Responsibility weighed heavily on 19-year-old Lilly Insalata as she boarded the bus to the L.A. Central Library this past summer. Just finishing her freshman year, the USC College student had been asked to do serious research with a seasoned scholar about a daunting subject: 20th century icon Marilyn Monroe. History and gender studies professor Lois Banner would be relying on Insalata to shape the project, part of Banner’s next book. Insalata wondered: Is there really anything new to say about this tragic, larger-than-life figure? How in the world can I contribute something original? “Does anyone have a quarter?” asked Banner, digging for loose change.

Professor Lois Banner introduced her undergraduate summer researchers, Lilly Insalata (center) and Christine Greer (right), to the joys and hard work of archival research at the downtown public library in June. They were investigating actress and star Marilyn Monroe.

No Day at the Beach
For USC College undergrads, summer means research

Dream Team
Dean Gillman taps new vice deans

The USC College of Letters, Arts & Sciences began this academic year with a new dean, who chose five university colleagues to serve as his deputies and brain trust.

Howard Gillman, professor of political science and history, was named dean of USC College in May by President Steven B. Sample. The selection of Gillman, who was associate vice provost of research advancement at USC, came after a nationwide, yearlong search that attracted more than 500 candidates and was the most systematic College decanal search in decades.

“Because the College represents nothing less than the beating heart of this university, our faculty advisory committee carefully identified, screened and examined numerous outstanding candidates from on campus and across the nation,” said C.L. Max Nikias, provost and senior vice president for academic affairs. “And in the end, President Sample found that the ideal person to lead the College forward was a renowned faculty scholar and outstanding teacher who has served the College and the university with distinction over the past 17 years.”

Dean Gillman has received numerous awards and accolades for his scholarship. He is widely published and the author of a highly regarded book on the disputed 2000 presidential election. He heads the Law and Courts Section of the American...
Research Ascendant

Grants to College faculty rise dramatically in face of tighter competition

Research funding at USC College has risen 30 percent in the past three years to nearly $67 million, with the most significant gains in grants from corporations and foundations.

Through the efforts of the College research and advancement offices, private funding from corporations and foundations more than doubled in the past three years to a total of $15 million awarded in fiscal year 2007. New faculty activity helped, too. Of the $66.9 million total, $7.7 million came as contracts and grants to College faculty hired since 2004.

USC College is attracting a higher quality of researcher than ever before,” said Michael Quick, executive vice dean for academic affairs. “And they’re arriving with active research profiles.”

Annual federal funding has spiked by 21 percent since 2004 to $47.3 million. However, reflecting the national trend, federal funding now makes up a smaller slice of the pie. In 2004, federal grants represented 77 percent of the College’s annual awards. It now represents 71 percent.

Quick was pleased with the overall increase, especially in light of the heightened competition for federal funding. Just a few years ago, the National Institutes of Health would fund one in four grant proposals. Now, the government agency funds about one in 10 proposals, Quick said.

“Federal funding has really gotten grimmer,” Quick said. “One would expect to see a drop in overall College funding from federal sources, but it’s still going up, so that’s great.”

Quick praised the faculty. “When we see how successful our faculty is at getting these grants in such a competitive environment — it’s the highest accolade they can get.”

The College has also added staff members to its development and research offices who work closely with professors seeking grants.

The faculty members awarded the largest individual grants in the fiscal year 2006-07 are:

- **Michael Waterman**, University Professor, USC Associates Chair in Natural Sciences and professor of biological sciences, computer science and mathematics.
- **John McAdie**, professor of psychology and genomics.
- **Myron Goodman**, professor of biological sciences and chemistry.
- **Kenneth Nealson**, Wrigley Chair in Environmental Studies and professor of earth sciences and biological sciences.
- **Antonio Damasio**, David Dornsife Chair in Neuroscience, professor of psychology and director of the USC Brain and Creativity Institute, based at the College.
- **Linda Duguay**, research associate professor of biological sciences and director of USC Sea Grant, based at the College.
- **Anthony Atala**, professor of biological sciences and director of the USC Wrigley Institute for Environmental Studies, based at the College.
- **Michel Baudry**, professor of biological sciences and biomedical engineering.

With warm regards,

Howard Gillman
Dean of USC College
Anna H. Bing Dean’s Chair
Dream Team
continued from page 1


His dedication to service, academics and the classroom is well recognized. He has chaired the political science department, run his graduate program and received numerous honors as a teacher and scholar at USC College.

(See profile of Gillman, on page 6.)

Gillman, who took office on June 1, spent his first month in the post discussing the future of the school with a broad range of faculty, administrators and alumni and, on July 2, announced his new administration and structure for the College’s leadership team.

“I was looking for excellent scholars and exemplary College citizens, who shared my passion for making the College a world leader in undergraduate education, graduate programs and research excellence,” he said.

Michael Quick, professor of biological sciences, was named to a newly created position, executive vice dean for academic affairs, charged with coordinating the work of the four new vice deans of USC College.

Vice Dean Elinor Accampo, professor of history and gender studies, will be responsible for promoting the College’s many graduate programs. Vice Dean Dani Byrd, professor of philosophy, will oversee research advance. Vice Dean Steven Lamy, professor of international relations, is now in charge of advancing the College’s undergraduate programs. And Vice Dean Edwin McCann, professor of philosophy and English, will focus on faculty affairs.

“This team is diverse in its academic expertise,” Gillman said.

“They remind us that the governance of a great liberal arts college is, fundamentally, the responsibility of an engaged and scholarly faculty,” Gillman explained that an advantage of the new structure is that much of the day-to-day supervision of academic affairs will go to Quick.

“I hope that allows me to maintain a broader perspective and focus on our most fundamental and important goals, including outreach to the larger Trojan Family and, working closely with College advisory boards, to build on our momentum and move the Tradition & Innovation fundraising initiative forward,” he said.

The new structure will also better integrate the functions of each of the vice deans and broaden their focus.

“Increasingly the missions of graduate programs, undergraduate programs, faculty affairs and research advancement are interrelated,” he said. “It is hard to recruit faculty without at the same time thinking about the way we promote research in the College or what we expect of them as undergraduate teachers. It is impossible to think about developing graduate programs without thinking about undergraduate programs, faculty affairs and research without thinking about the incorporation of research opportunities on the undergraduate side.”

Michael Quick served as the dean of research during the administrations of Peter Starr and Joseph Ason.

Quick attended Oglethorpe University in Atlanta and served in the Peace Corps. He received his Ph.D. in neuroscience from Emory University in 1992. He served on the faculty at the California Institute of Technology and the University of Alabama School of Medicine before joining USC College in 2002.

He uses molecular tools to understand how the brain produces behavior. His research in neural communication has implications for the treatment of a range of diseases, neural disorders and addictions. Quick has earned a number of top teaching awards at USC and is a faculty fellow in the USC Center for Excellence in Teaching.

Elinor Accampo, the most recent past president of the College Faculty Council, received her Ph.D. in history from UC Berkeley in 1984. Prior to coming to USC in 1983, she held positions at Colorado College and Denison University.

She studies 19th and 20th century French social and cultural history, and the history of women and gender relations. Her recent book, Blested Motherhood, Bitter Fruit: Nelly Roussel and the Politics of Female Pain in Third Republic France (Johns Hopkins University Press, 2006), examines early 20th century attitudes toward birth control and shows how reproductive issues influenced French politics, culture and women’s rights.

Dani Byrd received a B.A./M.A. from Yale University and a Ph.D. in linguistics from UCLA in 1994. He was a senior scientist at Haskins Laboratories in New Haven, the pre-eminent speech and hearing laboratory in the country. Byrd came to USC in 1998 and is director of the USC Phonetics Laboratory.

She studies speech production. She has won the Acoustical Society of America’s R. Bruce Lindsay Award, presented to a member under 35 who has contributed substantially to the advancement of theoretical or applied acoustics. Byrd is an editorial board member of the Journal of the International Phonetic Association and an editor of Journal of Phonetics.

Steven Lamy earned a Ph.D. in international relations from the University of Denver in 1980. His areas of expertise include international relations theory and foreign policy analysis with an emphasis on Western European states, the U.S. and Canada.

He came to USC in 1983. He has published more than 40 articles and book chapters, and is co-author of a textbook to be published by the McGraw-Hill Cos. Lamy has served as director and deputy director of the College’s School of International Relations. He has received 18 awards for excellence in teaching, including honorary membership in the USC Mortar Board Honor Society, and has directed the Center for Excellence in Teaching.

Edwin McCann graduated from UC Santa Cruz and received a Ph.D. in philosophy from the University of Pennsylvania in 1975. He has taught at Harvard University and MIT, and served on the visiting faculty at UC Berkeley, UCLA, UC Irvine and Claremont Graduate University. He came to USC in 1983.

He was director of the College’s School of Philosophy from 1997 to 2000 and president of the USC Academic Senate in 2003-04. McCann has received numerous teaching honors, including the USC Associates Award for Excellence in Teaching, His research focus is the history of 17th and 18th century philosophy, particularly the connections between philosophy and science.

In addition to his cabinet members, Dean Gillman announced the reappointment of David Román, professor of English and of American studies and ethnicity, as director of faculty development. Gillman noted that for the past two years Román “has done remarkable work in mentoring junior faculty and showcasing faculty innovation. David will continue to expand our efforts in these areas.”

David Román received a Ph.D. in comparative literature from the University of Wisconsin, Madison, in 1990. He has taught at Yale and the University of Washington, Seattle. He came to the College in 1995 and has received several USC awards, including a 2007 Mellon Award for Excellence in Mentoring for his work as director of faculty development.

His research focuses on theater studies with an emphasis on contemporary U.S. culture, as well as American, Latino and queer studies. He has written or edited a number of books, including Performance in America: Contemporary U.S. Culture and the Performing Arts (Duke University Press, 2005). His next projects focus on racial politics in 1940s American theater and the memoirs of pre-Stonewall gay and lesbian activists.

—Peter M. Warren

For more information about the USC College administration, visit the Web site at http://college.usc.edu

Meet USC College’s new leadership team: (from left) Vice Dean Dani Byrd, Vice Dean Steven Lamy, Dean Howard Gillman, Executive Vice Dean Michael Quick, Vice Dean Elinor Accampo and Vice Dean Edwin McCann. Gillman took office on June 1.
USC College ferries new houses from L.A. waterfront to Catalina Island for new Boone Center

It should be guaranteed to float the boat of marine scientists: USC College shipped six new houses — at 47 tons or more apiece — from Los Angeles’ Terminal Island to Santa Catalina Island in early August as part of construction of the new George and MaryLou Boone Center for Science and Environmental Leadership at the USC Wrigley Institute for Environmental Studies.

The houses were ferried across the San Pedro Channel, unloaded on the Catalina waterfront, hauled up a steep roadway by a semi-tractor and welded to steel-and-cement foundations already constructed at a site overlooking Big Fisherman’s Cove. The center will be dedicated this year.

The USC Wrigley Institute manages the Wrigley Marine Science Center on Catalina, and it will manage the new Boone Center as well. Anthony Michaels, professor of biological sciences, is the institute’s director.

“The Boone center’s mission is to create an upscale setting to attract leadership and planning retreats, training programs, high-profile conferences, and environmental conflict resolution negotiations to the island campus, officially called the Philip K. Wrigley Marine Science Center. “The USC Wrigley Institute is a world-renowned center for research, education and for the development of solutions to environmental problems,” Michaels said. “The Boone Center on our island campus will be the centerpiece of our effort to build consensus, mediate disputes and create leadership on ocean and environmental solutions.”

George Boone is a USC Life Trustee and member of the College Board of Counselors. He and his wife, MaryLou, have provided inspiration and dedicated support to the Wrigley Institute and its mission. In 2004, the couple made a lead gift to establish the Boone Center. The gift was complemented by other USC benefactors.

“We hope visitors to the Boone Center will find an ‘island effect’ that helps them work together,” Michaels said. “We know from experience that when scientists meet at marine labs, they find ways to collaborate that are often more creative and productive than...”

Tinder-dry vegetation stoked a wildfire that swept across Santa Catalina Island the day before USC commencement, causing staff and scientists at the College’s Wrigley Marine Science Center to scramble to stave off a research disaster.

A few sparks at a construction site ignited a blaze May 10 that burned to the edge of Avalon, consuming more than 4,700 acres of chaparral and grassland. It also burned through the power, phone and utility polls that run across the island and serve the College science complex near Two Harbors 25 miles away.

The labs and housing lost all electricity and telecommunications, forcing the evacuation of visiting scientists, construction workers and staff with children. Others remained, working long hours to rescue experiments and marine animals. Mainland staff pitched in, making runs across San Pedro Bay overnight to deliver small generators and satellite telephones, which supplied limited power and communications within 24 hours. Two large diesel-powered generators also were banded to the island, providing full power for the first time four days later. Regular electric service was restored by Southern California Edison on May 17, with phone and Internet back up three days later.

Key to the rescue effort was the drive to save precious experiments. Staff ran numerous boat trips, ferrying sea life to the University Park campus and returning with dry ice and other supplies. Recirculation pumps on an educational “touch tank” were down, so staff moved starfish and sea urchins back to their native waters in adjacent Big Fisherman’s Cove. They took oysters and hung them in baskets from the side of skiffs moored near the waterfront. They even wired a submersible bilge pump to a truck battery, using it to pour seawater into a holding tank that in turn provided water to enclosures filled with white sea bass. The improvised “bucket brigade” kept the fish alive and maintained the continuity of an experiment that’s more than a year old.

