

P-N-P

Philosophy-Neuroscience-Psychology

Newsletter Fall 2007

Letter from the Director

The 2006-2007 academic year has been another very successful year for the PNP program. We reached an important goal in the PNP undergraduate major. Not only did we graduate our largest class ever (with 28 PNP majors in the class of 2007), but we had well over 100 declared majors at the beginning of the 2007 Spring semester. This makes PNP one of the most popular interdisciplinary majors at Washington University. We are proud of our students and what they have achieved. You can read about some of the research projects that they have undertaken and about their future plans in this newsletter.

We are sorry this year to lose Dr. Philip Robbins, who has been on the faculty here since 2001. His contributions to the PNP program have been greatly appreciated and we wish him well in his new position as Associate Professor in the Department of Philosophy at the University of Missouri, Columbia. Since he is not moving far we hope to see him frequently on the Danforth campus.

I'm happy to report that Dr. Carl Craver was promoted this year to Associate Professor with tenure. This is a well-deserved recognition of his talents and industry.

This has been another busy year for the PNP faculty and graduate students. Between us we have given talks in four continents and more countries than there is space to list here. Among the many achievements and publications of the last academic year I would particularly like to draw attention to John Doris's receipt of the Stanton Prize from the Society for Philosophy and Psychology and to the publication by Oxford University Press of Carl Craver's book *EXPLAINING THE BRAIN: Mechanisms and the Mosaic Unity of Neuroscience*. Our core and affiliated faculty also continue to serve the university. Mark Rollins has just completed a 2-year term as Chair of the Faculty Senate Council and Steve Petersen has recently been appointed Director of the McDonnell Center for Systems Neuroscience.

As our students and faculty know, much of the behind the scenes work in the PNP program is carried out by Kimberly Mount, whose responsibilities extend from pre-certifying majors to organizing workshops and conferences (as well as producing this newsletter!). Kimberly's importance to the PNP program was recognized this year by the award of an Arts and Sciences Outstanding Staff Award.

Our postdoctoral research fellows are a vital part of the PNP program. We appoint two postdocs every two years. Many of our postdoc "alumni" have gone on to appointments at leading universities and some are now very well established in their

fields. Inside this newsletter you will find full details on where our former postdocs are now. You will also have a chance to meet the two postdocs who will be joining us in fall 2007 - Cory Wright from the University of California at San Diego and David Kaplan from Duke University. David and Cory each add new skills and interests to the PNP portfolio. We are looking forward to having them here and to learning from them.

Washington University is currently developing an ambitious program of internationalization, forging links with many of the world's leading research universities through the McDonnell International Scholars Academy. The PNP program is playing a part in this exciting initiative. A team of researchers and graduate students from PNP traveled to Beijing, China this summer for the US-China workshop on Memory and Language: Interdisciplinary Perspectives, organized with the Center for Cognitive Science at Tsinghua University and funded by the National Science Foundation. We are also very pleased to welcome Tianpu Peng from Beijing University who will be joining our PhD program as a McDonnell Academy Scholar this fall.

Thank you for reading our newsletter and for your interest in the PNP program.

José Luis Bermúdez
Professor of Philosophy and Director, PNP



CONTENTS

- Page 2- New Faculty
- Page 3- Faculty News
- Page 4 - Graduate Student News
- Page 5- Undergraduate Student News
- Page 7- Books Published

Philosophy-Neuroscience-Psychology Program Welcomes New Postdoctoral Fellows

David Kaplan

A native of California, David completed his undergraduate degree in Philosophy at UC San Diego and subsequently migrated eastward to North Carolina, where he received his PhD in Philosophy from Duke University in 2007.



His doctoral dissertation explored the issue of spatial representation, with particular focus on its manifestation in vision. After identifying inadequacies in contemporary theories of visual spatial representation, he developed an account highlighting the often underestimated roles played by such factors as the visual observer's physical embodiment, behavioral interaction with the environment, and the complex interplay between vision and action in making available visual spatial contents.

While part of the Philosophy-Neuroscience-Psychology Program, David is particularly interested in exploring topics more squarely in the realm of philosophy of neuroscience including the function, explanatory force, and adequacy of notions of representation, content, and computation in the neurosciences.

David is also looking forward to teaching a seminar on perception and action in the Fall 2007.

He comes to St. Louis with his fiancée, Nicole Kaunitz, a native of Sydney, Australia.

