USC Dornsife researchers investigate how memory works and why we forget.

The Memory Issue

REMEMBER THIS

USC Dornsife researchers investigate how memory works and why we forget.
Brighde Mullins has been awarded a Guggenheim Fellowship for her work as a playwright. With the fellowship’s support, Mullins is spending the Fall 2012 semester researching and writing about Phillis Wheatley — a slave who became the first African American woman to publish a book of poetry in the United States. Mullins calls playwriting a strange and difficult form. “It’s a thrilling time to be a playwright because people crave proximity to a live event,” she said. “William Butler Yeats talked about the ‘fascination of what’s difficult’ and he said that’s what attracts writers to their art. For playwrights, it really is the fascination of what’s difficult because playwriting is a form that takes a lot of collaborators even as it starts on the page, with the word, with story, with character.” An artist cannot wait for ideas, Mullins said. Writing plays requires space and unstructured time to explore ideas, which is exactly what the fellowship will provide Mullins, who was previously named a United States Artists literature fellow and a Whiting Foundation fellow. “This fellowship gives me a sense of permission married to a sense of momentum,” she said. Mullins’ Poetry: A Play has been commissioned by the Pioneer Theatre Company in Salt Lake City, Utah.
The Kingdom of Memory

One tiny drop of pond water. That’s all it took. Peering down a microscope at the age of 10, I can distinctly remember glimpsing — for the first time — the miniscule creatures alive in that tiny sample. The hundreds of cilia that beat in unison to propel the Paramecium. The rotating, whip-like flagella that moves the Euglena about. The millions of microbes found in a splash of water.

I began to realize that there is so much more to uncover in life than what you can see at the ends of your hands and feet. I was sold on becoming a scientist.

Throughout my subsequent path as a scholar, teacher and leader, I have often reminded myself of that moment of pure joy. However, what I have found even more inspiring is witnessing such Eureka moments alongside students as they not only grasp a concept, but run with it, synthesize it, extend it in their own ways. That passage into discovery is often life-changing and always unforgettable.

Each of us has an eclectic set of recollections that in no small part defines who we are. In this issue, we consider the complex subject of memory through multiple lenses: science, literature, history, culture and family. For as Holocaust survivor and writer Elie Wiesel noted, “In the end, it is all about memory, its sources and its consequences.”

As the 21st dean of USC Dornsife, I have the privilege of leading our students, faculty, alumni, staff and supporters during a pivotal time in the university’s history. We are embarking together on a journey that will no doubt leave an indelible mark upon our collective memory as Trojans as we build upon our strong liberal arts ethos and graduate programs while continuing to ensure access to the world-class faculty and facilities for scholarship.

I invite all of you to join in the cutting-edge narrative that comprises USC Dornsife, so we can emerge with experiences that will help shape our shared future.

Steve Kay
Dean of USC Dornsife
Anna H. Bing Dean’s Chair
The USC Shoah Foundation — The Institute for Visual History and Education offers a perspective on genocides that have occurred throughout the world. Preserving these memories helps ensure that for generations to come these stories will be a compelling voice for education and action. By Alina Tugend

Memory is our brain’s library, the key to our consciousness and identity. Its loss may be triggered by obesity, head injury, even traffic pollution. Can fasting help? By Pamela J. Johnson

For Macarena Gómez-Barris, memories weave a complex chronicle of culture and power in South America. By Michelle Salzman

Judith Anne Still ’64 has devoted herself to rescuing her composer father’s forgotten legacy. By Susan Bell

From the Dean
Life Line
New dean installed; Dutch ambassador visits USC; New neurosciences facility dedicated; Professor investigates human trafficking
SOCIAL DORNSEIFE
Discover bonus material through your smartphone or tablet
FROM THE HEART OF USC
Studying global challenges in the Arctic; Recording the transit of Venus; New Hindu studies chair
Curriculum
Archive
Profile
Lexicon
In the Field
Our World
DORNSEIFE FAMILY
Retiring faculty; Olympians bring home the gold; Alumnus’ colt wins at Kentucky Derby
Legacy
Faculty News
Faculty Canon
Alumni News
Alumni Canon
Remembering
IN MY OPINION
Your Greatest Legacy
ON THE COVER
A reminder to readers that USC Dornsife researchers are at the forefront of unraveling the mysteries of memory and cognition. Photo by John Livzey
“Our goal is for the U.S. to see the Netherlands as a country with shared history and values.”
Renée Jones-Bos, the Netherlands ambassador to the United States, talks to students in “EUROPEAN FOREIGN POLICY AND SECURITY ISSUES” about mutual interests between the two countries.

USC Dornsife Magazine nabs a national CASE CIRCLE OF EXCELLENCE AWARD, bronze, in periodical design for the Fall 2011/Winter 2012 issue.

“Bob’s ongoing commitment is helping us bring the messages of the institute’s Visual History Archive to young people worldwide.”
Steven Spielberg, founder of the USC Shoah Foundation — The Institute for Visual History and Education, presents Chairman and CEO of The Walt Disney Company Robert A. Iger with the institute’s highest honor, the AMBASSADOR FOR HUMANITY AWARD.

USC Dornsife issues more than 2,500 degrees during COMMENCEMENT 2012: 1,969 bachelor’s, 291 master’s, 69 graduate certificates and 174 Ph.Ds. View photos at dornsife.usc.edu/facebook

Air pollution experts John Seinfeld of Cal Tech and Kirk Smith of the University of California, Berkeley, receive the 2012 TYLER PRIZE FOR ENVIRONMENTAL ACHIEVEMENT, administered through USC Dornsife.

Continuing USC’s long tradition of nurturing successful Olympians, 24 members of the USC Dornsife Trojan Family compete at the 2012 SUMMER OLYMPIC GAMES in London.

Ground is broken on VERNER AND PETER DAUTERIVE HALL. USC’s first interdisciplinary social sciences building that will serve as a center for research and teaching.

USC Dornsife welcomes 33 NEW FACULTY MEMBERS. Learn more about their scholarship and research interests at dornsife.usc.edu/new-faculty-2012-13

The DORNSIFE NEUROSCIENCE PAVILION is dedicated. The new facility houses the Brain and Creativity Institute, directed by University Professor Antonio Damasio.
The world of letters, arts and sciences isn’t limited to the 64 pages you’re holding in your hands. We have added more content throughout the issue that you can access through your smartphone or tablet all year long. This includes inspiring videos, slideshows, music and even a recipe.

1. Download the USC Dornsife AR (Augmented Reality) App on your smartphone or tablet via your mobile app store. The app is available for Android and iOS (iPhone/iPad).

2. Look for the Scan for Extras button throughout the magazine to find out what pages have more ideas to discover.

3. Open the USC Dornsife AR (Augmented Reality) App and hold your phone 8–12” from the page. Enjoy videos, slideshows and music that appear on your screen.

Extras Include:

ARCHIVE
View a collection of photos from the International Mission Photography Archive.
Page 8

LEXICON
Watch Brian McGackin MPW ’10 read his poem “Kids Today.”
Page 13

STILL LIFE
Listen to William Grant Still’s original compositions “Gamin.”
Page 49
The Arctic is the land of the midnight sun, ice-covered ocean and permafrost. Here, at the tippy top of the northern hemisphere, is a remote and beautiful landscape at the heart of a complex situation.

As polar ice caps shrink — an indicator of climate change — newly exposed access to oil and gas resources have spurred a mad dash for energy riches. With the region encompassing Canada, the United States, Norway, Finland, Russia, Sweden, Iceland and Denmark, territorial claims have ignited.

This summer, students enrolled in the course “Ecological Security and Global Politics” had the extraordinary opportunity to explore these issues by meeting with top diplomats, energy experts, scientists and leaders from environmental organizations in the Arctic region. The class is part of USC Dornsife’s Problems Without Passports (PWP) program, which sends students across international boundaries to investigate complex societal issues.

Under the guidance of international relations faculty Steven Lamy and Robert English, students traveled to Stockholm, Sweden; St. Petersburg, Russia; and Rovaniemi, Finland. They met with Gustav Lind, chairman of the Arctic Council, among a number of other prominent leaders of organizations working to sort out the ecological and political issues at hand.

In addition to engaging in intensive policy research, students got a chance to understand the Arctic in a way no textbook or Web site could convey. One side trip brought students to a village in Lapland, the largest region in Finland, where they spoke with indigenous cultural officials about preserving native languages and promoting sustainable tourism. There was also an impromptu cookout on the Gulf of Finland.

“I think it was important for the students to just stop working, stick their feet in virtual Arctic waters and see a little bit of the nature they were talking about in their seminars and books,” English said.

For international relations major Julia Mangione, opportunities like this are exactly why she chose to attend USC Dornsife. Mangione is writing a senior thesis on indigenous participation in the Arctic Council.

“We met phenomenal academics and researchers from the University of St. Petersburg, the University of Lapland and the Stockholm International Peace Research Institute,” she said. “Now I have contacts with all of these people. I can write them an e-mail and they know who I am. It’s really powerful to have those connections.”

During their travel as part of “Ecological Security and Global Politics,” students got a chance to understand the Arctic in a way no textbook or Web site could convey. Here they stand at the Arctic Circle line in Lapland, Finland.
The 21st-century American immigrant bears little resemblance to the wave of Europeans who arrived during the previous two centuries. Today, 85 percent of the country’s immigrants come from Asia, Latin America or the Caribbean, according to the U.S. Census Bureau. In California, nearly 27 percent of the population is foreign-born.

