Blooms of Diversity

Expanding academia’s scope

On the first day of Hernan Ramirez’s field research into the workplace culture of immigrant gardeners, an enraged Westwood homeowner stormed from his house, unleashed a litany of expletives and threatened to sue.

His target was the gardener who, while trimming ivy at the house, accidentally cut a water hose, shutting off the air conditioning.

“The man came out of the house and went ballistic,” recounted Ramirez, a third-year doctoral student in sociology at USC College. “I was nervous, but the worker took it in stride.”

Ramirez’s research into Mexican immigrant gardeners in Los Angeles comes directly from his own experience. His father, Antipatro, migrated from Mexico and has been a gardener — jardiner — in the Los Angeles area for 36 years.

“This is my life story,” said Ramirez on a recent Sunday, while helping cultivate the English primroses and gardenias at his parents’ South Gate home. “This is my father’s life story. As the son of a Mexican immigrant gardener, it’s a subject I can put my heart into.”

Ramirez’s research is just one example of how a diverse faculty and student body expands scholarship by bringing new understanding to traditionally unexplored areas.

“The concepts that scholars develop are influenced not only by our academic training, but by our own particular biographies — by who we are,” said Pierrette Hondagneu-Sotelo, professor of sociology and Ramirez’s thesis adviser.

“If research in sociology were to be done only by a very homogenous group ... it would be more difficult to have research projects that look into topics like gender and immigration,” she said, “or projects that really interrogate questions of race and gender.”

Peter Starr, dean of the College, concurs, adding that, in an ideal world, to properly mentor students and nurture new scholars, the faculty would mirror the diversity of the student body.

“In some fields, the lack of diversity is a vicious cycle,” Starr said. “Students who are talented in a field go to classes and they do not see people who look like themselves. And they say, ‘Hmm, why is that? Maybe people like me are not welcome in this field.’ It makes them much less likely to get into the field.”

Elena Pietropaoli, associate professor of physics and astronomy, said this problem is particularly prevalent with women in the sciences.

“Women in physics, especially, are very much underrepresented,” Pietropaoli said. “If you don’t have female scientists, then you’re discouraging more participation by women. continued on page 8

Like many USC College scholars, doctoral student Hernan Ramirez (left) studies a subject close to his heart. His dissertation focuses on immigrant gardeners in L.A. Here he stands in front of his family’s South Gate home with his father, Antipatro Ramirez, a professional gardener for 36 years.

A diverse faculty and study body add fresh perspectives and new frontiers in scholarship.

Like many USC College scholars, doctoral student Hernan Ramirez (left) studies a subject close to his heart. His dissertation focuses on immigrant gardeners in L.A. Here he stands in front of his family’s South Gate home with his father, Antipatro Ramirez, a professional gardener for 36 years.
A MESSAGE FROM THE DEAN

Strength in Diversity

Each spring, proud graduates and happy families come to our beautiful campus to celebrate commencement with faculty and friends. They come from all over California, from across the nation, and around the world. All the graduates whose accomplishments we celebrate on this day have pasts and futures as unique as they are. Yet, dressed in robes and caps, they become one for a time, making a momentous occasion in their lives in a rich and happy communion.

The theme of this issue of the USC College Magazine is diversity. In so many respects — social, political, ethical and biological — diversity is a source of enormous strength. It is no accident that P. Fluctus Unum — one out of many — is one of the mottos that helps bind our great nation together. And yet difference can mystify us, scare us, give us pause.

Appropriately enough, the stories you will read here are themselves diverse. By pursuing our theme along the different vectors inherent to the humanities, the social sciences and the natural sciences, they reflect the breadth of the College and of the world it serves.

Increasing faculty diversity is a key goal for the College and the university. Our cover story explores how the diverse backgrounds and life experiences of our faculty and student scholars have come to influence their scholarship and the research they pursue. An accompanying piece (page 8) provides an update on the College’s aggressive campaign to broaden our faculty.

Elsewhere in the issue is a look at how the human organism itself responds to diversity (page 14). This discussion with College psychologists and neuroscientists shows how some of our halting approach to “the other” may ultimately be coded in the structures of our brain, our psyche and our evolutionary heritage.

Finally, we look at our marine environment (page 12), where nature’s diversity continues to astonish us. Marine biologists in the College are uncovering daily the tremendous variety and complexity of living things in the oceans, using molecular tools to discover tiny new species, as well as richer levels of biodiversity. The focus on diversity in this issue, however, belies a greater truth — that of our enormous similarities. Modern explorations of marine biodiversity are possible only because the genes of microbes, fish and oysters are written in DNA, the same biochemical language as our own. Fear of racial and ethnic difference is diminished when you befriend someone of a different race or ethnicity — and see beyond the differences to the many things you share. Likewise, scholars with diverse life experiences may choose to study wildly different topics from sharply differing perspectives, but they tap similar methods and modes of expression, those born from a shared tradition of learning and research.

So, viva la difference, but let’s cherish all that binds us together as humans, as citizens of Earth, and last but not least — as Trojans.

Cordially yours,

Peter Starr
Dean of USC College
Professor of French and Comparative Literature

USC College Marks Two Key Milestones

College launches Levan Institute, dedicates Irani Hall

Earlier this semester, two well-known and highly regarded alumni took a giant leap into Trojan history.

First, on Feb. 6, the College announced the creation of the USC Norman Levan Institute for Humanities and Ethics. It was made possible by a generous $6 million gift from Norman Levan, a Trojan alumnus, professor emeritus and former chief of dermatology at the Keck School of Medicine of USC. Through courses, lectures, seminars, faculty-student lunches and other events the institute will provide an ethical underpinning for 21st century students studying to become lawyers, scientists, journalists, politicians and physicians.

“The institute will issue a ‘grand challenge’ to every new USC student: to engage with, understand and be informed by the timeless values at the core of our humanity,” said Provost C.L. Max Nikias.

Just days later, on Feb. 9, the College dedicated its newest life sciences building the Ray R. Irani Hall, in honor of USC Trustee Ray R. Irani. Now the chairman of the board, president and chief executive officer of Occidental Petroleum Corporation, Irani earned a Ph.D. in chemistry from the College in 1957.

Completed in 2005, Irani Hall, formerly known as the Molecular and Computational Biology Building, houses faculty and students working at the frontier of genomic sciences.

“Thanks to people such as Ray Irani,” USC President Steven B. Sample told assembled guests at the dedication, “USC will remain a key player in this golden age of the life and biological sciences.”
JEP at 35: Still Changing Lives

Service-education program celebrates its growing legacy

Alberto Rivera was headed for a career in engineering when a postcard in his USC mailbox changed his life. It simply read: Volunteers needed for JEP’s Readers Program.

USC College’s Joint Educational Project (JEP) assigned Rivera, a sophomore majoring in engineering, to Vermont Avenue Elementary School. Ten years later, Rivera is still there, now as a second-grade teacher in the same classroom where he once tutored as a JEP volunteer.

“I just really enjoyed it,” said Rivera, 27, a Vermont Elementary teacher for the past six years. “I changed my major to education and never looked back.”

Now celebrating its 35th year, JEP has changed the lives of thousands of people — student volunteers and those they help. More than 55,000 USC students have participated in JEP since it began in 1972.

“We’ve come a long way,” said Tammy Anderson, JEP’s executive director, speaking under an archway of balloons at the JEP House during the 35th anniversary celebration on March 2.

“Years ago, we were seen as a program that did good things for people,” Anderson said. “Now, we’re rightfully seen as a national model for community-service learning. We’re connecting students who are learning in the classroom with what’s happening in the real world.”

At the event, scores of well-wishers gathered to celebrate JEP’s achievements.

USC College Dean Peter Starr pointed out that JEP’s efforts have produced a total of more than one million hours of service.

“We’re here in celebration of the wonders JEP faculty and staff do everyday,” Starr told the crowd. “On behalf of the College, I must tell you how proud we are of JEP.”

Each year, JEP places about 2,200 students from 20 departments throughout the university in agencies and schools at more than 50 community sites. In 2000, Time Magazine/Princeton Review recognized JEP’s integral role in USC’s commitment to public service when it featured USC as its “College of the Year.”

Barbara Seaver Gardner, then-director of the College’s Center for Urban Affairs, launched JEP to ease tension and build a bond between the expanding university and the surrounding community. But it wasn’t easy.

“Barbara was told by two of the nation’s most prestigious foundations that they wouldn’t fund JEP because they knew it wouldn’t succeed,” said Anderson, whom Gardner hired in 1981. “Fortunately, Barbara didn’t listen to the skeptics.”

Gardner and her small staff raised funds and obtained grants, and quickly grew out of their small space.

“So she went to the president [John R. Hubbard] and said, ‘You have to find me some space or I’ll pitch a tent in front of the Doheny Library,’” Anderson said. “They quickly found a place because they knew Barbara would do it.”

Answering the Call

Anderson keeps JEP moving forward

Tammy Anderson recalled the awkward interview 27 years ago at JEP’s historic bungalow.

It was December 1980 and Anderson, preparing to graduate from the USC Leonard Davis School of Gerontology, was applying for a position at USC College’s Joint Educational Project (JEP). When Anderson arrived, she was surprised to find a gerontology classmate there to interview for the same job with then-executive director Barbara Seaver Gardner.

“Neither one of us knew the other was coming,” Anderson recalled of her classmate. “Barbara [Gardner] would ask a question and we’d both have to answer it.”

Nearly three decades after being hired to direct a new senior citizen program, Anderson is still just as passionate about what she considers her calling.

“I work with such great folks,” Anderson said, sitting at her desk — inside the same office where that long-ago interview took place. “Such dedicated, wonderful people. With every new batch of students, I think, ‘We’ll never have one as great as that again.’ And then another one comes.”

In 1988, Anderson was promoted to assistant director. Ten years later, she became director and in 2002, when Dick Cone retired after a quarter-century, Anderson took the post of executive director.

“Tammy is Miss Charm,” Cone said by telephone from his San Gabriel home. “Tammy is just perfect for a people job because she can fit into any scene. And she approaches every day with enthusiasm.”

Raised in nearby Baldwin Hills, Anderson went to Catholic schools from kindergarten through 12th grade. Both parents, however, are former public school teachers — her father Alvin taught in the Compton Unified School District and her mother Donella in the Los Angeles Unified School District. They describe their daughter as a high-spirited youngster with insatiable curiosity.

“She was a vivacious, energetic child and it has followed her into adulthood,” Donella Seabrook said. “She had questions for everything and we had to have the answers.”

Anderson has been involved in experiential education — learning that engages students in a real life activity to gain knowledge about a subject — since the early 1980s. In 1987, Anderson became the first African-American to serve on the board of directors of the National Society for Experiential Education.

In 1990, she earned her master’s degree at the USC Rossier School of Education, managing class work and studying around her busy schedule at JEP.

Under her leadership, JEP has become a national model for hands-on learning by undergraduates, fostering learning in which students do field work in the community rather than or to enhance what they read or hear about a subject in lectures. In 2004, Anderson earned the USC President’s Award for Staff Achievement.

“Tammy is a person of integrity and good work ethic,” said the Rev. Cecil “Clap” Murray, USC’s holder of the John R. Tansey Chair in Christian Ethics. “She’s just a joy package. She’s what keeps this home alive.”

— Pamela J. Johnson
Dishing on America’s Diet Dogma
Sociologist confronts modern gustatory myths and culture

Top “diet” into a search engine like Google, and you’ll get about 171,000,000 hits.
That’s right. More than a hundred million. Add that to the hundreds of newspapers and magazines covering diet and dozens of cable channels devoted solely to food, and it’s no wonder we’re so confused about good food choices.

After five years of research into the food habits of our nation, Barry Glassner, professor of sociology at USC College, has found that myths and image drive meal choices more often than any practical sense of nutrition.

“There are a lot of forces out there trying to persuade us to eat one way rather than another, from the marketing of certain types of foods and supplements to people selling fad diets to truly qualified nutritionists and dieticians,” said Glassner, USC’s executive vice provost. “It’s very confusing for people to know who they should listen to and how they should eat.”

As a result, Americans fall sway to nearly every myth about food imaginable, he said, and our picky behavior has led us to select foods and restaurant experiences that underscore our own romantic image of food.

In his new book, The Gospel of Food: Everything You Think You Know About Food Is Wrong (Ecco/HarperCollins, 2007), Glassner gets to the heart of the commercial, cultural and socioeconomic factors behind everything from why we glorify certain foods and demonize others to what your dining choices say about who you are.

“If I eat at Wolfgang Puck’s Spago in Beverly Hills, that projects an image of what I think about food as well as my status,” he said. “Or, if I subscribe to Chowhound.com and search out an obscure restaurant that serves sugar-fried squid in Monterey Park, that projects another image entirely.”

He goes on to argue that many have fallen under the sway of killjoys who preach what he calls “the gospel of naught,” the view that a meal’s worth lies principally in what it lacks.

“The less sugar, salt, fat, calories, carbs, preservatives, additives or other suspect stuff, the better the meal,” is their thinking, he said.

“People get more out of a meal, not just emotionally, but physiologically, when the food is a pleasure to eat,” Glassner writes. “In one of my favorite studies, Swedish and Thai women were fed a Thai dish that the Swedes found overly spicy. The Thai women, who liked the dish, absorbed more iron from the meal. When the researchers reversed the experiment and served hamburger, potatoes, and beans, the Swedes, who like this food, absorbed more iron. Most telling was a third variation of the experiment, in which both the Swedes and the Thais were given food that was high in nutrients but consisted of a sticky, savory paste. In this case, neither group absorbed much iron.”

Enjoyment of food must be part of the picture, he said. “A piece of baked fish with a side of broccoli has its place when you’re looking for something light, but don’t tell a Tex Mex devotee that it beats a great carne asada burrito.”

—Evelyn Jacobson

Good Food Mantra
So how do you cut through the diet myths and eat well? Lorraine Turcotte, associate professor of kinesiology in the College and co-director of the USC Metabolic Regulation Lab, suggests this food mantra: Well-balanced, moderate portions, and fruits and vegetables. “You can’t go wrong if you have a good mixture of everything — fruits, vegetables, carbohydrates, proteins,” she said. “Eating smaller portions allows you to vary your diet more. And, almost nobody eats enough produce.”

Not a Picky Eater: Barry Glassner contemplates food choices at USC’s dining commons. His new book explores our obsession with eating and teases apart cultural and socioeconomic forces behind the glorification of some foods and demonization of others.

JEP at 35
continued from page 3

In 1976, JEP moved into the cream-colored, wood-frame house at 883 West 34th St. on University Park campus built in the 1960s, where USC’s fourth president George F. Bovard once lived.

Over the years, its programs have evolved greatly. The Readers Program is now ReadersPlus, as volunteers also tutor in math.

Student volunteers also spend time in clinics and hospitals helping doctors. They go to foster care and juvenile facilities and mentor youth. They visit shelters for the homeless or_barred women. They frequent schools, teaching subjects from Greek mythology to biology to French.

The USC students incorporate their community experience into courses in subjects such as sociology, geology or biological sciences. For example, for a sociology course about juvenile delinquency, JEP staff work with the course instructor to craft a curriculum based on the class textbook that also connects to the reality of the street.

“The text might talk about the 10 common myths about so-called juvenile delinquents,” said Susan Harris, JEP’s director of academic development. “By the end of the semester, our JEP volunteers, based on what they see volunteering in juvenile facilities, will have to confirm or challenge those 10 myths.”

The turning point for JEP came in May 1993, when the project obtained a $1 million endowment from Henry Salvatori to further expand its programs. Four months later, Gardner died of lung cancer at age 68. In 1997, Salvatori left another $500,000 to JEP in his will.

“I’m grateful that Barbara learned about the $1 million endowment before she died,” Anderson said during the anniversary event, where celebrants were scribbling messages around the frame of an enlarged black-and-white photo of Gardner.

“This was all her vision and her determination.”

Martin Galindo, a volunteer in the mid-1970s, recalled Gardner and his life-altering experiences at JEP. Galindo was a dental student at USC when he took a general education class that required JEP participation. After volunteering for one semester, Galindo decided to pursue a career in education.

“It really clicked with me,” said Galindo, who earned his bachelor’s degree in general studies in 1979 and master’s in education two years later.

For a quarter-century, Galindo taught, was a principal and administrator in the Los Angeles Unified School District. As a principal at Vermont Avenue Elementary, Galindo again worked with members of JEP. Now, Galindo is superintendent of the district covering the southeast portion of LAUSD.

“It all began with JEP,” Galindo said. “I liked working with kids and seeing their faces light up. I liked knowing that I was making a difference.”

