordon  Whitney Hawkins
Stephanie Leal  Shanna Leibl  Jill Murray  Maya Ravid
Hoeun Sim  Megan Stimpson  Mary Yeagley

#### Philip Steven Rethis Memorial Award
Paul Herzlich

#### The Morgan Award for Academic Excellence in Psychology
Mia Benton  Maya Ravid

#### The Morgan Award for Research Promise in Psychology
Ilya Altshteyn  Brandon Holbert

#### Distinguished Graduating Senior
James Scott
In memoriam: Howard H. Kendler 1919 – 2011

Howard H. Kendler, one of the pioneers in the science of psychology, and Professor of Psychology at UCSB from 1963 until his retirement in 1990, died February 17, 2011. A New York City native, Kendler received his B.A. from Brooklyn College, where he worked for Abraham Maslow and took an experimental course from Solomon Asch. Inspired by the Gestaltist tradition, Kendler enrolled at the University of Iowa with the intention of working with Kurt Lewin, but found himself more intrigued by the ideas of Kenneth W. Spence, under whose direction he received the Ph.D. in 1943. Kendler served in the US Army during World War II and was a Clinical Psychologist at Walter Reed Hospital.

His academic career began with an Assistant Professorship in Psychology at the University of Colorado. From 1948-63, he was associated with New York University, where, in 1951 he became Professor of Psychology and Chair of the Department of Psychology at University College. In 1963, he moved to UCSB where, except for sabbatical stints at Berkeley, Hebrew University in Jerusalem, and Tel-Aviv University, he remained until his retirement. He was selected as a Fellow at the Center for Advanced Studies in the Behavioral Sciences at Stanford University in 1969-70.

During his varied and distinguished career, Kendler made empirical, methodological, and theoretical contributions to the discipline. His early empirical work focused on latent learning, and later, with long-time colleague Tracy S. Kendler, on human discrimination learning.

His most significant legacy to the discipline, however, was his wide ranging theoretical and methodological analysis of psychology as a discipline, reflected in four widely read books and more than 150 professional articles. In his influential texts Basic Psychology (1971, 1977) and Historical Foundations of Modern Psychology (1987), he offered a complete view of psychology that was sensitive to the diversity of views about the nature of psychology, of strategies for research, and of conceptions about the role of psychology in society. With his decades-long perspective of the field, Kendler argued in Psychology: A Science in Conflict (1981) that psychology’s so-called cognitive revolution was more of an evolution, with the precedents of internal representation already appearing in Hullian theory, for example. A champion of the behaviorist approach for its scientific methodology, he nevertheless argued that psychology should never deny or abandon consciousness. In perhaps his most provocative work, Kendler’s analysis in Amoral Thoughts about Morality (2000, 2008) led him to argue that psychology is called upon to do things that as a science it cannot and should not do – for example, to provide a scientific basis for societal value judgments.

Kendler’s influence on the field extended to professional service. He served as President of the Division of Experimental Psychology (1964-65) and of the Division of General Psychology (1967-68) of the American Psychological Association, as well as holding the office of Chairman of the Board of the Governors of the Psychonomic Society in 1968 and President of the Western Psychological Association in 1971.

The passionate pursuit of ideas was one of Kendler’s most salient characteristics. His colleagues remember him as a brilliant raconteur and ardent debater, a man who loved to argue and was greatly skilled at the art. His broad knowledge and incisive thinking made him an articulate challenger of beliefs, but his convictions were tempered by good nature, and he was never cynical. The depth of his enthusiasm is perhaps best reflected in his own words: “When I started doing research, my whole life changed. It was a thrilling experience…Psychology was a kind of calling, and perhaps we were unrealistically idealistic, but it was a great deal of fun.” He continued to think, argue, and write articles until he was almost 90.

Howard Kendler was predeceased by his wife and colleague Tracy S. Kendler and son Joel, and is survived by companion Madeline Hanrahan and son Kenneth and family.

Did you know?