In recognition of this contemporary trend, Jody Agius Vallejo, assistant professor of sociology, teaches a course called “Immigrant America: Migration, Incorporation and the New Second Generation,” in which undergraduates study how and why people migrate to the United States; immigrants’ impact on the social, economic and political landscape; and the external forces shaping pathways to mobility and assimilation in American society.

“I want to help students understand human differences in a way that will prepare them to link scholarship to larger social issues and interact in a society that is increasingly diverse and global,” Agius Vallejo said. “I accomplish these goals by engaging the students in active learning projects outside the classroom.”

Some students volunteer as tutors for immigrants preparing for the American citizenship exam through USC Dornsife’s Joint Educational Project. Other students conduct in-depth interviews with immigrants on subjects discussed in class. The work informs their final research papers, allowing students to apply abstract concepts to real people and issues. —L.P.
During the 19th century, the proliferation of Christian evangelical missionaries across the globe became a prominent social movement. Protestants and Catholics from North America and Europe set out on often-dangerous missions to bring the gospel to indigenous people in the remotest areas of Africa, Asia, Oceania and the Caribbean. As the emerging art form of photography became more affordable and the equipment more compact, missionaries began to photograph the various people, places and cultures they encountered for their congregations back home.

For more than a decade, the Center for Religion and Civic Culture — housed in USC Dornsife and directed by Donald Miller, Leonard K. Firestone Professor of Religion — and the USC Libraries have partnered with archives around the world to digitize 82,000-plus historical photographs and make them publicly available through the International Mission Photography Archive (IMPA) database. A recent $280,000 grant from the National Endowment for the Humanities will allow USC and partner archives to add an additional 20,000 images to IMPA.

“This vast collection is of obvious interest for scholars of religion,” said Jon Miller, research professor of sociology and the grant’s principal investigator. “But it is also important for those looking for the historical traces of economic, cultural, political and technological change.” — D.K.

Margarethe Sasembe of Cameroon's Bamum tribe poses for a portrait in her native headdress. Note the ceremonial scarification on her forehead and the characteristic holes in her earlobes.
The Ocean’s Vitamin Deserts

Sergio Sañudo-Wilhelmy and his team develop a new method of analyzing water samples and identify vitamin-deficient zones in the ocean.

Using a newly developed analytical technique, a team led by USC Dornsife scientists was the first to identify long-hypothesized vitamin B-deficient zones in the ocean.

“This is another twist to what limits life in the ocean,” said Sergio Sañudo-Wilhelmy, professor of biological and earth sciences, and lead author on a recent Proceedings of the National Academy of Sciences (PNAS) paper about the vitamin-depleted zones, or so-called deserts.

B vitamins are organic compounds dissolved in the ocean and are important for living cells to function. Zones poor in B vitamins may inhibit the growth and proliferation of phytoplankton, which are tiny microorganisms at the base of the food chain in the ocean.

“An important result of our study is that the concentrations of the five major B vitamins vary independently and appear to have different sources and sinks,” said co-author David Karl, professor of oceanography and director of the Center for Microbial Oceanography: Research and Education at the University of Hawai‘i. “This could lead to complex interactions among populations of microbes, from symbiosis to intense competition.”

In addition to being food for the tiniest sea animals, phytoplankton also absorb carbon dioxide from the atmosphere, an important process at a time when levels of atmospheric carbon dioxide from the burning of fossil fuels are the highest they have been in half a million years.

The team developed a new method of concentrating water samples and then analyzing them using a mass spectrometer, which identifies and measures the quantity of an unknown compound in a given sample by first ionizing and breaking up the compound and then quantifying the fragmented ions or molecules produced. Mass spectrometry is also used to identify steroid use in athletes’ urine samples.

Sañudo-Wilhelmy collaborated on the research with William Berelson, Lynda Cutter, Emily Smail, Laura Gomez-Consarnau, Eric Webb and Maria Prokopenko from USC Dornsife, as well as scientists from the University of Hawai‘i and the Universidad Autónoma de Baja California.

The National Science Foundation (Chemical Oceanography Program and Office of Integrative Activities) supported the research. Additional support was provided by the Gordon and Betty Moore Foundation. —R.P.

Restocking Hope

Students collect 300 books to donate to Japan’s American studies libraries devastated by the 2011 earthquake and tsunami.

This past Spring, 13 students in USC Dornsife’s Japan Immersion Program collected 300 American studies books from schools across campus.

The students took the books to Japan during their two-week immersion trip sponsored by the Norman Topping Student Aid Fund. The books arrived in Sendai in northern Japan at Tohoku University, where they were distributed to libraries being rebuilt after the devastating 9.0-magnitude earthquake and tsunami of 2011.

Before the tsunami, American studies libraries were abundant throughout Japan. Japanese people used the books to build on their English language skills and learn about U.S. history. With funding going toward reconstructing destroyed or damaged facilities, scholars have had trouble replacing the books in their newly rebuilt American studies libraries. In the north, many of these libraries were completely wiped out, said George Sanchez, vice dean for diversity and strategic initiatives, and professor of American studies and ethnicity, and history.

“We thought this was a wonderful project for our students,” said Sanchez, who heads the Japan Immersion Program. “It connects us to associations near and dear to our hearts in Japan and it allows our students to connect to faculty here at USC.”

The book project was sponsored by the American Studies Association and Japanese Association for American Studies. —A.B.
Steve Kay is a top expert on genes and circadian rhythms, which serve as the body’s clock for timing the day-night cycle. At USC, Kay continues to run an active research lab, which he considers critical to his role as dean.
FOSTERING INTELLECTUAL COURAGE

Steve Kay awoke his first morning on the island of Manhattan feeling jet lagged, invigorated and hungry.

The new postdoctoral fellow at The Rockefeller University headed to the cafeteria for breakfast. As he surveyed the dining hall, he found just one other person there — Nobel Laureate Fritz Lipmann.

Taking a seat next to the legendary figure credited with ushering in a golden age of research in biochemistry, Kay began to stir his coffee as Lipmann turned and smiled.

He looked Kay in the eye, knowing it was likely his first day at Rockefeller, and said, “Whatever you do here, however much you engage your research topic, make sure it’s something big.”

Kay never forgot those words. “We’re not on this Earth long enough to just take incremental steps,” said Kay, a member of the National Academy of Sciences. “The age of discovery is upon us, whether it’s in the library, whether it’s in the lab, whether it’s in the community. We have incredible opportunities for all of us — students, faculty, staff, the entire Trojan Family — to make big differences right now.”

As the 21st dean of USC Dornsife, Kay believes there is no greater agent for change than education.

“Education is tightly linked to the development of human capital — be it bringing solutions to poverty, to environmental degradation, to health issues,” Kay said. “Putting paint on a canvas, creating computer animation, developing a cure for cancer, that creative instinct is something the world needs; it’s at the heart of generating solutions to every major challenge we face.

“At USC Dornsife, we will continue to cherish the transformative power of education and push forward as the work of our great university has a lasting impact on the planet.”

Kay’s group and others have also explored the ties between circadian rhythms and the body’s metabolism, helping to explain why night-shift workers, postdoctoral researchers, and faculty spanning four major departments.

Under his leadership, UCSD’s Division of Biological Sciences developed new scholarships for undergraduate researchers, mathematical philosophy class as he explored his wide-ranging interests. Near the end of his undergraduate days, he met professor Trevor Griffiths, who enthusiastically persuaded Kay to take a leap

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Choose Your Lens

The Middle East Studies Program gives students an opportunity to move beyond headlines and gain a deeper understanding of the region. by Michelle Saltzman

The Middle East cuts a wide swath: It contains a number of countries, a multitude of languages, cultures and customs, and thousands of years of history. Interests and conflicts resonate on a global scale, such as the unprecedented uprisings that have recently swept throughout the region. Not to mention it’s the birthplace of three of the world’s major religions — Islam, Judaism and Christianity.

Launched in Fall 2011, the Middle East Studies Program in USC Dornsife offers students a chance to dig deeper into the area from the ancient to the present through a major or a minor.

“There’s hardly a single country in the region that hasn’t been in the headlines in the last year,” said program director Kevin van Bladel, associate professor of classics. “The Middle East Studies Program provides students with an opportunity to explore the area in a critical way from a variety of perspectives.”

A hallmark of the program is its interdisciplinarity. Students can choose from courses in American studies and ethnicity, anthropology, classics, economics, history, foreign languages, international relations, Judaic studies, linguistics, political science, and religion. Altogether, 18 faculty members from 12 departments teach within the program.

For freshman Caitlin Wilhelm, the wide range of offerings in a variety of disciplines was central to her decision to select Middle East studies as her major. She’s naturally drawn to the humanities, and is especially interested in learning about history, culture and foreign languages. The Middle East Studies Program lets her combine all of her interests.

“I love the spectrum of classes that I can choose from,” said Wilhelm, who has a second major in linguistics. “They allow me to get a diverse background in the Middle East and gain a fuller understanding of the region.”

The Middle East Studies Program also hosts a number of events to take learning beyond the classroom.

At one lunchtime discussion, “Taking Stock of the Arab Uprisings,” students and guests listened to professors from the departments of international relations, political science, and economics, and the USC Sol Price School of Public Policy assess the revolutions that have taken place over the past year throughout the Arab world.