—Pamela J. Johnson
Down and Out, Yet Hope Remains
Students host conference on human rights, homelessness and hunger

Rufus Hannah’s feral hair has been cut and nearly combed. Clean-shaven, he wears a crisp T-shirt. His notched teeth have been capped and he flashes a white smile.

Employed and sober, he no longer stumbles around the streets of San Diego County. But his hands are a daily reminder of his troubled past. When he presses both fists together, a bold tattoo spells out: B-U-M-F-I-G-H-T.

“I regret I had anything to do with those videos,” Hannah, 31, told a crowd of hundreds during the 19th annual conference of the National Student Campaign Against Hunger and Homelessness, held at USC last semester. “I want to do something to stop this.”

USC College students Marissa Goodhill and Donesh Olyaie led the effort in bringing to campus the three-day conference, which drew about 600 participants, including a number of former homeless people, who shared their stories.

At the conference, Hannah talked about the mean streets, chronic depression and the changes in his life now that he is sober. He told the mostly student audience that one goal he has is to stop a disturbing trend in which teenagers around the world have viciously attacked the homeless. A series of independent videos called “Bumfights” inspired the sometimes-deadly attacks, according to police.

The videos show homeless people fighting, being pushed down stairs in shopping carts and jumping off buildings into dumpsters. Hannah, alcoholic and homeless for about a dozen years, became an unwitting star in the controversial videos. For his efforts, he was given beer.

At USC, Hannah told students he is working with the National Coalition for the Homeless on legislation that would make violence against the homeless a hate crime.

“I was totally taken advantage of,” the Army veteran said. “I’m trying to get a law passed. I’m fighting back that way.”

The conference had a profound effect on participants, and has led Goodhill and Olyaie to join students organizing a USC chapter of the California Student Public Interest Research Group (CalPIRG).

David Harris told students he was an unlikely homeless person. Reared in a suburban neighborhood in Washington, D.C., Harris was an excellent student who earned a score of 1,440 out of 1,600 on his SAT, then called the Scholastic Aptitude Test.

“My hope and dream was to make a living as a writer,” said Harris, an articulate and soft-spoken 42-year-old published poet. “To achieve that goal, my plan was to go to college and get a degree in journalism.”

But after Harris became a parent at 17, his life changed. He wed and worked in restaurants, mailrooms and telemarketing agencies to pay the bills. Then he got sick. Lacking health insurance, he couldn’t afford medical care and grew sicker, until eventually he couldn’t walk or speak.

In a hospital emergency ward, he learned he had congestive heart failure and suffered a stroke. He soon found himself living on the streets. Deeply depressed, he self-medicated with liquor.

“My depression sent me to the Taft Bridge in D.C.,” Harris recounted. “I sat on the railing of that bridge. I looked down and thought, ‘If I just jump, I will no longer have to worry about being homeless, about being cold and about being hungry.’”

Perched on the bridge for hours, he watched the sunrise over Rock Creek Park.

“I remember sitting there in the cold and thinking, ‘The sun came up and I’m still sitting here,’” he said. “I can’t do this.”

That morning, he met a volunteer at a soup kitchen, who listened to him and took him to a doctor. The doctor did nothing for him, he said.

“But what [the volunteer] did changed my life,” he said. “She taught me that someone cared. That meant I wasn’t alone in the world. And that gave me hope.”

Also speaking at the conference was Arlene Melendez, an attractive 40-year-old mother of four, who wore a blue-grey suit and her hair in a conservative bun. She told the crowd how she ended up on the streets of West Covina after drug abuse and a broken marriage.

She slept inside her van until the vehicle was towed. Then she slept outside at a car wash.

“I started running rampant with methamphetamine,” she said. “I was snorting more, and my body was hurting. I was fist fighting men. My body was going into convulsions, and I thought I was going to die.”

She sought help so she could be reunited with her children, she said. Now, clean and sober, she’s staying at a hotel and working on obtaining permanent housing.

“I’ve come a long, long way,” she said. “People think just because we’re homeless, we’re junk. And we’re not. We have hearts and we have families and we have lives. I just lost my path. But I’m back.”

Goodhill described the speakers as enlightening. “They put a face on homelessness,” said Goodhill, 19, a sophomore majoring in American studies. “They made the issue human.”

The conference grew out of a homelessness advocacy group at USC’s Joint Educational Project. Goodhill, Olyaie and other students had volunteered at shelters, but they saw the desperate need there and wanted to do more. In addition to bringing the national conference to USC, the group is leading a USC CalPIRG hunger and homelessness campaign. Members of the campaign organize homelessness and hunger awareness events and are working to toughen laws regarding violence against the homeless.

Olyaie said he often encounters homeless people on the outskirts of campus. Ignoring them is not the answer, he said.

“When you come across a homeless person, it’s easy to walk away,” said Olyaie, 21, a senior majoring in political science and theater. “But if you do nothing that person will still be standing there and will still be hungry.”

—PAMELA J. JOHNSON
**The Arm-Chair Colonialist**

How a 16th century travel writer pushed England to settle the New World

Richard Hakluyt may be the most important figure responsible for the English colonization of North America whom you’ve never heard about.

Though this contemporary of Shakespeare published even more writings than the Bard himself, the 16th century travel writer closely guarded details of his own life. Key facts, including the date of his birth and exact site of his grave, remain unknown.

“We don’t know what he looked like. We don’t know where he lived,” said USC College’s Peter Mancall, author of Hakluyt’s Promise: An Elizabethan’s Obsession for an English America (Yale University Press, 2007).

Four hundred years after the founding of Jamestown, Mancall answers many outstanding questions and offers fresh insights about who Hakluyt was, what shaped his views and how he established himself as the foremost proponent of English expansion, though he himself never ventured farther than Paris.

It was Hakluyt’s writings that helped propel the establishment of the Virginia Company and the settlement at Jamestown.

“People make history happen, and Richard Hakluyt was one of those people,” said Mancall, professor of history and anthropology and director of the USC-Huntington Early Modern Studies Institute. Mancall is also co-curator of the Huntington Library’s exhibit on Jamestown, which will open to the public this summer.

At its core, Mancall said the book is a story of one man’s power to determine the course of a nation. He described how Hakluyt, who was fluent in six languages, became an adviser to the queen and a trusted source on the outside world to the general public.

“He was the early modern equivalent of a scientist,” Mancall said. “He was almost single-minded in his passion for advancing knowledge and information.”

With Hakluyt’s influence over policy makers, his insistence that the English settle foreign lands and his inherent faith that the New World could be a Protestant Holy Land, Mancall credited him with laying the groundwork for the rise of the British Empire.

Mancall, whose previous books include Deadly Medicine: Indians and Alcohol in Early America (Cornell University Press, 1995), pays tribute to Hakluyt’s travel writing legacy by taking readers on a vivid tour of the colonialist’s world, weaving together details of his life and times.

The book recreates the sights and smells of Elizabethan England, from the odors of decaying carcasses hanging over the Thames to the flickering lights emitted from candles used for illuminating dark London days. It also includes maps and illustrations never before published.

Mancall was motivated to write this biography after coming across Hakluyt’s writings while researching his 1995 book Envisioning America: English Plans for the Colonisation of North America (Bedford/St. Martin’s).

“The English had a desire to spread Christianity, a desire to extract resources and a desire for more land,” Mancall said. “But big forces need someone to tie them together and Richard Hakluyt was that person. He turned ideas into actions that shaped our world as we know it.”

—Orli Belman

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**Neural Damage Puts Nicotine Habit in Check**

Smokers forget urge, quit easily after loss of function in key area of brain

Smokers with a damaged insula — a region in the brain linked to emotion and feelings — quit smoking easily and immediately, USC College neuroscientists reported recently.

The new study provides direct evidence of smoking’s grip on the brain. It also raises the possibility that other addictive behaviors may have an equally strong hold on neural circuits for pleasure.

The report, which appeared in the Jan. 26 issue of the journal *Science*, received widespread attention, including front-page coverage in *The New York Times*.

Senior authors Antoine Bechara and Hanna Damasio, both faculty in the year-old Brain and Creativity Institute at USC College, collaborated on the study with medical student Nasir Naqui, the paper’s first author, and postdoctoral researcher David Rudrauf, both of the University of Iowa.

“This is the first study of its kind to use brain lesions to study a drug addiction in humans,” Naqui said.

The study examined 32 former smokers, all of whom had suffered some kind of brain injury. The patients answered questions about their habits, discussed how hard it was to quit and rated their current urge to smoke. They all had smoked for two

Research by College neuroscientist Antoine Bechara and his colleagues have revealed a link between a smoking habit and a small area of the brain called the insula. The insula may be the Achilles’ heel of nicotine addiction.
Percival Everett II, USC Distinguished Professor of English, has won the PEN USA 2006 Literary Award for his 15th novel, Wounded, a tale that tackles racial and sexual intolerance in America.

The annual award recognizes literary excellence published or produced the previous year by writers west of the Mississippi River. It is given by the PEN American Center, an association of writers working to advance literature, defend free expression and foster international literary fellowship.

The USC College professor won for best fiction.

“I’m just honored to be considered with the other finalists,” Everett said.

Judges praised Wounded (Greywolf Press, 2005) as a “sophisticated examination of race and sexuality, done with exemplary finesse and lack of pretentiousness."

Wounded tells the story of John Hunt, a widowed African-American horse trainer in Wyoming who tends to his land with his elderly uncle. But Hunt’s serene existence is threatened when a gay college student is found slain and two bigoted thugs arrive in town. Tension increases when David, the gay son of an old friend, goes missing.

This is not Everett’s first novel to choose the West as its setting. When conducting research for his 2003 novel God’s Country (Beacon Press), Everett watched and read about 150 Westerns to soak up the genre. God’s Country is a farcical Western, a parable set in 1871 with an amusing cast of characters.

“They both deal with the West and share the same landscape,” said Everett, who worked as a horse trainer for 14 years and held a job as a ranch hand.

“But God’s Country is the mythical West, a fabrication of the frontier. Wounded is a novel about people and a real place.”

Although some critics have attempted to categorize him as a great novelist of the American West, Everett strongly disagreed.

“I’ve never written a Western,” he said. “I’ve written novels that happened to be set in the West.”

Other Everett novels include a satire of the publishing industry, a children’s story lampooning counting books, his unique take on the Greek myths of Dionysus and Medea, and a philosophical yarn narrated by a 4-year-old child.

Everett majored in philosophy and biochemistry at the University of Miami, and supported himself playing jazz and blues guitar. He grew disenchanted with those academic disciplines, however, and changed his focus to writing.

At Brown University, he enrolled in a master’s program in writing. At 25, he penned his first novel, Suder (Voices of the South) (Louisiana State University Press, 1983), about the struggles of Craig Suder, third baseman for the Seattle Mariners.

Born and raised in Columbia, S.C., Everett comes from a family of doctors and dentists. His maternal grandfather, however, was a farmer. His father was a voracious reader who introduced him to books.

A professor at the College since 1999, Everett teaches in the English department’s doctoral program in literature and creative writing.

In February, USC President Steven B. Sample appointed Everett a USC Distinguished Professor, an honor reserved for faculty whose achievements have brought the university special renown. Everett joins five other Distinguished Professors at the College.

—Pamela J. Johnson

Celebrated Author

Percival Everett earns top distinctions from literary peers and university leaders

years or more, and 16 said they had quit with ease, losing their cravings entirely.

Brain scans of the participants revealed that these 16 had suffered damage to the insula, a small island enclosed by the cerebral cortex.

In the 1990s, Antonio Damasio proposed the insula as a “platform for feelings and emotion.” The Science study shows that the pleasure of smoking appears to rest on this platform.

“It’s really intriguing to think that disrupting this region breaks the pleasure feelings associated with smoking,” said Damasio, director of the institute and holder of the Dana Dornsife Chair in Neuroscience in the College. “It is immediate. It’s not that they smoke less. They don’t smoke, period.”

The finding that one small region could be the Achilles’ heel of smoking addiction is especially surprising, given the brain-wide effects of nicotine on the nervous system. It also raises the question of whether damage to the insula also could cause a person to quit other addictive behaviors. Can a brain lesion cure someone of their bad habits?

The answer is not yet known, Bechara said, but he suggested the phenomenon could be “generalizable” regarding alcohol abuse, overeating and other addictions.

The discovery of the insula’s role in addiction opens new directions for therapies, Bechara said, including possible drugs targeted to a region that previously “no one paid attention to.”

Any treatment would need to preserve the beneficial functions of the insula. But Bechara noted that the region appears to be involved specifically in “learned behaviors” rather than the fundamental drives necessary for survival. As a result, it might be possible to target one without disrupting the other.

Hanna Damasio, co-director of the institute and holder of the Dana Dornsife Chair in Neuroscience, also stressed the difference between habitual and instinctive behaviors.

“Because the insula is now recognized as a key structure in processes of emotion and feeling, the fact that insular damage breaks down a learned habit such as smoking demonstrates a powerful link between habit and emotion or feeling,” she said.

—Carl Marziali
Building a Diverse College

Hiring efforts show progress as more women and minorities join faculty

USC College has successfully increased the hiring of women and minority faculty members in recent years, with the goal of enriching the university’s educational environment.

In a key recruiting initiative shared by the College and the Office of the Provost, more than half of the 35 tenure-track hires in the College last year were minority and women scholars.

During the past decade, diversity growth among new faculty in the College has significantly outpaced the 31 percent rise in the number of tenure-track faculty, which has gone from 376 to the current 494 members.

“Diversity is one of the explicit goals of the university strategic plan and the College is in many ways the epicenter of the university,” said Barry Glassner, USC’s executive vice provost and a professor in the College. “This is one component in a larger initiative by Provost [C.L. Max] Nikias that focuses on interdisciplinary research and teaching.”

In the past decade, the College has increased the number of Hispanic tenure-track faculty by 100 percent — from nine to 18 — of African-American faculty by 67 percent — from nine to 15 — and of Asian-American faculty by 71 percent — from 31 to 53. These 37 hires represent a 76 percent increase in minority faculty. The number of women faculty has increased by 64 percent, from 84 to 138. (See figure on page 9.)

And, of the 26 senior tenure-track faculty members hired last year under the Senior Faculty Hiring Initiative, a dozen were minorities and women. Three women were hired in the sciences — two in physics and one in biology — where there is still competition to recruit senior female scholars.

Additionally, six of the nine junior faculty scholars hired last year were minorities and women. Three of those six were hired in the sciences — including two minority women and one Caucasian woman.

“It is good news,” College Dean Peter Starr said, “but not good enough. We have made very significant progress over the past several years in increasing faculty diversity. But we still have a ways to go to realize our goal of a fully diverse College faculty.”

While people differ on what that standard should be or even if there should be a target, one way to assess faculty diversity is to measure it against the makeup of the student body.

Of the College’s 494 tenure-track faculty, Hispanics represent 4 percent; African-Americans make up 3 percent; Asian-Americans 11 percent, and women 28 percent.

Of the College’s 6,409 enrolled undergraduate students, Hispanics represent 16 percent; African-Americans make up 7 percent; Asian-Americans 20 percent, and the balance is Caucasian Americans and international students of various races and ethnicities. Women make up 56 percent.

As with the faculty, the undergraduates population in the College is steadily becoming more diverse.

In the past 15 years, the number of Hispanic undergraduates has increased by 34 percent, Asian-Americans by 32 percent, African-Americans by 13 percent. Women have increased by 19 percent.

Regardless of the gain in diversity, College officials still want to quicker the pace of diversity hiring. They are particularly proud of recruiting two women to physics, said Wayne Raskind, the College’s dean of faculty and professor of mathematics.

“When I became faculty dean in 2005, physics had no women,” Raskind said. “Last year, we hired two. We have made very significant progress over the past several years in increasing faculty diversity. But we still have a ways to go to realize our goal of a fully diverse College faculty.”

—USC College Dean Peter Starr

Bloom of Diversity

Essentially, you’re giving up on half of your student population.”

“The best female students in the sciences often end up doing something else,” she added, “when they could possibly have been the best researchers in the field.”

In addition to role modeling, another significant benefit of a diverse faculty is enriched research and scholarship.

For example, when Hondagneu-Sotelo began her studies 20 years ago, few were conducting extensive research on undocumented immigration, settlement and employment of Latinas.

“I consider myself Latina; my mother is from Chile,” said Hondagneu-Sotelo, who is fluent in Spanish. “The whole topic of immigration, work and gender interests me because my mother came here as a domestic worker.