If your degree is from the Department of Psychology at UCSB, you graduated from a top twenty department of psychology. In September 2010 the National Research Council (NRC) published its long-awaited report evaluating over 5,000 doctoral programs in 62 fields at 212 universities in the United States. UCSB significantly improved its position among research universities in this new NRC assessment, and so too did the Department of Psychology (our name when these ratings were made). With the more complete rating systems used in 2010, the UCSB Department of Psychology had ranking ranges reaching into the top 20 of departments.
Would you like to be part of the future of teaching and scholarship in the Department of Psychological & Brain Sciences at UCSB? Your gift, no matter how large or small, can help us:

- create top-notch learning programs for undergraduates
- support and reward the research endeavors of our very best undergraduates
- facilitate cutting edge research efforts that move both science and society forward
- attract and hire the most competitively recruited scientists at every stage of their careers
- support the best and brightest graduate students in their pursuit of the Ph.D. degree
- bring distinguished lecturers to the department to the benefit of both faculty and students
- outfit and equip research and scholarship spaces in the new building where faculty and students of all levels can interact

The Department greatly appreciates any support you can offer. We can provide information on dollar amounts associated with specific gift needs in the department.

The Department gratefully accepts gifts of any variety of types of assets, including appreciated securities, cash, real property, and personal property.

Gifts to the department can be made outright, pledged over a period of years, or made through planned giving vehicles such as charitable remainder trusts, charitable lead trusts, gift annuities, bequests, or other vehicles.

Many employers also match contributions to UCSB. Please check with your employer if you are unsure.

Graduate Student Support Fund

Who inspired you to get a psychology degree? Who made the difference between finishing and not finishing that honors thesis? When you had a problem in class, whom did you seek out? For many undergraduates, the answers to all these questions is “My T.A.” or “The graduate student I worked with.” Graduate students make crucial and compelling contributions to the teaching and research missions of the Psychological & Brain Sciences Department at UCSB. In large lecture courses, they are the students’ lifeline to the instructor. In lab classes, they are the ones who can crack the statistics codes, and show you the technique over and over again. And most students working in individual labs work closely with and learn much about graduate school from the lab’s Graduate Student Researchers. As UC funding falls, the need for graduate student support grows ever more pressing. If you’d like to make a donation earmarked for graduate student support in thanks for all that help you might have received back then, please contact chair Greg Ashby at ashby@psych.ucsb.edu.

From the Department Wish List

Non-restricted Fund: non-restricted funds for the department to use to meet its highest priority needs

Departmental Distinguished Colloquium Speaker Fund: funds for costs associated with bringing nationally and internationally known speakers to the department to share their research with faculty, graduate students, and undergraduates

Charles G. McClintock Fund: funds established to support senior graduate students in the Social Psychology program who combine high standards of scholarship with service to the program

Harry J. Carlisle Award: funds established for the support of outstanding graduate students in the Neuroscience and Behavior program

Undergraduate Awards Fund: funds to support awards given to seniors in Psychology and Bio-psychology who graduate with distinction in the major, and to enhance and enrich the undergraduate program

Psi Chi Fund: funds for the support of professional activities and scholarship enrichment for psychology majors elected to the national psychology honors society

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You can give to the department and specify how you would like your funds used, or allow us to use the funds where we need them most. You can give by check or credit card or by contacting the Department Chair Greg Ashby at 805 893 2858 or ashby@psych.ucsb.edu. Or click on the “Give to the department” button at our departmental home page www.psych.ucsb.edu
Gazzaniga elected to National Academy of Sciences, continued

which includes such luminaries as Gordon Bower, Noam Chomsky, William Estes, Duncan Luce, George Miller, and Roger Sheppard. The total number of active members of the NAS is 2113. Gazzaniga’s election further underscores the caliber of the science faculty at UCSB – Gazzaniga is one of 35 active UCSB faculty members elected to the academy.

Chancellor Henry T. Yang called the election “not only a most prestigious recognition for scientists, but also a deeply meaningful affirmation by their peers of the significance of their pioneering research and groundbreaking discoveries” and praised Gazzaniga for the inspiration he and other UCSB NAS members provide to students.

Gazzaniga received his Ph.D. in psychobiology from the California Institute of Technology, where he worked under the guidance of Roger Sperry, with primary responsibility for initiating human split-brain research. He subsequently made remarkable advances in the understanding of functional lateralization in the brain, and how the cerebral hemispheres communicate with one another.

He has published many books, which are accessible to a lay audience, such as Mind Matters and Nature’s Mind. His many scholarly publications include the landmark 1995 book for MIT Press, The Cognitive Neurosciences, now in its fourth edition. He is the founder and former editor-in-chief of the Journal of Cognitive Neuroscience and was a member of the President’s Council on Bioethics from 2001-2008. In addition to his positions as Professor of Psychological and Brain Sciences and Director of the Sage Center for the Study of Mind at UC Santa Barbara, Professor Gazzaniga is also the Director of the Summer Institute in Cognitive Neuroscience, President of the Cognitive Neuroscience Institute, and the Director of the MacArthur Law and Neuroscience Project.