The only major loss involved 100 million oyster larvae — an amount that’s about the size of a dollop of hair shampoo.

USC Wrigley Institute for Environmental Studies Director Anthony Michaels was at the center of the recovery effort. He called it “a dress rehearsal for a real disaster.” An emergency electrical generator is now being installed at the island complex.

“The staff rose to the occasion in this event and did a wonderful job,” he said. “We’ll be better prepared if something happens again.”

—R.H. and P.M.W.
would occur elsewhere. We want to create that same sort of environment for scholars and other members of society, who can come here and work on the really tough problems that we all must solve together.”

The Boone Center is comprised of six houses with a total of 11 bedrooms, as well as a central meeting hall and video center in the main building. With access to the central dining hall at Wrigley, visitors to the Boone Center will have the conveniences of a conference center and academic campus — including ready access to the Internet, food service and other modern conveniences — in an island setting.

Last year, the Wrigley Institute hosted 13 high-level scientific meetings and retreats, plus programs for nine USC schools and four departments in USC College. Before the addition, the facility could house about 100 people overnight in dorms and a few other cottages, which were built about five years ago.

The construction of the new buildings posed a logistical challenge. The houses were built on the mainland to save time and money, as well as minimize disruption to the research at the Wrigley Center. From start to finish, the Boone project was completed in about nine months, less than half the time it would have taken if all the work had been done on the island.

The extra expense if the houses were built on Catalina — estimated about $1.2 million — would have included additional hourly wages for workers to travel daily to the island, as well as the added costs to transport the crews each day and ship construction materials. Other increased expenses were expected from a logistical train that would have stretched across San Pedro Bay.

Building on two sites allowed construction to go faster. One crew on the mainland erected the wood-frame stucco houses at a rented site on the Port of Los Angeles waterfront while workers on the island excavated the Catalina land, built retaining walls, installed water and electrical lines, and laid cement and steel foundations.

The task of moving the houses by barge added significant drama to the project and drew media attention. And while the three separate barge trips went off without a hitch, the task required a crew of more than a dozen house movers and tug crewmen, heavy equipment, a barge and tugboat. The initial barging of the first two houses was taped and broadcast by a host of local television stations, and the Los Angeles Times covered it with two print stories and an online video.

The move itself required ingenuity and brawn. The houses are heavy — five of them tip the scales at 47 tons apiece, seven tons heavier than the weight limit for 18-wheelers on California highways. The sixth one — the centerpiece of the Boone Center — weighs 60 tons. Because they were built on Terminal Island, their trip to the dock was brief, under a quarter mile.

The barge itself had a 1,000-ton carrying capacity, so the two-house load was relatively light for the vessel and tug, albeit an extremely unusual sight. The thorniest part of the move was getting the houses on and off the barge. The initial house loading and unloading took more than a day for each house, but by the third barging — with a steep learning curve surmounted and the trickier issues resolved — the houses were rolling on and off in under two hours.

Once the barge arrived at Catalina, they were pulled up a paved roadway that runs at a 13-degree grade past the research labs and to the foundations. “The grade is not unusual for the house movers,” said Jay Fischer, USC construction project manager. “It just complicated matters a bit.”

A semi-tractor loaded with 25 tons of concrete towed each house up the incline. As a backup measure, each house was secured by cables and winches to another heavy-duty truck parked at the top of the hill.

The houses, of course, were built to travel, with steel frames, 2-by-6 stud construction (instead of standard 2-by-4) and added sheetrock walls.

“We knew they were going to be moved, so they were designed to be more substantial than tract housing,” said James McElwain, the College’s architect, adding that there was more behind the “beefy construction” than just ensuring that the houses survived the move. “We want these homes to be there for 100 years.”

—Richard Hoops and Peter M. Warren

For more photos, video and an update on the move go to college.usc.edu/news/boone
Howard Gillman, the new dean of USC College, is a nationally recognized scholar and innovative leader in university affairs, who wrote a seminal book on the disputed 2000 presidential election. Prominent in his field, he has received numerous scholarly awards and been recognized repeatedly by USC for his teaching, service and mentorship.

Gillman, 48, sees his new job as providing the “inspiration and vision” to ensure USC College is a global leader in undergraduate education, graduate training and research, and that it continues to fulfill its critical role as the structural core of the university.

“Fundamentally, the reputation of the university rises or falls on the reputation of this College,” he said. “We are, from my point of view, the heart of USC and I have an abiding sense of the responsibility, not just to the College, but to the university, to reach even higher levels of excellence.”

(For more on Gillman’s view of USC College see the Dean’s Message, page 2.)

Constitutional Scholar Takes Reins at USC College

Howard Gillman sees dean’s role as providing “inspiration and vision”
Research Matters

No Day at the Beach
continued from page 1

... into her purse, and interrupting the student’s angst.

Insalata gladly offered her professor the bus fare. She was nervous but excited and grateful to be among 30 students participating with nearly two dozen professors in the College’s Summer Undergraduate Research (SUR) pilot program.

“This student summer research is very valuable,” said Banner, as the bus rolled bumpily north on Figueroa.

“The students are getting intensive mentoring. We’re not only discussing the research in my office; I’m taking them to libraries and physically showing them how scholarly work is done.”

Other summer research topics in the program range from DNA cloning to climate change to how infants acquire language skills. If successful, the pilot will be expanded as part of the College’s new model for undergraduate education, one that begins exposing students to research methodology early on. The idea is to create a four-year path where students pursue their research projects throughout their academic careers — thereby challenging the semester-at-a-time model of undergraduate learning.

Last fall, the College launched its Team Research Communities (TRC) courses, which involve small teams of undergraduates working with professors on yearlong projects. The SUR program takes the concept a step further, giving undergrads a stipend and the opportunity to work one-on-one with a professor throughout the summer months.

“We can only rethink undergraduate education within a research university by thinking intelligently about research from the moment a student enters USC,” said Peter Starr, the former College dean who developed the model with Hilary Schor, former dean of undergraduate programs, and Michael Quick, now the executive vice dean for academic affairs.

In supporting the program, Dean Howard Gillman agreed that a liberal arts college must expose students “to the great questions of the ages” and give them opportunities “to see firsthand what it is like to engage a question with curiosity and a respect for evidence-based reasoning.

“One goal of the College is to make it possible for undergraduate students to do independent research,” Gillman said. “Moving in this direction will make ours a distinctive institution, blending the intimacy of a liberal arts college with the creative excitement of a research university.”

In the pilot, 22 professors from four disciplines — history, marine biology, physics and psychology — are working with one or two students on a research project. During the summer-long work, they also met periodically as a group to share their discoveries.

“Research isn’t just a solitary activity between a student and a mentor,” said Schor, professor of English and expert on Victorian literature. “It’s a community of people asking questions. They’re learning collective skills for problem solving. They’re learning the discipline of research, which is very different from the discipline of sitting in a classroom.”

This fall, the students are continuing their projects in four-credit courses, often with the same professor, and will attend seminars focusing on the larger questions of how to approach research in their field.

“This is the moment when they shape the specific work they did over the summer into its larger relationship to their discipline,” Schor said. “And for many of them, when they begin to think about going on to do more independent research of their own.”

The students’ polished work will be presented during a symposium in November.

Schor compared it to learning how to swim: a student has to conduct research to learn the process. But she doesn’t believe a student should be thrown into the pool and expected to...
do the butterfly stroke.

“You have to teach them,” she said, recalling instructing a senior writing his thesis how to use online library catalogs.

“I’ve been shown this many times and it’s never made sense to me until now,” the senior told Schor.

“I told him, ‘That’s because you never had your own research project, where you needed information to craft something of your own,’” she said.

“It’s that kind of independence, that kind of motivation that I think is the most important thing we can give our undergraduate students.”

Back at the Central Library on 5th Street, Banner had Insalata and classmate Christine Greer rolling up their sleeves. They were learning that some material — magazine archives and microfiche included — is not available online and there is more to scholarship than Googling a lot of topics.

“These archives have not been digitized, so the only way to study them is to go to a library and look them up,” Banner said.

Banner’s research focuses on the history of gender, sexuality and culture in the 19th and 20th centuries. Her book, American Beauty (Alfred Knopf, 1992), was the first to examine fashion during the past two centuries in the context of evolving patterns in politics, class and gender roles.

In another pathbreaking work, In Fall Flower: Aging Women, Power and Sexuality (Knopf, 1998), Banner pored over history, myth, literature and film to examine how Western civilization has celebrated and demeaned the older woman. She’s written books about women trailblazers Elizabeth Cady Stanton, Margaret Mead and Ruth Benedict.

Now Banner, a trailblazer herself, is writing the first scholarly work chronicling how Marilyn Monroe, as a symbol of the 1950s, reflected and defined the culture of that era. The research with Greer and Insalata will be incorporated into the work, and Banner is challenging them to question her assumptions.

For example, in one completed section of her manuscript, Banner discusses the famous image from the film “The Seven Year Itch,” in which Monroe’s character stands over a subway grate, a blast of air blows up her skirt. The character is cooling off from the summer heat after watching the movie “The Creature from the Black Lagoon” with a lustful neighbor.

Banner analyzes the “white-whiteness” — her platinum blond hair, white dress, white underwear, white high-heels and white button earrings. Banner analyzes the “whiteness” as it relates to race, social class, sexuality and aesthetics. The color white in female dress has sexual connotations, she wrote.

“When film stars like Jean Harlow and Monroe wore white, they drew on the resonance of white as both innocent and especially titillating when worn by a sexually experienced woman,” Banner wrote. “Publicly exposing white underwear gives it an extra sexual charge.”

But some of Banner’s theories may evolve, depending on what Greer and Insalata bring to the table.

“I invite them to disagree with me,” Banner said. “They may come up with information and theories that change my thinking for the project. It becomes a very collaborative effort. Lilly and Christine are undergraduates, but they are doing very high-level research.”

At the library, Banner helped Greer locate a hard-copy inventory of 1955 Life magazines. Greer is focusing her research on Monroe’s claims that growing up, she had been sexually abused. It was a particularly bold allegation for the time, Greer said, when such abuse wasn’t usually openly discussed.

Greer is studying the psychoanalytical attitudes of the day, particularly the Freudian Oedipus complex theory regarding father-daughter relationships that prevailed after World War II in America.

“In that time, young girls who said they were molested by their fathers were classified as seducing their fathers,” said Greer, a 20-year-old history and neuroscience major who had just completed her sophomore year.

“If Marilyn Monroe’s claims are true, it may give a deeper understanding of the siren persona she developed.”

Hunched over a huge book filled with Life magazines, Greer searched for examples of how father-daughter relationships were depicted postwar and jotted down notes.

Elsewhere in the library, Banner helped Insalata find microfilm of Esquire magazines printed in the mid-1950s. The English and gender studies major is studying how Monroe redefined Hollywood glamour. She wants to observe how women of that era were portrayed in images. As she perused the microfilm, she was finding that they were depicted as innocents or in come-hither poses, and not much in between. She continued on her hunt.

“I really want to write something new,” Insalata said. “That’s not easy when you’re writing about Marilyn Monroe and glamour. I’ve never done research like this before. It’s hard and
word “beat.” Back vowels are shaped in the back of the mouth such as in the word “boot.” In such a language, if a stream of speech contains two adjacent syllables, one with a front vowel and one with a back vowel, listeners know the syllables are part of different words. “For infants learning languages with vowel harmony, paying attention to harmony patterns could be a very powerful piece of information for detecting where words begin and end in ongoing speech,” Mintz explained to Sandoval, adding, “English doesn’t show harmony patterns, but, nonetheless, English-exposed infants detect these patterns and use them in processing speech.”

Mintz’s research helps to determine what “tools infants innately come with that allow them to break into the structure of language,” Mintz said. “So far, the studies have suggested that attending to harmony patterns and using harmony as a cue for detecting words in fluent speech might be an innate capacity shared by all infants.”

Looking a little confused at the explanation, Sandoval went with his son to a darkened, soundproof room, where Welday sat on a chair, Julian on his lap. On the walls, red and yellow lights flashed as speakers played computer-synthesized “nonsense words” exhibiting different vowel sound patterns. In the next room, Welday recorded how many seconds the child paid attention to each light and the various sound patterns before turning his head.

Inside the soundproof room, Julian blinked his wide brown eyes at the red light. When the odd-sounding sequence of syllables wafted from a speaker, the child listened for a few seconds before turning to his father with a worried look. In a few minutes, the testing was over and Julian received a tiny T-shirt that read, “Graduate of the USC Language Development Lab.”

After the Sandovals left, Welday’s real work began as she started analyzing the data. “It’s not just fun time hanging out with infants,” Welday said. “It’s complicated work. This project has helped me learn to do research independently. I can’t believe I’m doing this kind of research as an undergrad.”

Executive Vice Dean Quick said by introducing students to research early on, the emphasis is placed on teaching critical thinking skills rather than on memorization of facts. “There is probably more information content in a single daily edition of The New York Times than was available to the top scholar at the time of da Vinci,” Quick said. “We are overwhelmed with data. Memorizing facts is no longer what a college education should be about.”

