

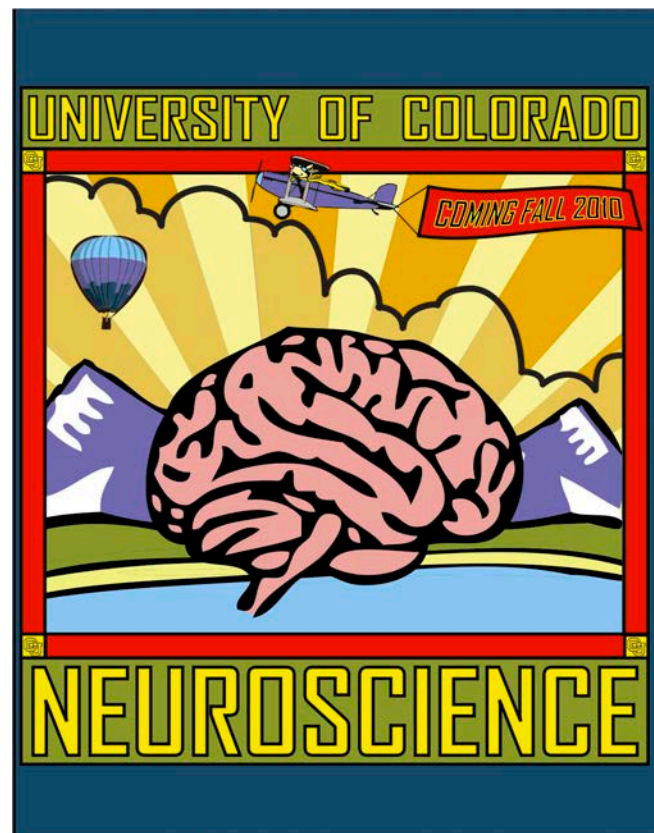
Psychology News

New Neuroscience Major Takes Off

Understanding how the brain does its job is one of the great challenges facing modern science. Enormous strides have been made toward this goal and new insights are constantly emerging. Undergraduates at CU now have the opportunity to engage fully in the study of the brain and how it supports mental activity and behavior by enrolling in the new neuroscience major that is administered in the Department of Psychology and Neuroscience.

About fifty years ago, the word “neuroscience” was coined to recognize that the study of the nervous system and its relationship to the mind and behavior encompasses many fields of science including molecular biology, biophysics, genetics, and psychology. With the founding of the Society for Neuroscience in 1971, this interdisciplinary field not only had a name but an official home.

The creation of an undergraduate neuroscience major is the culmination of several factors. Over the past



decade, our department substantially increased the number of faculty interested in linking the brain to cognition, learning and memory, motivation, emotion, and psychopathology. Eight years ago, under the leadership of Professors Steve Maier and Linda Watkins, a Center for Neuroscience was created in the department that now administers an interdisciplinary PhD degree in neuroscience. Last year, the faculty voted to change the name of the department to the Department of Psychology and Neuroscience.