“In the mid-80s, Mexican immigration was not a popular research topic in sociology,” she added. “It was not seen as a legitimate field of study, but then add gender to it and it was seen as illegitimate or, at best, innovative.”

Despite obstacles, she persevered. Hondagneu-Sotelo is an author and co-editor of several books on immigration and Latinas in the workplace. She is best known for the prize-winning Dominica: Immigrant Workers Caring and Caring in the Shadooms of Affluence (University of California Press, 2001). Her latest, Religion and Social Justice for Immigrants (Rutgers University Press, 2007), discusses how religion defines the immigrant fight for equality in human rights, culture and economics.

It is natural for one to be drawn to subjects related to one’s own personal history. Take for example, 21-year-old sophomore Michael J.W. Yun, who is taking a political science course in the College’s Team Research Communities program, where undergraduates work with a professor on yearlong research projects.

Yun, who was born and raised in South Korea, began attending school as an international student in Southern California in seventh grade. Each...
two terrific women — Jia Grace Lu and Elena Perepalsi. Grace Lu was a double coup because she works in experimental physics, a field where the number of women is smaller.”

To encourage a more diverse future professorate, the College has started two new programs that provide financial support to doctoral students of color in fields where they are underrepresented, as well as women in science, said Jennifer Wolch, the College dean of graduate programs and professor of geography.

One — the diversity placement assistance program — provides support for students to attend a summer training institute, for example, or conduct research with a faculty member for publication. The other — the diversity summer fellowship program — provides a stipend so students can continue their research during the summer.

In addition, the College is ramping up its recruiting efforts, reaching out to potential applicants from underrepresented groups and encouraging them to apply.

“What we don’t want is a wait-and-see approach,” Wolch said. “We are building an applicant pool that’s more diverse.”

The incentives used to attract faculty to the College range from offering housing allowances to building state-of-the-art laboratories.

“When I was presented with an excellent candidate, I just pulled out all the stops to get them through the door,” Raskind said. “And that’s where the provost’s diversity initiative and WiSE [USC’s Women in Science and Engineering program] are a big help.”

Michael Preston, special advisor to the provost and professor of political science in the College, said the provost’s initiative carries funding to help cover a range of costs.

“It is very clear there are some departments in the College and university-wide that lack minority representation,” Preston said. “The provost’s hiring initiative is an attempt to address that problem. And the initiative allows the College to get additional funds for housing and other expenses to help them attract and hire outstanding candidates.”

A key goal of the WiSE program, funded by a $20 million gift from an anonymous donor, is to hire more women professors in the sciences and engineering, but it also supports women at all stages of their academic careers.

Since WiSE’s inception in 2000, the number of women faculty in the sciences has nearly doubled, going from 12 to 23.

Jean Morrison, WiSE director and USC’s vice provost for graduate programs, said women are relatively well represented in most law, business and medical schools, but that is not so in the sciences. “It makes science and engineering appear anachronistic. Students in particular wonder, ‘What is the problem? Why are there so few women on the faculty in the sciences?’” said Morrison, professor of earth sciences in the College.

Susan Forsburg, professor of biological sciences, emphasized the importance for students to have women professors.

“Quite a few students tell me that I’m the first woman biology professor they’ve ever had,” Forsburg said. “It’s great for the women students because we’re role models. And we’re educating the young men about what women can do.”

Forsburg said that WiSE, coupled with the College and the provostal initiatives, will have an impact. “It is not so much the money, but what it represents,” said Forsburg, who authors a women-in-biology Web site, www.women.bio.net. “It shows commitment by USC to diversify its faculty. Candidates see that and they feel they’re in the right institution.”

Raskind also noted other senior hires last year among minority scholars, including Robin D.G. Kelley of history and American studies and ethnicity from Columbia University; Manuel Pastor of geography from UC Santa Cruz; and Sergio Saldarriaga-Wilhelmy of biological sciences from SUNY Stony Brook.

Kelley, who begins teaching in the fall, said that while diversity in all areas of life is beneficial, it’s important not to equate a particular gender or race with a certain perspective.

“There have been many women and people of color whose perspectives are very much in keeping with the status quo, and white men whose ideas are quite radical,” Kelley said.

“The main point for me, however, is that we not only need diversity of ideas and experiences, we must also eliminate the barriers that have kept underrepresented groups out.”

—Pamela J. Johnson

Judith Jackson-Fossett earned a Ph.D. at Princeton with the aid of a fellowship program for students from minority groups. Today, she is a tenured faculty member of the College’s English and of the American studies and ethnicity department. She is active in the USC Mellon Mays Undergraduate Fellowship, which promotes graduate training for underrepresented minority students.

“I came here as an outsider,” Yun said. “So I offer an outsider’s perspective on research.”

Jeffrey Sellers, associate professor of political science, is leading Yun’s research team. He said students such as Yun often bring a hard-earned cultural sensitivity to whatever subject they study.

“A student from a background such as Michael’s is more likely to see nuances and the complex cultural interplay, not just in cultural issues,” he said, “but also in politics, business, housing and other issues across disciplines.”

Hondagneu-Sotelo emphasized the importance of role modeling and mentoring in encouraging more students of color to enter careers in academia.

“One of my goals as a department chair should be to strive for a diverse future professorate,” she said, echoing Starr. “That can be done by carefully working with our students.”

Judith Jackson-Fossett, associate professor of English and American studies and ethnicity, agrees.

Since arriving at USC College 10 years ago, Jackson-Fossett has been active with the university’s program aimed at encouraging undergraduate students from underrepresented groups to pursue a Ph.D., especially in fields lacking diversity. Jackson-Fossett is a member of the steering committee of the program, now called the Mellon Mays Undergraduate Fellowship Program.

Similar fellowship programs enabled Jackson-Fossett to return to graduate school in 1990. She had first considered earning a Ph.D. while an undergraduate student at Harvard continued on page 10
Exploring Diversity

University, after encouragement from teaching fellows and professors. Then after graduation, she postponed the decision and followed many of her classmates to Wall Street for a job as a financial analyst.

“But I missed using all of my brain,” she said. After securing fellowships, she earned her graduate degree at Princeton University.

At USC, Jackson-Foossett has never missed a commencement exercise. As one of four African-American women tenured in the College, she considers the ceremonies another opportunity to educate.

Each year — as she walks across campus with other faculty members to the graduation ceremony wearing her orange and black Princeton cap and gown — she is stopped by several well-wishers.

“They all want to congratulate me because they think I’m getting my Ph.D.,” Jackson-Foossett said. “None of them considers that there might be a black woman professor. … For me to go unrecognized as a professor when I’m wearing a robe speaks to the need to diversify.”

The value of role modeling for students of color is only one benefit of having a black woman instructing a class. It is a win-win proposition for all the students, she said, explaining that in L.A. preschools, there are many African-American and Latina teachers. Later, students see fewer teachers of color.

“By the time students get to my classroom, it has been years since they have had a woman of color as a teacher and they don’t know what to think,” she said. “On the first day of class, I always arrive two minutes late — so they won’t think I’m another student.”

Ever the educator, Jackson-Foossett said that just by being at the university, she broadens the horizons of her students by giving them and their parents something to think about.

“We’re helping our students and their families understand that going to a professional school, being a doctor or a lawyer or a banker, isn’t the only thing that they can do. We want them to see life in higher education in the same way.”

That principle goes to the heart of Glenda Flores’ research. Flores, a second-year Ph.D. sociology student, is a second-generation Mexican-American who wanted to teach, but never considered becoming a professor until recently.

Her parents and counselors in high school and college encouraged her to be an elementary school teacher.

“As a Latina, it’s all that you know that you can be,” Flores said. “It’s rare to see a Latina attorney, or a Latina firefighter. But elementary school is a place where you can see Latinas.”

Flores is researching Latina teachers in Santa Ana, investigating the reasons behind a nearly 30 percent increase of Latina teachers in the past decade by interviewing them about their career choice and occupational experiences.

“There are two great advantages [in my doing this study],” Flores said. “The first is my Latina subjectivity and the other is my insider position. I’ve lived in Santa Ana my entire life, worked in the district and was going to be an elementary school teacher.

“I heard one of my participants actually say that the reason many Latinas were going into teaching was because they thought that was all they knew and all they could be,” she continued. “It was at this point that I saw my Latina subjectivity as a complete strength because it allowed her to speak freely with me and my experience resonated with her response.”

Back at the Ramirez home, Antipatro showed a visitor the stitches on the badly cut middle finger of his right hand. The 63-year-old gardener had injured his hand while at work trimming a hedge.

“That’s my first accident in 36 years, so that’s not bad,” Antipatro Ramirez said. “It could have been worse. I could have lost the whole finger.”

The accident also gave Hernandez Ramirez a close look at the kinds of on-the-job injuries gardeners face daily and provided other insights into their workplace. First, the injury underscored the work ethic of gardeners such as his father, who got stitches and returned to work the following day, despite warnings from his doctor to keep the wound clean.

It also highlighted other “dangers” associated with the job. For instance, after Antipatro sliced his finger in Westwood, he drove his truck home to South Gate and left it there before heading to the hospital. He didn’t want the expensive equipment in his truck to be stolen if he parked at the hospital.

“Dangers on the job will be a large part of my thesis,” Hernandez Ramirez said. “I’m working with Pierrette [Hondagneu-Sotelo] to fine tune my questions to gardeners about possible injuries.”

As Hondagneu-Sotelo observed: “Without diversity, departments would not have the richness that comes from scholars whose life experiences give them not only the drive, but the passion and particular insights to delve deeply into original and innovative projects.”

—Pamela J. Johnson

Gaining a Political Voice Via Religion

New book explores role of faith in promoting immigrant rights

When millions moved out of the shadows and marched for immigrant rights across the United States last year, the nation was shocked that these people of little means from different countries could organize so effectively.

But USC College sociologist Pierrette Hondagneu-Sotelo was not surprised. She had been studying Latino immigrants for two decades and knew one of the unifying factors that could make such an impressive social movement possible — religion.

“There’s a reason it’s called faith: People who bring their religious convictions seem to succeed despite the odds,” said Hondagneu-Sotelo.

Hondagneu-Sotelo had been meeting with a group of social scientists for three years to discuss religion and immigration. The group, created by the USC Center for Religion and Civic Culture, discussed how religion defines, affects and is incorporated into the immigrants’ fight for equality in human rights, culture and economics.

The results are documented in Religion and Social Justice for Immigrants (Rutgers University Press, 2007), a book edited by Hondagneu-Sotelo.

While the religious right’s stand against things like abortion and gay rights often grab more attention, Hondagneu-Sotelo said some creeds aid immigrants by pushing for a more inclusive social agenda.

“The book points to liberal and progressive religions that are more humane and responsive than the xenophobia of our times,” she said.

For example, the Roman Catholic Archdiocese of Los Angeles was one of the groups to call for the march that brought 500,000 people to the streets of Los Angeles in May 2006.

In an essay she co-authored, the sociologist writes about interfait groups that demonstrated together for border-crossing rights involving the U.S. and Mexico.

The collection also includes essays by USC College anthropologist Janet Hoskins, sociologist Rhys Williams, political scientist Janelle Wong and religion scholar Jane Iwamura.

—Eddie North-Hager
Pinochet and the Past Still Present for Professor
Sociologist’s exploration of atrocities in Chile is more than academic

As a child, Macarena Gómez-Barris fled Chile for Northern California with her family, escaping the brutal rule of Augusto Pinochet Ugarte. Now, as an assistant professor of sociology and of American studies and ethnic studies, Gómez-Barris is plumbing Pinochet’s dark legacy and exploiting Chilean efforts to memorialize the regime’s victims.

Her research proposal “The Place of Villa Grimaldi in Chile’s Democracy: Citizenship, Memory and Public Space” earned a Junior Scholars in the Study of Democracy award from the Woodrow Wilson International Center for Scholars’ Latin American Program and the Ford Foundation.

“Villa Grimaldi was a concentration camp,” Gómez-Barris said. “From 1974 to 1977, thousands of people were held captive. It was one of the first places where systematic torture became institutionalized in Latin America.”

Pinochet began sending prisoners to the camp shortly after he led a bloody 1973 military coup against Chile’s president, Salvador Allende. Pinochet installed himself as the country’s leader, and ordered his opponents imprisoned or disappeared.

In 1989, with the transfer of power to a democratically elected leader imminent, the military regime tried to erase Villa Grimaldi from history. “They bulldozed the detention centers to erase the evidence of that collective violence and leave no trace,” Gómez-Barris said. “They burned Villa Grimaldi, but you can see evidence of that fire today. There’s a huge, beautiful tree that’s growing back very green, where they now hold religious ceremonies, but it’s partly charred.”

Today, Villa Grimaldi is a park featuring a memorial for victims of the Pinochet regime. In the early 1990s, a group of citizens, including torture survivors and relatives of the disappeared, purchased the land where the torture center stood as a step in preserving the record of oppression. The Villa Grimaldi Peace Park was established in 1997.

“This place directly deals with the history,” said Gómez-Barris. “People gather together to have cultural activities and human rights events, and try to bring forth the persistent effects of trauma. They’re using this public space and memory to deepen democracy in the nation and beyond.”

The Villa Grimaldi work is part of a larger project by Gómez-Barris, Where Memory Dwells, forthcoming from University of California Press. The book is based on her dissertation at UC Santa Cruz, where she earned her doctorate in sociology in 2004.

To Gómez-Barris, who joined the College faculty in 2005, this research is intensely personal.

“I grew up hearing stories about the military dictatorship, and my own identity was very much structured by what had happened there,” she said. “Family friends had been victims of Pinochet’s secret police. There were a lot of memories alive in my own household, but for me it was really important to go back further, to go back to Chile and do a very close study of how people that never left the country, or who had returned, dealt with memory.”

Before completing her Ph.D., Gómez-Barris worked promoting community development and social justice. She sees her research as a continuation and expansion of her passion for those causes.

“Being able to research and to articulate the complexities of human experience is such a positive thing, I’m grateful for the opportunity to tell these stories in a complex way.” —Wayne Lewis

Exploring Immigrants, Churches and Politics
Fellowship supports a year in residence at Wilson Center in nation’s capital

Thanks to a prestigious fellowship, USC College political scientist Janelle Wong has spent the year pursuing her research on immigrants and the religious right in residence at the Woodrow Wilson International Center for Scholars in Washington, D.C.

Wong, an associate professor of political science and of American studies and ethnic studies, is one of only 23 scholars, policy makers and researchers named a 2006–2007 Wilson Center Fellow.

“Woodrow Wilson Center fellowships are among the most prestigious and competitive awards in the field of politics and international affairs,” said USC College Dean Peter Starr. “For Janelle to join such an esteemed group is both a wonderful opportunity for her and a tribute to her stellar work for her two departments and the College as a whole.”

Wong’s research project, “Immigration, Religion and Conservative Politics in America,” focuses on the increasing number of immigrants and the role of religion in politics in the U.S.

“With this fellowship I have been able to really immerse myself in my research and in this uniquely stimulating environment at the Wilson Center,” Wong said. “I’ve been challenged professionally by my peers and excited to delve into my work.”

Wong is looking at Latino and Asian-American evangelical, Pentecostal and charismatic Christian worshippers in the U.S. and how this growing group will affect the Christian right.

“It is not yet clear whether these new immigrants are weakening or strengthening the traditional conservative Christian political movement,” she said. “They add numbers but they bring new viewpoints and new priorities to the movement, and they change the racial and ethnic base of the movement.”

After writing the book Democracy’s Promise: Immigrants and American Civic Institutions (University of Michigan Press, 2006), Wong concluded that religious institutions, because of their larger size and more involved membership, play a more important role in politics than she expected.

“It is really churches and religious institutions that are the largest ethnic organizations in our society,” she said. “I wanted to explore their role more deeply because of the role that religion plays in politics and the fact that evangelical Christians are one of the most important voting blocks in contemporary American politics.”

The project is an offshoot of work that Wong began with Jane Iwamura, assistant professor of religion and of American studies and ethnic studies, with a grant from the College’s Center for Religion and Civic Culture.

—Orli Belman
The Hidden Biodiversity of the Ocean Realm

Genetic tools reveal new species and insights into why diversity matters

To get a sense of how marine biology has evolved in the last century, consider USC’s Allan Hancock Foundation building. From its construction in the 1930s until the last decade, wooden shelves holding hundreds upon hundreds of glass specimen jars filled much of the red-brick building’s core. The collection revealed the great diversity of form, color, geographies and habitats of ocean life.