“It helps to hear what USC scholars have to say about what’s going on,” said Shams Hirji, an accounting major and classics minor. “It’s a great filter about a real-world event.” He attended the talk to gain perspective on what he described as a “once-in-a-lifetime” revolt.

Hirji’s participation meets a goal of the Middle East Studies Program.

“We want students to interact with professors,” van Bladel said. “At an event such as the discussion on the Arab uprisings, students can jump into a live conversation with experts on what’s happening right now in the Middle East.” The program also hosts mixers to give students and faculty an opportunity to get to know one another and make academic and research connections.

“We aim to provide a space for everybody interested in the Middle East to come together and learn from one another,” van Bladel said.

For Wilhelm, that means getting to explore her interests in a program that will help guide her into a career.

“Studying languages, history and culture has given me so many options to consider when I choose what I would like to do with the rest of my life,” she said.
**BROEM**

{broh-uhm} noun 1. a piece of writing, often lyrical or metrical, that contains elements of speech, song, rhythm or rhyme and content pertaining to “bro” subjects such as sports, sex, celebrities, booze or video games; 2. a poem for dudes.

**Origin:** The term “broem” was coined by poet and Master of Professional Writing (MPW) lecturer Amy Gerstler in reference to a poem about Taylor Swift written by then-student Brian McGackin and subsequently appropri ated by McGackin for, as he calls them, “his own selfish purposes.”

**Usage:** “My professor asked me to write a love poem for my English class, so I handed in a broem about how I want to marry Emma Watson.”

Brian McGackin ’10 wrote his first full-length poetry collection, Broetry: Poetry for Dudes, as his final thesis for MPW. The collection was published by Quirk Books in July 2011. He is currently working on his second, third, fourth, fifth and sixth books simultaneously, because, as McGackin asserts, he is a poet “and poets are generally insane.” He is also the cohost of a satiric literary podcast.

Brian McGackin’s broetry collection includes playful verses such as those in “Impact”: “I go to spend money/ because/ it is Sunday/ it is fall/ it is football.”
Astronomer Edward Rhodes and his students record the June 5 transit of Venus at Mt. Wilson Observatory’s historic 60-foot solar tower. by Pamela J. Johnson

Atop Mt. Wilson overlooking Pasadena, Calif., dozens of stargazers peered through telescopes at a celestial wonder. A few people donned T-shirts declaring “I Witnessed the Transit of Venus.”

To mark the event that won’t occur again for another 105 years, a couple was married with a wedding party carrying spinning pinwheels reflecting the sun, catching glimmers of gold.

Amid the hoopla, astronomer Edward Rhodes gathered with some of his students inside the 60-foot solar tower he operates, quietly explaining that the ancient Greek word “planetos” means “wanderer.”

Early scientists understood planets to be celestial bodies orbiting a star. Some planets — such as Venus — would show retrograde motion and appear to back up for a while in a way that was thought to be wandering.

“That’s why the Greeks and Babylonians referred to planets as gods and attributed god-like powers to them,” Rhodes said, adding that in Greek mythology, Helios was the Titan god of the sun.

So in the case of the June 5 transit of Venus across the sun, consider, if you will, that a hockey puck has been hit across the white-hot surface of Helios. That would be Venus making its rare appearance across the face of the sun. Because Venus’ orbit is tilted 3.4 degrees compared to Earth’s, only four transits occur every 243 years.

For the six-hour transit, Rhodes’ USC Dornsife stu-

dents, and Shawn Irish, a USC data analyst and daily operator of the 60-foot tower, took photos of the unfiltered sun with an Ellerman camera every 30 minutes.

“To me as a scientist, it’s really cool to see a little dark dot plodding its way across the sun, and that’s a planet, that’s Venus,” said Matthew Orr, a junior majoring in astronomy in USC Dornsife and astronautical engineering at USC Viterbi School of Engineering.

During the transit, the group also took a pair of digital photos each minute using a narrowband filter and an electronic camera. These images provide measurements of the intensity of the solar disk before and during the transit so that the amount of dimming that Venus caused can be calculated for comparison with the dimming introduced during stellar transits by extrasolar planets.

Taking the research a step further, transits may help scientists detect so-called Goldilocks Zones, or areas of space in which a planet is just the right distance from its home star, so that its surface is neither too cold nor too hot thus possibly inhabitable.

Meanwhile, undergraduates in Rhodes’ “Astronomy 100” class watched the transit through a telescope set up on the University Park campus. Joseph Vandiver, laboratory manager for USC Dornsife’s Department of Physics and Astronomy, and Anthony Spinella, a USC Viterbi graduate student who in 2009 earned his bachelor’s degree in physics in USC Dornsife and has been a data analyst for Rhodes ever since, assisted students.

Daniel Ben-Zion, a junior majoring in physics in USC Dornsife, and Elly Glavich, a senior at USC Thornton School of Music, were among those waiting in line at the telescope.

“I feel so privileged to see something that won’t happen again for more than 100 years,” Glavich said.

Anna Miner, who graduated in 2012 with a bachelor’s degree in international relations with an emphasis on Middle East relations, has been awarded a Qatar Scholarship. The Qatar Scholarship Program of Georgetown University offers dedicated Arabic language students from the United States the opportunity to master their skills in an intensive Arabic language program at Qatar University in Doha for an academic year. Students are given the opportunity to intern or hold a job in the country.

A Seattle native, Miner spent a year in Jordan studying standard Arabic and Jordanian Arabic through USC Dornsife’s Overseas Studies Office and the nonprofit, nongovernmental organization Council on Educational Exchange. After her year in Qatar, Miner plans to join the Peace Corps before pursuing a master’s degree in international relations.

“USC Dornsife has helped me achieve my goals by providing a plethora of academic and study abroad options,” Miner said. “The School of International Relations provides so many opportunities, you never feel you need to chart a very narrow path for yourself.”
Eye-Opening Science

The Joint Educational Project’s Young Scientist Program teaches basic physics to 32nd Street School children through hands-on demonstrations.

Fourth-grader Zakar Martin cut a lemon in half. He pushed a nail into the squishy side of one half and a penny into the other half of the fruit’s pulpy side. Then he clamped one end of a wire to the copper penny and the other end to the zinc nail. A volt meter indicated electricity was flowing through the wires.

The 32nd Street School student’s eyes widened.

“I liked science before, but I really like it now,” Martin said enthusiastically. “What I like most about it is learning that an everyday fruit can make energy. That’s pretty cool.”

For Martin and 42 other youngsters, the exercise helped to demystify the complexities of science. A main objective of the Young Scientists Program (YSP) based in USC Dornsife’s Joint Educational Project (JEP) is to erase any intimidation toward physics, science and engineering. Another objective of the program is to encourage these students to think about careers in science. YSP is responding to President Barack Obama’s national STEM (science, technology, engineering and math) initiative to increase student achievement in science and math over the next decade.

On April 26, the children participated in the YSP Energy and Motion Studio hosted by JEP in partnership with USC’s Women in Science and Engineering (WiSE).

“We really want to get fourth and fifth graders ready for life sciences or engineering,” said Nadine Afari, YSP program director and lecturer with the USC Viterbi School of Engineering. “This Energy and Motion Studio is laying a foundation that physics, math and science can be fun and interesting.”

Under YSP, USC graduate students and undergraduates teach natural, life, earth and engineering sciences to fourth- and fifth-graders at five USC community schools.

As they rotated among four stations, students learned how energy and motion work. The young scientists then put into practice what they discovered about food energy, light energy, matter, atoms and Newton’s laws of motion. For fourth-grader Danielle Lopez, the studio planted a seed in her brain. “Maybe I’ll be a scientist,” she said. —A.B.

New Hindu Studies Chair

Dharma Civilization Foundation’s $3.24 million gift will promote study of one of the world’s major religions.

USC Dornsife’s School of Religion will establish the first chair of Hindu studies in the United States funded by the Indian-American community.

The $3.24 million gift from the Dharma Civilization Foundation to the School of Religion will establish the Swami Vivekananda Visiting Faculty in Hindu Studies and the Dharma Civilization Foundation Chair in Hindu Studies.

“USC has a long history of welcoming and embracing people from a wide variety of cultures and creeds, back-grounds and beliefs,” USC President C. L. Max Nikias said. “We’re home to more student religious groups than any university in the nation. Now we are very proud to house the first chair of Hindu studies in the United States endowed by the Indian-American community.”

Based in Los Angeles, the Dharma Civilization Foundation aims to fund studies of the Indic civilization, focusing on the Dharmic religions of Hinduism, Buddhism, Jainism and Sikhism. The objective is to promote Dharma education through research scholarship, degree courses and endowed chairs.

“This historic gift to the School of Religion highlights the department’s commitment to study the enduring questions of human life and values from a global perspective,” said Duncan Williams, director of the School of Religion. —E.N.-H.

The USC Dornsife/Los Angeles Times Poll

The USC Dornsife/Los Angeles Times Poll is a series of statewide public opinion polls of registered voters in California, designed to survey voter attitudes on a wide range of political, policy, social and cultural issues. Conducted at regular intervals throughout the year, the poll has been widely cited, helping to inform the public and to encourage discourse on key political and policy issues.

1 in 3

Californians said high-speed rail would be their preferred mode of travel between Southern California and the Bay Area.