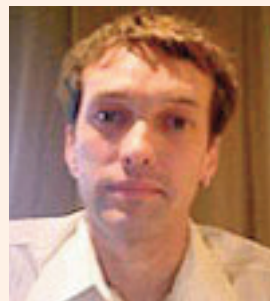
Cory Wright

Cory earned a BA in Psychology from Wabash College in Indiana and an MA in Philosophy from the University of Mississippi. He was a Visiting Fulbright Scholar at Utrecht and Tilburg Universities in 2004-2005, and received an interdisciplinary Ph.D in Philosophy and Cognitive Science from the University of California San Diego in 2007.

A primary area of research focuses on the impact of neuroscientific results for philosophy of mind. For example, one project studied the way in which explanations of the role of mesocorticolimbic DA modulation influence views on brain reward function, positive reinforcement, and desire; another project recently investigated certain mechanisms of control and regulation on different conceptions of autonomy, and formed the basis for a paper, co-authored with Ioan Muntean, forthcoming in the journal *Pragmatics and Cognition* entitled 'Autonomy, allostatic mechanisms, and AI: a biomimetic perspective'. An upcoming project involves reviewing research on so-called 'hedonic hotspots'---particularly the ventral pallidum---as a way of distinguishing different types of explanatory practices and motivating an account of non-reductive psychoneural explanation.

Additionally, Cory also has interests in epistemology and philosophy of cognitive science, with particular emphasis on veridical representation and cognitive grammar. His dissertation, entitled '*Truth and Cognition*', exploited resources from Ronald Langacker's Cognitive Grammar in order to reinvest Cognitive Linguistics with a (badly-needed) account of truth and truth-bearing. It also provided several arguments against minimalism, and showed why cognitive linguists---despite appearances to the contrary---need not be deflationists about truth and other alethic phenomena.

Currently, Cory is working with Nikolaj Pederesen on a book-length project entitled '*Alethic Pluralism: Current Debates*', which surveys the main themes and issues surrounding pluralist theories of truth, as well as a paper on Ramseification as a technique for defining truth-predicates. Cory has forthcoming a short piece entitled 'Embodied cognition: grounded until further notice?' in the *British Journal of Psychology*, and is also preparing a paper with Iris van Rooij and Todd Wareham on computational models of approximate solu-



tions to constraint satisfaction problems. Cory also serves as the book review editor for the journal *Philosophical Psychology*, and has also been invited to serve as the book review editor for the journal *PSYCHE*.

Past Postdocs

Since our previous postdocs have been very successful, we thought it would be interesting to mention their current positions:

Anna Alexandrova, Assistant Professor
University of Missouri, St. Louis

Irene Applebaum, Associate Professor
University of Montana

Stephanie Beardman, Assistant Professor
Columbia University

Peter Bradley, Assistant Professor
Temple University

David Chalmers, Professor and Director of
the Center for Consciousness
Australian National University

Philippe Chuard, Assistant Professor
Australian National University

Morton Christiansen, Associate Professor
Cornell University

Ilya Farber, Assistant Professor
School of Economics and Social Sciences,
Singapore Mgmt. University

Rick Grush, Professor
University of California, San Diego

Brian Keeley, Associate Professor
Pitzer College

John Kulvicki, Assistant Professor
Dartmouth College

Heidi Maibom, Assistant Professor
Carleton University

Chris Mole, Lecturer
University College Dublin

Dominic Murphy, Assistant Professor
California Technical Institute

Gualtiero Piccinnini, Assistant Professor
University of Missouri, St. Louis

Laura Sizer, Assistant Professor
Hampshire College

FACULTY NEWS

José Bermúdez

José recently signed a contract with Cambridge University Press for a new textbook on cognitive science. This will be the first textbook on cognitive science that does justice to the central role that neuroscience now plays within the scientific study of the mind.

He has presented the following talks; 'The sense of "I"' at an international conference on Subjectivity, Objectivity, Intersubjectivity in Copenhagen, Denmark (September 2006); 'Concepts and language' at an international workshop on Thought and Language in Zurich, Switzerland (March 2007); 'Uses and abuses of the distinction between conceptual and nonconceptual content' at an international conference on Concepts in Copenhagen, Denmark (May 2007); and 'The disunity of cognitive science?' at US-China workshop on Memory and Language: Interdisciplinary Perspectives, held at Tsinghua University, Beijing, China (July 2007).

He participated in an invited symposium on Kant and Nonconceptual Content at the Pacific APA in San Francisco (April 2007). He has been invited to present 'Logic without language?' at the Center for Cognitive Science at the University of Chile, Santiago, Chile (August 2007).