Today, the jars are gone. The rooms have been gutted and remodeled. The long shelves have been given way to laboratory benches, gene amplifying machines, centrifuges, computers and other equipment of a modern molecular lab. These are the tools driving a new era of discovery, allowing scientists to describe the biological diversity of the sea in greater detail than ever before.

“A huge amount of biological diversity has been totally untappable without genetic tools,” said marine microbiologist Jed Fuhrman, the McCallum-Crosby Chair in Marine Biology in USC College and a member of the USC Wrigley Institute for Environmental Studies. “That’s been especially true for microbes, the most abundant kind of life on Earth.”

Using state-of-the-art genetic tools, Fuhrman and his colleagues have begun to reveal the heretofore hidden diversity among marine plankton and microbes, as well as the unexpected ways these microscopic organisms make a living. Others are exploring another frontier of biological diversity — the genetic diversity of individuals within a species — in studies of marlin, oysters and other larger creatures.

“Biodiversity runs the natural world,” Fuhrman said. “Human beings don’t exist in a vacuum. Everything’s connected. So if we want to understand our world, we have to understand all of the other organisms in it.”

To many, biodiversity refers simply to the number of different species on Earth. “Biologists think of biodiversity more broadly, not only as the diversity of organisms, but also of their functions and abilities, their appearances, their roles in the system,” Fuhrman said.

Geneticist Dennis Hedgecock believes biodiversity contributes to a healthy environment, but says hard evidence supporting that belief has only just started to emerge. He points to a 2006 study in the journal *Science* showing that both species and genetic biodiversity increase the productivity and stability of the ocean ecosystem, making it more resilient to major disturbances, both natural and human.

“This is some of the first evidence showing that biodiversity matters, at least for large species,” said Hedgecock, the Paxson H. Ofield Professor of Fisheries Ecology in the College.

The report also found that the ecological impacts of overfishing are lessened in areas with high biodiversity. The study concludes that, although the ocean’s biodiversity is dropping fast, and bringing with it many negative effects on water quality and the fish stocks humans rely on for food, the trend can still be reversed.

Hedgecock’s studies of genetic diversity in oysters, sea bass and salmon have helped to promote more thoughtful management of commercial and recreational fisheries, as well as conservation breeding programs. He and Donal Manahan, professor of biological sciences, study oysters and recently published a paper pinpointing the genes that gives a breed of hybrid oysters an advantage over others.

“We’re studying which genes allow one individual to successfully reproduce or grow larger than others in the same population,” Hedgecock said.

Suzanne Edmands, an associate professor of biological sciences, also investigates genetic variation in marine creatures. Her aim is to better understand the mechanisms by which new species form, as well as the implications of genetic biodiversity for fishery management and conservation efforts.

“Diversity within populations allows adaptation to new circumstances or stresses, like infection or the increasing sea temperatures associated with global warming,” Edmands said.

In one project, Edmands and marine biology doctoral student Catherine Purcell are looking at the genetics of striped marlin populations in the Pacific. Their results show surprisingly large genetic differences in the absence of obvious geographic barriers. For example, they find a genetic break between Southern California and Mexico marlin populations, which both spend time in the fall near the tip of Baja California. Meanwhile, populations in Japan and Hawaii, though separated by thousands of miles, show no genetic differences between each other or the Southern California group.

In addition to studying the genetic basis of hybrid vigor in high-yield oyster varieties, Dennis Hedgecock investigates how fish hatcheries impact the genetic diversity of wild populations.

Using genetics, Jed Fuhrman has identified hundreds of new species of marine bacteria and provided new insights into global microbial diversity.

**Then and Now:** In the 1860s, Ernst Haeckel used a simple microscope and ink to describe 3,000 new species of *Radiolaria* (left), a group of minute marine microbes that measure just one-hundredth of an inch across. More recently, scientists have used high-powered microscopes and photography to study these (right) and even smaller bacteria. Today’s genetic techniques allow researchers to look beyond appearances, which has led to an explosion of discovery.
Their work may have direct implications for the management of this species. Currently, the striped marlin fishery is classified and managed as one stock extending throughout the Pacific. If this is not the case, as Edmunds and Purcell’s results suggest, the discrete populations are more susceptible to overfishing. Managing the fish as separate stocks will protect the genetic biodiversity of the species as a whole, Edmunds said.

“Genetic diversity is key to a species’ ability to respond to evolutionary challenges,” said Edmunds.

molecular identification techniques for bacteria, viruses and a distinct group of ancient microbes called Archeana.

Microbes make up some 90 percent of the biomass in the sea. Despite their abundance, the microbes’ small size, non-descript features and the fact that most will not grow in dishes in the lab have meant that the majority of species have eluded efforts to identify them.

In the last five years, however, Fuhrman and microbial ecologist David Caron have identified hundreds of new species by examining their genetic makeup. The work is part of the USC Microbial Observatory project, a National Science Foundation-funded study of microbial diversity and its fluctuations over time.

“It’s a major deal when someone finds a new species of fish, or even a new kind of worm. Now we are doing that everyday. It’s just astounding,” said Caron, who studies zooplankton, a group of single-celled microbes that includes marine algae and zooplankton called the protists.

“Now, instead of just looking at these microbes under microscopes, we’re looking at genes to identify species.”

Adding to their interest is that they have “no clue” about many of these new microbes’ morphology, physiology or ecologial role, said Caron, a professor of biological sciences in the College.

Their project piggybacked on the USC Wrigley Institute’s San Pedro Ocean Time Series, an ongoing study led by Anthony Michaels, professor of biological sciences and director of the Wrigley Institute. The Time Series allows institute scientists to study long-term changes in environmental factors such as temperature, salinity, nutrient concentrations and ocean ecology at a spot in the San Pedro Channel, about halfway between the coast and Catalina Island.

Fuhrman’s team made a major discovery last year, when they found annual repeating patterns in the kinds and abundance of microbes at the site. They were able to relate these patterns to changing environmental factors.

Who’s there, Fuhrman said, “doesn’t change a huge amount from month to month. But two, three months later, the community has changed. And by six months, it’s a very different group. But by 12 months, the [original microbes] are back.”

That pattern, he said, supports the idea that microbes, like animals and plants, each have a specific biological niche.

“This conclusion shouldn’t be that earthshaking, but it actually is for some people,” said Fuhrman, who published the findings in the Proceedings of the National Academy of Sciences. “Microbes have their own, unique place in the world. It’s not the ‘if you lose one, another one’s fine, a dime-a-dozen kind of thing. They all have their own job. You wouldn’t see a repeating pattern if any one could do the job. It would just be random and change unpredictably.”

From Caron’s point of view, discovering the diversity of microbial life — the who — is one of the two most pressing questions in his field. The other is the where: Are some marine microbes found only in specific locales, or does the open nature of the oceans give most microbes a global reach, what he calls “cosmopolitan” presence? His work suggests it may be a mix. “I think that some organisms will have a discrete distribution, but we’ve already found that quite a few species do have a global distribution.”

Caron expects that, even for cosmopolitan species, their relative abundance will differ from place to place, depending on specific local conditions. “There’s usually a large suite of organisms at low abundance that can backfill (become more abundant) when and if environmental conditions change.”

In that way, the functions of the ecosystem can be maintained, even if the individual species shift. Caron likens it to a soccer game, with players substituting in and out. The individual players may change, yet the game goes on.

That’s why, Caron said, maintaining biodiversity — even of tiny microbes — is so important to marine health. “Microbes do the majority of the biological work in the oceans. They produce most of the energy and organic matter, and they decompose all of the dead organic matter. They support a wonderful and charismatic macrofauna, from shrimp to dolphins. What microbes do is fundamental to the way the oceans, and our entire planet, works.”

College research efforts in these continued on page 15.
Exploring Diversity

Escaping the Inner Caveman

Psychologists offer perspectives on the brain and difference

It's a metaphor with power even as repetition has rendered it cliché: America is the world's melting pot. A nation where virtually all trace their lineage to immigrants, the U.S. indeed plays host to intermingling peoples and cultures. But the mixture doesn't always come together easily, and the melting pot has boiled over throughout our history.

Regardless, thanks to factors such as the ever-increasing speed of travel and communication, diversity is increasing. Nowhere is this more apparent than in a multi-ethnic metropolis such as Los Angeles. As people of different races and cultures interact, there are many opportunities to cooperate and learn from one another, but just as many for tension or strife.

Of course, discord could be traced to the leftovers of a less enlightened time, learned attitudes of racism or bias. But there's a more complicated view. Some of USC College's scientists are zeroing in on the inner workings of emotion in the brain. In distrust, they see the vestiges of human instincts older than civilization. They also see hope to overcome the negative impact of these instincts.

"It is obvious that we are living in a very diverse world and we are constantly being confronted by differences among people," said Antonio Damasio, the College's David Dornsife Chair in Neuroscience and professor of psychology. "What we have to do as scientists, and as human beings, is try to understand the roots of our emotional responses to these differences and use that knowledge to reduce the damage that can come from such reactions."

Some psychologists have investigated the empirical signs of emotional response and race relations. The results are troubling, but, science tells us, they represent the current state of mind.

According to a number of studies, whites display an increase in blood pressure and sweating — signs of autonomic arousal that indicate fear or the detection of a threat — when interacting with, or viewing faces of, African-Americans. (There’s not yet a significant enough body of work on other combinations, such as African-Americans viewing Caucasian faces, to draw further conclusions.)

USC College social psychologist Brian Lickel has collaborated with researchers at USC, Harvard, UC Santa Barbara and Tufts University in a detailed look at social interaction between races and internal levels of stress.

A 2007 study by psychology graduate student Jacyn Ronquillo, co-authored by Lickel, used neuro-imaging to look at brain activity in whites viewing photos of African-Americans. They noted activity in the amygdala, a structure strongly involved with emotion and the fight-or-flight response — which activates in response to a perceived threat.

"One possibility is that people don’t like each other," Lickel said. "But our evidence really is more consistent with the idea that part of it may be unfamiliarity."

To support that conclusion, Lickel points to a recent study that he worked on by Wendy Berry Mendes of Harvard. Undergraduate participants were asked to interact with an Asian-American female, but in one part of the experiment, an unexpected element was thrown in: The young woman, who was working for the experimenters, spoke with a Southern accent.

Lickel and his colleagues found that in response to the surprise and cognitive dissonance of speaking with an Asian-American woman with a Southern accent, their participants showed an increase in blood pressure.

"This element of the unexpected increases the demands of that social situation," Lickel explained. "It is harder to navigate, which makes it more threatening."

But psychologists also note it is likely that the same psychophysiological mechanisms that produce distrust in the face of social unfamiliarity were once upon a time very helpful.

Damasio, director of the USC Brain and Creativity Institute, pointed out the former usefulness of associating difference with threat.

" Probably, the detection of differences is something that has an old biological history," Damasio said. "There possibly was a time when it was advantageous to recognize difference very rapidly, because difference might indicate a potentially unfriendly group. These reactions are not created just because people are evil to begin with."

Irving Biederman, the College's Harold Dornsife Chair in Neurosciences and professor of psychology and computer science, also related these dynamics to the more primitive side of human nature. Some might call it the caveman syndrome.

"There’s this tendency to have a preference for your group over the others, and the other group is doing the same," Biederman said. "It’s your cave against the other cave. I think of us as not being very far removed from that time, that our social behaviors can usually be understood in terms of our evolutionary history."

What exactly happens physically when humans experience a real or imagined threat? Research is still under way to delve more deeply into the structure and function of the brain, but neuroscientists believe they have developed a relatively consistent understanding of the biological basis of the caveman’s response — difference perceived as a threat. The current model describes a complicated interplay between the brain and the body.

When faced with a fear-inducing stimulus, areas deep within the brain activate. These structures are less related to conscious awareness and could somewhat clumsily be described as more "primitive." The almond-shaped amygdala seems to play a particularly prominent role in the fear response.

"The amygdala seems to be a structure that’s very relevant for quick, early threat detection," said Lickel.

The feeling, thought and action associated with "unease" is created by interplay between the amygdala and other parts of the nervous system.

When the amygdala is activated, it signals the body’s peripheral nervous system, resulting in some of the typical physical signs of peril: sweating as well as rising blood pressure and heart rate.

Simultaneously, the amygdala also signals areas of the prefrontal cortex, an area on the surface of the brain long understood to be the home of conscious planning and other higher-order functions. The cortex then works to analyze, and mediate, the emotional and physical responses. In effect, one "notices" that one’s getting tided up.

"You might be consciously aware of your emotion — I’m feeling afraid" — or you might not be," said Mary Helen Immordino-Yang, who holds a postdoctoral appointment at the Brain and Creativity Institute and the USC Rossier School of Education. "But even if you’re not really aware that you’re uncomfortable around a particular person, it’s..."
Our social behaviors can usually be understood in terms of our evolutionary history,” said Irving Biederman, whose research focuses on perception, vision and recognition of objects and faces.

In 2006, and continued for many years, scientists have done extensive work establishing the connectedness of modern human social behaviors with those of our early ancestors. The guiding hypothesis is that the evolution of social behaviors is driven by the need to maintain and expand group cohesion.

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Hidden Biodiversity

crucial areas are set to expand. In fall 2006, seven new marine scientists joined the College faculty, recruited as part of an innovative “cluster hire” in environmental genomics and biogeochemistry coordinated by Michaels of the Wrigley Institute.

Among the new faculty are John Heidelberg, an associate professor of biological sciences, and his wife and colleague Karla Heidelberg, an assistant professor of biological sciences, who now live at the Wrigley Marine Science Center on Catalina Island with their two children. Both scientists have played key roles in large-scale, genomic studies of microbial diversity.

In March, the Heidelbergs and geobiologist Ken Nealson, the Wrigley Chair in Environmental Studies in the College, were among some two dozen co-authors of a report on the largest-ever global census of marine microbial life. The genomic study, published in the Public Library of Science Biology, revealed thousands of new and astonishingly diverse species. The team also described millions of new genes and proteins, some of which may prove useful in the creation of new.

antibiotics and alternative energy sources and in furthering our understanding of the role of microbes in global climate change.

New hire Katrina Edwards also studies microbial diversity, but in a largely unknown terrain — the rock below the sea floor. Since 2003, Edwards, an associate professor of biological sciences who was among the first anywhere to earn an interdisciplinary doctorate in geobiology, has been preparing to probe the biophere scientists believe thrives underneath the ocean. In 2008, she will begin drilling to depths of 500 meters at a site in the tropical Atlantic Ocean.

Considering that soil holds the most diverse group of microbes on land, most believe that she will find a mother lode of new species in the sea sub-floor. “No one’s ever done this before, so we really don’t know,” Edwards said.

Describing the extent of microbial diversity is not the only goal of these researchers. Most also want to apply what they learn to solve urgent environmental problems facing the oceans, and there are immediate practical applications too.

“So many of these microbial systems are incredibly important all over the planet,” said Michaels, listing pollution, bioremediation, climate change, corrosion, sewage treatment and biofuels as some areas where research on microbes may prove pivotal.

For example, Caron’s new insights into the workings of normal marine communities will aid his research monitoring harmful algal blooms off the California coast. Algal blooms, which can prove fatal to marine life and cause millions of dollars in economic damage, begin when one species becomes overly dominant. Caron hopes to understand what factors tip the ecological balance.

Fuhrman’s genetic tests are already being used to test coastal waters for the presence of potentially harmful viruses — including enteroviruses and hepatitis viruses — and other human contaminants. “People have asked for a long time, ‘Is it safe to go into the water?’”

“If we understand how the natural ecology works, then we’ll have a better idea of what’s happening with these pathogens — in terms of how long they’ll survive in the water, what conditions promote them and what conditions inhibit them,” Fuhrman said.

College marine scientists still do much of their work at the old Hancock building at the center of campus — as well as aboard sea-going research vessels and in the labs at the Wrigley Institute’s island campus. In many ways, they are asking the same kinds of questions about biodiversity and the marine world posed by earlier faculty. But now, they’ve got better tools — and an ocean that needs help more urgently than ever before.

—Eva Emerson

Scientists Mary Helen Immordino-Yang studies brain activity associated with positive feelings such as admiration. “When you see someone hurt and say, ‘I feel your pain,’ that analogy isn’t too far off.”

Photo by the Author.

Geobiologist Katrina Edwards will search for new forms of microbial life in the rocky depths below the seafloor.

Still guiding your behavior.”

Immordino-Yang is among the scientists at the institute attempting to map “social emotions” on the brain using the advanced brain imaging technology available at the Dornsife Imaging Center. She notes that humans are also wired for empathy — in a rather literal way.

When people feel pain themselves, and when they see someone else in pain, some of the same aspects of the brain’s pain network are active,” she said. “So when you see someone hurt and say, ‘I feel your pain,’ that analogy isn’t too far off.”