Rather, he said, the College is moving toward creating research experiences for all undergraduate students. “We have to create scholarship across the College that is about teaching students how you get those facts, interpret those facts,” Quick said.

“That’s the goal of a new kind of College and a new kind of university.”

—Pamela J. Johnson
The Wordsmith’s Philosopher
Scott Soames explores the meanings and logic of language

A t Princeton University, philosophers Scott Soames and Saul Kripke often walked home together.

On the way, they would sometimes stop by the Annex, a fixture on Nassau Street, and duck into its basement bar for dinner and a drink. Rather than talk sports or politics, these men were more likely to ponder the meaning of meaning and whether a paradoxical sentence can be true.

Now the director of the School of Philosophy at USC College, Soames was highly influenced by Kripke — regarded by many as the leading philosopher of his time.

Soames, who specializes in the philosophy of language and the history of analytical philosophy, is perhaps best known for defending and expanding on the “anti-descriptivist revolution” in philosophy led by Kripke and others.

Developed in the early 1970s, the revolution changed the way philosophers think of general terms — such as water, gold, tiger, blue — that stand for abstract categories of kinds of things that occur in nature: substances (water, gold), species (tiger) and color (blue). (See sidebar for Soames’ glossary of terms.)

In 2005, Soames left Princeton after nearly a quarter century. Soames’ departure, which came after the deaths of philosophers and colleagues David Lewis, Richard Jeffrey and Margaret Wilson, and Kripke’s retirement, was a setback for its philosophy department.

“It’s a serious blow,” Gilbert Harman, Princeton’s philosophy graduate studies director, told the Daily Princetonian after Soames announced his departure.

When Soames arrived, USC’s philosophy program ranked 46th in the nation, according to the Philosophical Gourmet Report. Two years later, it ranks 16th, mostly as a result of recent outstanding hires, including Soames; Jeffrey King and George Wilson from the University of California, Davis; and James Van Cleve from Brown University.

“I’m not at all happy with being 16th,” Soames said inside his office, where a photo of Soames, Kripke and other Princeton philosophers adorned a wall. “I’d like to see us in the top five.”

The former director of philosophy at the College, James Higginbotham, was the catalyst in rebuilding the school. Hired in 2000 from Oxford University, Higginbotham, the Linda MacDonald Hill Chair in Philosophy, oversaw the faculty’s expansion from 12 to 18.

Higginbotham, also a renowned philosopher of language, was extremely familiar with Soames’ work. When he heard Soames was contemplating leaving Princeton, he began the seduction of the well-known East Coast philosopher.

“I don’t think I want to go,” Soames recalled telling his then-fiancée Martha Dencker. “But I had told [Higginbotham] I would visit, so I had to get on the airplane.”

It was 7 degrees and miserable in Newark when Soames’ plane took off. In Los Angeles, it was 65 and sunny. Higginbotham drove Soames to the Shangri-la Hotel in Santa Monica. Soames took a jog along the beach. He called Dencker.

“You know, there’s a lot to be said for Southern California,” he told Dencker, whom he married in 2004, two days before they moved to Los Angeles.

“That [weather] was the start of it,” Soames said. “But I was also impressed with USC’s commitment to building first-rate departments and ultimately a first-rate university that can compete with anybody.”

Soames had spent most of his life teaching at MIT, Yale and Princeton.

A Linguistic Glossary, as Explained by Scott Soames

A natural language is the native language of a speech community. We contrast natural languages with artificial languages, e.g., invented languages of symbolic logic, mathematics or computer science. In the past half century, the logical and linguistic techniques originally developed to endow artificial languages with meaning have been modified and adapted to the task of describing the meanings of natural language sentences.

The reference of a term is what which the term is used to stand for or talk about, e.g., the two-word name “Scott Soames” is used to talk about a certain person — me.

A representational state of mind is a state of mind — like seeing or believing something — that represents the world to the agent as being a certain way. When the world is indeed that way the perception is accurate, and the belief is true. When it isn’t that way, the perception is inaccurate, and the belief is false.

The representational content of a sentence or of a mental state (e.g., a state associated with belief or perception) is whatever it is about that sentence or state that represents the world as being a certain way. For example, we use a sentence “A is F” to represent the thing referred to by “A” as having the property designated by “F.” When the world is the way the sentence represents it to be, we say that the sentence is true.

Understanding the meaning of a sentence involves knowing what the world must be like in order for it to be true. Similar points can be made about perception and belief. When you see a certain color, your perceptual experience represents your immediate environment as containing a colored object located at a certain place. When the perception is accurate, there is such an object at that place. In this way, the notions of truth, reference and meaning are brought together in a theory of representational content. These are fundamental components of a theory of information needed to understand both language and mind.

The anti-descriptivist revolution was a development in the philosophy of language, led by Saul Kripke, David Kaplan and Hilary Putnam in the early 1970s, which analyzed the meanings of many words — e.g., ordinary proper names and many common nouns for kinds of things occurring in nature (words like water, gold, tiger, blue) — as consisting simply of the things or kinds referred to, rather than of qualitative descriptions or definitions of those things. Instead of looking for definitions in people’s heads, we look for the things in the world that these words are attached to and how that attachment came about.
“When you have a sense you are already on top, it’s all too easy to become complacent,” Soames said. “So, to meet these people at USC, who were eager to improve and to move forward, well, it just appealed to me.”

The move also sparked Soames’ competitive streak, which has its roots in sports. Growing up in Seattle, Soames played football and baseball and swam, but his real love was basketball. “I was short, so I played point guard,” said Soames, a 60-year-old with sandy hair.

Academics didn’t really register. “I was more interested in athletics,” admitted Soames, who remains an avid sports fan. “The gym teacher said, the truth was “when I was ill with scarlet fever in the second and third grades and spent a year in bed,” he said. “I read almost all sports stories: Phantom Backfield, The Kid Who Battled A Thousand.”

Although his parents never attended college, they encouraged their two sons to do so. “I knew I would go to college but never thought about it very much,” Soames said. “So along came my senior year and a representative from Stanford came to our high school. He spoke and I was impressed.”

At Stanford, he entered a new, intellectual world. “I found myself intrigued with philosophy because I was interested in what you might think of as the ‘big philosophical questions,’ ” he said.

He earned his bachelor’s in philosophy and spent the next four years teaching English in Hong Kong, then giving reading lessons to first-, second- and third-grade immigrant children in Mountain View, Calif. “My work with Mexican-American children brought me into contact with literature on language development,” he said. “There were various theories about why these children were having a hard time reading. So, I started to read about what people knew about language and how children learn it.”

He read Noam Chomsky, the legendary founder of modern linguistics, and was attracted to his naturalist approach to the study of language. Soames pursued his Ph.D. at MIT, where, working with Chomsky, he became one of the first scholars to combine theoretical linguistics with the philosophy of language. Higginbotham, who worked closely with Chomsky as a professor of philosophy at MIT from 1980 to 1993, is also among the field’s pioneer scholars.

Soames has written scores of articles and five scholarly books, including the two-volume Philosophical Analysis in the Twentieth Century (Princeton University Press, 2003) and most recently, Reference and Description (Princeton, 2005). He is also general editor of the Princeton series Foundations of Contemporary Philosophy, a collection of 21 books in which today’s leading philosophers, including Soames, discuss the state of contemporary work in their specialized areas.

Explaining his specialty, Soames described the philosophy of language as investigating the nature of truth, reference, meaning and representational content — and developing theoretical frameworks for applying these concepts to the study of natural language, communication and representational states of mind.

During the first two-thirds of the 20th century, philosophers believed that the solution to all philosophical problems could be found in the study of language. The philosophy of language became the center of philosophy. “Now, that period is over,” Soames said. “We learned that language, though very important, is not the key to all of philosophy.”

So what is the key to all philosophy? “No one knows,” he said with a boyish grin.

—Pamela J. Johnson

Hanging with the Lemurs

Nayuta Yamashita peers into the lives of the planet’s most primitive primates

Nayuta Yamashita peers into the lives of the planet’s most primitive primates. Shapes of the most critically endangered primates on the planet.

Bio-anthropologist Nayuta Yamashita is USC’s resident expert on lemurs — Madagascar’s native primate and a living link to Homo sapiens’ biological history. Yamashita’s group studies the greater bamboo lemur of Madagascar, one of the most critically endangered primates on the planet.

Yamashita’s group studies the greater bamboo lemur of Madagascar, one of the most critically endangered primates on the planet. Madagascar is the only place on Earth where lemurs, these furry mammals sport long limbs and large, haunting eyes that earned them their name, derived from the Latin, “spirits of the night.” These small primates native to Madagascar have been hooked ever since.

But then, to segue from an early interest in evolution to a career studying Madagascar’s unique fauna makes perfect sense. Scientists consider Soames the leading expert on lemurs — Madagascar’s native primate and a living link to Homo sapiens’ biological history.}

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Hanging with the Lemurs
continued from page 11

lemurs to be the closest living relatives of the ancient common ancestor of apes, monkeys and human beings. This has led some to wonder whether these prosimians can provide a view into our biological origins.

“They’re the most primitive primates,” Yamashita said. “Of course, there’s still a lot to learn about them. They’ve also evolved during the 65 million years since primates first began evolving.

“So you have to take [their relation to the common primate ancestor] with a huge grain of salt. You kind of put your blinders on and go, ‘OK, it’s interesting, but is it true?’ I’m interested in reconstructing what that ancestor might have been, it might look something like a lemur.’”

Yamashita specializes in examining elements of the animals’ diet. She’s a functional morphologist by trade, meaning she concentrates on the relationship between form and function. Her research puts particular focus on the shape and workings of the lemur teeth and jaws and the physical properties and nutrition of their food. After all, what’s more basic than food?

“Diet plays such a huge role in just about everything having to do with an animal,” Yamashita said. “This is the animal’s job, to find the food and eat it.”

She and her colleagues Chia Tan of the center for Conservation and Research for Endangered Species at the San Diego Zoo and Chris Vinyard of the Northeastern Ohio Universities College of Medicine are currently investigating a trio of lemur species that primarily feed on the same type of bamboo.

This arrangement surprised Yamashita and her collaborators. They would expect one of the lemur species to outcompete its fellow bamboo gourmants. They also wondered how these lemurs, the smallest of which is no larger than a kitten, could handle the hard work of breaking through the plant’s tough exterior to reach its edible growing portions.

While the study is still in progress, it seems that the lemur groups may avoid competition in part by divvying up the resource — with different species eating different parts of the plant. As for little jaws vs. big bamboo, the team has noted that the largest bamboo lemurs, who top out at around 6 pounds, employ a very long, labor-intensive approach to dining, aided by surprisingly strong jaw muscles.

“Their little jaws can’t get completely around the bamboo,” Yamashita said. “So they gnaw at it and start a little hole in the bamboo with their canine teeth. Then they lick it, they start peeling the bamboo down till they’ve exposed it. They just poke a hole in it basically and then strip it down.

“They are constantly applying force. They’re sort of overbuilt [in their jaw] to compensate for that [constant exertion].”

And there’s a further mystery: The bamboo in question contains high levels of cyanide in its growing parts, a natural defense against hungry herbivores. Somehow, the lemurs show no ill effect, despite taking in a side order of poison with their meals.

“The million-dollar question is, ‘How are these animals able to tolerate it or neutralize it?’” Yamashita said.

Her team performed preliminary tests indicating that the cyanide actually passes through the lemur’s bloodstream, a tantalizing clue that they plan to follow up on in a separate study with a physiologist.

Of course, collecting data in a distant locale engenders its own complications. Yamashita and her colleagues have come up with a few sharp ideas to do their science on the spot.

For instance, to determine whether cyanide was passing through the bamboo-eating lemurs’ blood, the team tested the animals’ excreta using chemically treated paper strips. They expected to find cyanide in the animals’ solid waste, indicating that it had passed through the bloodstream, liver and kidney.

In another instance, Yamashita and her colleagues stimulated the jaw muscles of tranquilized lemurs with tiny electrodes and measured bite strength using portable equipment — the first time tests of that type were conducted in the field.

“Basically we brought the lab into the field,” Yamashita said.

Her home base at USC recently relocated: In 2006, she joined the College’s anthropology department from the Keck School of Medicine of USC’s cell and neurobiology department, where she taught anatomy. While Yamashita speaks highly of her new mentor, where she taught anatomy.

USC’s cell and neurobiology department, which is more at home as one of a number of specialties and provides a Coquerel’s sifaka (a medi- um-sized lemur) as its eponymous lead. Nowadays, mentioning “lemur” or “Madagascar” no longer elicits a blank look, she said.

“It’s kind of cool that people know what these lemurs are,” Yamashita said, “that they don’t live anywhere but on this island and that they’re special animals.”

That’s something Yamashita has known for a long time.

—Wayne Lewis

The Namorana River runs through the Madagascar rainforest where Yamashita investigates the diet and evolutionary adaptations of lemurs.