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Message from the Chair

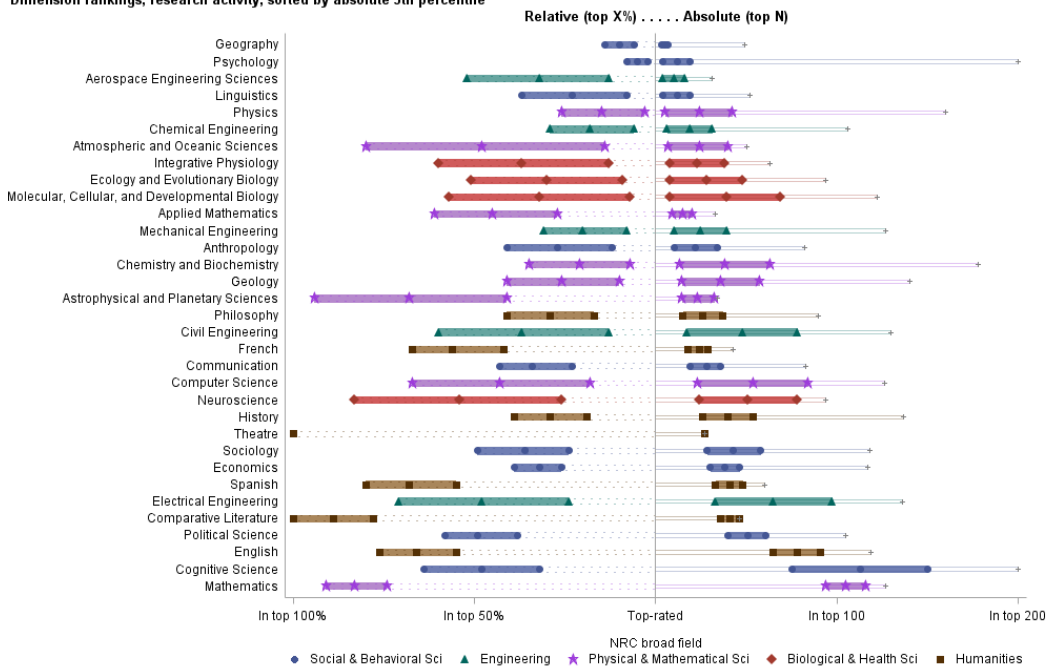
Welcome to the Fall 2010 edition of Psychology News. Having two shorter newsletters per year rather than a single longer one is a better way of keeping up with all the news about the department. The biggest turn of events since last spring has been the release of the National Research Council's fifteen year study on the quality of PhD programs in the United States. The question "Which university has the best psychology department?" turns out to have a complex answer. The methodology used by the NRC to provide answers to this question is at the edge of modern sampling theory and analysis methods. Twenty CU-Boulder doctoral programs were highly ranked by the NRC, including our own department. We were at the very top of the rankings among these twenty programs. The figure shows ranking based on quality of research, in which we are number two at CU. Among the 236 graduate programs in psychology that were ranked, we were number thirteen to sixteen, depending on the ranking criteria. Well done! You can find out more about the study and how the CU programs ranked nationally at the website maintained by the CU Office of Budget and Planning (kudos to Lou McClelland): <http://www.colorado.edu/pba/nrc>. Prospective PhD students have access to all NRC results on the web at phds.org, where they can rank departments by weighting attributes that are important to them.

There are additional exciting changes in the works and we will cover these in the next issue of this newsletter. What a wonderful department to work in! Our faculty are dedicated, creative and hard-working. Our staff accomplishes daily miracles with limited resources. Our graduate and undergraduate students are among the brightest and most motivated on campus.

Enjoy this newsletter and take pride in your connection with our department.

--Lew Harvey

NRC Assessment of Research-Doctorate Programs, 2010: CU-Boulder Program Rankings
Dimension rankings, research activity, sorted by absolute 5th percentile



Absolute ranks -- e.g., program is ranked 42nd among 180 programs in the discipline.
 Relative ranks -- e.g., program is in the top 23% of programs ranked in the same NRC discipline.
 CU-Boulder NRC site: <http://www.colorado.edu/pba/nrc/>
 Code: CU-Boulder PBA: L:\NRC\2010Results\graphs\NRC_graph_butterfly.sas, created September 28, 2010

The alumni newsletter for the Department of Psychology and Neuroscience is published biannually and distributed to all alumni.

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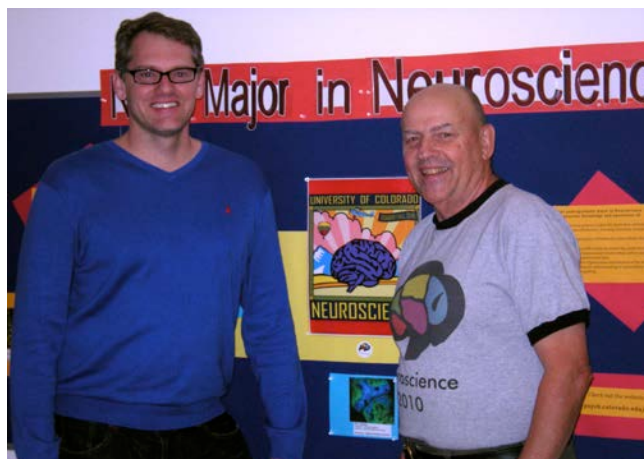
New Neuroscience Major (continued from page 1)

For many years, undergraduates have expressed a strong interest in a neuroscience major, but the necessary faculty resources were not available. However, with eighteen faculty in the department currently engaged in neuroscience-related research, it became possible to create a major. Thus, under the leadership of Professors Donald Cooper and Jerry Rudy (co-directors of the neuroscience undergraduate program) and support from Department Chair Lew Harvey and Dean of Arts and Sciences Todd Gleason, a major in neuroscience was created and enrolled its first students this fall.