Her research is attempting to uncover the biological basis for higher-level emotions, specifically admiration, testing the hypothesis that complicated social emotions are built on the same processes that support simple sensory input about pleasure and pain.

“We’re finding some very interesting confirmations of our theory and some surprises which we don’t quite know how to interpret yet,” Immordino-Yang said, “but we only have very preliminary results right now.”

Of course, traits that are key to survival under one set of circumstances can outgrow their usefulness when things change. In modern society, cooperation between groups reaps more rewards than unmotivated competition. Scientists believe that the legacy of the cavean is something thing we can make a conscious effort to leave behind.

“It is time to diffuse the reactions that could be caused by this sort of ‘natural’ biological reaction and try to modify them and adapt them to current times,” Damasio said. “The same way we learn to control fear and understand when fear is appropriate and when it isn’t, we have to learn to control reactions that lead to rejection or aggression. We can choose instead to engage other, extremely positive emotions such as compassion.”

Lackel noted that the difference may be as simple as making friends with people who are different from you, making the unfamiliar familiar.

“One finding that’s becoming clear is that friendships are absolutely key,” Lackel said. “When you form friendships with people of different ethnic backgrounds — that appears to have a big effect on your general attitude about people belonging to that group.”

From the cavern to the 21st century, changes in the human condition have outpaced the evolution of human nature. A emerging body of neuroscience and psychology seems to offer an intuitive, encouraging message for America’s multiethnic cauldron: We can be friends, but we have to try.

—Wayne Lewis

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Geobiologist Katrina Edwards will search for new forms of microbial life in the rocky depths below the seafloor.
A Two-Time Universe?

A second dimension of time could unify physics laws, better describe nature

For a long time, Itzhak Bars has been studying time.

More than a decade ago, the USC College physicist began pondering the role time plays in the basic laws of physics — the equations describing matter, gravity and the other forces of nature.

Those laws are exhaustively accurate. Einstein mastered gravity with his theory of general relativity, and the equations of quantum theory capture every nuance of matter and other forces, from the attractive power of magnets to the subatomic glue that holds an atom’s nucleus together.

But the laws can’t be complete. Einstein’s theory of gravity and quantum theory don’t fit together. Some piece is missing in the picture puzzle of physical reality.

Bars thinks one of the missing pieces is a hidden dimension of time.

This idea is bizarre, but powerful nevertheless. With two times, Bars believes, many of the mysteries of today’s laws of physics may disappear.

Of course, it’s not as simple as that. An extra dimension of time is not enough. You also need an additional dimension of space.

It sounds like a new episode of “The Twilight Zone,” but it’s a familiar idea to most physicists. In fact, extra dimensions of space have become a popular way of making gravity and quantum theory more compatible.

Extra space dimensions aren’t easy to imagine — in everyday life, nobody ever notices more than three. Any move you make can be described as the sum of movements in three directions — up-down, back and forth, or sideways. Similarly, any location can be described by three numbers (on Earth, latitude, longitude and altitude).

Other space dimensions could exist, however, if they were curled up in little balls, too tiny to notice.

“An extra dimension of space is really there, it’s just so small that we don’t see it,” said Bars, a professor of physics and astronomy.

Something as tiny as a subatomic particle, though, might detect the presence of extra dimensions. In fact, Bars said, certain properties of matter’s basic particles, such as electric charge, may have something to do with how those particles interact with tiny invisible dimensions of space.

In this view, the Big Bang started the baby universe growing 14 billion years ago blew up only three of space’s dimensions, leaving the rest tiny. Many theorists today believe that 6 or 7 such unseen dimensions await discovery.

However, only a few believe that more than one dimension of time exists. Bars pioneered efforts to discern how a second dimension of time could help physicists better explain nature.

“Itzhak Bars has a long history of finding new mathematical symmetries that might be useful in physics,” said Joe Polchinski, a physicist at the Kavli Institute for Theoretical Physics at UC Santa Barbara. “This two-time idea seems to have some interesting mathematical properties.”

If Bars is on the right track, some of the most basic processes in physics will need re-examination. Something as simple as how particles move, for example, could be viewed in a new way. In classical physics (before the days of quantum theory), a moving particle was completely described by its momentum (its mass times its velocity) and its position. But quantum physics says you can never know those two properties precisely at the same time.

Bars alters the math describing motion even more, postulating that position and momentum are not distinguishable at a given instant of time. Technically, they can be related by a mathematical symmetry, meaning that swapping position for momentum leaves the underlying physics unchanged (just as a mirror switching left and right doesn’t change the appearance of a symmetrical face).

In ordinary physics, position and momentum differ because the equation for momentum involves velocity. Since velocity is distance divided by time, it requires the notion of a time dimension. If swapping the equations for position and momentum really doesn’t change anything, then position needs a time dimension too.

“If I make position and momentum indistinguishable from one another, then something is changing about the notion of time,” said Bars. “If I demand a symmetry like that, I must have an extra time dimension.”

Simply adding an extra dimension of time doesn’t solve everything, however. To produce equations that describe the world accurately, an additional dimension of space is needed as well, giving a total of four space dimensions. Then, the math with four space and two time dimensions reproduces the standard equations describing the basic particles and forces, a finding Bars described partially last year in the journal Physical Review D and has expanded upon in his more recent work.

Bars’ math suggests that the familiar world of four dimensions — three of space, one of time — is merely a shadow of a richer six-dimensional reality. In this view the ordinary world is like a two-dimensional wall displaying shadows of the objects in a three-dimensional room.

In a similar way, the observable universe of ordinary space and time may reflect the physics of a bigger space with an extra dimension of time. In ordinary life nobody notices the second time dimension, just as nobody sees the third dimension of an object’s two-dimensional shadow on a wall.

Two-time physics may assist in the quest to merge quantum theory with Einstein’s relativity in a single unified theory. The most popular approach to that problem today, superstring theory, also invokes extra dimensions of space, but only a single dimension of time. Many believe that a variant on string theory, known as M theory, will be the ultimate winner in the quantum-relativity unification game, and M theory requires 10 dimensions of space and one of time.

Efforts to formulate a clear and complete version of M theory have so far failed. “Nobody has yet told us what the fundamental form of M theory is,” Bars said. “We just have clues.”

Adopting the more symmetric two-time approach may help. Describing the 11 dimensions of M theory in the language of two-time physics would require adding one time dimension plus one space dimension, giving nature 11 space and two time dimensions. “The two-time version of M theory would have a total of 13 dimensions,” Bars said.

For some people, that might be considered unlucky. But for Bars, it’s a reason for optimism.

“My hope,” he says, “is that this path that I am following will actually bring me to the right place.”

—Tom Siegfried
Scholarship Bound

A round-up of recent books by USC College faculty

Advancing the Feminist Project
To ensure a better future for women everywhere, we must have a greater understanding of the past, argues historian Judith Bennett in History Matters: Patriotism and the Challenge of Feminism (University of Pennsylvania Press, 2006), her commentary on women’s and gender history. Understanding the persistence of patriarchy is critical to the feminist project, she writes, noting that it provides feminists with the perspective necessary to advance in the 21st century.

Movies with Mass Appeal — and Smarts
More than mindless entertainment, some blockbusters show intelligence and attention to craft. “Although it may not be really fashionable to do so, these films need to be celebrated,” writes Kenneth Turan, a lecturer in the Master of Professional Writing program, in New in Theaters: Everywhere: A Celebration of a Certain Kind of Blockbuster (Public Affairs, 2006). This collection of reviews highlights big studio successes that he says shouldn’t be underestimated. A film critic at The L.A. Times, Turan provides behind-the-scenes looks at both “Conan the Barbarian” and “Blade Runner,” two classic examples of the “better” blockbuster.

Faith and the Future
Passing on the Faith: Transforming Traditions for the Next Generation of Jews, Christians, and Muslims (Fordham University Press, 2006) offers a collection of 16 essays by scholars and religious leaders from three faiths. Edited by Father James Heft, Alton M. Brooks Professor of Religion, the articles discuss the challenges of engaging youth in religious life, as well as reporting on young people’s views on religion. Contributors include Bric Lenskota, assistant director of USC College’s Center for Religion and Civic Culture, and Diane Winston, Knight Chair in Media and Religion in the USC Annenberg School for Communication.

A Look at the Prison Problem
Despite falling crime rates, the U.S. prison population has more than quintupled since the 1980s, with California leading the way. In Golden Gulag: Prisons, Surplus, Crisis and Opposition in Globalizing California (University of California Press, 2007), Ruth Wilson Gilmore of geography and American studies and ethnicity examines the expansion of penitentiaries, charting the political and economic forces at play. The book puts the present dilemma in context and challenges many typical assumptions about who benefits and who suffers from the state’s commitment to prison expansion.

Language as Crime
When English law expanded to include “treason by words” under the Tudor monarchy in the 16th century, English citizens produced a number of different definitions of treason. In Treason by Words: Literature, Law and Rebellion in Shakespeare’s England (Cornell University Press, 2006), English scholar Rebecca Lemon investigates this phrase as both a legal issue and a cultural event by examining texts by John Donne, Ben Jonson and William Shakespeare. “What happens to our notion of the crime and the event itself when we approach it not as violent action but as a verbal phenomenon?” she asks.

Art History Examined
In Chaos and Cosmos: On the Image in Aesthetics and Art History (Cornell University Press, 2006), Karen Lang, associate professor of art history, explores the foundations of art history as a discipline, examining key texts that have shaped the field, with specific attention to art history’s early years in Germany from the 1880s to 1940. With numerous illustrations of important works from the period, she shows how aesthetic objects became both historical objects and objects of knowledge.

Math and Physics Interwoven
USC College mathematicians Edward Blum and Sergey Lototsky collaborated on Mathematics of Physics and Engineering (World Scientific, 2006), a textbook exploring the connection between mathematical models and their physical applications. The authors show how mathematical models are derived from physics and, conversely, how those models can lead to scientific breakthroughs in physics. The book also looks at the scientific contributions of Euclid, Newton, Einstein and others.

Engaging Our Nation’s Newcomers
Massive demographic shifts in the U.S. in recent decades have made understanding the place of immigrants in the public sphere critical. In Democracy’s Promise: Immigrants and American Civic Institutions (University of Michigan Press, 2006), Janelle Wong of political science and American studies and ethnicity examines the challenges and opportunities posed to civic institutions by the influx of immigrants. She argues that meager political participation by immigrants results not from disinterest but from the inability of political parties and advocacy organizations to mobilize immigrant voters.

Intertrogating the Impostors
Sensational literature thrived in 18th century Britain, with popular appetite fed by a field of forgers and frauds. In Fictions and Fakes: Forging Romantic Authenticity, 1760–1845 (Cambridge University Press, 2006), Margaret Russell, professor of English, demonstrates how these impostors influenced Romantic literature. She examines works by such writers as Wordsworth, Coleridge and Byron alongside fakes such as those of Thomas Chatterton — who wrote pseudo-medieval poems on artificially aged parchments.

Casden Institute’s Annual Review
In the latest volume of its annual review series, the USC Casden Institute for the Study of the Jewish Role in American Life continues its investigation into the dynamic relationship between Jewish culture and modern America.

The Jewish Role in American Life: An Annual Review, Volume 5 (Purdue University Press, 2006) was edited by USC College’s Bruce Zuckerman and Jeremy Schoenberg, the executive director and assistant director, respectively, of the Casden Institute. The essays cover the broad themes of politics, values, image, education and culture.

In a chapter on politics, USC College historian Steven Ross examines how some of Hollywood’s most prominent stars and producers — many of them Jewish — of the late 1930s struggled against government, colleagues and public opinion to bring the threatening reality of Hitler and Nazi Germany to light.

Toward the Perfect Script
Syd Field, a Master of Professional Writing lecturer, provides step-by-step guidelines to writing a successful screenplay in his recently updated The Screenwriter’s Workbook (Bantam Dell, 2006). He includes personal anecdotes of the screenwriting process, as well as analyses of films such as “The Incredibles” and “Brokeback Mountain.” With tips on how to confront the daunting blank page, sharpen dialogue, develop characters and structure, and handle inevitable rewrites, Field shares his expertise with a new generation of screenwriters.
Changing the Game

USC College students bridge politics, academia on new Web site

USC College undergraduates Colin Koproske and Mathew Morgan have a modest goal:
They want to change the tenor of American political dialogue.
They want to replace polemics and partisanship with rational debate based on solid research. And they’re enlisting some of the nation’s best minds — faculty and doctoral students at USC and across the nation.

The two students founded the BrainTrust Project, a nonprofit organization centered on a Web site, BrainTrustProject.org, which officially launched in February. The site showcases university experts’ perspectives on the important policy issues of the day. The articles aim to inform voters and elected officials alike.

“Professors participate by writing newspaper-style op-eds on their areas of expertise,” said Koproske, a senior majoring in political science and music performance. “The idea is a simple hub for scholarly opinion that will help to better educate the vot-
ers but change the dynamic between government officials and academics.

“Basically, we’re promoting public intellectuals.”

Koproske and Morgan chafe at the way public debate can be dominated by emotionally charged issues — “gay marriage and flag burning” in their shorthand — and want to shift the focus to reasonable examination of vital but less volatile issues such as the search for alternative fuels.

First things first, though. The BrainTrust Project launched featuring 10 articles from nationally known scholars, with more in the pipeline. Koproske and Morgan want a broad database of authors, so they are seeking contributions from as many faculty and doctoral students as possible.

“A lot of the people we’ve approached were eager for a forum such as this one,” said Morgan, a senior international relations major.

“They all got involved in academia because they’re passionate about their field, and this is an opportunity to write something relevant that they know the public desperately needs.”

Because the world of policy is multifaceted, the content on the Web site spans the most relevant disciplines — international relations and political science, naturally — but also encompasses economics, education, environmental studies, health care and the sciences.

Koproske and Morgan are more concerned with contributors’ academic credentials than their party affiliation. “We have no ideology of our own to espouse,” Morgan said. “We encourage people of all political backgrounds.”

In addition to presenting articles by academics, the site’s founders hope to encourage collaboration and to promote the role of university faculty as a public resource.

Through participation in the BrainTrust Project’s “Wikidemia,” university experts can team up online to develop nuanced policy recommendations. A directory of contributors can serve as a virtual Rolodex for journalists, or citizens, seeking to learn more.

The idea for the project began when Koproske and Morgan interned at a San Diego-area political organization in the summer of 2005. As with many ambitious endeavors, it began with discontent.

“We were working in politics, but were sort of becoming disillusioned with it,” Koproske said. “The rhetoric turned us off. We’re into academics, but we’re dealing with the political world. We noticed what a gap there was between those two worlds.”

In addition to their distaste for politicians’ exploitation of emotionally charged issues, the student interns worried that people with policy expertise, such as the academics who taught their classes, didn’t have a real voice in the political world.

“The BrainTrust Project was a way that we envisioned solving all the problems that we saw,” Koproske said.

They’ve recruited an estimable advisory board that includes Alison Dundes Renteln of the College’s political science department; bioanthropologist Craig Stanford, chair and professor of anthropology; former USC professor Erwin Chemerinsky, who now teaches law and political science at Duke University, as well as Duke anthropologist Orin Starn and Harvard psychologist Steven Pinker.

The BrainTrust founders have impressive résumés of their own. Both are USC Trustee Scholars and members of the Mortar Board honor society. Koproske is a recipient of a Marshall Scholarship, one of the most prestigious awards granted to American undergraduates. Thanks to Marshall funding, he will study at the University of Oxford next year, where he will continue his involvement with the project.

Morgan, originally from Camarillo, Calif., will also continue working on the project after graduation. His career interests lie both in public policy and the nonprofit sector. An American Red Cross volunteer for eight years, he is in his second year as a member of the Red Cross’ National Youth Council and expects to remain involved with the organization for the rest of his life.

A St. Louis native, Koproske wants to pursue a career as a political science professor, while maintaining his sideline as a professional drummer. His dedication to public intellectualism will stay with him, as well. “It’s a mission I’ll be involved with my whole life, trying to get academics more active in the public sphere.”

Koproske and Morgan hope their idea finds its place in scholarly culture.

“Ideally, in a couple years everybody going into Ph.D. programs will know about the site, sort of like an academic FacelBook,” said Koproske, referring to the popular social-networking site.

For all their ambition, the duo behind the BrainTrust Project remains realistic about the task at hand. They know that any attempt to recast political discourse must, first and foremost, engage citizens.