In this video still, a greater bamboo lemur (Hapalemur simus) tears into the cyanide-bearing plant that constitutes a dietary staple for the primates.
It’s a little bit hard to pigeonhole Manuel Pastor, who joins the USC College faculty this fall. The professor of geography and of American studies and ethnicity is an economist by training, but his work ranges across the social sciences. He’s held appointments in UCLA’s architecture and urban planning school, the international relations program at UC San Diego and Occidental College’s economics department. He’s published on pollution near schools and in minority neighborhoods, globalization’s effect on local markets, race and immigration, and Latin American economies in transition, among a host of other topics.

There’s a common theme, though, that’s quite fitting for the outgoing director of UC Santa Cruz’s Center for Justice, Tolerance and Community: the quest for equity.

As a researcher, Pastor pinpoints problems of justice and seeks out solutions. And if you ask him, he’ll tell you that the key is the new three R’s.

It’s all about “rigor, relevance and reach. High-quality academic work, directly relevant to some public policy concerns and with extensive reach to publics that really need to use the research.”

And Pastor’s three R’s spell research with impact.

Earlier this year, Pastor presented to the Bay Area Air Quality Management District “Still Toxic After All These Years,” a report written with colleagues at Occidental and Brown. They recommend changes to permit policies to avoid clusters of polluting facilities in any one neighborhood.

In 2003, Pastor and colleagues showed that California waste sites were located in disproportionately greater numbers in minority neighborhoods. In response, the California Integrated Waste Management Board overhauled its efforts to include more community members in the decision-making process about where to locate dumps.

More dramatically, the South Coast Air Quality Management District in 2000 drastically tightened cancer-risk standards for new developments that pollute. This was the result of community pressure — and a timely Los Angeles Times op-ed by Pastor and colleagues. The op-ed presented evidence that, when overlaid upon existing pollution, the laxer regulation represented an inordinate health risk to the region’s minority neighborhoods.

Underlying Pastor’s dedication to justice is a sincere and abiding optimism. When asked about his inspiration, he mentions U.S. civil rights movements both historic and ongoing, from the abolition of slavery to women’s suffrage to the gay rights movement.

“All of those movements represent America moving to its highest promise about who we could be,” Pastor said. “If you look at vibrant community struggles for justice, they represent such a great promise about who we could be.”

His latest book, co-authored by Chris Benner of Pennsylvania State University and Laura Leete of Willamette University, tackles the changing labor market.

Pastor described one example, the Milwaukee metalworking industry, as well.”

They found that, compared to those who dwell in higher income areas people, in lower income neighborhoods rely more upon labor market intermediaries. The networks of friends and family in such areas tend to be of limited value for job seeking. This can lead to a vicious cycle.

“One of the biggest punch lines of the book is that the use of temporary agencies tends to help people find employment,” Pastor said. “But it often connects them, even in the long run, to employment that’s not very high quality in terms of benefits or wages.”

The book does offer solutions to this rut.

Pastor described one example, the Wisconsin Regional Training Partnership. The Milwaukee metal-working industry had been in decline, and businesses tended to avoid investing in job training for fear of losing more-adept employees to their competitors. This public-private consortium lobbied for training investments across the industry and broke the stalemate.

“They’ve been able to bring up the training level,” Pastor said. “It’s wound up being a useful mechanism for bringing people off welfare and into the metalworking industry, as well.”

For him, solutions are best when they’re win-win.

For example, there’s his newest grant, the Just Growth project funded by the Ford Foundation. Pastor is looking into what he called “a tantalizingly new possibility.”

“There’s a growing body of evidence, which I hope to contribute to, that regions that are fairer — that is, including more people in the benefits of economic growth — actually tend to have more rapid and more sustainable economic growth.”

This is a strand of research that Pastor has pursued before, and he points to a recent study by the Cleveland Federal Reserve revealing that out of 100 midsize metropolitan areas, regions exhibiting less racial segregation and more income equality
Evolution’s Gardener

David Bottjer and his graduate crew dig new clues about ancient mass extinctions

Rocks collected from ancient seashells clutter the worktables that dominate the center of paleobiologist David Bottjer’s lab. A grainless, yellowed one records the shape of a giant clam that lived 90 million years ago in what’s now Texas. Pieces of a 270 million-year-old limestone bubble in a bath of acid, revealing dime-sized shells long turned to stone. More rocks, carefully tagged, wait like unopened treasure boxes, each rife with fossils that could provide new views of life’s history.

An expert on animal evolution and rare fossils, Bottjer may be best known for his investigations of the most destructive aspects of evolutionary history—the mass extinction events. These planetwide upheavals have punctuated the history of life on Earth at least five times in the past 500 million years. More than 99 percent of all the species that have ever lived have gone extinct, many, like the dinosaurs, killed off during one of the five big extinctions. Each cataclysmic event has severely pruned the tree of life, rerouting evolution and shaping the makeup of the globe’s current biotic citizenry.

Understanding mass extinction events has gained a new urgency in the face of today’s environmental problems — from climate change and dwindling numbers of rare species to pollution and large-scale habitat destruction. These problems, and the attendant rapid loss of biodiversity, have led some to speculate that humans now stand in the throes of the planet’s sixth great extinction.

In the last few years, Bottjer, a professor of earth sciences and biological sciences in USC College, has made substantial progress in his work to explain the circumstances that led to the disappearance of the dinosaurs 65 million years ago, the end-Permian killed off more than 90 percent of all species and ranks as the largest known extinction in the planet’s history.

“This was when animal life faced its biggest crisis since it first evolved,” he said. “People used to think of it happening suddenly, like a car hitting a wall. But our studies show millions of years of evolving pressure on species.”

Understanding mass extinctions is critical, Bottjer said. Solid methodology is critical — there’s the first “R” again.

For Pastor, who grew up in Southern California, his return to L.A. has both professional and personal dimensions. Los Angeles is ground zero for a complex intersection of issues around globalization and the impact of the goods movement industry on surrounding communities, including air pollution throughout the L.A. Basin — ideal subjects for Pastor’s research.

More than 40 percent of all cargo containers coming into the U.S. move through the twin ports at Los Angeles and Long Beach, which are growing at more than 10 percent a year and contribute around 25 percent of all air pollution in the basin. Limiting the environmental impacts from the ports’ boom is controversial, but industry, policy-makers, environmentalists and the impacted communities will have to strike a balance to sustain growth over the long term.

One source of friction is the aging trucking fleet that hauls goods from the ports and adds to pollution and traffic problems. Pastor has already weighed in on the issue with an op-ed for the Los Angeles Business Journal, suggesting a move away from the current independent contractor system to an employer-based model that would provide a living wage to truckers while requiring the shipping companies maintain a clean fleet. He sees this as an interim step to a robust, green Southern California logistics industry — another win-win.

In L.A., Pastor will be closer to his 92-year-old father in Whittier, as well as to his two children, who attend a 92-year-old elementary school. "This is the town where people remake themselves, with Hollywood as the stellar example, but it’s also the town that’s remaking itself right now,” he said. “People are trying to craft new solutions to the problems of social inequity, and they’re trying to craft it in a way that includes business too.”

USC College, similarly, is on the cusp of great things. "USC has become a very exciting place to be. The university has a big commitment to trying to engage in the city and with the communities around it. And the College has a big commitment to improving the quality of its research profile. That’s really exciting.”

— Wayne Lewis
A long, long time ago

Behind a desk in Zumbarge Hall covered in neat, towering piles of journals, books and papers, Bottjer leans back in his chair. He’s talking about his summer trip to fossil beds in Nevada and British Columbia, but his thoughts are about 250 million years away, considering the condition of the globe at the close of the Permian period and the start of the Triassic.

“These were catastrophic times,” he said. “And very interesting times. The Triassic begins with a mass extinction and ends with another substantial extinction. The intriguing thing is that these extinctions are about 50 million years apart. That’s pretty close.”

Along with many other scientists, Bottjer believes that both extinctions were caused by an extended period of severe global warming. “We’re finding that the two extinction events probably are related. They’re both associated with times of great volcanism, global warming and stagnating, low-oxygen oceans,” he said.

This was during the age when the land masses, driven together by plate tectonics, were fused into the supercontinent known as Pangaea. Tectonic activity, foreshadowing Pangaea’s breakup, led to volcanic eruptions that covered hundreds of square miles with molten rock.

The volcanism, the theory goes, led to extreme global warming, decreasing the difference in seawater temperatures between the polar regions and the equator. Ocean circulation, normally driven by these differences, slowed and the oceans stagnated. The supply of oxygen dwindled. Marine creatures began to show signs of stress.

With so little oxygen, Bottjer thinks anaerobic microbes might have come to dominate deep ocean niches. These include sulfate-reducing bacteria that create hydrogen sulfide and carbon dioxide as a byproduct of metabolism. Hydrogen sulfide, which is often said to smell like rotten eggs, is very toxic to most animal life. The stinky, toxic water might have killed off large groups of animals in deep water and slowly, over five to 10 million years, crept upwards into the mid-ocean and coastal areas and reefs, where it devastated life.

His team’s research on the fossil record is helping to refine what’s known about life long ago and these mass extinctions. It’s also lending strong support to his theory.

Bottjer and graduate student Catherine Powers will publish this fall a report in Geology, a top journal in the field. The fifth-year doctoral student’s studies of bryozoans, a group of tiny marine invertebrates that live in colonies, reveal how their distribution and species diversity shifted over hundreds of millions of years. Looking at fossils and data from around the globe, she showed that bryozoans followed the pattern described in Bottjer’s theory — deep water species began to disappear about 260 million years ago, well before the end-Permian extinction, while shallow water species declined gradually until, at the time of the crisis, very few were left.

“It turns out that bryozoans may be a good ‘canary in the mine’ for detecting these stressful periods,” Bottjer said.

For insight into the first signs of environmental change, Bottjer and former student Matthew Clapham, who earned a Ph.D. at USC last year and will join the faculty at the University of California, Santa Cruz, in January, looked back earlier in the fossil record.

In a paper published July 30 in the online edition of the Proceedings of the National Academy of Sciences, they reported that ecological changes associated with the extinction were already starting 10 million years before the end-Permian crisis. Analyzing rock samples from Nevada, China and Greece, Clapham identified 24 fossilized marine communities that lived in the mid-Permian (270 to 260 million years ago) or the late-Permian (260 to 252 million years ago).

He examined more than 33,000 individual fossils to determine the relative abundances of mollusks and brachiopods in each period. He found that while brachiopods dominated the communities in the mid-Permian, as has been thought, the mollusks steadily increased. Bottjer and Clapham discovered that, by the late-Permian, mollusks and brachiopods lived in mixed communities, and in some cases, mollusks overtook brachiopods in abundance.

The finding contradicts the older belief that the shift was abrupt and tied to the mass extinction.

“We think the ecological shift was caused by environmental stress,” Clapham said, “and that the mollusks, as a group, were better able to tolerate the increasingly deteriorating conditions.”

Immediately after the end-Permian extinction, the sea floor, once home to a diverse flora and fauna, looked nearly bare. Some mollusks, however, not only survived the crisis, but thrived. Bottjer and former student Margaret Fraiser documented this in a paper published in the July issue of Palaeontology, with the attention-grabbing title of “When Bivalves Won Over the World.”

Fraiser, now an assistant professor at the University of Wisconsin, Milwaukee, showed that the bivalve group of mollusks that includes clams, oysters, scallops and mussels tolerated many of the environmental changes of the early Triassic. Then, their populations expanded.

According to Bottjer, “a few bivalves — a few clams — could tolerate these conditions, and no one else could, so they went bananas. In the rocks from this time, you start finding zillion of these. We figure they had some physiological way to tolerate the changes.”

The idea that stagnating oceans led to an accumulation of poisonous hydrogen sulfide has been strengthened in studies by another of Bottjer’s graduate students, Pedro Marenco, in work with Frank Corsetti, associate professor of earth sciences in the College. Marenco uses geochemical techniques to examine sediments in rocks that date to the early Triassic.

He has found telltale signs of bacterial sulfate reduction in the rocks. Marenco, who completed his degree this past summer, is now a postdoctoral fellow at UC Riverside.

One of the few men in the College to receive a grant from USC’s Women in Science and Engineering program (WiSE), Bottjer received $25,000 to help fund the work of four recent female graduate students — Powers, Fraiser, Nicole Bonobo and Sara Pruss. Pruss, who graduated in 2004, did a postdoc at Harvard before landing a faculty position at Smith College. Bonobo is now an assistant professor at California State University, Fullerton. The WiSE grant enabled the women to pursue studies at locales around the world and fueled their success.

“We’ve got as good a group of students as anywhere,” Bottjer said. “And this batch has done very well.”

—Eva Emerson
Professors team up to unravel mystery of blood sugar sensors in body and brain

About three years ago, Casey Donovan, professor of kinesiology at USC College, had hit a wall. His groundbreaking research into the body’s physical sensors for hypoglycemia — how the body knows when there is too little sugar in the blood — had uncovered a surprisingly large role for the hepatic portal vein, which carries blood from the stomach and other digestive organs to the liver. But the deeper he probed, the more Donovan suspected the brain was also involved in detecting and reacting to hypoglycemia, a sometimes life-threatening condition that affects both athletes and diabetics.

Meanwhile, across campus, Alan Watts, professor of biological sciences and director of the Neuroscience Research Institute in the College, had run into a wall of his own. His well-known findings on the neurobiology of stress — discovering how neurotransmitters, hormones and neural circuits act in the brain when the body is pushed hard — were stymied by a need to find a stressor that could be easily controlled in the lab.