Carl Craver

This year, Carl Craver was promoted to associate professor with tenure. His book, *Explaining the Brain: Mechanisms and the Mosaic Unity of Neuroscience* appeared in print with Clarendon Press, Oxford U. It has been nominated for a Times Higher Education Supplement award for the best academic book by a young scholar. He published several book chapters and articles, and he received a grant from the Center for the Humanities for work on the relationship between episodic memory and moral psychology. He gave invited talks at the University of Washington, the University of Maryland, and the University of Missouri. He delivered the annual Alumni Lecture in the History and Philosophy of Science Department at the University of Pittsburgh. He spoke at several conferences, including the Philosophy of Science Association and both the Central and Eastern APA. His international travel included a one-week course on the philosophy of science for the Budapest Semester on Cognitive Science, a

talk at the Institute Jean Nicod in Paris, a talk at the History of the Philosophy of Science meeting in Paris, a talk at an interdisciplinary conference on cognitive science at Tsinghua University in Beijing, and a talk at the International Society for the History, Philosophy, and Social Studies of Biology in Exeter, UK (a society for which Craver has served as a program officer and as the Chair of the publication committee).

John Doris

John received the Stanton Award at the Society of Philosophy and Psychology 2007 meeting in June. Brian Leiter reports, "Doris is a leader in the experimental philosophy movement and the integration of psychology and ethics. The 2007 Stanton Award which is given to a scholar in Philosophy or Psychology who has begun making significant contributions to interdisciplinary research and has been active in the SPP."

Past winners of the Stanton Award include Kathleen Akins (Philosophy, Simon Fraser), Paul Bloom (Psychology, Yale), David Chalmers (Philosophy, ANU), Shaun Nichols (Philosophy, Arizona), and Jesse Prinz (Philosophy, North Carolina) [formerly Wash U].

John Heil

John has completed editorial work on a book, *The Mind in Nature* authored by C. B. Martin. The book will appear this winter, published by Oxford University Press. In January, Heil delivered a paper, 'Realization' (on the nature of the 'realizing' relation, the relation thought to hold between, for instance, mental states and brain states that realize them) at the Australian Association of Philosophy. He was the recipient of the first annual award for the best paper published in the *Australasian Journal of Philosophy* during the previous year.

Brett Hyde

Brett has published two articles. The first, "Towards a Uniform Account of Prominence-Sensitive Stress", appeared in *Wondering at the Natural Fecundity of Things: Essays in Honor of Alan Prince*. The second, "Issues in Banawá Prosody: Onset Sensitivity, Minimal Words, and Syllable Integrity", appeared in *Linguistic Inquiry*. He also presented a talk, entitled "Bidirectional Stress Systems", at the West Coast Conference on Formal Linguistics.

Mark Rollins

During the past year, Mark Rollins has presented papers at the American Philosophi-

cal Association Central Division meeting, the American Society for Aesthetics Pacific Division meeting, and a conference on Art and the Brain co-sponsored by the Institute for the Study of Modern Art at the Phillips Collection in Washington D.C. and the University of Illinois. Papers collected from the latter conference will be published as a book. During the Fall term this year, Rollins has been invited to give talks at a conference on Aesthetic Psychology in Durham, England and a conference on Images on the Nanoscale at the Nanocenter at the University of South Carolina. During the 06/07 academic year, in addition to continuing as Chair of Philosophy, he served as Chair of the Faculty Senate Council.

GRANTS AWARDED:

José Bermúdez received a grant from NSF to fund the "US-China Joint Workshop on Memory and Language: Interdisciplinary Perspectives"

This award funded Dr. Bermúdez, Professor of Philosophy and 8 U.S. researchers (including 2 post-docs or graduate students), to convene a joint interdisciplinary workshop on theoretical interfaces in language and memory. The workshop was held in Beijing, July 16-21, 2007. The US-China Joint Workshop on Memory and Language: Interdisciplinary Perspectives will build an integrated research and teaching agenda around a key challenge of contemporary cognitive science: integrating theoretical approaches to understanding how languages (first and second) are acquired through the methods of cognitive neuroscience, psychology, and computational modeling. The counterpart hosts are Professor Cai, Shushan, School of Psychology and Cognitive Science, and Professor Yang, Xiaolu, Foreign Languages Department, both at Tsinghua University, in Beijing, China.

The NSF release on this award reads as follows "The proposed workshop is based on the complementary strengths of the two lead institutions which have newly established programs: WUSTL's Philosophy-Neuroscience-Psychology (PNP) program and Tsinghua's Center for Psychology and Cognitive Science. The credentials and experience of principal researchers at both of these interdisciplinary units provide a strong intellectual base for a fruitful discussion. The workshop venue and design will attract academics from other U.S. and Chinese institutions interested in the topic. The workshop will include several sessions on curriculum design in psychology and cognitive science, and will enhance the inter-

and Tsinghua to successfully collaborate. The U.S. participants represent several U.S. universities, and include four women and one underrepresented minority. The PI has reserved space for 2 graduate students or post-docs to participate. The results of this workshop will make important contributions to students interested in this nascent research area.”