“We’re not naively idealistic,” Morgan said. “Elected officials are primarily responsible to their constituency. We need to address the constituents and build a dialogue at that level.

“As long as we allow politicians to avoid the difficult and complex issues that we’re facing as a country, they will. It’s as simple as that.”

—Wayne Lewis

Photos by Phil Channin

Students Matthew Morgan (left) and Colin Koproske founded BrainTrustProject.org, which showcases scholars’ writings on key policy issues in an effort to elevate the level of political discourse.
Janet Fitch weaves metaphor into her storytelling like Vincent van Gogh fuses bold, swirling brushstrokes into his oil paintings. “Metaphorical writing, to me, tells you more about both the phenomenon you are observing and about the bigger world,” said Fitch. She began teaching at USC College after the success of her debut novel White Oleander (Little, Brown and Co., 1999), which was chosen for the Oprah Winfrey book club and made into a movie.

In her recent second novel, Paint It Black (Little, Brown and Co., 2006), Fitch’s figurative language elevates her writing to a fine art. “She felt black and white and raw, like an Egon Schiele woman — Michael’s favorite artist. She looked at the coffee, tiring there like a giant question mark. Like the moonlight in 2003.”

These passages offer insight into the protagonist, Josie Tyrell, who is forced to confront the suicide of her artist boyfriend, Michael Faraday, a Harvard dropout and son of a famous pianist. An art model from Bakersfield, Josie becomes emotionally entangled with Michael’s neurotic mother, Meredith. While the relationship leads her to some hideous secrets, Josie struggles to find the truth. “I’m going back to [the unfinished book] at some point,” Fitch said.

Fitch explained the seven-year gap between her novels, saying that she was writing a book set in Los Angeles in the 1920s that didn’t sell. She turned to one of her short stories that also takes place in L.A., but during the punk rock scene of the early 1980s — and turned it into a book. The short story was originally called “Love in the Asylum,” but she ultimately named the novel Paint It Black after the haunting Rolling Stones sitar melody about a man enraged over his lover’s sudden death.

“Metaphor appeals to the part of the human being who understands music, who understands painting,” she said, sitting barefooted in jeans, her long wheat-blonde hair parted slightly off-center. “It’s less intellectual and much more emotional.”

Novelist and teacher Janet Fitch, whose latest book is the poetic Paint It Black, wants students in her fiction courses to learn from her mistakes as a writer.

Colin Koproske, a senior majoring in political science and music performance, has been named a 2007 Marshall Scholar. The highly competitive Marshall Scholarship, one of the most prestigious awards an American undergraduate can receive, will take Koproske to the University of Oxford next fall to study for a master’s in political theory.

Koproske, 22, joins four other USC students who have won the honor in recent years — all had pursued majors in USC College: Jacob Checchio (2000), Paul Miller (2002), David Checchio (2004) and Nalay Vora (2004).

“I received ‘the call’ from an official at the British Consulate the night after my interview,” Koproske said. “Her voice lacked any emotion either way, so my immediate reaction was ‘OK, you probably didn’t get it.’”

After his disbelief at the news and her assurance that he indeed was selected, the call ended abruptly. “Then came the screaming and dancing,” he said.

The Marshall Scholarships were established by the British government in 1953 as thanks for assistance received after World War II under the Marshall Plan. At an estimated value of $60,000, the scholarships provide two fully funded years of study, with a possible third-year extension, at any university in the United Kingdom. At least 40 Marshall Scholarships are awarded each year to exceptional young Americans studying a range of subjects.

Koproske’s research interests are secularism and the relationship between religion, science and political thought. While at USC, he co-founded a nonprofit called the BrainTrust Project (see page 18).

He is also a classically trained percussionist and pianist who holds the drumset chair in the USC Thornton Jazz Orchestra and plays in several smaller jazz groups, as well as a hip-hop/R&B band around Los Angeles. “My drums and keyboard will make the trip with me to Oxford,” Koproske said.

—Allison Engel

Fitch, who was going through a divorce while writing Paint It Black, was in an emotional place suited to examining loss.

“The new book] was dealing with some of my own personal issues around depression more than issues directly related to my divorce,” she said. “I was dealing with everything that was falling apart.”

Fitch was born in Hollywood and raised in L.A.’s Koreatown, and Paint It Black reflects an author who knows the city intimately. Her late father, Vernon, was a civil engineer and voracious reader who introduced her to books. She dedicated White Oleander to him.

Her mother, Alma, to whom she dedicated Paint It Black, worked for Los Angeles city and county governments, and was the city council’s first woman chief deputy. Both her novels explore the complicated mother-daughter connection.

In addition to raising, Allison, a constant in her life has been teaching. “I love sharing the tools that I’ve crafted out of lots of failures,” Fitch said. “Most of my students are experienced writers. When they get the tools that are missing, they know what to do and really take off. I really love to see that. I love to see a student become a colleague.”

Fitch earned a bachelor’s degree from Reed College in Portland, Ore., and became a journalist. But her art was always fiction, inspired by the poetry of Dylan Thomas, Carl Sandburg, Anne Sexton and T.S. Eliot. For 10 years, she unsuccessfully submitted her short stories to publications, often to the Ontario Review, where author Joyce Carol Oates was an editor.

“I always addressed the manuscript to her in hopes that she would see it, and it was always rejected,” Fitch said. “Then this one story (“White Oleander”) came back with a little yellow post-it note. It said, ‘Good story, but too long for us. Seems like the first chapter of a novel.’ It was signed JCO. I tell you, that was a heart-stopping moment.”

—Pamela J. Johnson
USC College of Letters, Arts & Sciences Summer 2007 VOLUME 8 NUMBER 1

Rising Trajectories
Funding awards recognize potential of two young professors

USC College’s Thorsten Becker and Peter Qin each have received an Early Career Award for Scientists and Engineers from the National Science Foundation (NSF).

The award honors academics near the start of their careers. Winning it puts Becker, assistant professor of earth sciences, and Qin, assistant professor of chemistry and biological sciences, in the company of an elite group of USC faculty recognized early on as having great potential in their fields.

The grant money will allow Becker and Qin to continue their research and, in turn, make significant contributions to the scientific community. The award provides new researchers with funding that might have been otherwise difficult to obtain at an early stage in their careers.

Becker’s initial steps into science came when he studied physics at Frankfurt University in his native Germany. By the time he began thinking about his thesis, his interests had shifted, and Becker chose to enter the realm of geophysics.

“It was really the field work that interested me,” Becker said of the research and experiments carried out in the mountains. “It combined my love of the outdoors with physics.”

Ironically, Becker now spends much of his time indoors developing ever-more sophisticated computer models of convection-driven movements below the planet’s surface.

With the award, Becker plans to delve deeper into his ongoing modeling studies of plate tectonics and the composition and dynamics of the Earth, including the formation of mountains and earthquakes.

Biochemist Qin loved all sciences but focused on physics during his undergraduate years at Peking University in China. His desire to “understand physical principles of how biochemistry works” led him to his current field, in which he earned a doctorate from Columbia University.

Qin will use the grant to continue his studies of the structure and function of nucleic acids — DNA and RNA molecules that play vital roles in the maintenance and expression of genetic information. In the world of biomolecules, physical composition and three-dimensional conformation dictate function. But information about the shapes of certain nucleic acid molecules has been difficult to obtain using conventional technology.

Qin is employing a new technique called site-directed spin labeling (SDSL), which uses a small reporter molecule to reveal more about key RNA and DNA molecules.

In their first project, Qin and his team will focus on a so-called packaging RNA molecule. They will use the SDSL technique to measure distances between specific positions within the packaging RNA molecule. The data help reveal the shape of the molecule.

In addition to providing young scientists with the resources to create strong research programs, the Career award has an education requirement.

Becker is developing a new course on numerical methods in earth sciences as well as two new software modules that will allow students to learn more about the geophysics of the Earth’s mantle, explore how these dynamics affect plate tectonics and develop valuable quantitative skills.

Qin will create “Genes, Life and Society,” a new general education course that will explore genes, nucleic acids and issues of evolution and diversity. The class will take advantage of the multimedia teaching platform, BioSIGHT, developed at USC, which provides high-quality interactive visualization and simulation software — such as the “virtual microscope” — for science classrooms.

—Luisa Monte

USC Mock Trial Team Sweeps Regional Competition
Team advances to national competition

Students from USC’s Mock Trial Team won first, second, third and fifth places and were named tournament champions at the American Mock Trial Association’s Great Western Regional Tournament held Feb. 17–18 in Los Angeles at USC.

The USC team in recent years has been among the top performers in the Western Region and finished the 2006 season with an overall national ranking of fourth out of 564 teams.

The sweep of the top places at the regional tournament earned USC two bids to the national finals and enables members to skip past two national qualifying events and advance directly to the AMTA National Championship Tournament, which was set to take place in St. Petersburg, Florida, April 13–15.

Olu Orange (center, seated) is the team’s head coach. Orange, an adjunct professor of political science at USC College, is a practicing criminal and civil rights attorney in West Los Angeles.
Powerful Genome ID Method Extended to Humans

Development takes scientists a step closer to era of individualized medicine

A mathematical discovery by a student-led group at USC College has extended the reach of a novel genome mapping method to humans, potentially giving cancer biology a faster and more cost-effective tool than traditional DNA sequencing.

The team from the laboratory of USC University Professor Michael Waterman has developed an algorithm to handle the massive amounts of data created by a genome identification technology known as optical mapping. Waterman holds the USC Associates Chair in Natural Sciences and is a professor of biological sciences, computer science and mathematics in the College.

Anton Valouev, who earned his Ph.D. in applied mathematics in 2006, led the creation of the algorithm, which he said makes it possible to optically map the human genome.

“It carries tremendous benefits for medical applications, specifically for finding genomic abnormalities,” said Valouev, now a postdoctoral fellow at Stanford University.

Valouev was lead author of the paper, which appeared in the October 2006 Proceedings of the National Academy Sciences (PNAS) Early Edition.

Optical mapping was developed at New York University in the late 1990s by David Schwartz, now a professor of chemistry and genetics at the University of Wisconsin-Madison. Schwartz and a collaborator at Wisconsin, Shiquan Zhou, co-authored the PNAS paper.

The power of optical mapping lies in its ability to reveal the size and large-scale structure of a genome. The method uses fluorescence microscopy to image individual DNA molecules that have been divided into orderly fragments by so-called restriction enzymes.

The resulting restriction map provides coordinates on the genome analogous to mile markers on freeways.

By imaging large numbers of an organism’s DNA molecules, optical mapping can produce a map of its genome at a relatively low cost.

An optical map lacks the minute detail of a genetic sequence, but it makes up for that shortcoming in other ways, said Philip Green, a professor of genome sciences at the University of Washington who edited the PNAS paper.

Geneticists often say that humans have 99.9 percent of their DNA in common. But, Green said, “individuals occasionally have big differences in their chromosome structure. You sometimes find regions where there are larger changes.”

Such changes could include wholesale deletions of chunks of the genome or additions of extra copies. Cancer genomes, in particular, mutate rapidly and contain frequent abnormalities.

“That’s something that’s very hard to detect” by conventional sequencing, Green said, adding that sequencing can simply miss part of a genome.

Optical mapping, by contrast, can estimate the absolute length of a genome and quickly detect differences in length and structure between two genomes. Creating optical maps of healthy and diseased genomes can guide researchers to crucial mutations.

Though he called optical mapping “potentially very powerful,” Green added that it requires such a high level of expertise that only a couple of laboratories in the world now use the method.

The Waterman group’s algorithm may encourage others to take a second look.

—Carl Marchi

Student News

Alessandro Sueldo, a junior majoring in international relations, received a 2007–2008 Rotary Foundation Ambassadorial Scholarship, supplementing a trip to Saint-Petersburg State University in Russia for youth and generational transformation in Russian society. He and his twin, Matias, were previously profiled in the summer 2006 issue of USC College Magazine, highlighting their work with the Teaching International Relations Program, which places Trojan students in local high schools to discuss current global issues.

Gabriela Jauregui, a comparative literature doctoral student, has been awarded a 2007 Paul and Daisy Soros Fellowship for New Americans, which funds advanced education for first- and second-generation immigrants. The award goes annually to just 30 graduate students from around the nation. Jauregui, a native of Mexico City, is also pursuing an M.F.A. in creative writing at the University of California, Riverside. Her poetry collection, Controlled Decay, will be published next year by USC College alumns Chris Alanis’s Black Goat Press.

What’s News With You?

USC College values the close-knit community created by its students, alumni, faculty and affiliates. That’s why we’re interested in learning about what you’ve been up to, and sharing it with your College family and friends. If you have some news you’d like to announce, please send the information to magazine@college.usc.edu, or mail it to: USC College Magazine, University of Southern California, ADM 304, MC 4012 Los Angeles, CA 90089-4012

Undergraduate Wins Honor for Research

Christopher Brown, a biology major and bioethics and Spanish minor who graduated in December, was honored for his research presentation at the Annual Biomedical Research Conference for Minority Students (ABRMS). His undergraduate research project focused on the role of oxidative stress and stress-inducing drugs on the physical activity levels and circadian rhythm of fruit flies.

Oxygen molecules called free radicals, produced by the body’s normal metabolism, can damage proteins, DNA and other key biomolecules, causing oxidative stress. Despite the presence of powerful antioxidant enzymes in cells, oxidative stress has been linked to the development of cancer and other diseases, as well as to the process of aging. Circadian rhythm refers to the body’s natural 24-hour sleep-and-wake cycle, also known as the internal “biological clock.”

Brown found that flies facing increased levels of oxidative stress experienced altered activity patterns, causing the flies to abandon the normal sleep-wake cycle set by the biological clock. An expert on aging and genetics, John Tower, associate professor of biological sciences, served as Brown’s research adviser.

ABRMS is an annual conference organized by the American Society for Microbiology and is the largest professional meeting of its kind. The conference encourages minority students to pursue advanced training in the biomedical and behavioral sciences. More than 2,500 people attended the conference, which met in Anaheim, Calif., in November 2006. More than 1,100 students presented their research. Brown was one of 12 undergraduates to receive a cash award of $250 for his work. His research was conducted as part of the USC Center of Excellence in Genomics (CEGIS) and was funded by an undergraduate research grant through the Genome Research Experience for Undergraduates. CEGIS is a National Science Foundation-funded center.

Brown continues his fruit fly research and other projects in the Tower lab and has applied to M.D./Ph.D. programs, for which he is now interviewing.
Oldest Animal Embryos or Bacteria?

Graduate student sheds new light on nature of 600-million-year-old fossils

The study’s authors, which include Bailey’s adviser Frank Corsetti, associate professor of earth sciences, and biology graduate student Beverly Flood of the College, were careful not to rule out the existence of animal fossils from the same geological era. The Doushantuo Formation contains the fossils of many species, some of which have been identified as animals. While calling the evidence for animal life in the Doushantuo “controversial,” Bailey noted that other fossils in the formation “bear little resemblance to *Thiomargarita*.

“The program offers an alternative interpretation of the most abundant microfossils in the Doushantuo Formation,” he said. “The structures that we discuss were the first Doushantuo fossils to be interpreted as embryos, and they’ve been widely accepted as such.”

Regardless of the evidence for animal life in the Doushantuo, Bailey’s study elevates *Thiomargarita* to the realm of bacteria. “We believe that *Thiomargarita* even supplies its own fossil bed.”

The oldest-known animal eggs and embryos, whose pictures made the cover of the prestigious journal *Nature* in 1998, were so small they looked like microbes. Work from a USC College student suggests that just what they may have been.

Jake Bailey, a doctoral student in earth sciences, has found evidence for reinterpreting the 600-million-year-old fossils from the Precambrian era as giant bacteria.

Published in the Dec. 20 issue of *Nature*, the discovery “complicates our understanding of microfossils thought to be the oldest animals,” said Bailey.

His new insight into the nature of the fossils emerged from his studies of two separate findings about *Thiomargarita*, the world’s largest known living bacterium.

In 2005, *Thiomargarita* discoverer Heide Schulz, from the University of Hannover in Germany, showed the bacterium promotes deposition of a mineral known as phosphorite. The fossils identified as eggs and embryos in 1998 came from southern China’s Doushantuo Formation, on Bailey’s study, found *Thiomargarita* can multiply by reductive cell division, a process rare among bacteria but typical of animal embryos.

Bailey knew the fossils had been identified as embryos in part because they showed evidence of reductive cell division. Then he thought again about the phosphorite deposits.

“When I put those two pieces together, I said ... perhaps they’re not animal embryos at all.”