Although he had found success using dehydration to trigger stress, Watts wanted a process that would help him “delve further into the cross-talk between the brain and body as a way to better understand how we maintain our metabolism.”

Then, in one pivotal week in 2004, Donovan and Watts met — resulting from a chance conversation with neuroscientist Larry Swanson, the Milo Don and Lucille Appleman Professor of Biological Sciences in the College, to map the areas of the brain activated by hypoglycemia.

Together they are discovering hypoglycemia is anything but simple.

“Despite its importance to diabetics, who are a growing part of the population, surprisingly little is known about how the body actually senses glucose,” Donovan said. “We’ve been locked in a dogma for many years that’s not necessarily wrong but not very complete, where we thought there might be just one sensor.”

Indeed, added Watts, “in the past, many focused on studying pancreatic mechanisms and how you become insulin-resistant, which are critical aspects of diabetes. But now the field is becoming more diverse, more attuned to how the brain plays a role.”

Their research has broad implications. Through the study of hypoglycemia, they hope to understand how the body regulates blood sugar and other aspects of metabolism. These include a better understanding of the processes responsible for why we feel hungry, why we feel shaky if we haven’t eaten and how the body recognizes that it has been fed and is full.

“Donovan is an expert on how lactic acid forms in the muscles of athletes during intense exercise. The study of hypoglycemia was a natural next step because it, too, is present when athletes go to the limit. In his work on the hepatic portal vein, he discovered that afferent nerves — nerves that lead to the central nervous system — were involved in sensing when the body’s blood sugar dropped too low. “We knew the brain was involved, that neurotransmitters like norepinephrine and epinephrine were involved, but we weren’t sure just how high [in the brain] it went,” he said. To their surprise, “We found a number of areas of the brain activated by hypoglycemia,” Donovan said. “The brain engages different components, different neural circuits, to mediate responses to hypoglycemia.”

In fact, a recent study by Watts and his former postdoc Arshad Khan, now a research assistant professor at USC College, revealed new details about how the hindbrain and the paraventricular hypothalamus (a brain area that plays a major role in coordinating feeding behavior and metabolism) help respond to hypoglycemia.

In the short time they have worked together, Watts and Donovan have been extremely productive — their teams have presented findings at the Society of Neuroscience meeting and at the past three meetings of the American Diabetes Association, and they have co-authored articles in the American Journal of Physiology and Endocrinology.

There is much more to come, promised Watts. “These are the kind of results you can only hope to achieve,” he said. “This is one of those great collaborations where things actually worked very well for both of us.”

Next, the researchers will focus on how the mechanisms in the brain work, whether there are different processes for the onset of “slow” or “fast” hypoglycemia (when hypoglycemia develops over an hour versus 10 minutes) and understanding the basic biochemical signals the body uses to detect glucose levels.

Knowing how the brain reacts hypoglycemia is critical to understanding the overall glucose-sensing mechanism in the brain. For diabetics and athletes, who can experience hypoglycemia with overexertion, the study could lead to ways to react to falling blood sugar before the levels hit a critical point — and impact performance, behavior and health.

Watts noted that the new Center for the Study of Neuro-Metabolic Interactions, funded by the College last February, will help him “delve further into the intricate collaboration of body and brain in metabolism and hunger.”

Other collaborators will include Richard Simerly, director of the Neuroscience Program at the Saban Research Institute of Children’s Hospital Los Angeles, and the Keck School of Medicine’s noted obesity and diabetes researchers Michael Goran, the Robert C. and Veronica Atkins Chair in Childhood Obesity and Diabetes and professor of preventive medicine, and Richard Bergman, the W.M. Keck Chair in Medicine and professor of physiology and biophysics.

“Over the last 15 years, the rates of diabetes and obesity have soared,” Watts noted. “All of us in science realize we’ve got to talk with each other if we are to figure out why this is happening.”

Watts said the work on hypoglycemia has relevance for other types of research into how the body maintains and controls its energy, as well as how it regulates and stimulates food intake. “The way we look at it in the lab…. This is all part of a larger picture.”

—Monika Guttman

PHOTO BY PHIL CHANNING
Engaging Ritual

Lisa Bitel studies religious practice past and present to find the roots of belief.

Two years ago, when Bitel was a fellow at the university’s Center for Interdisciplinary Research, she and another fellow, USC neuroscientist Norberto Grzywacz, began a joint study into how gender, ethnicity and religiosity affect the mechanics of vision and what the brain sees. But the research didn’t get Bitel any closer to understanding what’s at the heart of visions.

“I couldn’t find out what I needed to know — maybe because I can’t define culture in a way that’s measurable in the body,” she said. “You can keep using science to explore, but you reach a point where you can’t know where a religious experience begins.”

This time, she focuses on two fifth-century saints, Saint Brigit of Kildare, Ireland, and Saint Genovefa of Paris, who were the first women saints. They both had cult-like followers who were converted to Christianity but by being attuned to their beliefs by engaging in regular rituals — not entirely unlike what’s going on now in the Mojave.

“Their current of inexplicable sightings and a culture of it that’s below the radar of formal religion,” Bitel said. “And the more I think about it and the more I talk to colleagues who work on this stuff, the more I think that’s the way it has been in most parts of the world forever. Today, we’re just seeing the tip of the iceberg as far as people recognizing it and debating it.”

—Claire Martin

In addition to studies of religious culture, historian Lisa Bitel examines visual culture, including religious “kitsch” such as the Virgin Mary beach towel hanging behind her.

O
n the 13th day of every month, at around 10:30 a.m., the Virgin Mary appears in the Mojave Desert. Invariably, the sun shines bright, and always, Maria Paula Acuña is there to see the image in the sky.

A crowd gathers around her, staring directly into the sun to try to catch a glimpse of the Virgin, some using binoculars to glean a sign of a divine presence.

Acuña and her followers may sound unusual, but they’re not alone in their devotion to religious visions. The many recent claims of divine figures appearing in everyday objects — from a smudged window to a taco shell to a ray of light — are contributing to a debate that’s gone on for centuries and recently gained momentum. Are these communications from a higher power or are they examples of religious belief gone wild? Why does one person see a religious figure where another sees a cloud in the desert sky?

USC College’s Lisa Bitel is one of a growing number of scholars exploring these questions. Bitel, professor of history, has studied the social, cultural and religious history of medieval Europe. Now, she’s training her eye on religious visions.

Specifically, she’s trying to define the cultural influences that surround visionsaries as a path to understand why some people see visions and others don’t. She’s discovered that people come to religion in often-unconventional ways that have nothing to do with doctrine or gospel, and everything to do with their cultural surroundings.

Bitel is also using this contemporary research as a window into the past. By studying Acuña and her followers, or similar groups, she is better able to understand how religion took root centuries ago and how for many people ritual and practice is as important as doctrine and belief.
Butterflies Are Free, Again
A rare species returns from the brink of extinction

The El Segundo blue butterfly is back.

Once relegated to a few small and fragile reserves, the nearly extinct butterfly with azure blue wings has expanded its territory to take up residence along the bluffs of Redondo Beach, said USC College’s Travis Longcore, research assistant professor of geography.

“A few hundred are now living and breeding in the four-acre area where orange, purple and beachcombers can get a close look at the rare species,” said Longcore. “In the national picture, this project is yet more evidence that the Endangered Species Act works, and that species recovery is not only possible, but sometimes even involves a walk on the beach,” said Longcore, who also is the science director for the Urban Wildlands Group.

Until last month, the species only existed in three special reserves set away from the crowds. “This is an important step in breaking down the barriers between people and nature in the city,” said Longcore.

Less than one inch across, the butterflies journeyed from their protected environment to the beach because the invasive ice plant had been removed and replaced with native vegetation — namely dune buckwheat — that not only provides the butterfly with nectar but also with a place to lay its delicate eggs.

The butterfly, whose wings sport gray and black spots on one side and an electric blue on the other, was first placed on the Endangered Species list in 1976. Longcore never imagined the tiny butterflies would make the trip to the bluffs and buckwheat on their own.

The study suggests that all these factors may have nothing to do with aging. “I think a lot of people would just assume that if you’re increasing bacterial load in an aging human, it must be bad,” Finkel said. “And it might not just be bad, it just might be. Prior to this study, I would not have thought that.”

The study, funded by the National Institute on Aging, is part of a broader effort in the Tower lab to eliminate irrelevant factors in aging and close in on its fundamental causes. “We want to determine what limits the life span of the fly or any other animal,” Tower said. “Tower’s team eliminated bacteria as a factor by comparing normal fruit flies to specimens born from eggs washed in antibiotic, raised in an axenic environment and given disinfected food throughout their lives. A third group of flies was raised with bacteria and disinfected in adulthood.

Co-author Paul Webster, director of advanced electron microscopy and imaging at the House Ear Institute in Los Angeles, used scanning electron microscopy to visualize structures resembling bacteria biofilms on the surface of older flies.

Tower and co-author Chunli Ren, a graduate student, took bacteria samples from the surface and interior of the flies throughout their life span, disinfected food throughout their life span, and replaced with native vegetation — namely dune buckwheat — that not only provides the butterfly with nectar but also with a place to lay its delicate eggs.

Bacteria — you can live without ‘em, but it won’t do you any good, according to a study of fruit flies by USC College biologists.

Fruit flies scrubbed clean of bacteria did not outlive their grubby siblings, the researchers report in Cell Metabolism’s Aug. 8 cover story.

“The finding challenges the conventional wisdom that even harmless bacteria — and the immune response they provoke — suck up the energy of the host organism and hasten its death. “It seemed like it was dogma that if the organism has to spend energy doing something, it should shorten the animal’s life,” said co-author Steven Finkel of USC College’s biological sciences department.

A research team led by John Tower, associate professor of molecular and computational biology at the College, compared normal fruit flies to ones kept in an axenic (bacteria-free) environment.

“The surprise was that the flies grown under axenic conditions and the normal flies had the same life span,” Tower said.

The experiment cannot be replicated in higher organisms, which need bacteria for proper digestion and other functions. But the result in flies still may be relevant to human aging research.

In both flies and humans, the number of bacteria living on the organism increases with age. The innate immune response to bacteria is similar in flies and humans, and it loses strength with age in both species.

The study suggests that all these effects are relevant in aging. “Although the colonization was a surprise — experts thought the butterflies would need to be introduced by hand — it was not an accident,” Longcore said. “This project is an example of cooperative conservation, where goals are met through carefully crafted consensus and voluntary action.”

Four years ago, Longcore and Redondo Beach resident Ann Dalkey formed the Beach Bluffs Restoration Project to spearhead the restoration along Santa Monica Bay. The Santa Monica Bay Restoration Commission, the Urban Wildlands Group and the Los Angeles Conservation Corps’ Science, Education and Adventure Lab program all supported the effort.

Working with at-risk youth and volunteers, the groups pulled out the ice plant and put in buckwheat, California sunflower, deer weed, lupines, prickly pear cactus, ambrosia and sand verbena.

“The project was funded by the Coastal Conservancy, the City of Redondo Beach and the Los Angeles County Department of Beaches and Harbors.”

To view a video of Longcore and the butterflies, go to college.usc.edu/news/multimedia

Research Matters

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Fast-Tracking Lifesaving Discoveries

USC College alumnus Ray Stevens energizes structural biology research

“Everything worked.” “It wasn’t just luck,” Bau said. “Ray is street-smart — he knew how to work it. He also worked really hard. And he was very good with computers.” Bau considers Stevens, who received the chemistry department’s Outstanding Alumnus Award in 2005, one of his three most successful students. They all were also his most efficient students. “They didn’t waste time. They’d say, ‘Do the experiment, do the write-up immediately. I’d have the report on my desk the next morning. They were not necessarily perfect — they got a lot done and they weren’t afraid of taking risks and making mistakes. Ray was always impatient to go on to the next step. His attitude was like ‘Bam! Bam! Bam! Let’s get going! Let’s go on to the next project!’”

As a graduate student, Stevens remembers talking with his peers about pursuing only “pure” chemical research — driven by intellectual curiosity, they would create new knowledge for knowledge’s sake, not for some “tainted” commercial end. It wasn’t until he got an unexpected request to help the Ray Area company Gilead Biosciences develop what is now called Tamiflu — an FDA-approved treatment for the influenza virus — that he began to question his earlier perspective on fundamental versus applied research. Since then, he’s had a true change of heart. “Now, I think that it doesn’t have to be one or the other. If one chooses their projects wisely, they can do both. I found out that it’s very rewarding to convert basic science information into applications and to become involved with the companies that complete drug development and the families affected by diseases.”

For example, in his work with the inherited metabolic disease PKU, he said, “the basic science involved satisfies the intellectual side of things, but the clinical work, and even the
20 USC College of Letters, Arts & Sciences

NEW FACULTY MEMBERS 2007–08

PROFESSORS

ERIC M. FRIEDLANDER
Visiting Professor, Mathematics
Ph.D., Mathematics, Massachusetts Institute of Technology, 1970
Current Institution: Northwestern University

Eric M. Friedlander is the Henry S. Noyes Professor of Mathematics at Northwestern University. His research interests include algebraic K-theory and representation theory, work for which he has been awarded a Humboldt Senior Scientist Award, invitation to speak at the International Congress of Mathematicians and membership in the American Academy of Arts and Sciences.