Carl Craver received a grant from the Center for Human Values. The grant is to explore the relationship between episodic memory and the moral self in a person, K.C., who has profound deficits in episodic memory with preserved semantic memory. He will travel to the Rotman Research Institute in Toronto to work with Shayna Rosenbaum to study K.C.

John Doris received the National Endowment for the Humanities, Summer Research Grant, Summer 2007 to help support his visit to Centre for Consciousness at The Australian National University.

AFFILIATED FACULTY

Steve Petersen (Neurology) is the new Director of the McDonnell Center for Systems Neuroscience at Washington University; effective July 1st.

In June 2007, Professor **Keith Sawyer** (Education) published his new book *Group Genius: The Creative Power of Collaboration* (Basic Books, \$26.95). In this accessible book for the general reader, Sawyer reveals that creativity is always collaborative—even when you’re alone. (<http://www.groupgenius.net>)

Rebecca Treiman will be at the University of York, York England, this academic year. She received a Leverhulme Visiting Professorship to visit there, collaborate with people in their Centre for Reading and Language, give some lectures at York and other universities.

THE MORAL PSYCHOLOGY RESEARCH GROUP

John Doris is a member of the steering committee for the Moral Psychology Research Group. The group is engaged in interdisciplinary research on moral cognition, emotion, motivation, and behavior. Topics on which the group is working include

moral reasoning, the role of emotion in moral judgment, moral rules, evaluative diversity, character and virtue, positive psychology, the neural correlates of ethical judgment, and the attribution of moral responsibility. All of this work is informed by contemporary empirical research in the biological, social and behavioral sciences; indeed, it is frequently informed by the groups own empirical work in such areas as development, culture, social cognition, and brain science. Founded through a multi-university collaboration involving philosophers of cognitive science and ethics, the Moral Psychology Research Group first met at Rutgers University in April 2003. Subsequently, the group has held weekend-long meetings twice yearly. In addition to oral presentations and critical discussions of 2007 works in progress, the group has, when resources and circumstances permitted, staged 4-6 hour intensives, where the group informally picks the brain of a distinguished scientist.

These sessions, which have to date involved Marc Hauser (Harvard), and Martin Seligman (University of Pennsylvania), Paul Rozin (University of Pennsylvania), and Ara Norenzayan (University of British Columbia) were regarded as unqualified successes by both presenters and audience, and the group is planning future sessions of this kind. At present, the groups meetings are in some measure structured around the production of a volume, *The Handbook of Moral Psychology*, which is under contract with Oxford University Press. This volume, which aims to be both a state of the art reference and a cutting edge brief for future research, is composed of 14-18 collaboratively authored chapters on central topics in moral psychology. The book should engage researchers across the disciplinary spectrum, and is intended as a model for how philosophically sophisticated and empirically informed interdisciplinary work on human morality may proceed. The group expects to have a completed manuscript, which the group conceives of as the first in a series of such volumes, in late 2007 or early 2008.

GRADUATE NEWS

Santiago Amaya was invited to present a paper at the conference 'Selfhood, Normativity and Control', organized by Radboud University in the Netherlands. He was also invited to attend the workshop 'Knowledge and Action', organized by the University of Stirling in Scotland.

Ronny Dosenbach collaborated on a neuroscience paper, "Distinct brain networks for adaptive and stable task control in humans" which was published in the Proceedings of the National Academy of Sciences of the United States of America (PNAS).

Matt James was a co-recipient of the department's 2007 Helen Stenner Memorial Essay Prize for the outstanding graduate student essay of the year.

Sarah Robins presented research that she did with Dr. Rebecca Treiman (Psychology, Wash U) at the Graduate Research Symposium in February "How parents speak to their children about writing: Clues to the nature of print in young children's environments." and won first prize. She also presented this at the 2007 meeting of the Society for the Scientific Study of Reading in Prague. This summer Sarah was chosen to attend the "US-China Joint Workshop on Memory and Language: Interdisciplinary Perspectives". While at the conference she presented "Metalinguistic Awareness in Reading Development and Human Cognition" as part of the student presentations.

Adam Shriver gave an invited talk, 'Mind-ing Mammals: Pain and Suffering in Nonhuman Animals' at the University of Pennsylvania as part of their "Neuroethics" series. http://neuroethics.upenn.edu/talk_series.html

Brandon Towl presented a paper at the annual meeting of the Southern Society for Philosophy and Psychology in April, entitled "Mind-Brain Correlations, Identity, and Neuroscience". This paper won a graduate student travel grant and was one of the finalists for the Griffith Award (information at <http://www.niu.edu/sspp/Griffith.html>).