The curriculum for the major is scientifically rigorous and multidisciplinary. Students can tailor their elective courses to blend their interests in a number of different fields such as engineering, computer science, medicine, and life sciences. Students are encouraged to take courses like games development and computer programming in the Department of Applied Mathematics in order to develop applications for emerging technology platforms like smart phones and mobile devices. They are also encouraged to be tech savvy and apply those skills to neuroscience. “In the past, we thought it was sufficient for students to have a good understanding of statistics and experimental design. As the technology landscape grows, it is clear that for students to be successful when they graduate, they need to be able not only to work with data but to develop analytical tools that allow them simultaneously to problem-solve, communicate, and apply their knowledge to practical problems whether it’s in medicine, graduate school, or business,” says Professor Don Cooper.

Professor Cooper is the architect and organizer of the CU neuroscience online community and the Introduction to Neuroscience I course, the entry gate to the neuroscience major. He established a variety of online environments for students to interact with and he encourages students to use emerging social media by incorporating real-time Twitter feeds, text polling, and Facebook to link the CU neuroscience community together. “Our goal is to engage the students in a virtual space where they are familiar,” he explains. “Instead of confining conversations to the classroom, they can respond in a forum, like ‘CU Neuroscience’ on Facebook, for participation credit.”

Neuroscience major students, nicknamed Buff Brains for the brain buffalo avatar on the CU Neuroscience Facebook page, get more than debate and conversation on the Facebook website. A crowd of about two hundred supervised peer advisors is available to respond to questions about graduation requirements, job prospects,



Co-directors of the neuroscience undergraduate program, Professors Don Cooper and Jerry Rudy

and social events. In a recent post, Courtney Knapp, a new neuroscience major and student in the Teaching of Neuroscience class taught by Professor Cooper, explains, “I religiously check my Facebook every day. It’s a great way to connect with people I meet in class, schedule study groups, and share interesting media I find on the internet. I can get immediate help with questions I post on the neuroscience page or even in my Facebook status! An e-mail is sent to my iPhone when someone comments, so I’m always in the loop.” A post from Andrea Soden, another new student in the major, continues, “I’m always on Facebook anyway, and it is so much more convenient to have neuro there as well. It makes it a lot more fun and seems less like a class and more easy going.”

Interest in the major has been understandably overwhelming. Over three hundred students have declared the major with only forty-six classroom seats in the Introduction to Neuroscience I class available. To solve this problem, two online courses were created to provide junior and senior students a means to get credit for the introductory courses and graduate with the major. Dean of Continuing Education Ann Heinz reports, “We are thrilled to partner with the new neuroscience program to offer online courses that serve our students. We are working closely with the faculty to develop online courses that are customized to reflect their teaching style and learning objectives.”

The first class of neuroscience majors is expected to graduate this coming spring (2011) with a class of approximately thirty.

Website: <http://psych.colorado.edu/~nrsc>

(Contributed by Don Cooper, Jerry Rudy, and Alicia Segal)

Alumni Spotlight: Deborah Zwick

“Where you start, you end. Life takes a circuitous route.” For Deborah Zwick, PhD (BA ’76), the unfolding of her career path may appear to be a straight line but has taken some interesting twists and turns along the way. It has also landed her back in Colorado where her journey into the arena of psychology began.

When Dr. Zwick started college, she was neither a psychology major nor Colorado-based. Her undergraduate education began at Mills College in California as an art major with a special interest in photography. She was familiar with Colorado since her family had a ranch in Crested Butte which she’d visited in her younger years. She had been drawn to CU when considering colleges but wasn’t academically inclined in high school and had worried about getting in. In her sophomore year, she made the leap and transferred to CU as an art major specializing in photography.