Bailey and his co-authors compared the size and geometrical properties of the Doushantuo fossils and modern *Thiomargarita* bacteria — they were nearly identical. The result pointed strongly to ancient *Thiomargarita* activity.

“I was shocked that there was this other option out there,” Bailey said.

The finding also solved a long-standing puzzle. Proponents of the animal theory had struggled to explain how eggs and embryos could be preserved, as neither fossilizes easily.

These bacteria, on the other hand, make better fossil candidates. And by depositing phosphorite, *Thiomargarita* even supplies its own fossil bed.
Playing The Devil’s Advocate

Playwright and USC College instructor Donald Freed wins PEN USA Literary Award

Donald Freed, longtime instructor in USC College’s Master of Professional Writing program, has won the PEN USA 2006 Literary Award for “Devil’s Advocate,” a play set on Christmas Eve 1989 during the U.S. invasion of Panama.

Earning the award for best drama, Freed’s play takes place inside the Vatican embassy in Panama City, where a ravaged Manuel Noriega seeks asylum and must defend himself to a cynical archbishop.

The PEN judges applauded Freed for telling a brutal story with heart. Seeing the play through today’s lens, judges noted, it is “impossible not to draw disturbing parallels between the capture and trial of Noriega in 1989 and that of Saddam Hussein for crimes originally supported by America.”

Reached by telephone in England, where he is currently artist-in-residence at the University of Leeds’ Workshop Theatre, Freed said he intended to expose U.S. hypocrisy in “Devil’s Advocate.”

“The American empire right now is the stuff of tragedy,” he said. “It’s up to playwrights to tell that story.”

“Freed — whose other best-known plays center on a fictional last testament of Richard Nixon and the Julius and Ethel Rosenberg trial — is considered a social historian as well as a playwright, novelist and screenwriter. He plans to return to USC College in 2008, where he has taught at the nation’s first multidisciplinary master’s program in creative writing for 22 years.

Freed called it a particular honor for this work to be recognized by the PEN USA Center at a time when political theater in the United States is under siege.

The annual award recognizes literary excellence published or produced the previous year by writers west of the Mississippi River.

“There is a chilling going on right now in the U.S.,” Freed said. “People in power do not like to be criticized and do not like the truth to be told. Playwrights can’t force people to do anything. But they can try to tell the truth.”

Born in Chicago in 1933, Freed was raised in Alexandria, La., where he lived with his mother and stepfather, a successful merchant. After World War II, when the wartime boom ended, his stepfather’s business collapsed and he killed himself.

Of that time in his life, Freed observed: “We’ve all known a Willy Loman,” referring to Arthur Miller’s classic play, “The Death of a Salesman,” in which the protagonist, Willy Loman, commits suicide hoping that in death he may provide for his family.

Freed’s mother, who sold insurance “in the back roads of Louisiana,” supported the family of five children for several years until she died of cancer at 42.

A young Freed started out as an actor and director, working among other places at Chicago’s Goodman Theater. In 1955, he accepted an uncle’s invitation to live with him in Los Angeles, where he began teaching acting and staging plays at the Coronet Theater in West Hollywood.

Although the Civil Rights Movement and 1965 Watts Riots spurred Freed’s political activism, he began his writing career with a play about Gandhi, and one about Julius and Ethel Rosenberg. That play, “Inquest,” was first staged in Cleveland in 1969.

His major works include 10 plays, eight books and three screenplays. He has received numerous honors, including Rockefeller and Louis B. Mayer awards.

Now writing a play about George W. Bush, Freed said that playwrights shoulder a unique burden to express the truth.

“Do make his point, he quoted Artaud: “We are not free and the sky can still fall on our heads, and the theater has been created to teach us that first of all.” —Pamela J. Johnson

Peers Honor Quake Scientist

The American Geophysical Union recognizes Charles Sammis

Charles Sammis, professor of earth sciences in USC College, has devoted almost four decades to studying earthquakes. His contributions to the field of geophysical sciences recently led to his being named a Fellow of the American Geophysical Union (AGU).

The designation is conferred upon no more than 0.1 percent of all AGU members in any given year. A committee of fellows selects new fellows, who are chosen in recognition of their acknowledged prominence in one of the four fundamental areas of the geophysical sciences: atmospheric and ocean sciences; solid-Earth sciences; hydrologic sciences; and space sciences.

“I am very proud to have been named a Fellow of the AGU. USC has been very supportive with the [USC] Associates’ Award in both teaching and research, but this is my first serious national and international recognition,” said Sammis. “The esteem of one’s colleagues is the ultimate academic reward.”

Sammis’ current research examines how the structure of an earthquake fault affects the generation of seismic waves, which, in turn, produce the shaking and damage on Earth’s surface. This involves examining ancient fault zones that have been exposed by uplift and erosion of the crust, creating a fault zone in the laboratory to capture a simulated earthquake with high-speed digital photography, and developing theoretical computer models.

These tests have shown that the short branching cracks and pulverized rock that border large fault planes can have a strong effect on the rupture velocity during an earthquake. He’s also revealed how fluctuations in these fault zone characteristics can affect the frequency of the resultant seismic waves, and hence their destructive capability.

In addition, Sammis has a research contract with the U.S. Air Force to monitor countries that are conducting underground nuclear tests. He is devising new ways to distinguish seismic waves generated by an underground nuclear explosion from those generated by an earthquake. Sammis also is exploring ways to determine the size of nuclear bomb tests. He is a complicated issue because many variables affect this estimate. For instance, nuclear yield is estimated from the amplitude and frequency of the seismic waves, but these are very sensitive to the type of rock and soil that surround the buried nuclear bomb at the testing site.

The importance of understanding the rock composition can best be illustrated by mistakes made in analyzing nuclear tests conducted by the Soviet Union, Sammis said. The Soviets were testing in permafrost north of the Arctic Circle. Americans monitoring these tests did not appreciate that ice in the cracks in the rock could affect the generation of seismic waves. As a consequence, their calculations of the strength of the Soviet nuclear devices were significantly low.

—Kirsten Holgian
Faculty News

A Likeness in Marble
Malcolm Baker, professor of art history, received a fellowship for the 2007–2008 academic year from the Huntington Library to work on a book, tentatively titled The Marble Index: Roublidius and Sculptural Portraiture in Eighteenth-Century Britain. The book will examine how the portrait bust became modern.

Piecing Together Mayan History
Megan O’Neill, assistant professor of art history, received a 2007–2008 J. Paul Getty (Museum) Postdoctoral Research Fellowship. She will work on a book manuscript, Ancient Maya Objects of History, which will involve fieldwork at ancient Mayan archaeological sites in Mexico and Guatemala, as well as archival research there and in the United States.

Brain Business: Making Decisions
Antoine Bechara, associate professor of psychology, was awarded a small interdisciplinary grant from the James H. Zumberge Research and Innovation Fund of USC. With the grant, Bechara and Debbie MacInnis, vice dean of research at the USC Marshall School of Business, will host a two-day meeting of mainly USC scholars from disciplines including neuroscience, psychology, law, politics, economics and communication. The conference will encourage research collaborations to address issues such as how humans judge and decide, and how emotions influence cognition.

Latin American Art Scholar Honored
Dania Bleichmar, assistant professor of art history and Spanish and Portuguese, received the Association for Latin American Art Dissertation Award for the finest dissertation in the field of Latin American visual culture completed during 2004–2006. The association is a nonprofit organization “dedicated to the advancement of the study of Latin American art.”

Honoring Our Peers
In 2007–2008, USC honored seven faculty members for their contributions to science, technology, engineering, and mathematics education at the University of Southern California. The recipients included Anne Blochman and Anthony P. Berardi.

Heavy Metal Complex
Professor of chemistry and materials science Mark Thompson was awarded the 2006 MRS Medal from the Materials Research Society for the “development of highly-efficient heavy-metal phosphor complexes.” The medal is awarded for a specific outstanding recent discovery or advancement that has a major impact on the progress of a materials-related field.

Festschrift for Chemist
To celebrate the 65th birthday of Philip Stephens, professor of chemistry, his former students Gerard Jensen (Ph.D., chemistry, ’94) and Karl Jalkanen (Ph.D., chemistry, ’89) served as guest-editors of a special issue of Theoretical Chemistry Accounts. The issue includes a scientific autobiography of Professor Stephens’ work along with original articles from leading scientists and former students on topics related to Stephens’ research. A Festschrift (loosely translated from the German as “celebration publication”) is an international academic tradition of preparing a book or volume to honor a scholar on an important anniversary or birthday.

A Street Named Rev. Murray
Cecil “Chip” Murray, the holder of USC’s first endowed chair, the John R. Tinsley Chair in Christian Ethics, now has a street named after him. Dr. Cecil L. Chip Murray Circle was dedicated at the end of January outside the First African Methodist Episcopal Church at West 25th Street and South Harvard Boulevard in Los Angeles. Before coming to USC in 2005, Murray was senior pastor at the church for 27 years. “I am deeply honored to have the intersection named for me,” he said. “It is the circle of life, the circle of love.”

Online Navigators of History
Four USC College historians—Lisa Bibel, professor of history; Cynthia Herrup, professor of history and law; Philippa Levine, professor of history; and Peter Mancall, professor of history and director of the USC-Huntington Early Modern Studies Institute—are now on the editorial board for Blackwell Publishing’s new online journal History Compass. The online-only journal con-

Fellow Scientists Salute USC College Biologist

Association for Women in Science honors Susan Forsburg

Long a de facto role model for women in academia, Susan Forsburg, professor of biological sciences in the College of Letters, Arts & Sciences, has made it official by becoming a Fellow of the Association for Women in Science.

Forsburg and nine others were honored Feb. 18 in San Francisco at the annual meeting of the American Association for the Advancement of Science. They join an influential group of more than 100 association fellows dedicated to achieving equity and full participation of women in science. “What it shows is that hard work and our efforts pay off,” Forsburg said at the ceremony. “We can be recognized by our peers. Any recognition benefits all of us.”

Women in all fields, she said, can be overlooked despite their accomplishments.

Donna Dean, president of the association, praised Forsburg for her academic accomplishments and for her Women in Biology Internet page, www.womenbio.net. The site is packed with advice and resources for women with a Ph.D. who are seeking careers in academia or industry. Forsburg has said she is “especially proud of a comprehensive set of links to so-called ‘alternative careers’ sites as well as information about surviving every step of the academic path.”

She is also heavily involved in USC’s Women in Science and Engineering (WISE), a successful program designed to increase the representation and success of women in the sciences. (See story on page 8.)

Named one of the top nine women in cancer research by Pink magazine, Forsburg is best known for her work on cell division and cancer using the test organism Schizosaccharomyces pombe, a simple, single-celled yeast species.

—Carl Marszalek

Susan Forsburg, right, at work in her lab with doctoral student Rebecca Nugent.

PHOTOS BY PHIL CHANNING
It Computes: Chemistry Cyber-Facility

Center to offer cutting-edge tools, training for lab chemists

USC College theoretical chemist Anna Krylov’s research lab has no beakers, no bottles of chemicals labeled in fine print. Her work — to understand the behavior and characteristics of highly reactive, unstable molecules produced during chemical reactions — is all done on her computer.

Since the 1960s, computer-driven approaches have increasingly enabled chemists like Krylov to apply the laws of quantum mechanics to chemical reactions. Scientists can now compute the properties and interactions of molecules that, though small, are extremely complex.

Thanks to a $2.6 million grant from the National Science Foundation in 2005, Krylov has launched a new center to enable more laboratory chemists to take advantage of the state-of-the-art tools of computational chemistry.

In September 2006, the associate professor of chemistry and three colleagues received a five-year grant to establish the Center for Computational Studies of Electronic Structure and Spectroscopy of Open-Shell and Electronically Excited Species. The College also provided support for the multi-university center, which will provide remote access to its chemistry cyber-facility to scientists at five campuses.

In addition to Krylov, the project’s principal investigators are Joel Bowman of Emory University, William Polik of Hope College in Holland, Mich., and Wee Ling Wong of USC’s Integrated Media Systems Center (IMSC) and the Viterbi School of Engineering.

Using computational and theoretical analyses to strengthen or support laboratory findings has become more and more common. “It’s important for the interpretation and deeper understanding of experimental results,” said Krylov. “And theoretical predictions can save a lot of time and resources when designing new experiments.”

That has led Krylov to work closely with many experimental chemists over the years, and inspired her to create the center. “From our collaborations with experimentalists, I realized that most would benefit from being able to do the calculations themselves,” she said.

But, she notes, the field is so new and the technology so specialized that most graduate students in experimental labs receive no training in these advanced computational techniques. Further, most groups do not have access to the type of computers or facility needed to do the intensive computations.

The advanced chemistry software that Krylov uses requires a specific computer configuration — one in which each computer node is equipped with a large memory, a large amount of local disk space and very fast input-output ability.

Krylov’s team has completed building the 11-atom computer cluster that will form the cyber-facility at the core of the new center, as well as its Web site. “This will be a focused facility for computational open-shell chemistry,” Krylov said.

The facility will provide remote access to the 10 experimental groups taking part in the center’s pilot program, including USC College of letters, arts and sciences. Students and scientists will be able to download the software and access the helpdesk by means of the Internet. The new facility will provide an example of parallelism, which is one of the most important aspects of computational chemistry.

Chemist Anna Krylov leads a federally funded center that aims to add computational techniques to the experimentalists’ toolkit. Krylov received another honor this year — the 2007 Dirac Medal from the World Association of Theoretical and Computational Chemists. Named for Nobel Prize-winning physicist Paul Dirac, the medal recognizes the most outstanding computational chemist in the world under 40.

University, University of Chicago and California State University, Los Angeles.

The groups will receive training and technical support and provide feedback to center investigators on the cutting-edge computational methods and software being developed by Krylov and Bowman. A leader in undergraduate chemical education, Polik will lead efforts to create new and improved graphic interface and interpretation tools.

Wong will lead the design and creation of distance learning tools and online education modules. Senior scientist Kadri Diri, who has a Ph.D. in computational chemistry, will coordinate the center’s support and educational efforts.

Diri already has started working with Wong to create a series of video lectures featuring experts explaining fundamental concepts of computational as well as quantum chemistry. The lectures will be stored in an online digital library, and will target a wide audience, from undergraduates to advanced experimental scientists. They also plan to create an online, Wikipedia-like quantum chemistry learning tool, allowing users to help create, edit and update content.

—Eccs Emerson

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The facility will provide remote access to the 10 experimental groups taking part in the center’s pilot program, including USC College of letters, arts and sciences. Students and scientists will be able to download the software and access the helpdesk by means of the Internet. The new facility will provide an example of parallelism, which is one of the most important aspects of computational chemistry.

Chemist Anna Krylov leads a federally funded center that aims to add computational techniques to the experimentalists’ toolkit. Krylov received another honor this year — the 2007 Dirac Medal from the World Association of Theoretical and Computational Chemists. Named for Nobel Prize-winning physicist Paul Dirac, the medal recognizes the most outstanding computational chemist in the world under 40.

University, University of Chicago and California State University, Los Angeles.

The groups will receive training and technical support and provide feedback to center investigators on the cutting-edge computational methods and software being developed by Krylov and Bowman. A leader in undergraduate chemical education, Polik will lead efforts to create new and improved graphic interface and interpretation tools.

Wong will lead the design and creation of distance learning tools and online education modules. Senior scientist Kadri Diri, who has a Ph.D. in computational chemistry, will coordinate the center’s support and educational efforts.

Diri already has started working with Wong to create a series of video lectures featuring experts explaining fundamental concepts of computational as well as quantum chemistry. The lectures will be stored in an online digital library, and will target a wide audience, from undergraduates to advanced experimental scientists. They also plan to create an online, Wikipedia-like quantum chemistry learning tool, allowing users to help create, edit and update content.

—Eccs Emerson

It Computes: Chemistry Cyber-Facility

Center to offer cutting-edge tools, training for lab chemists

USC College theoretical chemist Anna Krylov’s research lab has no beakers, no bottles of chemicals labeled in fine print. Her work — to understand the behavior and characteristics of highly reactive, unstable molecules produced during chemical reactions — is all done on her computer.

Since the 1960s, computer-driven approaches have increasingly enabled chemists like Krylov to apply the laws of quantum mechanics to chemical reactions. Scientists can now compute the properties and interactions of molecules that, though small, are extremely complex.

Thanks to a $2.6 million grant from the National Science Foundation in 2005, Krylov has launched a new center to enable more laboratory chemists to take advantage of the state-of-the-art tools of computational chemistry.