NEW GRADUATE STUDENTS

Isaac Wiegman

Isaac comes from the University of Houston with an MA in philosophy and a graduate certificate in cognitive science. His undergraduate degree was a multidisciplinary degree in biology and philosophy from Southern Nazarene University. His present interests range from puzzles about mental content and intentionality to emotion and morality.



Tianpu Peng

Tianpu comes from Peking University with a B.Phil from the philosophy department and a BS from the psychology department. He used to focus on reference, meaning and modality (esp. 2D semantics) but now he is expecting to undertake more empirical trainings to become a naturalist. Tianpu is a McDonnell Academy Scholar.



UNDERGRADUATE NEWS

As of August 2007, we have 86 declared undergraduates majors. May '07 graduates totaled 28: 10 primary CN (Cognitive Neuroscience track); 3 primary LCC (Language, Cognition Culture track); 8 CN second majors; 4 LCC second majors; and 3 minors.

Advisors for the program are: José Bermúdez, Pascal Boyer, Carl Craver, John Doris, John Heil, Brett Hyde, Brett Kessler and Mark Rollins.

May Graduates:

Lorin Kline graduated Cum Laude. She also received other awards during her 4 years here at Washington University: Harriet Switzer Leadership Award; Gerry & Bob Virgil Ethis of Service Award; and the Ethan A. H. Shepley Award. In addition she was nominated for the Harry S. Truman Foundation Scholarship.

Natalie Badowski graduated Summa Cum Laude in her primary major, Biology.

College Honors were awarded to **Viviana Benitez, Leslie Forrest, Alanna Gold, Ben Oberman, Abigail Swain** and **Eric Turkington**.

Ana Bailey and **Alanna Gold** received Psi Chi Honors in their primary major, Psychology.

Eliot Scholarships were awarded to **Robert Klemish** and **Michael Sherling**.

Phi Beta Kapa honorees: **Natalie Badowski, Sarah Kliff** and **Abigail Swain**.

Future plans:

Ana Bailey (CN) will be earning a masters degree in human development and cognition at the University of Washington.

Sarah Kliff (LCC) will pursue a career in journalism. She has a job with Newsweek Magazine in their editorial department doing research and writing.

Joshua Lawrence (CN) plans to work for Ernst and Young's Quantitative Economics & Statistics practice out of Washington D. C.

Kevin Mulqueeny (CN) is pursuing his Ph.D. at the University of Chicago in developmental psychology.

Julie Serot (LCC) spent time at the St. Louis Zoo after graduation as a zookeeper in the Primate Unit and plans to pursue her Ph.D. in either Wildlife conservation or Primate Cognition.

Ben Oberman (CN) plans to attend medical school.

Tamara Curl (LCC) is a research assistant in Psychology at Washington University in St. Louis.

Natalie Badowski (CN) will be applying to medical schools.

Alanna Gold (CN) plans on pursuing her Ph.D. in Clinical Neuropsychology at the University of Houston.

Michael Sherling (CN) is working with Todd Braver's lab (Wash U) researching cognitive control. He plans to pursue his Ph.D. in neuroscience.

Lorin Kline (CN) plans to attend Law School with the hopes of eventually working on Public Interest law in the non-profit sector.

Renata Malkus (LCC) will be applying to the JET program for teaching English in Japan.

Benjamin Dao (CN) is going to spend a year working in a lab and volunteering at a hospital before he applies to medical school.

Lucy Vine (CN) is taking a year off volunteering as a spanish medical interpreter; working on publishing a paper for the *Journal of the History of Neuroscience* and pursuing employment at Washington University Medical School as a MRI clinical research assistant or in patient care at Barnes-Jewish Hospital or St. Mary's Hospital. She plans to apply for medical school afterward. **Leslie Forrest** (CN) will work for the Japan-

ese Exchange and Teaching Program with plans to pursue a Ph.D. in clinical psychology.

Abigail Swain (LCC) will work as a research assistant in a Cognitive Psychology lab for two years before deciding to pursue her Ph.D. in this field.

Amelia Baum (minor) is going to be employed by the Japanese Exchange and Teaching Program for a year or two.

Eric Turkington (CN) began the Executive Training Program at Ruder Finn Public Relations. He is currently working on the account of a major pharmaceutical company, Schering-Plough.

Current Undergrauates:

Amir Francois (CN '08) received the CHADS Undergraduate Research Summer Fellowship in Early-Onset Mood Disorders which he will be using to continue his research in Dr. Kelly Botteron's Neuroimaging Lab in Child Psychiatry at the med school where Amir is directing the MRI project on the Morphometric study of the Ventromedial Prefrontal Cortex in Preschool aged children diagnosed with depression.