55%

of Californians said they want another chance to weigh in on whether the state should borrow money for high-speed rail, agreeing with the statement that “the plan for the project has changed, the total costs have increased and there are doubts that high-speed rail can actually turn a profit.”

7 out of 10

voters said they favored full legal rights for gay and lesbian couples.

59/36

percentage of voters that, respectively, favor and oppose Gov. Jerry Brown’s budget proposal — including the ballot initiative that would temporarily raise the state sales tax and income tax on high-earners.

dornsife.usc.edu/poll

Fall 2012 / Winter 2013  15
In the Field

ANATOMY OF A PERFECT DIVE

Olympic divers twist, bend and spin, performing acrobatics mid-air before entering the water in a straight vertical arrow without a splash.

Through science, Jill McNitt-Gray helps athletes prepare for success in diving. The professor of biological sciences and biomedical engineering in USC Dornsife and the USC Viterbi School of Engineering, worked with the U.S. Olympic Committee to help athletes execute the perfect dive during the 2012 London games.

McNitt-Gray is the director of the USC Biomechanics Research Laboratory, which uses state-of-the-art biomechanical modeling techniques for athletes. In sports biomechanics, scientists use engineering mechanics, biology and neuroscience to develop 3-D dynamic models of the human body, then use experimental and simulation results to determine the internal and external forces at work on athletes’ bodies when they maintain balance, change directions, sprint, flip or land.

McNitt-Gray’s team places force plates atop 10-meter towers, which measure the ground reaction forces generated by divers standing on them, to quantify balance and forces generated by the divers during their jumps.

“They’re much like your bathroom scale,” McNitt-Gray said. “When you step on the bathroom scale it measures the force that you apply to the ground.”

RIP ENTRY

For water entry, arms are key.

“Arms are the first thing that go into the water,” McNitt-Gray said. “You can see as the diver cuts through the surface of the water she or he is actually clasping their hands to enter in a nice alignment. So we spend a lot of time on the athletes trying to keep the core nice and solid and getting the arms lined up so they can be straight as an arrow when they enter the water.”

That’s called a rip entry because it literally sounds like someone has ripped a piece of paper.

“So to have that perfect entry you have to get everything right during the flight as well as on the tower.”

Vertical Velocity

Athletes diving off a 10-meter tower, which is 33-feet high, can hit the water at speeds of about 30 miles per hour.

Pike

In this position, the body mass is distributed farther from the center of mass, so the resistance to rotation is greater than in a tuck position, and as a result the rate of rotation will be slower for a pike than a tuck.

Tuck

In this position, the body mass is distributed close to the center of mass so the resistance to rotation is relatively small, and as a result the diver will rotate quickly.

10 m

30 mph
Power Crystals

Chemist Richard Brutchey has discovered a path to liquid solar cells.

Scientists at USC have developed a potential pathway to cheap, stable solar cells made from nanocrystals so small they can exist as a liquid ink and be painted or printed onto clear surfaces.

The solar nanocrystals are about four nanometers in size — meaning one could fit more than 250 billion on the head of a pin — and float in a liquid solution, so “like you print a newspaper, you can print solar cells,” said Richard Brutchey, assistant professor of chemistry.

Brutchey and postdoctoral researcher David Webber developed a new surface coating for the nanocrystals, which are made of the semiconductor cadmium selenide. Their research is featured as a “hot article” in *Dalton Transactions*, an international journal for inorganic chemistry.

Liquid nanocrystal solar cells are cheaper to fabricate than available single-crystal silicon wafer solar cells but are not nearly as efficient at converting sunlight to electricity. Brutchey and Webber solved one of the key problems of liquid solar cells: how to create a stable liquid that also conducts electricity.

In the past, organic ligand molecules were attached to the nanocrystals to keep them stable and to prevent them from sticking together. These molecules also insulated the crystals, making the whole effort terrible at conducting electricity.

“That has been a real challenge in this field,” Brutchey said.

Brutchey and Webber discovered a synthetic ligand that not only works well at stabilizing nanocrystals but actually builds tiny bridges connecting the nanocrystals to help transmit current.

With a relatively low-temperature process, the researchers’ method also allows for the possibility that solar cells can be printed onto plastic instead of glass without any issues with melting, resulting in a flexible solar panel that can be shaped to fit anywhere.

As they continue their research, Brutchey said, he plans to work on nanocrystals built from materials other than cadmium, which is restricted in commercial applications due to toxicity.

“While the commercialization of this technology is still years away, we see a clear path forward toward integrating this into the next generation of solar cell technologies,” Brutchey said.

The National Science Foundation and USC Dornsife funded the research. —R.P.

Legacy Honored

$1 million gift establishes the Dean Howard Gillman Fund.

Two anonymous donors made a $1 million gift to USC Dornsife to establish the Dean Howard Gillman Fund.

The endowment honors the legacy of Gillman, the 20th dean of the USC College of Letters, Arts and Sciences and the first dean of USC Dornsife, and his unprecedented commitment to providing extracurricular research opportunities for USC Dornsife undergraduates.

“It is wonderful that, because of this endowment, generations of USC Dornsife undergraduates will have meaningful opportunities to delve deeply into our world of inquiry and discovery under the mentorship of our stellar faculty,” said Gillman, professor of political science, history and law, who ended his tenure as dean in June 2012.

The gift provides financial support to outstanding USC Dornsife undergraduates who seek to engage in academic research under the mentorship of a USC Dornsife faculty member. Reflecting Gillman’s belief in the importance of expanding knowledge across the various disciplines within the liberal arts, the Dean Howard Gillman Fund will support student research in every field of study represented within USC Dornsife, with a special focus on projects that engage fundamental questions of human value, promote human well-being or address significant social challenges. —E.C.
This summer, USC Dornsife students were in northern Taiwan as part of USC Dornsife’s Problems Without Passports (PWP) program to investigate Atayal, an Austronesian language that is spoken today fluently by only a few hundred people in northern Taiwan. Mandarin is Taiwan’s official language.

In keeping with PWP’s goal of combining problem-based research with study in a foreign country, Khalil Iskarous, assistant professor of linguistics, designed the six-week course to allow graduate and undergraduate students substantive experience doing work in the field, while learning about a global problem.

Thanks to a National Science Foundation grant, Peter Guekguezian, a second-year doctoral student in linguistics, accompanied the group to Taiwan along with one other graduate student. Guekguezian was eager to take advantage of the rare opportunity to do linguistic field research.

“Sometimes, sitting down in front of a computer can be tedious, even boring,” Guekguezian said. “But when you’re out there talking with people and really getting to know their language on a firsthand basis, it’s just wonderful. You really get to see why language is such a human science … the human experience is really captured through language.”

Six USC Dornsife students and alumni have been awarded prestigious Fulbright Fellowships in 2012 for their academic achievement and commitment to cultural engagement.

Established in 1946 and sponsored by the U.S. Department of State’s Bureau of Educational and Cultural Affairs, the Fulbright is the largest international fellowship program in the United States. Each year, about 8,000 grants are given to support independent study, research and teaching in more than 140 countries. In just the past four years, 28 USC Dornsife students have earned this honorable distinction.

Caitlin Bradbury ’12 is participating in the Binational Business Internship program in Mexico. Recipients of this grant complete a 10-month internship while enrolled in courses at a university. Nelly Chávez ’12, who majored in American studies and ethnicity, and French, enjoys helping students with literacy and linguistic challenges, especially English-language learners. She brings this intimate knowledge to her secondary school teaching assignment in Madrid, Spain. Nina Gordon-Kirsch ’12, an environmental studies major, is monitoring the level of endocrine disrupting compounds throughout the wastewater treatment process in Be’er Sheva, Israel. Having earned a bachelor’s degree in economics and international relations, Daniel Paly ’12 is studying the role of public policy support for private industry in the nascent Brazilian solar energy sector by examining regulatory infrastructure, government direct investment and a potential feed-in-tariff in São Paulo, Brazil.

Sarah Goodrum, a Ph.D. student in art history, is completing her dissertation research in Berlin, where she will examine photography in the Cold War period in East Germany under the leadership of the Socialist Unity Party. Huibin Amelia Chew, a Ph.D. student in American studies and ethnicity, is exploring the interplay between Filipino anti-imperialist movements and transnational feminism by examining the activities of GABRIELA, the largest federation of women’s groups in the Philippines.
Fall 2012 / Winter 2013

FACULTY AND STUDENTS Spain
As part of USC Dornsife’s Maymester program, John Platt, professor of earth sciences, led junior and senior geological sciences majors on a nine-day trip studying bedrock and geological structures in Malaga, Spain, and three other cities in the country, where students were tasked with studying rocks and discerning what took place many millions of years ago.

“"To understand geology you have to be able to look at rocks and interpret them,” Platt said. “We are showing students how to actively look at rocks in their natural environment, make interpretations based on what they see in the field, and we’re teaching them various techniques and skills you need to do that.”

Leading up to the trip, students attended weekly seminars to familiarize themselves with the queries researchers are trying to answer, such as how tectonic plate collisions created mountain ranges spanning large distances. In Spain, students also studied volcanic rock and faults in Carboneras and examined the evolution of a continental collision zone in Ronda.

The Trojans observed geological formations and sketched, measured and plotted information on a map. Rather than snapping photos, Platt required the team to draw their observations, which encouraged students to focus on the most important aspects of the terrain.

For senior Max Wagner, the trip reinforced his passion for geology and showed him the diverse set of skills needed to become a field geologist.