Dr. Zwick explains that this move to Boulder and her experiences here were significant and pivotal for her on many levels. “Boulder was very memorable for me. My time there affected me socially, personally, and professionally,” she says.

Professor Lew Harvey, whom Dr. Zwick assisted with research when she was an undergraduate at CU, remembers the transformative changes that she went through during that time and the enthusiasm she had for trying new things. “What I most admired about her was her open, inquiring mind. She was energized and inquisitive about exploring all sorts of ways to be effective in the world.”

The ability to explore her world in innovative ways led her to a very successful business venture. At age nineteen, she took the bold step of starting a Kinko’s partnership with her boyfriend. What began as a means of supporting herself through college emerged as a vehicle to subsidize her entire career, including her PhD training, as well as her current lifestyle.

Dr. Zwick was also going through significant changes at that time in relation to her college major and future career. She had always been interested in psychology and took some basic psychology classes after arriving at CU. She had a sense that she wanted to merge psychology and her enthusiasm for art and photography. Courses that she took in the department, particularly in developmental and social psychology with Professor O. J. Harvey, strengthened her interest in the clinical area of the field. “O. J. Harvey was a huge inspiration and mentor to me,” she says. He encouraged her to pursue a large research grant with the Polaroid Foundation that dovetailed with her interest in photography as a therapeutic modality. She succeeded in securing the grant, an unusual accomplishment for an undergraduate. Polaroid provided cameras and film, which she used to do original research with the elderly in nursing home settings. Her study explored the use of instant feedback photography and its impact on self-concept for that senior population.

Dr. Zwick went on to complete a master’s degree in counseling psychology at the University of Oregon in Eugene and then returned to her hometown of Chicago to pursue her PhD in psychology at Northwestern University in

Evanston. She concentrated her PhD research on assessment, with a dissertation that focused on learning disabilities and the Rorschach, an unusual combination.

Throughout graduate school, Dr. Zwick worked at a Catholic adolescent treatment center and took on increasingly responsible roles at that facility. Her notable assessment and clinical skills were recognized by the organization, and she was hired as a consultant with the Archdiocese Catholic schools after she graduated. She went on to establish a large private practice of seven psychologists working with the Catholic schools in Chicago doing adolescent outpatient, inpatient, and assessment work.

Since that time, Dr. Zwick has married and moved to the Vail Valley in Colorado with her husband, a PGA golf



professional turned photographer. She has a private practice in Avon and evenly divides her time among assessment, consulting, and psychotherapy.

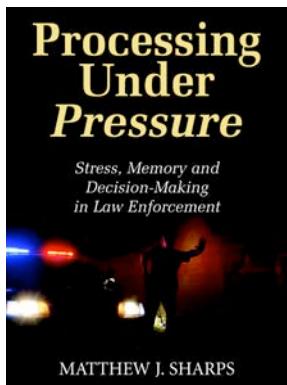
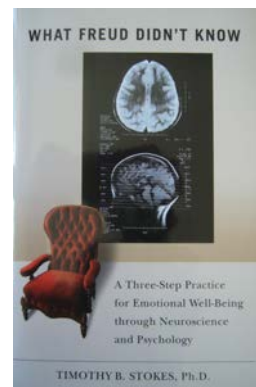
Dr. Zwick has always felt drawn back to Colorado and is happy to have realized that dream. She appreciates what she calls “the healthy balance in my life” which includes as much play as it does work, with Dr. Zwick and her husband finding time to enjoy her true passions: skiing and horses. She particularly loves riding in the back country and going on long horseback riding trips, which she finds is her own best form of therapy. – by *Alicia Segal*

Alumni Bookshelf

What Freud Didn't Know (Rutgers University Press), by Timothy B. Stokes, PhD (BA '71), has been on the non-fiction best-seller lists in both the Denver and Boulder areas. The book compiles relevant research in neurobiology related to mood and psychological problems and shows how this research can inform clinicians who are in the business of helping people feel better. It is directed toward a double audience: the lay public and the clinician. It is able to succeed because it easily explains the research and at the same time gives the reader an effective “Three-Step Practice” for achieving improved well-being.