Greg Gandenberger received a grant for his work on the origins of 20th Century electrophysiology. He is working with Dr. Craver in the Erlanger archives at Washington University to explore how experimental apparatus and theory interanimate one another as scientists try to integrate a new activity (such as the action potential) into the rest of science.

Nicole Sussman (CN '08) was awarded a stipend from the Career Center allowing her to intern this past summer at Oregon Health and Science's University's Children's Psychiatric Day Treatment Center located in Portland, Oregon.

Sharda Umrath (CN '09) attended the Annual Summer Workshop in Cognitive Science and Cognitive Neuroscience hosted by the Institute of Research in Cognitive Science at the University of Pennsylvania.

Mind, Brain, Behavior Undergraduate Research Program 2007

The Mind Brain Behavior (MBB) program is a two-year program that introduces students to the interdisciplinary study of cognitive science exploring the intriguing relationships among mind, brain, and behavior. In the second year of the MBB Program, students engage in research under the supervision of a participating MBB faculty member. Each year there are 30 or more faculty members who serve as research mentors representing several departments across the Danforth and Medical School campuses, including philosophy, linguistics, psychology, neuroscience, neurology, psychiatry, anatomy and neurobiology. Students choose among several research options at the end of their freshman year and then engage in a research project throughout the Fall and Spring semesters of their sophomore year. This program is unique in providing students with an intensive research experience early in their undergraduate career. In fact, many of our students continue working in their mentor's lab or pursue further independent research opportunities in the cognitive sciences during their junior and senior years.

During the 2006-2007 academic year, 20 students participated in the Mind Brain Behavior Research program. The student projects clearly reflected the interdisciplinary nature of the study of mind, brain, and behavior at Washington University. A sampling of student projects included examining the use of implicitly learned affective and spatial information patterns to study racial prejudice, the effect of survival processing on memory of words, the effects of carboxyfullerene on MPTP-induced nigrostriatal damage in macaque monkeys, and the importance of sleep for memory consolidation in *Drosophila melanogaster*. Two sample research summaries are presented below. The MBB research experience culminated at the end of the Spring semester in a Research Poster Symposium during which all students presented their findings to the MBB faculty, as well as postdoctoral fellows, graduate and undergraduate students who share an interest in the cognitive sciences.

SAMPLE UNDERGRADUATE RESEARCH SUMMARIES:

Does testing still enhance learning when students cram before the final exam?

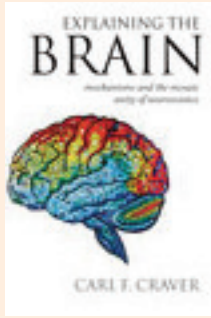
Sharda Umanath (supervisors: Karl Szpunar, & Kathleen McDermott, Ph.D.)

Testing subjects for their knowledge of previously learned study materials, prior to a final test, has substantial benefits for the long-term retention of that information (Darley & Murdock, 1971; Hogan & Kintsch, 1971; McDaniel & Masson, 1985). However, studies of the benefits of testing have not considered the influence of re-study just prior to a final test—a strategy that is commonly used by students in their academic pursuits. Roediger & Karpicke (2006) have reported that re-study has a strong immediate benefit. The purpose of the present study was to examine whether re-studying material prior to a final test will affect the known benefits of testing on long-term retention. Four groups ($n=18$) of subjects studied a series of 3 lists of German-English word-pairs. The two manipulations of interest varied whether or not they received initial testing for each of the 3 lists and whether or not they were permitted to re-study the lists prior to a final test (test-restudy; test-no restudy; no test-restudy; no test-no restudy). The results replicated the benefit of testing on long-term retention. More importantly, we demonstrated that the influence of prior testing becomes ever more pronounced following re-study of the materials—the Testing Effect grew twice in size. Previously tested subjects appeared to make more effective use of their re-study session by adding 8 times the number of new words compared to the non-tested group and they corrected 50% of their errors made during initial testing (relative to the non-re-study tested group).

Emotional Responses to Interpersonal and Noninterpersonal Stimuli in Schizophrenia

Laura Cobb (supervisor: Deanna Barch, Ph.D.)