“To successfully do geology in the field you must bring together many different areas of earth science with the ultimate goal of understanding a small part of the world around us,” he said.

Professor of Earth Sciences John Platt’s students sketch the geological formations of rock structures in Spain in research that will help determine how the rocks formed.

FACULTY Italy
Laurie Brand, Robert Grandford Wright Professor and professor of international relations, received a Rockefeller Foundation Bellagio Center residency award to finish her book project, Restor(y)ing the State: National Narratives and Regime Resilience in the Arab World.

The four-week residency that begins Oct. 25 will give Brand room-and-board and work space at the center. It will also provide her the opportunity to participate in informal presentations of residents’ works and engage in discussions with scholars, artists, policymakers and practitioners across disciplines.

The fellowship will enable Brand to write the conclusions for the book, which she began as a Carnegie Scholar examining post-independence Arab state narratives. A four-time Fulbright Scholar and a past director of USC Dornsife’s School of International Relations, she hopes to convey to an American audience the complexities of national narrative and identity construction in the Middle East and North Africa.

“Having been at the Rockefeller Center for conferences, I know what an exciting place it is intellectually,” Brand said. “I am now looking forward to this longer-term residency and the time for quiet reflection and intensive writing it will offer as I think through the broader implications of this project.”

FACULTY AND STUDENTS Minnesota
Led by Professor of English David Treuer, students traveled to northern Minnesota for a monthlong USC Dornsife Maymester immersion writing course. The students divided their time reading everything from treaties to Native American fiction and nonfiction, and traveling to Leech Lake and other reservations for firsthand immersion experiences. They wrote nonfiction essays and articles based on those experiences; and shot, edited and created a collaborative documentary about contemporary Native American life. Treuer designed the course to collapse the distance between what people imagine Native American life to be and the reality on the ground. To watch the collaborative documentary produced by the class, visit dornsife.usc.edu/writing-rez.

FROM THE HEART OF USC

Writing on the Rez
USC Dornsife students study and work with Native American students from Bemidji State University.
Five USC Dornsife authors from various disciplines ponder the connection between creativity and memory.

By Dan Knapp
Jerry Siegel came of age during the 1910s and ‘20s. The youngest child of Jewish Lithuanian immigrants, Siegel often felt out of place in the blue collar, Midwestern atmosphere of his Cleveland, Ohio, neighborhood. When his father died of a heart attack during a robbery at his haberdashery, the shy and socially awkward teenager retreated further into his shell. As he matured and found himself as an artist and storyteller, Siegel channeled his memories of growing up vulnerable and isolated in the big city — a metropolis, if you will — and used them to create one of the most iconic and enduring characters of the 20th century.

As Superman speeds toward his 75th birthday, Siegel’s thematic use of an immigrant outsider trying to fit into American culture continues to resonate with readers. It is this use of Siegel’s own memories of his early life in Cleveland that makes the superhuman so — humane.

Siegel’s approach to writing the legend of Superman also exemplifies one of the cardinal rules of good writing: “Write what you know.”

The best writers often take personal experiences and memories (either their own or those of others) and infuse their work with feelings, fears, sounds, tastes and other personal markers that give authenticity to their work. Utilizing memories to flesh out a story — whether an autobiography or a work of science fiction — lends the plotline a sense of gravitas and urgency.

I recently asked a quintet of accomplished USC Dornsife authors — novelists, historians, screenwriters, memoirists and poets — to contemplate the role that memory has in their writing. The degree to which all five rely on memories to inform their work may surprise you.

### Peter C. Mancall

*Mancall photo by Phil Channing. Superman is a trademark and copyright and appears courtesy of DC Comics*

Peter C. Mancall is Andrew W. Mellon Professor of the Humanities and a professor of history and anthropology. He is also the director of the USC-Huntington Early Modern Studies Institute and vice dean for the humanities in USC Dornsife. He has authored several books, including *Fatal Journey: The Final Expedition of Henry Hudson* (Basic Books, 2009) and *Hakluyt’s Promise: An Elizabethan’s Obsession for an English America* (Yale, 2007).

**PM:** I always try to be attentive to the places where individuals lived. For my study of the Elizabethan colonial promoter Richard Hakluyt, I needed to describe Oxford, London and Paris, where he spent the most important years of his life. In those places, he became obsessed with recording all of the information he could find about English travelers abroad. He understood, more than anyone of his time, how personal recollections of journeys might goad readers to undertake their own explorations, and in the process their actions might benefit the realm. Since Hakluyt never sailed across the Atlantic, he needed to rely on others’ memories — a risky proposition in an era when, as one English critic later quipped, travelers were often travel liars. But Hakluyt knew that without recording those memories the English would lose ground in their competition with Continental Europeans, so he set them down in collections that, taken together, rivaled the completed works of William Shakespeare in length and complexity.

**DK:** From the cave paintings in France, to parchment scrolls, to bound diaries and even blogs, people have recorded their everyday occurrences for millennia. Where do you think the fascination with detailing personal events comes from?

**PM:** Memories are certainly subjective. What happens when first person accounts you find during research do not align with the common perception of a historical event or person? For example, did you run into conflicting information when researching your book on Henry Hudson?

**DK:** Henry Hudson, unlike Hakluyt, was an inveterate explorer, who tried four times to sail from England to East Asia. He and others on board kept records of their activities. But when Hudson’s ship *Discovery* returned to London without him in 1611, the last pages of Hudson’s log were missing. The survivors told about a mutiny in Hudson Bay and claimed that all of the mutineers died soon after they dispatched Hudson and his closest colleagues — including his teenage son. How could judges in London know if these men, who had come home on a boat with blood-stained decks, were telling the truth? In my book, I tried to piece together the scattered accounts of what happened on that journey into an Arctic landscape where truth and myth often collapse into each other.
DINAH LENNEY, assistant professor of teaching in USC Dornsife’s Master of Professional Writing (MPW) Program, teaches multiple genres, including memoir. In 2007, Lenney authored Bigger than Life (University of Nebraska Press), in which she details the tragic events and aftermath surrounding the murder of her father, former New Jersey politician and prominent businessman Nelson G. Gross.

DK: Your father’s death made national headlines. Aside from the tragedy itself and his social standing, what triggered the writing of the book and how much time and distance did you need to be able to tell the story?

DL: You’re exactly right, the tragedy was the trigger — and I started writing immediately, as a way of making sense of what had happened to my father and to me. But that led me to write the story I’d been trying to write for years, which, I hope, turns out to be as much about family — the ties that bind — as it is about a murder. I guess it was a couple of years after my dad was killed, I realized I was ready to intentionally craft a book that had been gestating for decades.

DK: Your memoir digs deep into family issues and your own memories regarding your relationship with your father. Did anyone object to the book after the fact and how did you reconcile yourself with telling the truth your way?

DL: Objections — there were some, yes. Not as many as I’d expected, but I was surprised by who and why. Look, it doesn’t feel good to hurt people you love. Even people you don’t. Here’s the thing about memory, though — it’s subjective; therefore somebody’s always going to object. But I was certain, and still am, that I’d been honest and fair, and as hard on myself as anyone else. And that bolstered me.

DK: Was it hard to write about events on the East Coast all the way from Los Angeles?

DL: It wasn’t, no. As much as I love L.A., as long as I’ve lived here, the smell of that part of the world is in my nose. It’s the stuff of my memory and my imagination, too — plus, like the passage of time, physical distance can inform a writer’s perspective in rich and vivid ways.

DK: What advice do you offer your students about which memories to inject into such a personal project?

DL: Well, memoir isn’t autobiography. It’s not meant to be a chronological blow by blow — it’s only a slice of the pie. Maybe you’re looking at an event through the lens of a relationship — or maybe a relationship through the lens of an event. Bottom line, you don’t want to be boring. As Elmore Leonard says, you should “leave out the parts that readers tend to skip.”

DK: Memoir writing has exploded in the literary world. Even children are writing memoirs. What’s the monumental fascination and should kids and tweens be writing memoirs?

DL: I guess we want to mark the moment — to insist that who we are and what we do in this life amounts to something meaningful. Here’s what I believe: Kids should be reading and writing. If they’re jazzed about memoir, if it inspires them to live mindfully — to develop a taste for all things literary? Well then, I’m all for it.
You have written extensively on the impact Marilyn Monroe has had on feminism and culture. Both of your Monroe books are well-regarded for their level of research on the movie screen icon. What personal memories of Monroe did you draw from when you were crafting your books?

LB: My historical memory has often been important to my books on recent eras. With regard to Marilyn, I was a teenager in the 1950s, but I wasn't a Marilyn fan. In researching her life, I discovered I was raised 10 miles from her first foster home, so I knew the environment of the area. I was raised in Inglewood; she in Hawthorne. I was raised in an evangelical Christian religion, as she was. I had relatives in the movie industry, which dominated Los Angeles in the 1950s, as she had. I went to a local Los Angeles high school, as she had, and I understood the dating culture of that era. I married a New York intellectual, as Marilyn had, and I understood that world. The major problem I had in doing 100 interviews for my book on Marilyn was not memory, but lying. I had to use my best judgment — my intuition — when I interviewed people. I talked to people who were at Marilyn's the day and night she died and listened to oral interviews of others. That was truly amazing. I also had many arguments with individuals who don't believe that historians should reveal anyone's private life, even if they are dead. I disagree. You can't truly understand Marilyn Monroe, Margaret Mead or Elizabeth Cady Stanton — three of my biographical subjects — without knowing the full depth of their experiences and internal motivations. So memory is both fallible and can easily be manipulated. But it is an important tool among many that writers possess.