SUSAN FRIEDLANDER
Visiting Professor, Mathematics
Ph.D., Mathematics, Princeton, 1972
Current Institution: University of Illinois at Chicago

Susan Friedlander’s research has focused on mathematical fluid dynamics and partial differential equations. For her joint work on instabilities in fluid motion, she received the medal of the Institut Henri Poincaré in Paris. She is currently the chief editor of the Bulletin of the American Mathematical Society.

STEVEN REGESER LOPEZ
Professor, Psychology
Ph.D., Psychology, University of California, Los Angeles, 1983
Previous Institution: University of California, Los Angeles

Steven R. Lopez brings a cultural perspective to the study of mental illness, assessment and intervention. He studies how family factors influence the course of schizophrenia, particularly for Mexican-Americans. His research team has developed a model of cultural competence for clinical practice, which they are currently testing with support from the National Institute of Mental Health.

JIN MA
Professor, Mathematics
Ph.D., Mathematics, University of Minnesota, 1992
Previous Institution: Purdue University

A distinguished scholar, Jin Ma has published extensively on stochastic control theory, analysis and differential equations. Ma’s research has been applied widely to option pricing, hedging, portfolio optimizations, stochastic recursive utilities, term structure of interest rates, risk measures and other areas of mathematical finance. His other interests include insurance models, credit risk and nonlinear filtering.

SERGEY NUZHDIN
Professor, Biological Sciences
Ph.D., Genetics, Institute of Molecular Genetics, Russian Academy of Sciences, Moscow, 1992
Previous Institution: University of California, Davis

Sergey Nuzhdin explores molecular evolution in a wide range of model systems, from fruit flies and mosquitoes to plants. He studies how new species form, including the role of ecological adaptation and the genes involved, and the origin and maintenance of genetic variation. Using quantitative, computational and model-based methods, he has shed light on the genetics of complex traits.

ASSOCIATE PROFESSORS

ANGE-MARIE HANCOCK
Associate Professor, Political Science
Ph.D., Political Science, University of North Carolina, Chapel Hill, 2000
Previous Institution: Yale University

Ange-Marie Hancock is a social welfare, education, and diversity (race/ethnicity and gender) policy specialist who has taught and spoken across the United States and in China. She just finished her second book manuscript, The Double Consciousness of the Pariah: Hannah Arendt and W.E.B. DuBois in Conversation.

FRANCILLE RUSAN WILSON
Associate Professor
Ph.D., American History, University of Pennsylvania, 1988
Previous Institution: University of Maryland, College Park

Francille Rusan Wilson is an intellectual and labor historian whose research examines the intersections between black labor movements, black social scientists and black women’s history in the Jim Crow era. Her next book focuses on lawyer and economist Sadie T.M. Alexander and the impact of racism and sexism on working black women in the early 20th century.

ASSISTANT PROFESSORS

FRANK ALBER
Assistant Professor, Biological Sciences
Ph.D., Computational Biochemistry, Swiss Federal Institute of Technology, 1998
Previous Institution: University of California, San Francisco

Frank Alber brings expertise in computational chemistry to studies of cellular proteins and macromolecular assemblies. His work has led to the characterization of the structures of large cellular assemblies such as the nuclear pore complex. At USC, he will study the structure, function and dynamics of protein complexes to shed light on fundamental cellular processes.

DAVID ALBERTSON
Assistant Professor, Religion
Ph.D., Theology, University of Chicago, 2007
Previous Institution: University of Chicago

Historical theologian David Albertson specializes in the late medieval/early modern era, focusing on Christian thought and ethics. His dissertation examined the work of 15th century German cardinal and polymath Nicolaus Cusanus. Albertson received a Fulbright Fellowship to study last year at the University of Cologne in Germany.
Richard Brutchey

Assistant Professor, Chemistry

Ph.D., Chemistry, University of California, Berkeley, 2005

Previous Institution: University of California, Santa Barbara

A synthetic inorganic chemist who has worked at the boundaries of materials science and biology, Richard Brutchey seeks to create and synthesize new nanoscale materials that will more efficiently catalyze chemical reactions in environmentally friendly ways. He has found novel methods of making useful nanoscale materials at low temperature that require less energy than previous methods.

Jay Bartroff

Assistant Professor, Mathematics

Ph.D., Mathematics, California Institute of Technology, 2004

Previous Institution: University of California, Riverside

Jay Bartroff focuses on statistics and probability, particularly within the context of biomedical research. He studies sequential analysis, experimental design, adaptive clinical trials and multistage hypothesis testing. At USC, he plans to develop new computational algorithms to derive optimal designs with applications to dose-finding studies for novel cancer treatments, medical diagnostic tests and educational testing.

Robert Delgado

Assistant Professor, Anthropology

Ph.D., Biological Anthropology and Anatomy, Duke University, 2003

Previous Institution: Hunter College, City University of New York

Primatologist and USC College alumnus Roberto Delgado specializes in studying the complex interplay between an animal's behavior and its environment, with a focus on social organization, vocalizations and mate selection. He’s pursued fieldwork on orangutans and langurs in Indonesia, howling monkeys in Costa Rica and marmosets in Brazil, among others.

Sarah Feakins

Assistant Professor, Earth Sciences

Ph.D., Geology, Columbia University, 2006

Previous Institution: California Institute of Technology

Sarah Feakins combines geological and biological methods to better understand the intertwined histories of the planet’s environment, climate and life. She specializes in using molecular and isotopic geochemical techniques to detect “biomarkers” (molecular signatures of life preserved in layers of ancient sedimentary rock), which she can use to reconstruct patterns of ecological, environmental and climatic change.

Tansu Celikel

Assistant Professor, Biological Sciences

Ph.D., Cognitive Neuroscience, La Scuola Internazionale Superiore di Avanzati, 2001

Previous Institution: Max Planck Institute for Medical Research

Neuroscientist Tansu Celikel is adept in a wide range of experimental methods that allow him to study brain function and plasticity, including what happens during learning and memory. He has mapped a part of the rodent brain called the somatosensory cortex using simultaneous electrophysiological recordings from hundreds of neurons throughout the cortex.

Dana Johnson

Assistant Professor, English

M.F.A., Creative Writing, Indiana University, 2000

Previous Institution: University of California, Riverside

USC alumna Dana Johnson’s fiction examines the intersection of race and class, focusing on the complexities of African-American identity in post-civil rights era America. Her teaching interests include creative nonfiction and issues of race, class and gender. Johnson is the author of the award-winning story collection Broad Any Woman Down (University of Georgia Press, 2001).

Travis Williams

Assistant Professor, Chemistry

Ph.D., Organic Chemistry, Stanford, 2005

Previous Institution: California Institute of Technology

Travis Williams is interested in developing more efficient ways to develop and produce pharmaceuticals by designing and developing new reactions for complex molecule synthesis. He is working on creating highly simplified analogs of the tris(oxazole) macrolide family of marine natural products, which have attracted interest as potential new cancer treatments.

Sean Roberts

Assistant Professor, Art History

Ph.D., History of Art, University of Michigan, 2006

Previous Institution: Tufts University

Sean Roberts’ research focuses on early modern books, maps and images, and their currency as visual culture in the Mediterranean world. He studies the relationships between the histories of science, art and ideology across Europe from the 15th to 18th centuries. He is currently investigating the 16th century Venetian painter Tintoretto’s depictions of Egyptians, Turks and black Africans.

Bing-Jiun Shen

Assistant Professor, Psychology

Ph.D., Clinical Psychology, University of California, Los Angeles, 2001

Previous Institution: University of Miami

Bing-Jiun Shen explores the link between psychosocial factors (such as emotional distress, stress and coping) and the development and progression of cardiovascular disease. He applies advanced statistical techniques to the interrelationships among psychological characteristics, psychophysiological factors and disease outcome to identify variables that can lead to — or help ameliorate — heart disease.

Edwin Hill

Assistant Professor, French

Ph.D., French and Francophone Studies, University of California, Los Angeles, 2007

Previous Institutions: Getty Research Institute and University of California, Los Angeles

Alumni Ray Stevens continued from page 16

outreach and fundraising activities I do for the PKU community, is rewarding for me.

As he did while an undergraduate and graduate student, Stevens still uses x-rays to reveal the precise shapes, twists and turns of molecules, only now the crystals he studies are made up of large, extremely complex proteins.

Stevens’ crystallography work revealed the 3-D structure of the enzyme that malfunctions in those born with PKU. Normally the enzyme helps the body break down phenylalanine, one of the 20 essential amino acids in the human diet. For the Stevens team, however, building phenylalanine leads to a buildup of the amino acid that, at toxic levels, causes permanent mental retardation, organ damage and other problems. Restrictive, low-protein diets help control the disease’s effects, but can be hard to follow. There is no cure.

With the enzyme structure in hand, however, Stevens and his collaborators identified another enzyme that can metabolize phenylalanine. The enzyme was developed into an injectable therapy with BioMarin Pharmaceutical Inc. and is in pre-clinical testing as a treatment for severe PKU. Stevens and his team’s related work has led to the development of a separate potential therapy for patients with moderate or mild PKU, now in stage III clinical trials.

In the last year, Stevens’ team published the 3-D structure of botulinum toxin, also known as Botox, and the human cell receptor with which the toxin interacts. With further development, the same protein binding would most associate with cosmetic surgery can be used to relax muscles that are abnormally contracted in diseases like cerebral palsy and muscle dystonias, Stevens said.

Most exciting is what’s next: His team has determined the structure of a protein that he’s pursued for 15 years. A member of the G-protein receptor family, the protein sits inside the cell membrane and, it turns out, is a bit of a shape-shifter, both factors that made solving the structure a formidable technical challenge. To be published this fall, their new finding is huge — some 50 percent of all therapeutic drugs bind to a G-protein receptor — and will form the intellectual basis of Stevens’ next start-up company.

Getting more involved with his alma mater is another project Stevens plans to pursue with his usual zeal. “Now that I’ve got to this stage in my career, I’d like to help USC in any way possible,” he said. “USC is a great university.”

Specifically, he wants to help USC College of Life scientists find ways to commercialize their research. Boosting connections between venture capitalists, industry and scientists at the College would provide many benefits to the university, Stevens said. “I’ve increased research funding, better recruitment and building up the school’s reputation as a life sciences powerhouse. By partnering with industry, you can transform basic research into medical advances faster. And the creation of new biotech and science industries in L.A., would benefit the whole region.”

He’s also gotten involved in a more direct way. Last spring, Stevens began a new collaboration with USC College of Medicine professors Myron Goodman and Xiaojian Chen. Their teams will work together to study the structures of the APOBEC enzyme family, then focusing on which Goodman, a biochemist, and Chen, a structural biologist, have been studying for a number of years. Already, Stevens has brought his characteristic need-for-speed to the problem. “I said to them, ‘If you really want to understand the biology, why not solve the molecular structures of all 12 APOBEC enzymes at once?’ ”

It’s ambitious, yes. But the payoff, Stevens noted, could make it all worthwhile.

—Eva Emerson

Alumni News

Former Secretary of State Warren Christopher (B.A., letters, arts & sciences, ’65) received an honorary doctorate from California State University, Los Angeles, on June 9 during the commencement ceremony. He received his undergraduate degree from the College magna cum laude.

Dale Gribow (B.A., history, ’60) is the executive producer of “The Patti Gribow Show,” a morning talk show taped at CBS television studios. Dale and Patri are married, and live in the Coachella Valley. She has interviewed celebrities such as Mary Ann Mobley, retired Army Gen. Bernard Trainor, journalist Judy Woodruff and Kathryn Joosten of “Desperate Housewives.” Dale was recently selected as a Blue Ribbon Committee member for the Foundation for the Retarded. He was also named the first guest society reporter for the The Desert Sun Newspaper.

Dale Harspring (Ph.D., political science, ’72) was recently named a university distinguished professor at Kansas State University. University distinguished professors are appointed following a university competition held by the provost. One of America’s leading experts on Russia, Germany and Eastern Europe, Harspring has authored 12 books and dozens of articles. A permanent member of the Council on Foreign Relations, the most prestigious foreign policy organization in the United States, Harspring spent more than 20 years in the State Department’s Foreign Service and 32 years in the Navy, both on active duty and in the reserves.

John T.S. Keeler (B.A., political science, ’72) was recently appointed dean of the University of Pittsburgh Graduate School of Public and International Affairs. Previously, Keeler was professor of political science and chairman of French and Italian studies at the University of Washington. “The Graduate School of Public and International Affairs is an excellent school with 50 years of excellent history and the potential to become even better, which is my challenge,” he said. “I’m really excited about it.”

Port of Long Beach biologist Robert Kanter (Ph.D., biological sciences, ’78) was recently promoted to managing director of environmental management and planning. He will supervise the port’s environmental programs, as well as all land use, transportation and legislative policies related to the environment. Kanter joined the port in 1990. In 2006, he helped develop the Clean Air Action Plan with the Port of Los Angeles. The plan outlines ideas for dealing with air pollution generated by business at the twin ports.