Individuals with schizophrenia self-report higher levels of social and emotional anhedonia (a reduction in the ability to experience pleasure) than controls on questionnaires and clinical interview (Burbridge & Barch, 2003). In contrast, a number of studies suggest that individuals with schizophrenia show intact (i.e., similar to controls) self-reports of emotional responses to affective stimuli (Burbridge & Barch, 2003). However, many of these studies have not distinguished between stimuli that are interpersonal in nature and those that are not. It is possible that individuals with schizophrenia may show reduced or abnormal affective responses to interpersonal stimuli, given evidence for impaired social cognition in this disorder (Pinkham, Penn, Perkins & Lieberman, 2003). This study examined whether individuals with schizophrenia differ from controls in their self reported valence/arousal responses to positive, negative or neutral pictures and whether they show a differential impairment in affective responses to pictures that involve interpersonal information. Forty individuals with schizophrenia and 29 healthy controls were given a clinical interview and rated on several dimensions, including anhedonia, amotivation, and negative symptoms, using the Scale for the Assessment of Positive and Negative Symptoms. Participants were also shown a series of positive, negative, and neutral images on a computer screen and were asked to rate them for both valence and arousal on a scale of 1-5. The results indicated that individuals with schizophrenia showed overall a less negative emotional response to negative stimuli than controls. Negative interpersonal stimuli elicited a less negative emotional response in individuals with schizophrenia than in controls. While controls rated negative interpersonal stimuli as more negatively valenced than noninterpersonal, individuals with schizophrenia did not demonstrate the same emotional distinction between the two. This suggests that for individuals with schizophrenia, the inclusion of interpersonal components to the stimuli does not change the negative valence of the stimuli.



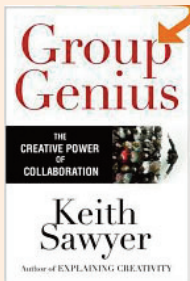
EXPLAINING THE BRAIN: Mechanisms and the Mosaic Unity of Neuroscience

Carl F. Craver
Oxford University Press, 2007

- * Ground-breaking work in a new field: the philosophy of neuroscience
- * Masterful command of the latest work in philosophy and in brain science
- * Illuminates key questions for researchers in both disciplines and in cognitive science more generally

What distinguishes good explanations in neuroscience from bad? Carl F. Craver constructs and defends standards for evaluating neuroscientific explanations that are grounded in a systematic view of what neuroscientific explanations are: descriptions of multilevel mechanisms. In developing this approach, he draws on a wide range of examples in the history of neuroscience (e.g. Hodgkin and Huxley's model of the action potential and LTP as a putative explanation for different kinds of memory), as well as recent philosophical work on the nature of scientific explanation. Readers in neuroscience, psychology, the philosophy of mind, and the philosophy of science will find much to provoke and stimulate them in this book.

Of Special note: 'Explaining the Brain' has been nominated for a Times Higher Education Supplement award for the best academic book by a young scholar.



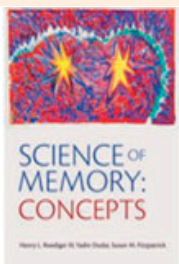
GROUP GENIUS: THE CREATIVE POWER OF COLLABORATION

Keith Sawyer
Basic Books, 2007

Creativity has long been thought to be an individual gift, best pursued alone; schools, organizations, and whole industries are built on this idea. But what if the most common beliefs about creativity are wrong?

In this authoritative and fascinating new book, Keith Sawyer, a psychologist at Washington University, tears down some of the most popular myths about creativity and erects new principles in their place. He reveals that creativity is always collaborative—even when you're alone. Sawyer's book is filled with compelling stories about the inventions that change our world: the ATM, the mountain bike, and open source operating systems, among others. In each case, Sawyer shows the true story of innovation: in spite of the "lone genius" myths that always spring up after an invention's success, these important inventions always originate in collaboration.

To understand the hidden collaborations that drive exceptional creativity, Sawyer spent 15 years studying jazz groups, theater ensembles, and everyday conversation. In *GROUP GENIUS*, he distills the essence of this acclaimed research and shows us how to be more creative in collaborative group settings, how to change our organizations for the better, and how to tap into our own reserves of creativity. The empowering message is that all of us have the potential to be more creative; we just need to learn the secrets of group genius.



SCIENCE OF MEMORY: CONCEPTS

Roediger, H. L., Dudai, Y., & Fitzpatrick, S. M.
Oxford University Press, 2007

Scientists currently study memory from many different perspectives: neurobiological, ethological, animal conditioning, cognitive, behavioral neuroscience, social, and cultural. The aim of this book is to help initiate a new science of memory by bringing these perspectives together to create a unified understanding of the topic.

The book began with a conference where leading practitioners from all these major approaches met to analyze and discuss 16 concepts that are crucial to our understanding of memory. Each of these 16 concepts is addressed in a section of the book, and in the 66 succinct chapters that fill these sections, a leading researcher addresses the section's concept by clearly stating his or her position on it, elucidating how it is used, and discussing how it should be used in future research. For some concepts, there is general agreement among practitioners from different fields and levels of analysis, but for others there is general disagreement and much controversy. A final chapter in each section, also written by a leading researcher, integrates the various viewpoints offered on the section's concept, then draws conclusions about the concept.