DK: To complement your numerous studies on the lives of some of the 20th century's most influential women — Mead, Benedict, Monroe, Stanton — you authored a memoir about your divergent relationship with childhood friend Fran Huneke. Finding Fran (Columbia University Press, 1998) is remarkably detailed.

LB: As for Finding Fran, I remembered a lot about my childhood. I had my mother's daily diary, written when the events occurred. I didn't read it until I had written down my memories, and I was astounded by the similarities in the two sources. As is often the case, my siblings have different recollections from mine about our upbringing. Fran's memories also differed from mine. I had family letters and documents, and Fran gave me letters and documents that she possessed after I found her in Alexandria, Egypt, now a devout Muslim. I read newspapers, newsletters and other material that pertained to what I was writing about. In other words, I checked the material I had from people's memories against other kinds of historical sources.
MARK RICHARD lectures in USC Dornsife’s Master of Professional Writing Program. His works include the award-winning collection of short stories *The Ice at the Bottom of the World* (Anchor, 1991) and the best seller *Fishboy* (Anchor, 1994). His most recent book — a memoir titled *House of Prayer No. 2* (Nan A. Talese) — is frequently cited among the best nonfiction books of 2011. In addition to teaching and writing novels, Richard spent much of this past summer in Calgary, Canada, scripting the second season of the AMC series *Hell on Wheels*.

**DK:** Literary commentators frequently mention your work in the same breath as those by William Faulkner and Tennessee Williams. Does being a Louisiana native influence your storytelling?

**MR:** We moved from south Louisiana when I was young to east Texas, then to tidewater Virginia. Geographically those places all have swamps, snakes, dark rivers and complicated racial configurations that were often the talk of the same barber shops, sidewalks and front porches in the evenings. No one had air conditioning back then, so as a child in all of those places, you could always hear adults talking just outside your window as you lay in the dark drifting off to sleep.

**DK:** *House of Prayer No. 2* deals with your boyhood and adolescence. Given that it is a memoir, how much of the work comes from your own memories of those years in the 1950s and ’60s and how did you go about filling in the gaps?

**MR:** It’s all from memory, though sometimes I’d look at old photographs to stir the memories up. I found early on that it’s o.k. just to skip over stretches of time of which you have no recollection. Either that time was unremarkable as some time can be, or it was so traumatic that you’ve buried it and either it’ll surface later or it won’t.

**DK:** There has been so much controversy in memoir writing with scandals about writers fabricating events to families demanding retractions. When you wrote your memoir, how did you ensure details were true and did you worry about anyone disputing the facts?

**MR:** The only person who has disputed the memoir is my mother. Thanks, mom! There were some very personal things I revealed that I should have known would have caused her some grief but it didn’t occur to me — or it did and at the time I didn’t care. But since the book’s reception has been so positive, she’s come around and is proud of the book and has admitted that I barely scratched the surface of some of the more painful aspects of our lives.

When I finished the book, I sent it to three friends whom I trust to make sure I had gotten it right. They are friends from three different eras in my life. Not only did they substantiate what I had remembered, but they helped me remember some deeper contexts of the incidents. By the way, I tracked down the trawler-mate who’d seen the monkey-like creature we pulled out of the ocean one night that was hairless and hissed at us before leaping back into water and he confirmed what we had seen and to this day gets choked up with fear or awe just talking about it. So yeah, I tried to ensure all the details from the personal to the primeval.
One of the things that lends considerable authenticity and authority to your writing is the fact that you’ve lived through much of the time you’ve detailed in your books. How have your life experiences and memories shaped your writing projects? For example, do you think you would have written *Hot Stuff* had you not worked as a club deejay and had memories in your head of mirrored disco balls?

Well, despite Bob Dylan’s great line — anyone who remembers the ’60s wasn’t there — I guess I do have a few memories! Although I know it doesn’t work this way for everyone, having lived through the era I’m writing about seems to inoculate me against nostalgia. But of course, memory is fragmentary, unreliable and, sometimes, most interesting as an object of study itself. One of the themes of *Hot Stuff* is that, through disco culture, gay men remade themselves, shedding the effeminacy so long associated with homosexuality. But had I relied only upon my own disco memories, and not read that era’s fiction, journalism and cultural criticism and once again watched its films and listened to its music, I doubt that gay macho would have been such a prominent theme. Hmm, would I have written *Hot Stuff* had I not been a deejay? I’m not sure, but I suspect that working as a deejay in a Midwestern college town, rather than in New York or San Francisco, and being a ‘girl deejay’ gave me a different angle of vision.

Much of your writing takes popular culture and looks at it through the lens of gender, sexuality or politics. When you re-examine cultural artifacts through this type of construct, do you ever worry that you may be changing the reader’s memories or opinions about iconic figures like, for example, Janis Joplin or Donna Summer?

Historians are always messing with people’s minds — or should be! After all, new material becomes available, and the world changes in ways that affect historians, who then pose different questions about the past. So this sort of revisionism is at the heart of writing and doing history. As for pop music icons, we usually only know a sliver of who they are, very often because they’re busy constructing and burnishing an image that corresponds to their genre’s notion of what’s authentic. This was certainly true of Janis Joplin, who put an enormous amount of energy into being what I called the queen of the real.’

What made you decide to take off your historian hat and write about something deeply personal? Can you talk about your upcoming book, a memoir about your grandfather?

My grandfather was an accused bank embezzler whose shortfall was discovered during the Depression. I never met my grandfather, so the book’s memoirish bit is about how the scandal reverberated inside my family. But this is much more a work of history than memoir, and about a period that, for once, I did not live through!
The USC Shoah Foundation — The Institute for Visual History and Education offers a perspective on genocides that have occurred throughout the world. Preserving these memories helps ensure that for generations to come these stories will be a compelling voice for education and action.

by Alina Tugend

Freddy Mutanguha was 18 years old when his parents and four sisters were macheted to death by Hutu soldiers during the 1994 genocide in Rwanda. Mutanguha, a member of the Tutsi minority ethnic group, didn’t see the murders, but from a nearby friend’s house could hear his family’s screams over the soldiers singing.

His mission now is to create not only a memorial of survivor, perpetrator and rescuer testimony about that terrible time in his nation’s history, but also peace-building educational initiatives that foster resilience against violence, regardless of the political and economic climate.

The development of two distinct ethnic groups in Rwanda — the Hutus and Tutsis — arose in response to the divisive colonial rule of Belgium in the early 20th century. Tensions between the two groups then continued to escalate, especially after Rwanda gained independence in 1962 and the country became a highly centralized, repressive state with a regime characterized by the persecution and ethnic cleansing of the Tutsis. Cycles of violence continued, with Hutu extremists continually blaming Tutsis for the country’s growing economic and social woes. In 1994, when a plane carrying Rwanda President Juvénal Habyarimana, a Hutu, was shot down, violence began immediately with Hutu extremists determined to wipe out the Tutsi population.

It is difficult to ask Rwandans, still traumatized by a massacre that killed an estimated 1 million Tutsis, to talk about the genocide openly. But it is crucial to gather memories of those who bore witness.

The Rwandan people are not alone in trying to find a way to both preserve an historical record of a mass tragedy and share its lesson with the rest of the world.

The same impetus drove the founders of the USC Shoah Foundation — The Institute for Visual History and Education, which has collected video interviews with nearly 52,000 Holocaust survivors in 34 languages. Housed in USC Dornsife, it is the largest collection of its kind in the world. The institute is now committed to expanding its Visual History Archive and has begun incorporating testimonies from genocides other than the Holocaust.

Beginning in 2007, Mutanguha, country director of the Aegis Trust (Rwanda), a genocide prevention organization overseeing the Kigali Genocide Memorial in Rwanda, has worked with the institute to share methodologies on how to conduct interviews responsibly in Rwanda. Mutanguha and others from his organization are learning how to archive testimony and make it accessible to the world.

The first integration of non-Holocaust testimony into the Visual History Archive, the survivor testimonies about the genocide in Rwandan are expected to be followed by survivors of other genocides, said Karen Jungblut, the institute’s director of research and documentation.

“The range of experience of survivors and witnesses of genocides provides perspective that prejudice, bigotry and intolerance exist in many forms,” Jungblut said. “These collections represent multiple experiences that provide a pathway for understanding the universal.”

The technical craft of preserving and archiving Holocaust and Rwandan genocide
Smith said. “They focused on the key facts about the Nazi concentration camps and what they saw the perpetrators commit. It was almost like a police report.”

By the '60s and '70s, Holocaust survivors began giving longer autobiographical accounts that were more detailed and literary in nature, Smith said. By the '90s survivors in greater numbers began talking about their personal experiences before, during and after the war. The stories, Smith said, become increasingly analytical.

“In the '40s, they had just been persecuted, were highly traumatized and had the potential to still be persecuted,” Smith said. “They told their stories only to trusted authorities.”

To some degree, the situation mirrors what Rwandans and Cambodians face.

“People must feel safe in order to open up,” Smith said. “You don’t want to retraumatize them. Memory is emotional, cultural and spiritual. It’s more than historical.”