In September 2006, the associate professor of chemistry and three colleagues received a five-year grant to establish the Center for Computational Studies of Electronic Structure and Spectroscopy of Open-Shell and Electronically Excited Species. The College also provided support for the multi-university center, which will provide remote access to its chemistry cyber-facility to scientists at five campuses.

In addition to Krylov, the project’s principal investigators are Joel Bowman of Emory University, William Polik of Hope College in Holland, Mich., and Wee Ling Wong of USC’s Integrated Media Systems Center (IMSC) and the Viterbi School of Engineering.

Using computational and theoretical analyses to strengthen or support laboratory findings has become more and more common. “It’s important for the interpretation and deeper understanding of experimental results,” said Krylov. “And theoretical predictions can save a lot of time and resources when designing new experiments.”

That has led Krylov to work closely with many experimental chemists over the years, and inspired her to create the center. “From our collaborations with experimentalists, I realized that most would benefit from being able to do the calculations themselves,” she said.

But, she notes, the field is so new and the technology so specialized that most graduate students in experimental labs receive no training in these advanced computational techniques. Further, most groups do not have access to the type of computers or facility needed to do the intensive computations.

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The College deans have named 16 diverse projects to be funded in the inaugural round of programs emphasizing research infrastructure and expansion of interdisciplinary work. The competition was launched last fall and the awards were announced in February. The projects fit strategic goals set out by the College and the Office of the Provost, and the list provides a glimpse into future research and academic advancements at the College. Those selected represent the broad range of academic innovation pursued by College faculty.

For the Research Infrastructure Initiative, the faculty was asked to submit proposals that would facilitate the provost’s initiatives in the arts and humanities, biomedical imaging, biomedical nanoscience, China studies, future fuels and energy, and immigration and integration.

For the Interdisciplinary Projects, Programs and Centers Initiative, the faculty offered proposals that would create or expand collaborative projects, research programs and interdisciplinary centers. The 16 selected are:

**Will Berelson**, associate professor of earth sciences, will develop a new research program that merges microfluidics and geobiology. The program targets the creation of partnerships among USC geobiologists, engineers and others to seed research in the field and build prototype equipment.

**John Bowlt**, director of the Institute for Modern Russian Culture and professor of Slavic languages and literatures, will use the award to preserve and provide access to the newly donated Ferris Collection of Stalinist and Perestroika Culture. The collection of more than 10,000 items includes a broad range of written material and art from the Stalin and Perestroika eras.

**Micheal Dear**, professor of geography, received funding to create a multimedia archive of socioeconomic, demographic and land-use changes along the U.S.-Mexico borderlands from 1848 to the present. This project will support both the College’s Latin America Initiative and the provost’s Immigration and Integration Initiative.

**Daniel Lidar**, associate professor of chemistry and electrical engineering, will establish the USC Center for Quantum Information Science and Technology, which will advance research in the emerging field, from theoretical implementation of simple atomic, photonic and solid-state hardware to the development of quantum computing structures and algorithms.

**Nancy Lutkehaus**, director of the gender studies program and associate professor of anthropology and gender studies, will create the Southern California Women Artists Archive. The archive will utilize teams of undergraduates to collect digital interviews and other archival material from women artists in the region.

**Lin Chen**, associate professor of biological sciences, is creating an interdisciplinary program among structural biologists and neurobiologists focusing on structure and function studies of neural receptors, transporters and ion channels. The grant will enable the purchase of high-end equipment that can be used to understand and analyze neural signaling at the molecular level.

**Xiaojiang Chen**, professor of biological sciences, received funding to help equip the NanoBiophysics Core Facility, which will provide USC researchers with instrument services and create a place to exchange ideas.

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**For the Interdisciplinary Program for the Study of Faith in High Definition, Jane Iwamura**, assistant professor of religion and of American studies and ethnicity, is forming a multidisciplinary team to explore how religion and ethics are embodied in television programs. The project will address religious beliefs and cultural values in television genres ranging from dramas to reality shows to news programs.

As director of the newly created Canadian Studies Program, **Patrick James**, professor of international relations, will fund a variety of programs and classes focused on generating awareness of Canada. There will be a particular focus on Canadian culture, values and that nation’s relationships with California and the United States.

**Marcus Levitt**, associate professor of Slavic languages and literatures, will establish a Slavic Digital Research Center. It will help solve special problems scholars encounter when working with Slavic texts. Common areas of interest include the development of software that can handle the Cyrillic alphabet, and creating standards for archiving and web publishing.

**Gayla Margolin**, professor of psychology, is forming the USC Center for the Study of Urban Youth. The center will seek solutions to complex problems affecting children and families in the Los Angeles area. The center will focus on research and practical applications concerning at-risk youth and preserving family well-being in urban communities.

**As director of the USC Center for Religion and Civic Culture (CRCC), Donald Miller**, the Leonard K. Firestone Professor of Religion, has traveled to Rwanda, Tanzania, India, Brazil and Armenia, where he has seen the need to document how religious people attempt to create the sacred in the midst of the profane. The funding will allow the CRCC to purchase portable video production equipment that can be used in field research.

**Anne Porter**, assistant professor of art history, religion and classics, will form an Interdisciplinary Center for Commemorative Studies (ICCS) to promote innovative research on how humans remember and celebrate key events, such as the creation of the World Trade Center memorial to commemorate September 11. To examine these issues, ICCS will create a collaborative community of architects, artists, designers, art historians, archaeologists, political scientists, historians and anthropologists, as well as students of religion and literature.

**For his research in paleoanthropology, Lowell Stott**, professor of earth sciences, will purchase equipment that can be used to investigate how climate systems behaved on a monthly-to-seasonal basis in the past. This is an important goal of the United States’ strategic climate change research initiative.

**Alan Watts**, director of the Neuroscience Research Institute and professor of biological sciences, will create a Center for the Study of Neuro-Metabolic Interactions (CSNMI) to study how the brain and nervous system control metabolism. Diabetes and obesity, for instance, involve complex neural-metabolic interactions that will be investigated to better understand the disease process.
Lasting Legacy

Helen M. Donegan (B.A., physical education, ’49) died March 11 in Laguna Beach, Calif. donegan was injured in an auto accident. She was 77.

In 2004, she created the Helen Donegan Fund for International Study at USC College. The $500,000 gift created an annuity to provide scholarships for foreign students to study at USC and for USC students to study abroad.

The motivation to establish a fund came 18 years ago when Helen (who preferred to be called by her first name) was shopping in Shanghai. A student approached her to practice his English. Her late husband, Jim, fond of Chinese cutlery, asked the boy to lead her to a reputation of a shop. The boy offered to pay for the knives in Chinese yuan if the Donegans gave him the equivalent in dollars.

They agreed after the boy explained that to study abroad he needed to pay for some of his qualifying exams in dollars. Eventually, the student — Dennis — came to the United States and earned a master’s at Brigham Young University and a second master’s in finance and economics at Columbia University.

“Dennis is the inspiration for the gift,” Helen said in a 2004 interview with USC College Magazine.

Seeing how hard Dennis worked to get through school, she said, was the impetus behind her decision to help other students attend college. Her dedication to global travel and her alma mater were also major factors.

Helen was born in Walnut, Calif., where her family had a citrus farm. Inspired by a high school teacher who was a USC alumnus, she came to USC.

After teaching for a few years in Whittier and Riverside, Helen took her first cruise in 1957. “I thought I’d died and gone to heaven,” she said. She loved it so much her friends asked her, “Why don’t you just go and get yourself a job on the ship?”

So she did. For five years, she sailed from Los Angeles to Australia and back, on a route that included stops in New Zealand, Tahiti, Rotaranga and Pango Pango. She traveled that route over 25 times.

But her passion for travel was unabated — her love for the sea eventually took her and Jim on 10 world cruises, among many other trips. The trip to Chile fostered the relationship with Dennis that continued until her death. An African mohair tapestry that graced the head of her bed was a souvenir from a trip to Mombasa. But her favorite place, she said, was Antarctica, which was evident from the proliferation of penguin paraphernalia around her house. “It’s nature at its all-time best,” she said.

Helen was active in the desert chapter of the Trojan League, and kept in close touch with fellow alumni.

In 2004, she discussed her lasting relationship with six of her classmates and how they had maintained a Round Robin letter among the small group for more than 50 years. Three of them were Helen of Troy, an officer, and hostess that represented USC at social events, and one was a Mortar Board president. They were members of four different sororities; Helen was an Alpha Phi. Donations in her memory should be sent to the USC/Norris Comprehensive Cancer Center.

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OBITUARIES

John Ariasudo, 94, (B.S., chemistry, ’38, M.D., ’40) died Feb. 10, 2007. He grew up in El Centro, Calif., graduating from Central Union High School. A member of the 82nd Airborne Division in World War II, Ariasudo was awarded the Purple Heart and Silver Star. After the war, he returned to USC to attend medical school. He practiced in San Bernardino and El Centro.

Meredith L. Wann, 86, (B.A., history, ’43) died Oct. 24, 2006. She moved to Portland, Ore., in 1945 when she was a ninth-grade English and social studies teacher for 26 years. Wann is survived by a daughter, two sons, three grandchildren and a great-grandchild.

Rhale Kirsch, 87, (B.A., ’47) died Nov. 9, 2006. Kirsch’s studies were interrupted when he joined the Navy after the attack on Pearl Harbor. Initially a sailor on a sub-chaser, he was transferred to officer-training school, eventually earning the rank of lieutenant. He served as a communication officer aboard the USS Mount Olympus in the South Pacific and was among the first Americans to view Hiroshima after the 1945 atomic bomb. At the end of World War II, Kirsch refused a promotion to lieutenant commander and an assignment to explore the South Pole, instead returning to finish his degree at USC. He loved the outdoors and worked as a park ranger at Yosemite National Park. Later, he and his wife settled outside of Redlands, Calif. Kirsch is survived by his wife, daughter, two sons, sister and five grandchildren.

James W. Logan, 82, (B.A., political science, ’49) died Jan. 7, 2007. Logan taught history in a high school in Fresno after graduating. He served in the Marines during World War II and later became a planning commissioner and Fresno City Council member. Logan was co-founder of the Cedar Lanes Bowl and Restaurant and owned Nancy’s Restaurant until he became a business consultant. He often appeared for clients before the Fresno County Board of Supervisors on development issues. Additionally, Logan served as president of the local United Way board and the Fresno Unified School Educational Foundation. He loved the outdoors and had worked as a park ranger in Kings Canyon National Park.

George Bernau, 60, (B.S., business administration, ’66; M.A., law, ’73) died Dec. 12, 2006. After graduation, Bernau became a lawyer and turned his “what-if” musings into popular novels. The first, Promises to Keep, was published in 1988 and imagined a full life for President Kennedy. Purchased for $750,000 by Warner Books, it was a record advance for a first novel at that time. Bernau later published similar what-if books on Marilyn Monroe and Adolf Hitler’s propagandist and henchman, Joseph Goebbels. He also wrote occasional book reviews for the Los Angeles Times. He is survived by his daughter, Erin.

Walter Willoughby Carruthers, III, 62. (B.A., political science, ’66) died Feb. 7, 2007. After earning his bachelor’s, Carruthers earned a master’s in public administration and an M.B.A. from USC. He was a senior underwriter for Scotsdale Insurance Company for 17 years. A storyteller, he had a great passion for writing stories about his childhood in Hollywood in the 1950s. He was also an avid member of the Pima Air Museum and participated in annual Scottsdale festivals in Arizona and national Scottish Highland competitions. He is survived by his wife, Connie, and his daughter, Laura.

Patricia Jean “P.J.” Armstrong Smoot, 58, (B.A., English, ’71) died Nov. 22, 2006. She met her husband of 38 years, James R. Smoot, at USC and taught high school English after graduation. Smoot went on to work in the New York and Paris offices of Price Waterhouse and in the financial and human resources divisions of International Paper. After retiring, she served and prepared as president of The Point of Contact, a management consulting firm. She is survived by her husband, parents, sister, three brothers, aunt and uncle, as well as several nieces, nephews and cousins.

John S. Boskovich, 49, (B.A., philosophy, ’80) died Sept. 24, 2006. He wrote the 1990 movie “Without You I’m Nothing” —a movie —with comedian and actor Sandra Bernhard, who also starred in the film. Boskovich taught art at the Otis College of Art and Design in Los Angeles. His photography was exhibited at the Rosamund Felsen Gallery in Santa Monica.

Compiled by Kirsten Holguin
Leaving His Worries Behind

T.C. Boyle’s latest novel, Talk Talk, explores deaf culture and identity theft

T. C. Boyle is serious about protecting his uniqueness. He’s also a chronic worrier, so it makes sense that his 19th novel, Talk Talk (Penguin Group, 2006), would explore the horrors of identity theft.

A thriller, this tale differs from Boyle’s classical works. Equal parts Hitchcockian, Kafkaesque and Borgesian, the novel is an unconventional page-turner about identity and the role language plays in the 21st century. It’s also about love and isolation — and some of it is hilarious.

“I worry about everything that’s going on in the world,” said Boyle, Distinguished Professor of English at USC College. “In fact, I read the L.A. Times every morning, and I just want to shoot myself.”

Granted, it would be futile to try to feign the identity of someone as distinctive as Boyle, whom critics have called the most imaginative novelist of our time.

From his curious middle name — Coraghessan — and his eccentric hair, red Converse high-tops and silver ear clip to his satirical folk tales of feral cats and ravenous alligators as well as his novels about xenophobia and environmental destruction, he’s a writer seemingly from another galaxy.

Still, Boyle — who regularly shreds, burns and brings to the recycling center all of his personal papers and documents — became fascinated by the widespread crime of identity theft.

“Why is it so disturbing to us?” wondered Boyle. “What is our identity to begin with? And why is it so important to be an individual?”

Boyle was meditating on all this the day he visited his dentist.

“My God, there was the most beautiful woman I’ve ever seen sit-ting in this chair before you,” the dentist told Boyle. “And you know what? She was deaf.”

The idea triggered Boyle’s imagination.

“As soon as he said this to me, well, of course he got out the jackhammer and the drill and the rest of it,” Boyle said. “I closed my eyes and began to understand that my heroine was going to be deaf.”

Shortly afterward, Dana Halter, a deaf schoolteacher and the protagonist in Talk Talk, was created. The novel follows the misadventures of Dana, whose peaceful life with her earliest, artist-geek boyfriend in San Roque (a mythical Santa Barbara) crumbles in a case of mistaken identity when she is jailed for crimes she did not commit.

She and boyfriend Bridger set out to find the perpetrator in a trip across America that tests their love.

By phone from his home near Santa Barbara, Boyle discussed the novel and conceded that his dentist story might be slightly embellished.

“It might have been a teeth-cleaning,” Boyle said. “But the [rest of the] story is true.”

Boyle settled on a deaf protagonist because he realized that a story about identity theft would be more intriguing if the theft happened to someone who was special in some sense.

“We’re always worried about ethnic divisions and national divisions,” Boyle said. “But everybody who can hear is of one culture, as opposed to everyone in the world who can’t hear.”

While conducting research, Boyle visited Gallaudet University in Washington, D.C., the nation’s leading college for the deaf. One student predicted: “You’re just going to do as all novelists have done with deaf people. She’ll be a victim.”

Boyle’s protagonist is no pushover. Dana Halter is a devoted, literature-loving teacher. But she’s also angry, bullheaded and smug.

She is unrelentingly protective of her deaf identity, yet she’s uncomfortable in her own skin. She routinely sees a speech therapist to “keep herself sharp” and practices speaking in front of the mirror.

If someone detects she’s deaf after she speaks, she becomes agitated and feels insulted.

The man who steals her identity, Peck Wilson, is equally as complex. Although clearly amoral and focused on himself, he garners some sympathy because his life contains its own tragedies and he spends the money that he steals on others.

Boyle — who has written several books about historical figures of the 20th century such as cornflake inventor John Harvey Kellogg and sex researcher Alfred Kinsey — is intrigued by the narcissistic personality.

“Like a typical criminal personality, the narcissistic personality is self-aggrandizing,” he said. “It’s also the kind of personality that gurus have and, of course, novelists have. Many fascinating people are like this. And I keep exploring it to see what it’s all about.”

For his next novel, Boyle digs into the turbulent life of Frank Lloyd Wright. Boyle, who lives with wife, Karen, and their three children in a 1909 home designed by Wright, said his work about the women in the life of the famous architect was inevitable.

He keeps picking the brain of the narcissist to see where it may lead.

“No too much with Peck, but with Kellogg and Kinsey and now with Frank Lloyd Wright, what is the danger to the audience,” he said, “to the follower of the guru?”

— Pamela J. Johnson