This groundbreaking volume will be an indispensable reference for all the students and researchers who will build upon the foundation it provides for the new science of memory.

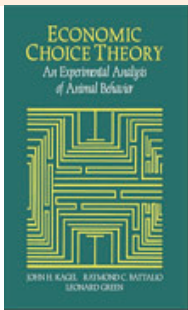


CRITICAL THINKING IN PSYCHOLOGY

Cambridge University Press, 2007

Sternberg, R. J., Roediger, H. L., & Halpern, D. (Eds.)

Good scientific research depends on critical thinking at least as much as factual knowledge; psychology is no exception to this rule. And yet, despite the importance of critical thinking, psychology students are rarely taught how to think critically about the theories, methods, and concepts they must use. This book shows students and researchers how to think critically about key topics such as experimental research, statistical inference, case studies, logical fallacies, and ethical judgments.



ECONOMIC CHOICE THEORY: An experimental analysis of animal behavior

Cambridge University Press

Kagel, J. H., Battalio, R. C., & Green, L. (2007).

Here is the blurb on the book:

This book details the results of the author's research using laboratory animals to investigate individual choice theory in economics, particularly consumer-demand and labor-supply behavior and choice under uncertainty. The use of laboratory animals provides the opportunity to conduct controlled experiments involving precise and demanding tests of economic theory with rewards and punishments of real consequence. Economic models are compared with psychological and biological choice models along with the results of experiments testing between these competing explanations. Results of animal experiments are used to address questions of social policy importance.

Reprinted (with permission) from *The Record*:

Bermúdez named director of Center for Programs

José Luis Bermúdez, Ph.D, professor of philosophy in Arts & Sciences, has been named director of the University's Center for Programs effective July 1, announced Edward S. Macias, Ph.D., executive vice chancellor, dean of Arts & Sciences and the Barbara and David Thomas Distinguished Professor in Arts & Sciences.

"I am pleased that José is assuming leadership of the Center for Programs," Macias said. "His creativity, ability to work with many different groups, and desire to advance Arts & Sciences have combined to advance the Philosophy-Neuroscience-Psychology program in exciting new directions, and I am confident that the same enthusiasm will mean great things for the Center for Programs. We couldn't have a better spokesperson for interdisciplinary teaching and scholarship than José Bermúdez."

Established in 2005, the Center for Programs is designed to promote interdisciplinary teaching and research in Arts & Sciences. For the last two years, Center programs have been shaped by founding director Gerald Early, Ph.D., the Merle Kling Professor of Modern Letters and professor of English, African & African American studies and American culture studies. Early will continue as director of The Center for the Humanities in Arts & Sciences.

Bermúdez, who studies non-linguistic thought in children and animals, as well as the nature of self-consciousness, joined Washington University in 2003 as professor of philosophy and director of the University's Philosophy-Neuroscience-Psychology Program, both in Arts & Sciences. He has over 100 publications, including 3 single-authored books and 4 edited volumes.

A member of the McDonnell Project on Philosophy and Neuroscience, Bermúdez earned a Ph.D. from Cambridge University in 1992 and served previously as the chair of philosophy at University of Stirling, Scotland. Bermúdez will work with Macias and the Academic Planning Committee to review interdisciplinary programs in Arts & Sciences. He's looking forward to expanding the center's interdisciplinary mission. According to Bermúdez, "Excellence in interdisciplinary teaching and research is one of Washington University's greatest strengths, and the Center for Programs is almost unique among American universities in its mission of promoting scholarship and student learning across the traditional boundaries of academic disciplines. It is an honor to continue Gerald Early's achievements as founding director of the Center for Programs. I'm greatly looking forward to working with members of the executive board to support and strengthen interdisciplinary collaborations within Arts and Sciences - and between Arts and Science and the other schools."

He's already been active in organizing a National Science Foundation-funded collaborative workshop with the Center for Research in Psychology and Cognitive Science at Tsinghua University in Beijing. To be held at Tsinghua from July 16-21, the "U.S.-China joint workshop on Memory and Language: Interdisciplinary Perspectives" will involve Bermúdez and seven other faculty from the departments of psychology, philosophy and education in Arts & Sciences, in addition to participants from Duke, Tufts, and the University of North Carolina, together with students from Washington University.

Since its founding, the center has awarded five "seed" grants for interdisciplinary joint faculty projects and two grants for student interdisciplinary projects. In April, the Center hosted a faculty workshop exploring the who, how and why of collaborative interdisciplinary research. A follow-up workshop on funding interdisciplinary research will take place in September 2007. The center also publishes a newsletter, Cross Currents.