For that reason, it’s imperative that survivors receive support before, during and after the interviews. Smith said the support varies by country, but in Rwanda, for example, a survivors’ organization provides counseling, and if necessary,
volunteers trained in mental health are summoned to speak to survivors giving testimony.

Mutanguha said that at the outset, many Rwandan survivors refused to speak about the atrocities.

“They asked ‘Why should we do this?’” Mutanguha recalled. It was particularly difficult in the early days following the genocide, he said, when witnesses feared talking and had no wish to relive the nightmare.

But slowly, Mutanguha said, people began realizing that the process of speaking out would benefit their children and the younger generations.

“They wanted to help others,” Mutanguha said.

While there may be more than 100,000 potential survivors of the Rwandan genocide to interview, currently the USC Shoah Foundation is incorporating 66 testimonies about the genocide, 50 of which are from the Kigali Genocide Memorial, into the institute’s collection. Mutanguha himself has given a five-hour interview.

He recalled other agonizing interviews.

“My daughter said to me, ‘Papa, Papa, give me water,’” survivor Venuste Karasira recounted. “She had just learned to talk and was saying, ‘Give me water, I’m dying of thirst.’”

A militia soldier overheard her and taunting Karasira said, “‘Papa, this cockroach, let me come and show you.”

Then one of the men stabbed the child with a knife. Karasira points to his head.

“Right here and it went through.”

Currently, the Rwandan testimonies are being transcribed and subtitled in English, Jungblut said. The Rwandan interviews will belong to the Kigali Genocide Memorial and Aegis Trust (Rwanda) and both the institute and Aegis Trust will disseminate the testimonies and integrate them into educational programs.

On one level there are similarities when comparing genocides, Mutanguha said.

“There is the process of preparation and execution of the genocide and the fact that people suffered,” he said. “These things one finds in each and every genocide.”

But every country and culture deals with genocide in its own way and time.

“Rwanda knew this was a story that had to be told and was absolutely aware of the Holocaust precedent — it had resonance,” Smith said. “In Cambodia, on the other hand, there is a cultural and personal expectation that individuals not share their stories with the wider community. Conversely, Rwanda wanted to place its genocide firmly in the public consciousness.”

Cambodia’s genocide, led by the Communist Party, the Khmer Rouge, aimed to form a peasant farming society, much like Communist Party leader Mao Zedong had in China. In Cambodia, there were mass evacuations to the countryside where millions died of overwork, starvation and disease. The Khmer Rouge conducted regular and deadly purges to rid the country of the professional class, Buddhist monks and former government officials. The genocide, which took place from 1975 to 1979, claimed an estimated 2 million lives.

Rwanda’s readiness to deal with the mass killings is demonstrated by the fact that trials for genocide crimes occurred five years before the first Cambodian trials — even though Cambodia’s atrocities had taken place 20 years before Rwanda’s.

How stories are told varies widely among cultures.

“In Rwanda, the narrative tradition is not about chronology,” Smith said. “It’s about community values and family; the sense of abandonment by the international community when the United Nations left. What happened was very, very local. It was hand-to-hand fighting and the victims knew everyone involved in the chain of activity.”

Therefore, methodology in interviewing differs from country to country.

“You can’t force one method to be used,” Smith said.

Another challenge in interviewing Rwandan genocide survivors is helping them overcome their fear that they or their families can still be punished by the perpetrators in some way.

“MEMORY IS EMOTIONAL, CULTURAL AND SPIRITUAL.
IT’S MORE THAN HISTORICAL.”
For that reason, people can give their testimony but ask that the videos not be shown to anyone or put online until a future date. This is also the case with Holocaust survivors. The institute has agreed not to make public approximately 400 Holocaust interviews until a certain amount of time has passed.

Additionally, the institute is working with the Armenian Film Foundation, which has documented the Armenian genocide that began in 1915 and led to the deaths of as many as 1.5 million Armenians in Ottoman-ruled Turkey.

In this case, the foundation is working to update its testimonies from film to digital media and make them available to the world.

Armenian genocide survivor J. Michael Hagopian began conducting interviews with eyewitnesses and survivors in 1966. He interviewed them through the ’60s, ’70s, ’80s, ’90s, up to 2005. Over the years, he filmed — this was before the use of videotape — more than 400 Armenian survivors and witnesses and has used some of the interviews in documentaries.

In 1979, he established the Armenian Film Foundation in Thousand Oaks, Calif., to preserve Armenian culture and heritage. Hagopian, who earned his Ph.D. at Harvard University, worked until his death in 2010 at age 97.

Carla Garapedian, project leader of the Armenian Film Foundation’s digitization project and Hagopian’s longtime associate, sought to collaborate with the institute.

“We wanted to see how we could make the whole project more widely available,” Garapedian said. “And the USC Shoah Foundation was looking to expand its collection. So we started discussions.”

Hagopian traveled the world finding people to provide first-hand accounts of the Armenian genocide. His group filmed the interviews in 10 languages, including Armenian, Greek, Russian and Turkish.

Funding is being sought to support the integration of these interviews into the Visual History Archive so they will become accessible to a global audience.

While the Holocaust interviews are sometimes many hours long — the average interview is 2½ hours but one runs as long as 17 hours — the Armenian accounts were much shorter for technical reasons. Film was expensive and the filmmakers had to be very frugal, often using only one or two rolls of film for each interview, Garapedian said.

“Very often most events are described in detail, but almost monotonous,” she added. “Often they are almost unemotional. Someone who was eight or nine years old when the Armenian genocide occurred will describe the executions of a father, mother and describe children being sent on death marches. Sometimes they feared talking, and whispered as if perpetrators are just around the corner.”

In one testimony, survivor Sam Kadorian — whose cheek was scarred from a Turkish bayonet — described an abhorrent scene:

"I saw with my own eyes, when a woman didn’t have any milk in her breasts, so one of these Turkish soldiers grabbed the baby by the arm, tossed the little thing up into the air. The Turkish soldier caught it with a bayonet on his rifle."

Adding other genocides to the institute’s collection will not dilute the singular experience of the Holocaust, Jungblut said.

“Everything adds. Nothing takes away,” she said. “We’re looking for a body of work that encompasses the experience and helps us understand the commonality of these experiences from the Armenian genocide to the Jewish Holocaust to Cambodia, Rwanda, and others.”

Although each genocide is horrific in its own way, survivors and witnesses can see similarities.

“Armenian survivors and Holocaust survivors can really relate,” Garapedian said. “They see things going from..."
normal to kind of bad, and they can’t quite believe it. Then they’re pushed out of their homes and they can’t believe it. Armenians hear Holocaust survivors talking about it and say ‘that’s how we felt.’”

Mutanguha agreed.

“There are so many points of connection with the Holocaust survivors,” he said. “They know what it means to experience the killing of an entire people. They witnessed the affects of propaganda, the misuse of media and newspapers to dehumanize them. Our experience is not identical, but we share the struggle for survival in common.”

Equally as important as assembling and archiving the testimonies is how they are disseminated to the world. About 1,100 of the 52,000 testimonies are available on the Web via the institute’s Visual History Archive Online. The complete archive can be accessed through 40 institutes (including USC) in 10 countries. In addition, a number of museums, libraries, schools and synagogues have licensed copies of specific testimony.

The testimonies have been used in university courses, including gender studies, history, Jewish studies, psychology, film studies, anthropology and Catholic theology.

Dispersing the interviews is an ongoing project. The institute has developed a series of resources and products that incorporate video testimony from its archive for the benefit of secondary schools. One example is the Holocaust education program Echoes and Reflections, a three-way partnership with the institute, the Anti-Defamation League and Yad Vashem, the Holocaust museum in Jerusalem, Israel.

The work continues with the launch of IWitness, a new educational Web site, which enables teachers and their students to explore 1,000 video testimonies from survivors and witnesses and use the testimonies in their lessons. The institute is currently working with teachers from throughout the United States and around the world to fine-tune IWitness.

Through all these efforts, Mutanguha’s hope — and the hope of all connected to the institute — is that the testimonies and the horror they reveal will not be seen as an anomaly.

“Someone, say, from Mexico, listening to my testimony should know what it means,” he said. “A human being has suffered. It happened in Rwanda and it can happen anywhere.”
As a child, how many of you memorized the planet names and order with this little ditty: My very elegant mother just sat upon nine porcupines.

Although the demotion of Pluto to a dwarf planet renders this particular mnemonic device obsolete, people have used catchphrases and wordplay to trigger memory since antiquity.

Argue may have lost an “E” in this argument, but University Professor Emeritus Richard Thompson knows only one “C” is necessary and you need two “Cs” for success.

Thompson, William M. Keck Chair Emeritus in Psychology and Biological Sciences in USC Dornsife, has studied learning and memory for more than 60 years. He discovered the essential role of the cerebellum in memory and was the first to localize the site of a memory trace — or the physical storage of memory in the brain.

“Without memory, you would not have a mind,” Thompson said. “If you couldn’t remember anything, ever, you couldn’t think. You couldn’t perceive. Memory is what glues together our experiences as human beings.”

A National Academy of Sciences member, Thompson tracked the minute physical changes that occur in the brain as learning takes place and memories are coded, stored and retrieved. He and his team discovered that the brain encodes a memory by changing the physical structure of connections between neurons called synapses. When something new is learned, neurons sprout new synapses and strengthen existing connections.