Michael O’Sullivan (Ph.D., religion, ’81) received a Southern California Journalism Award at the Los Angeles Press Club’s 49th annual awards ceremony. He was recognized for his work in the category of International Journalism – Hard News for his Voice of America report “Democrats, Republicans Eye Albuquerque.”

Dale Bonner (B.A., political science, ’87) was recently sworn in by Gov. Arnold Schwarzenegger as secretary of the Business, Transportation and Housing Agency. The agency has a budget of $11 billion. Its oversight and regulatory authority includes financial services, transportation, affordable housing, real estate, managed health care plans and public safety. A key priority for Bonner will be to implement the infrastructure bond measures approved last year by voters. The $37.3 billion bond measure will provide the state with critical improvements in transportation and housing. Gov. Schwarzenegger noted that “Dale’s commitment to public service and background in both state government and the private sector are tremendous assets” that will benefit California and help the state build for the future.

Austin Nichols (B.A., creative writing, ’02) had the title role of John in the HBO television series “John From Cincinnati.” Nichols’ character is a mysterious man who wanders into a disturbingly dysfunctional family of California surfers.

Brian Clerc (B.A., philosophy and cinema-television, ’06) married Laura Norman on June 2 in Alexandria, La. Clerc is employed at Target as an executive team member. The couple will live in College Station, Texas.
Student News

University Honors

USC’s 124th commencement ceremony held May 11, 2007, fea-
tured College students on stage with university leaders and humi-
ities such as newsmen Ted Koppel and actor-director Clint Eastwood. Valedictory Col\n
in Koproske, a double major in politi-
cal science and music performance, and multicultural education
professor of English and gender stud-
is broke the University of Cambridge’s traditional division and a
readily accepted women as students.

Guggenheim for Historian

Philippa Levine writing book on evolution debates

SC College history professor Philippa Levine has been named a 2007 Guggenheim Fellow for her research on the chasm created in the debate over evolution. Levine will use the prestigious fellow-
snip to work on a book about the debates that have swirled around the theory of evolution through the ages.

“Teaching evolution has been a hot-
button issue for politicians and parents longer than most are aware. Levine found the philosophical division has been entrenched for more than two centuries around the world.”

“This is a much bigger debate than people realize,” said Levine, also a professor of English and gender stud-
ies. “But there doesn’t have to be an}

generation. The Wonderland Award, sponsored by the USC Libraries, is a}
multidisciplinary competition encourag-
ing new scholarship and creative work related to Lewis Carroll. Hamrick’s first place prize is $1,500, and his story will join other Wonderland works as perma-
nent parts of The Edward Gessady and Margaret Elizabeth Gessady Lewis
Carroll Collection at USC.

Psychology Standouts

Psychology graduate student Houri Histriyan beat our national competition to win a 2007-08 Dolores Zohrab Liebmann Fellowship. The fund supports students with outstanding char-
acter and ability who hold promise for achievement and distinction in their cho-
en fields of study. It covers tuition and living expenses for one academic year. The E.M. Kupitz Fellowship Fund, supporting promising graduate students in child psychology, has named College doctoral student Sarah Duman an American Psychological Foundation Fellow, one of only three nationwide. The grant pays a generous stipend and covers conference travel. Her proposed work examines the relationship between parents’ attentiveness and aggressive behavior in children.

Doctoral student Laura Helfin was recog-
nized with the Outstanding Student Abstract Research Award by the Society of Behavioral Medicine’s Cancer Special Interest Group. Tania Abou-Ezeddine, a doctoral student, is the inaugural winner of the USC College psychology department’s Graduate Student Award for Scientific Writing in Clinical Psychology. She was recognized for her article “Positive Peer Relationships and Risk of Victimization in Chinese and South Korean Children’s Peer Groups,” which was published in the Journal of Social Development.

“Only time will tell if the public comes to realize the dangerous reality of that which we have created,” Levine said.

“No one can just sit by and say ‘That’s evolution, and there’s nothing to do with it.’”

“I want to show there is a need to teach evolution in schools as a serious issue in order to

‘There may never be a resolution,’” said Levine, who taught a general

education class called “The Evolution

Debates” last year.

“I knew if I could teach this course to first-year students, I could write a book,” she said.

It is the fourth fellowship this year for Levine, who went to England as the Derek Brewer Visiting Fellow at Emmanuel College, to study Darwin’s papers, the largest such collection in the world.

The USC Gould School of Law’s Mary L. Dudziak, who holds appoint-
ments in history and political science in the College, also received a Guggenheim Fellowship this year.

Eddie North-Hager
Anne Porter is challenging her colleagues in academia to re-envision the ancient world. She disputes a basic assumption: Nomads were a discrete group of traveling herdsmen, hostile to city dwellers and their ways. In her view, at the dawn of civilization, the peoples of the desert and the city were not distinct groups at all.

It’s a proposition that sometimes places the Near East studies scholar at odds with the traditional beliefs of her field. But it also earned Porter a prestigious lectureship at the College de France, a celebrated research institution in Paris.

An assistant professor of religion, art history and classics at USC College, Porter gave a series of lectures in May reinterpreting the role of pastoralists — nomads in common parlance — in the development of the world’s first city, Uruk in Mesopotamia, during the fourth millennium B.C.

According to her analysis of Uruk artifacts, the people of Uruk didn’t typically have set occupations and tasks were commonly interchangeable.

“These are the same social groups,” she said. “It’s an extended family where some members tend the farm in the city and others go off in the desert with the sheep and goats. And it’s perfectly normal for them to exchange. Next season, this family stays home and that part of the family goes off.”

Her lecture series, “The Essential Logic of Pastoralism,” summarized arguments fully developed in her forthcoming book. Her work vindicates the oft-maligned pastoralists, typically portrayed as lawless, rootless raiders, disconnected from Uruk’s society. Porter points out the misinterpretations are partly driven by how alien their environs are to the modern Western world.

“Studies of the ancient Near East have focused totally on the history of the city, these little, tiny strips of green through this vast desert of brown. And this means that half, if not two-thirds, of what’s going on in the ancient world is completely ignored.”

In each segment of her College de France lecture series, Porter presented her holistic view of the city and the steppes of Mesopotamia from a different academic perspective: political science, archaeology, anthropology and literary theory.

Her interdisciplinary approach and expertise in the study of antiquity has earned Porter a fellowship at New York University’s new Institute for the Study of the Ancient World. This academic year, she will be on the East Coast offering her advice in the establishment of this boundary-crossing endeavor.

But for Porter, who first entered Near East studies “by total accident” as an undergraduate at the University of Melbourne and went on to a distinguished career as a field archaeologist before returning to academia, her interdisciplinary comes with the territory.

“Every different approach just brings a different insight to the problem,” she said. “I don’t really think in terms of different disciplines. It’s just ‘This is the way to explore this problem.’ ”

—Wayne Lewis

Marine Scientist Named to Microbiology Academy

David Caron honored for work revealing diversity of marine microbes

David Caron, a professor of biological sciences in USC College, has been elected a fellow of the American Academy of Microbiology (AAM), the honorary leadership group within the American Society for Microbiology. Caron is one of 54 scientists elected to the academy this year on the basis of their scientific achievements.

A biological oceanographer by training, Caron is a leading expert on microbial diversity and investigations into microscopic life that includes skeleton-forming diatoms, slime molds, shape-shifting amoebas and the planktonic algae that can cause toxic ocean tides. Caron’s work has focused on many aspects of protistan biology — from probing the physiology of organisms living in the Antarctic to identifying new species off the Southern California coast and surveying the diversity and abundance of marine protozoan populations around the globe.

“It’s an extremely well-deserved honor,” said Douglas Capone, the Wrigley Chair in Environmental Studies in the College. “With the application of modern molecular techniques, Dave is defining the cutting edge of research on the microbial ecology of protists.”

Jed Fuhrman, the McCulloch-Crosby Chair in Marine Biology, nominated Caron. “[The honor] reflects Dave’s cumulative, lifetime contributions to science,” Fuhrman said. “Dave has been a pioneer in revealing the biodiversity and significance of protists in aquatic ecosystems. He has done important basic research, as well as more applied work, looking at harmful algal blooms and why they’ve become more prevalent.”

Caron has published more than 130 scientific papers and received one of the top awards in his field, the Seymour Huttner Young Investigator Prize from the Society of Protozoologists. He joined the College from Woods Hole Oceanographic Institution (WHOI) in Massachusetts, where he worked from 1985 to 1999, eventually holding the Mary Sears Endowed Chair for Excellence in Biological Oceanography.

“It is a great honor to be recognized by your peers,” said Caron, who is also a member of the USC Wrigley Institute for Environmental Studies. “I’m very pleased.”

USC’s previously named AAM fellows include professors Capone, Fuhrman, Miriam Susskind, and Kenneth Nealson, the Wrigley Chair in Environmental Studies of USC College, as well as Bill Costerton of the USC School of Dentistry.

—Eva Emerson
Justice, Law and Punishment in Islam

Megan Reid, assistant professor of religion, has been named as a 2007 Carnegie Scholar for her project entitled “Punishment and Appropriate Justice in Islamic Societies,” which is also the subject of her new book. A cultural historian, Reid studies Islamic law and ethics throughout the ages. She was one of 21 scholars selected for the honor this year by the Carnegie Corp. of New York. Each will receive grants of up to $100,000 to explore themes relating to Islam and the modern world over the next two years. Reid’s project will investigate concepts of punishment in Sunni Islam within the context of their sacred beginnings. She argues that the case for violent justice cannot be found in Qur’anic passages but rather in successive generations of those who interpreted Islamic legal texts, resulting in evolving and fluid notions of appropriate justice.

Among other themes, she will look at the past and present attitudes of Muslim judges and legal scholars regarding corporal and capital punishments, as well as the imagery of those punishments and their capacity to shock and satisfy. She intends to shed light on how Islamic societies today understand changing conceptions of fair punishment and also notions of clemency.

Opera in Latin America

The Rockefeller Foundation awarded Roberto Ignacio Diaz, associate professor of Spanish and Portuguese and comparative literature, a residency at the Bellagio Study and Conference Center, where he will work on a book-length study entitled “Abductions of Opera: Passion and Absence in Latin America, 1700–2004.” Diaz’s research focuses on Latin American literature and cultural history.

Guiding Modern Language

Margaret Rosenthal, associate professor of Italian, was appointed by the Modern Language Association’s executive council to the advisory committee of PMLA, the association’s member journal, for a three-year term (2007–10). The publication features essays on language and literature for scholars and teachers of English and foreign languages.

College Nets Zumberge Awards

USC College's Orlando Bentancor and Anne Porter were among the 12 USC faculty members selected to receive 2007 awards from the James H. Zumberge Research and Innovation Fund. Bentancor, an assistant professor of Spanish and comparative literature, won an individual award for his proposal, “The Life of Metals in Potosi.” Porter, an assistant professor of religion, art history and classics, submitted the winning proposal, “Community and Cosmology: Participatory Political Practice In Ancient Mesoamericana.”

Paris, then Harvard

Robert Campany, professor of religion and East Asian languages and cultures, was invited to present four keynote lectures at l’École Pratique des Hautes Études in Paris and also to teach one semester as a visiting professor in the East Asian languages and civilizations department at Harvard University.

Fishing Honor

Dennis Hedgecock, professor of biological sciences, was selected as the first holder of the Kenneth K. Chew Visiting Professorship in the School of Aquatic and Fisheries Sciences at the University of Washington. He is the Passion H. Offield Professor in Fisheries Ecology at the College.

Creative Class and More

Kevin van Bladel, assistant professor of classics, received a 2007 USC General Education Course Development Award. But that was just the beginning of his recent honors. After a summer spent researching rare Arabic-language texts thanks to a grant from the National Endowment for the Humanities, van Bladel is spending the fall as a scholar-in-residence in the School of Historical Studies at the Institute for Advanced Study at Princeton. In spring 2008 and during the 2008-09 academic year, he will be at New York University’s new Institute for the Study of the Ancient World as an associate research scholar.

Provost’s Research Awards

USC College faculty members received more than half of the 41 research grants from the USC Provost’s Advancing Research in the Humanities & Social Sciences fund. Within USC College, winning proposals came from 24 faculty members representing 12 departments.

— English, art history, political science, classics, history, religion, sociology, linguistics, psychology, anthropology, philosophy and geography. The winning projects were chosen from a pool of 114 submissions.

As part of the USC Provost’s Immigration and Integration Initiative grant program, five College faculty members received funding awards, including Michael Dear, professor of geography; Pierrette Honndagneu-Sotelo, professor of sociology; Lon Kurashige, associate professor of history, politics, and American studies and ethnicity; Leland Saito, associate professor of sociology and American studies and ethnicity; and Janelle Wong, associate professor of English, American studies, and American studies and ethnicity. The research grants, worth up to $25,000, support innovative, influential and cross-disciplinary research that addresses the integration of immigrant communities into all aspects of social life: politics, economics, education, housing, health care, social welfare and culture.

Religion and International Relations

Steven Lamy, professor of international relations and vice dean of USC College, has been appointed to the religion and international relations advisory board of the Social Science Research Council.

Doubly Distinguished

G.K. Surya Prakash received the 2007 trifecta medal from the Southern California Section of the American Chemical Society at an April celebration on campus. Prakash, the George A. and Judith H. Olah Nobel Laureate Chair in Hydrocarbon Chemistry and professor of chemistry in the College, also recently was honored with a Distinguished Alumni Award from the Indian Institute of Technology in Madras, India, where he earned his master’s degree.