Dr. Stokes has been in private practice in Boulder, seeing adults and couples, for thirty years. He is also Clinical Director of Corporate Psychological Services, a business which delivers counseling to corporate employees. In the past, he has taught behavioral psychology at San Diego City College and was formerly Editor in Chief of Naropa University's *Journal of Contemplative Psychotherapy*.

(Contributed by *Timothy B. Stokes, PhD*)



Professor Matthew J. Sharps' 2010 book *Processing Under Pressure: Stress, Memory, and Decision-Making in Law Enforcement* (Looseleaf Law Publications) brings modern cognitive science to bear on the increasingly demanding world of law enforcement and criminal justice. Examples of the frequently bizarre dynamics of cognition under stress are drawn from the realms of police work, eyewitness memory, and command decisions in well-known tactical contexts. The book is written for law enforcement personnel and commanders, for students and scholars of criminal justice and forensic psychology, and for others with interests in the relevant fields.

Professor Sharps, a CU psychology graduate (BA '81, PhD '86), is Professor of Psychology at California State University in Fresno, specializing in cognitive science.

(Contributed by *Matthew J. Sharps, PhD*)

Staff News



Undergraduate advisor **Laurel Amsel** facilitated a session at the National Academic Advising Association conference in Orlando, Florida, in October 2010. She presented a session on "How to Identify and Best Serve Our Students with Mild Traumatic Brain Injury."



Department staff member **Jon Roberts** was selected by the CU Chancellor to be one of five CU-Boulder Employees of the Year for 2010. He is the manager of CLIPR, the Computer Laboratory for Instruction in Psychological Research.



Professor Linda Watkins Receives Distinguished Award

Professor Linda Watkins was honored with the prestigious Prince of Asturias Award for Technical and Scientific Research for her ground-breaking work on the mechanisms and management of pain. She and two other pain researchers, David Julius and Baruch Minke, were presented this award by Spain's Prince Felipe in a week-long celebration in Oviedo, Spain, in October 2010. To learn more about the award and view photos and videos of the ceremony and festivities, go to <http://www.fpa.es/en>.

Professor Watkins also received the John Liebeskind Pain Management Research Award from the American Academy of Pain Management and gave a plenary talk associated with the award at their annual meeting in September 2010.

Research News by Alyson Daly

Acupressure and the Relaxation Effect



People suffering from traumatic brain injury (TBI) or stroke experience many problems of which the general public has until recently been unaware. One of these problems is specifically related to the neurologically impaired brain's ability to respond to stress.

Professor Theresa D. Hernández is studying people with traumatic brain injury or stroke and how they may be helped by alternative medicine techniques including acupressure. Her study on acupressure in adults who had sustained a stroke was recently published in the journal *Complementary Therapies in Medicine*. Professor Hernández and her graduate student Kristina McFadden found that participants treated with active or "real" acupressure showed significantly greater and faster reduction of heart rate, a key sign of relaxation, compared with a placebo group who were touched in locations on the body not considered active "acupoints." This indicates that touch alone was not responsible for the change – the enhanced relaxation effect had to do with stimulation at specific "acupoints" on the body associated with acupressure.



The Pain of Social Rejection

Does social rejection affect the brain in the same way that physical pain affects the brain? Professor Tor Wager is currently working on several studies dealing with how human subjects experience pain. One of these involves pain and social rejection.

First, Professor Wager and his lab demonstrated that fMRI activity in a brain region called the somatosensory cortex is specific to perceptions of the body (including pain and touch). They reviewed 165 emotion elicitation studies of various types. None showed activation in this area, whereas a substantial number of studies of physical pain did show activation.

Next, the lab recruited a group of participants whose romantic partner had recently broken up with them. These participants were not yet over their ex-partner. They were directed to come to the lab with a picture of a friend and of the person who had rejected them. During fMRI scanning, they were then shown both pictures and also subjected to heat pain (similar to that of holding a hot cup of coffee). The fMRI scans revealed that the area specific to physical pain, the somatosensory cortex, is also activated by the pain of social rejection.