The Stuff of Legacy

Smithsonian magazine will feature USC College’s Daniela Bleichmar in its special edition, “America’s Young Innovators in the Arts and Sciences: 37 Under 37.”

Bleichmar, 34, is an assistant professor holding appointments in art history, and Spanish and Portuguese. She specializes in the connections between visual culture, science and colonialism in the Americas from 1500–1800.

Her research was honored for its unique, multidisciplinary approach, said Beth Py-Lieberman, the Smithsonian's associate editor and chief researcher on the special issue, which hits newsstands Oct. 16.

Bleichmar is “an ideal candidate” for this honor, said Py-Lieberman, adding that Bleichmar’s approach to history represents “a fresh vision, a new direction and the stuff of legacy.”
Pioneering Anthropologist Was Expert on Tiv Tribe

Paul James Bohannan, known as the world’s leading expert on the Tiv of Nigeria, has died. He was 87.

An emeritus professor of anthropology at USC College, Bohannan's rich body of work as a cultural and social anthropologist ranged from working among the Tiv, a West African tribe, to research about divorce in the United States.

At the College, Bohannan served as dean of social sciences and communications from 1984-87. After retirement, he moved to Three Rivers, near Sequoia National Park, where he was working on his autobiography. He had battled Alzheimer’s in recent years and died in his sleep on July 13.

Born in 1920 in Lincoln, Neb., Bohannan grew up in Indiana, Montana and Colorado and attended the University of Arizona. When the U.S. entered World War II, he left school to enlist in the Army. After the war, Bohannan returned to the UA, where he earned his bachelor's degree, then became a Rhodes scholar at Oxford University.

After earning his doctorate in philosophy at Oxford, Bohannan studied the Tiv tribe from 1949-1953. He lived in a mud hut without plumbing, learned the Tiv language and documented the customs and culture of the tribe, then numbering 880,000.

Bohannan returned to the U.S. and taught at Princeton University and Northwestern University, where he focused on African ethnography and helped to build the anthropology department's study of economic anthropology. He taught at UC Santa Barbara before joining USC College.

Gary Seaman, associate professor of anthropology at the College, co-authored with Bohannan The Tiv: An African People from 1949 to 1953 (Ethnographics Press, 2000). Seaman, an expert in the analysis of ethnographic film, used his cutting-edge digital techniques to rescue the badly damaged images that Bohannan had taken during his years among the Tiv.

"When you’re thousands of miles from technological civilization, you do what you can," Bohannan told USC Trojan Family Magazine in 2000. "In the heat and humidity of the Nigerian bush, negatives start to molder."

The rescued, digitized images and Bohannan’s published research provided the foundation for the book, which chronicled the life of the Tiv farmers in the last days of British colonial rule. The photographs preserved a record of domestic activities that the Tiv, now numbering more than 2 million, have since discontinued — such as hollowing out tree trunks for canoes.

Bohannan’s other research projects focused on stepfamilies, aging, law, divorce and American history, among other topics.


Seaman remembered Bohannan as an expert in the analysis of ethnographic film, used his cutting-edge digital techniques to rescue the badly damaged images that Bohannan had taken during his years among the Tiv.

"When you’re thousands of miles from technological civilization, you do what you can," Bohannan told USC Trojan Family Magazine in 2000. "In the heat and humidity of the Nigerian bush, negatives start to molder."

"He was abreast of all sorts of issues," said Seaman, a faculty member at the College for 25 years. "He was an authority on marriage in relation to economic systems; he was an expert on customary law, the ethnography of the Tiv farmers."

A connoisseur of fine Scotch whisky, Bohannan spent each summer in Scotland, where he visited distilleries. He also had other leisure pursuits.

"His real passion was ballet," Seaman said. "He often would remark that if he hadn’t grown up in the time and the place he did, he would have undertaken a career like Vaslav Nijinsky."

Bohannan is survived by his wife, Adelyse; a son, Denis of Hanford; a brother, William of Connecticut. He was predeceased by his first wife, Julia Hilts, who earned her bachelor's degree at the College. Rebecca Bohannan died of cancer in 1997.


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"Both Julia and I felt strongly that student aid was critical to the continuing success of USC," Rolph said last year. "Working overseas for much of my career helped Julia and me realize the importance of advanced education with an international direction."

"Standing a lanky 6-foot-5, "Ham was always with a smile," said Peter Berton, emeritus professor of international relations who oversees undergraduate programs in the College, remembered Bohannan as being "one of those people who was always willing to help the professors. He was an active participant in the intellectual life at the School of I.R."

Rolph wrote extensively about Pearl Harbor and North Vietnam, as well as on communist strategy and propaganda. His book, Vietnamese Communism and the Protracted War (American Bar Association, 1971,) analyzed communism and its contrasts with liberty under law.

In addition to his wife, Julia, he is survived by his sister, Marilyn Caine, two nieces and a nephew.

—Pamela J. Johnson
Obituaries

Rev. Hamilton T. Boswell, 92, (Ph.D., religion, ’43), a longtime religious and civic leader in San Francisco’s African-American community, died in his sleep in Pinole, Calif., May 6. Boswell was twice awarded the Freedom Award by the NAACP.

Boswell was born in Dallas but spent most of his childhood and early adulthood in Los Angeles. He earned a master’s degree and a doctorate in theology from USC College. In 1939, he married Eleanor Gugg after just three days of courtship and they settled in Los Angeles. That same year, Boswell took his first clergy position as the minister of St. John’s Methodist Church in Los Angeles. In 1943, he became the minister at Bowen Memorial Methodist Church in Los Angeles. Four years later, he moved to San Francisco to serve as the minister of the Jones Memorial United Methodist Church. Boswell was the Jones Memorial church’s pastor for 29 years. He founded the Jones Methodist Credit Union and Jones Memorial Homes, the first federally financed senior citizen housing in San Francisco. From 1953-62, Boswell served on the city’s juvenile justice commission, and from 1964-74 he was chairman of its housing authority commission. In 1984, he began a decade-long service as chaplain of the city’s police department. He was the first chairman of the San Francisco Conference on Religion and Race, as well as the co-chair of the Church Labor Conference, which organized support for the civil rights efforts of Dr. Martin Luther King Jr. He is survived by his wife of 68 years, Eleanor Boswell; a brother, Dr. Martin Luther King Jr. He is survived by his daughter, Eleanor Boswell; and past president of the California School Boards Association and a regional director of the National School Boards Association. More than 600 people attended her memorial service in Pleasanton, Calif.

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C. Bradley Mulholland, 65, (B.A., economics, ’63), a former shipping company executive, died Feb. 20 from complications of cancer.

After graduation, Mulholland answered a newspaper ad for a booking clerk job with Matson Navigation Co. He got the job and stayed for 38 years. Matson operates a fleet of freighters to Hawaii and other Pacific destinations. It is one of two U.S.-flag cargo shipping firms on the West Coast. Mulholland rose through management ranks by working six or seven days a week and eventually was named chief executive officer in 1992. At his retirement in 2004, he was executive vice president of Alexander & Mulholland, a member company of the Pacific Basin Shipping Group.

He got his job and stayed for 38 years. Matson operates a fleet of freighters to Hawaii and other Pacific destinations. It is one of two U.S.-flag cargo shipping firms on the West Coast. Mulholland rose through management ranks by working six or seven days a week and eventually was named chief executive officer in 1992. At his retirement in 2004, he was executive vice president of Alexander & Mulholland, a member company of the Pacific Basin Shipping Group. When he graduated in 1963, his grade point average ranked him among the top 10 in his graduating class. Carol Florence, a counselor at Munister, praised Blue, calling him “a leader.” Florence recalled that, to earn his Eagle Scout award, he repaired wheelchair ramps, refurbished beds at a homeless shelter and built picnic tables for the elderly and handicapped. Blue is survived by his parents, James and Deborah, and two siblings.

Shaun M. Blue, 25, (B.A., philosophy, ’04) died April 16. Blue, a first lieutenant in the Marines, was killed during combat operations in Al Anbar, Iraq. Blue joined the Marines immediately after graduating USC-College in 2004. He was assigned to the 2nd Battalion, 7th Marine Regiment, 1st Marine Division, Marine Expeditionary Force based out of Twenty-Nine Palms, Calif. Blue grew up in Munister, Ind., and was an outstanding scholar and athlete at Munister High School. He was a member of the varsity track, cross-country and wrestling teams. When he graduated in 2000, his grade point average ranked him among the top 10 in his graduating class.

Carol Florence, a counselor at Munister, praised Blue, calling him “a special person” and “a strong moral leader.” Florence recalled that, to earn his Eagle Scout award, he repaired wheelchair ramps, refurbished beds at a homeless shelter and built picnic tables for the elderly and handicapped. Blue is survived by his parents, James and Deborah, and two siblings.

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USC College of Letters, Arts & Sciences
A Study of Atrocity with a Dream of Peace

Political scientist Richard Dekmejian puts political violence in context

It’s surprising, but one of the world’s leading experts on the topic of terrorism doesn’t like the word.

“It’s a biased term,” said Richard Dekmejian, a scholar who has served as a consultant for the State Department, the Defense Department and the United Nations. “It frames everything from the perspective of the nation-state, which has become the bastion of legitimacy. But in terms of human beings killed, traditional terrorism pales when compared to genocide. States have such a monopoly on the means for violence that the state can be the supreme terrorist.”

The political science professor’s 2007 book, *Spectrum of Terror* (CQ Press), is based on one of his undergraduate courses and what he has learned while teaching it for the last two decades. He argues that acts of political violence, from the proverbial lone gunman to organized pogroms against religious and ethnic minorities, exist on the same continuum.

Thus, the Unabomber, Al-Qaeda and the Sri Lankan government as a ready example of political violence that started small but several times has spawned genocides and, equally important, to the Third Reich are linked in violent, even as they differ in context and scale.

Dekmejian has an important message: If conflicts aren’t resolved when they’re on the small end of the scale, they can escalate, sometimes even leading to mass murder.

He pointed to strife between the rebel group Tamil Tigers and the Sri Lankan government as a ready example of political violence that started small but several times has spawned interethnic bloodbaths claiming thousands of lives.

“The moral of the story,” he said, “is you have to deal with these things at the micro level so they won’t escalate and become political or genocide.”

The bulk of *Spectrum of Terror* reviews case studies of political violence, a wide-ranging round-up that includes the IRA, the Chechens, Hezbollah and Al-Qaeda as well as the Holocaust and the Armenian genocide. In addition to presenting narratives and timelines, Dekmejian analyzes strategy in cultural context by integrating game theory, a branch of mathematics studying the interaction of parties having distinct or competing interests.

And context is key.

“People’s self-interests are very often clotted by their cultural background,” Dekmejian said. “An Islamic suicide bomber calculates his self-interest very differently than you or I do. His concerns are leaving behind a hero’s legacy, his destination in the afterlife and his perception of what it means to be a good Muslim. Unless you understand that, you’re nowhere in trying to stop him or trying to reform the situation so that this type of person would not emerge.”

In the book’s final section, Dekmejian offers predictions of future trends in political violence and his recommendations for a more peaceful world.

For Dekmejian, a U.S. Army veteran, the ideal situation would see enlightened leaders worldwide form a coalition to intervene in genocides and, equally important, to bring conflicting factions together to resolve issues before they reach that level.

He pointed to the U.S. role in the Iraq situation, noting that “violence is how to prevent it.”

“Perhaps the greatest challenge our government faces,” he said, “is to stop him or reexamine your whole stance — sometimes your facts as well.”

One has to be hopeful about these deep causes, he added, “We need to find out what the deep causes were — psychological, social, political, look at the evolution of conflict in game theoretic terms and then look at whether the thing can be resolved. If a situation has been resolved, we need to look at how and learn that lesson.”

For now, though, Dekmejian said he doesn’t see easy solutions to America’s own entanglements in the Middle East, noting that “violent jihadism is going to be with us for a long time.”

*Spectrum of Terror* is essentially an adaptation of the popular course Dekmejian teaches each fall, “Terrorism and Genocide.” His students receive a salute on the dedication page, and he credited the undergraduates and teaching assistants from this course — numbering around 4,000 through his 20 years at USC College — with providing feedback vital to the book’s development.

“In a sense, it’s multi-authored,” he said. “I’ve learned a great deal from personal contact with my students. You think you know something and all of a sudden a student throws a question at you that pushes you to reexamine your whole stance — sometimes your facts as well.”

He allowed that his chosen subject matter is indeed grim but serves a greater cause.

“I prefer teaching my leadership course over the class on terrorism and genocide. It’s more uplifting,” he said. “But I teach this course out of a sense of duty, precisely because it deals with confronting issues that are so harrowing. I hope students receive a salute on the dedication page, and I credited the undergraduates and teaching assistants from this course — numbering around 4,000 through his 20 years at USC College — with providing feedback vital to the book’s development.

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“I prefer teaching my leadership course over the class on terrorism and genocide. It’s more uplifting,” he said. “But I teach this course out of a sense of duty, precisely because it deals with such a tragic topic. My overwhelming interest in the topic of political violence is how to prevent it.”

—Wayne Lewis