Predicting Antisocial Behavior



CU's Institute of Behavioral Genetics has been collecting data on twins and their families since the mid-1980s (The Colorado Longitudinal Twin Study, known as LTS). LTS investigators have collected data on the same participants from toddlerhood to early adulthood.

Professor Soo Rhee and her colleagues are using these data for a study of early precursors of conduct problems and antisocial behavior. They are evaluating disregard for others (i.e., negative reactions such as anger, hostility, or callousness) in response to others' distress. Recently, they found that disregard for others assessed as early as fourteen months predicted antisocial behavior assessed during childhood (ages four to twelve) and adolescence (age seventeen).

Faculty News

The **Neurobiology of Stress Workshop 2010** was held in Boulder, Colorado, in June. Over two hundred researchers/clinicians from the US, Canada, and Western Europe attended, including twenty-one undergraduate, graduate, and postdoctoral trainees from our department. Of those, **Mike Weiser, John Christianson, Chad Osterlund, Ryan Newsome, Jasmine Yap, Rachael Ramsey, and Casey O'Neill** played critical administrative roles. **Serge Campeau, Steve Maier, and Heidi Day** were key program participants and served on the Local Organizing Committee. **Bob Spencer** was one of the workshop organizers and Principal Investigator of an NIMH grant that provided support for the Workshop.



Mark Whisman participated in the Klaus-Grawe-Think-Tank-Meeting in Zurich, Switzerland, in October 2010. He and nine other international experts in different specialties gathered to formulate methods to improve the prevention and treatment of psychological problems in children and their families.

Alice Healy received a College Scholar Award from the College of Arts and Sciences which, in conjunction with her semester sabbatical, will allow her to take one year off from teaching to conduct research full time; she is taking off the academic year 2010-2011. The title of her proposed research is "Analytical Experimental Investigation of the Clicker Technology."



Professor Emeritus **Michael Wertheimer** completed a three-year term on the American Psychological Association's Board of Directors last December, and in January began a three-year term on its Policy and Planning Board. He is currently working on a fifth edition of his *A Brief History of Psychology* and English translations of some of his father Max Wertheimer's early German papers on Gestalt theory.



Charles Judd and **Bernadette Park** were named co-recipients of the 2010 Thomas M. Ostrom Award. Professors Judd and Park were honored for outstanding lifetime contributions, both collaborative and individual, to research and theory in social cognition. The award was given at the Person Memory Interest Group (PMIG) meeting in Paynesville, Minnesota, in October 2010. To learn more about the award, go to the following website: <http://www.indiana.edu/~soccog/ostrom.html>.

In Memoriam: Raymond Miles (1923-2010)

Professor Emeritus Raymond Castleton Miles passed away on April 7, 2010, at the age of eighty-six. A veteran of the Second World War who served in the Pacific Theater, he completed his bachelor's and master's degrees at the University of Idaho and in 1954 earned his PhD in psychology from Ohio State University. Early in his career, he published extensive influential research in comparative and animal psychology that was admired by outstanding scholars such as Harry Harlow. Professor Miles taught at the Universities of Idaho and Wisconsin, Montana State College, the Universities of Oregon and Alberta, and Ohio State University before coming to the University of Colorado at Boulder where he served as a full professor from 1966 to 1990. He served the department not only as a respected teacher, but also as Director of Undergraduate Studies from 1981 to 1987, making sure that all undergraduate courses in the department were appropriately staffed and initiating an innovative and popular peer mentoring program in which advanced undergraduate majors advised lower-division students. He was an avid reader, lover of the outdoors, and dedicated scholar.
(Contributed by Michael Wertheimer)



Visit our “Alumni News” wiki for updates from alumni who have sent us news.

Address: <http://psych.colorado.edu/wiki/labs:Psychology-News-Alumni>

Click “Login” from the menu on the left

The username and password are “psychology” and “alumni” (lowercase and without quotes)

What’s New With You?

Please give us news about yourself to share on our wiki. Include your name, degree(s), and year that you graduated from CU. Feel free to add other information about yourself, including activities of interest (current employment, professional activities, family news, etc.) and insights into how your CU degree has helped to shape your life and work.

Send your news to: psychology.news@colorado.edu

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