Bucking traditional thought, his research showed that memories reside in very specific brain cells and simply by reactivating these cells by physical means, such as light, an entire memory can be recalled.

Memory: The Key to Consciousness (Joseph Henry Press, 2005), which Thompson wrote with Stephen Madigan, associate professor of psychology in USC Dornsife, gives readers a few tips on how to use associations to improve recollection. One he calls “the mind’s eye technique.”

Say you want to memorize a grocery list. Imagine you are walking (or riding your bicycle) down a very familiar path.

“And you envision several weird objects along the path, like a 10-foot-tall tube of toothpaste,” Thompson said. “When you have all those objects really well-remembered, you’re developing a long complicated story of your journey through this path. Then you can take any list of items and tag them on to each object. So in this case, broccoli flower heads are growing out of the giant toothpaste tube.”

Breaking information into manageable pieces, mnemonic devices work because they connect prior knowledge to new knowledge, helping the brain to make sense of information it has never been exposed to.

In the book, Thompson devotes a chapter to the topic of false memory, addressing why some people remember things that did not occur.

FUNDAMENTAL MISUNDERSTANDING

Thompson begins by describing cognitive psychologist Elizabeth Loftus’ 1974 experiments that show what happens to a subject’s memory when he or she is presented with false information.

In one experiment, volunteers watched a short film depicting a collision between two cars. Some were asked, “About how fast were the cars going when they hit each other?” Another group was asked, “About how fast were the cars going when they smashed into each other?” The control group was not asked a question.

A week later, all volunteers were asked if they had seen broken glass at the accident scene. Of the control group, 6 percent said they had and 7 percent of the hit subjects said they had, compared to 16 percent of the smashed into subjects who said they remembered seeing broken glass.

The words researchers used to describe the accident greatly affected what the subjects said they saw in the film. Loftus’ research has relevance to legal issues, particularly when it comes to asking accusers leading questions.

Take cases involving childhood sexual abuse allegations. Thompson describes a 1994 case in Wenatchee, Wash., in which a young foster daughter of a police officer said she and her classmates had been sexually molested. Some children described outlandish acts at a church involving men dressed all in black and wearing sunglasses.

Without physical evidence, the claims led to the arrests of more than 40 people and the convictions of some.

Equally astounding are cases of recovered memory in adults with multiple personality disorder (MPD), which
some psychologists say is a result of a traumatic experience in childhood, usually involving sexual abuse. The person with MPD is said to adopt a new personality to cope with emotional suffering. The new personalities are accompanied by a complete repression of memories of the abuse, some say.

Many psychologists argue that the recovered memory issue is a result of a fundamental misunderstanding about the mechanisms of memory.

One wrong belief is that memory is a high-resolution recording device that creates a continuous, detailed copy of experience from which memories can be “played back” with perfect fidelity. Although people are capable of extensive visual and auditory long-term memory, there is no “video-recorder” model of memory, Thompson wrote.

Another mistaken belief is that there is a memory process known as repression — unconsciously motivated forgetting — that is capable of removing memories, even repeated experiences, from the consciousness. Thompson wrote that to date, none of the numerous experimental studies of emotion, memory and the brain have led to the identification of biological plausible brain mechanisms that would be required for repression to operate.

**MEMORY CACHE**

Thompson’s greatest legacy is his research on the mechanism of memory storage, where and how the brain stores memories. Working memory — or short-term memory concerned with the immediate task at hand — occurs in the prefrontal cortex; long-term memory is kept in the hippocampus; and skill memory in the cerebellum.

“We think this is just the beginning,” Thompson said. “We think that many aspects of memory can be highly localized. We just haven’t found them all yet. Our memory trace was the first.”

After localizing the memory, scientists can learn how each memory is formed — thus understanding the neurobasis of the many kinds of memory.

“You can’t analyze the mechanisms of memories until you find out where they are,” Thompson said. “In the long run, this research will provide ways for treating learning disabilities and memory diseases. And there are many.

“Maybe, just maybe, this work will lead to the ultimate prevention and treatment of Alzheimer’s disease.”

Some of Thompson and his team’s latest research demonstrates that allopregnanolone, a naturally occurring steroid produced in the central nervous system, increases the number of neural stem cells and restores cognitive function in the Alzheimer-inflicted mouse brain.

“The research advances the development of allopregnanolone as a therapeutic to restore cognitive function in people suffering from Alzheimer’s.”

Published online in the Proceedings of the National Academy of Sciences, the study — co-authored with Roberta Diaz Brin- ton, who holds the R. Pete Vanderveen Chair in Therapeutic Discovery and Development in the USC School of Pharmacy, and others — has led to planned clinical trials in humans.

Although encouraging, Thompson said allopregnanolone is likely not the ultimate way to fight the disease.

“I think the ultimate answer is manipulating the human genome,” Thompson said. “You would want to do it before Alzheimer’s has developed. That’s in the future.”

**HEALTHY HEART, HEALTHY BRAIN**

While investigating the causes of Alzheimer’s disease, Margaret Gatz, professor of psychology, gerontology and preventive medicine in USC Dornsife, has studied the health of more than 14,000 Swedish twins for more than 25 years.

Alzheimer’s is a type of dementia. Dementia is a term used to describe a wide range of symptoms associated with memory impairment and other thinking skills. Alzheimer’s disease, which involves a particular set of changes in the brain that very gradually steal away a person’s memory, accounts for up to 80 percent of dementia cases.

“In her twins study, Gatz determined that about 70 percent of risk for Alzheimer’s disease is due to genetic causes. In each stricken individual, the cause is a combination of genes and environmental influences. By studying cases in which one twin developed Alzheimer’s disease and the other twin did not, her team found that midlife type 2 diabetes and obesity are significant risk factors for Alzheimer’s. Those who have the onset of diabetes in midlife have more than twice the chance to develop the disease compared to twins with no history of diabetes.

“This leads to a concern with the obesity epidemic in the United States and worldwide that, in fact, obesity may play out in creating greater risk for dementia in the decades to come,” Gatz said. “So there’s a longer term reason to worry about carrying too much weight — your cognitive health.”

Speaking to people in the community, Gatz has found that the connection between a healthy heart and a healthy brain is not well known.

“But it’s clearly there,” said Gatz, chair of USC Dornsife’s Department of Psychology and adjunct professor at the Karolinska Institutet in Stockholm, Sweden.

As director of the education core at the USC Memory and Aging Center, Gatz helped to create a comic book-style novella in Spanish and English called Forgotten Memories, which shows community members how to recognize signs of dementia. The novella targets the Latino community.

**“WE THINK THIS IS JUST THE BEGINNING, WE THINK THAT MANY ASPECTS OF MEMORY CAN BE HIGHLY LOCALIZED. WE JUST HAVEN’T FOUND THEM ALL YET. OUR MEMORY TRACE WAS THE FIRST.”**

**METHOD OF LOCI**

The most basic mnemonic technique involves forming a mental image of each of the things to be remembered as occupying a place along a travel route you know well. When you need to retrieve the information, take a mental stroll along the route.
TEN EARLY SIGNS and SYMPTOMS OF ALZHEIMER’S and DEMENTIA

Memory loss that disrupts daily life 1.
Extreme difficulty getting organized 2.
Difficulty completing familiar tasks 3.
Forgetting to show up for appointments 4.
Trouble understanding visual images and spatial relationships 5.
Trouble holding a conversation 6.
Frequently misplacing things 7.
Making poor decisions 8.
Withdrawal from work or social activities 9.
Changes in mood and personality 10.

because Latinos have a high prevalence of diabetes and other vascular risks.
Her twins research discovered other risk factors.

CANCER AND COGNITION

In a 2005 study published in the Journal of the National Cancer Institute, Gatz and Beth Meyerowitz, professor of psychology in USC Dornsife, and their team of students determined that cancer survivors are twice as likely to develop long-term cognitive problems including memory impairment than those who have never had cancer.

Research has shown that cognitive impairment in cancer patients can persist even five years after treatment. But how long these cognitive deficits last or whether they worsen and become more apparent in older age has been a question.

Seeking to determine the extent of cognitive deficits in cancer patients, the team conducted a study of 702 cancer survivors from Sweden and their cancer-free twins using data collected through the Karolinska Institutet.

They found that those who had survived cancer for five or more years were twice as likely as their cancer-free twins to have cognitive dysfunction — assessed during standardized, mental-status telephone interviews.

Participants were scored on a scale from zero to three. Anyone who scored a three, defined as having verbal, orientation or recall problems that interfere with daily life, was considered to have cognitive dysfunction.

“The twin who had cancer was more likely to have some sort of cognitive dysfunction,” said Meyerowitz, vice provost for faculty affairs.

Previous studies had found cognitive problems in short-term cancer survivors, but this was the first to find significant cognitive differences between long-term survivors and cancer-free individuals, and to focus on older adult survivors.

“This suggests that possibly the cognitive dysfunction gets worse over time with increased survival duration,” said the study’s lead author Lara Heflin, who in 2007 earned a Ph.D. in psychology in USC Dornsife and completed postdoctoral research at the University of California, San Francisco Medical Center.

The comparison with cancer-free twins means that the increased dysfunction cannot be attributed to the normal aging process.

Cancer survivors were also twice as likely to be diagnosed with dementia, although this result was not statistically significant. The authors concluded that cancer and its treatments may lower survivors’ cognitive reserve, thus increasing their long-term risks of cognitive dysfunction and dementia.

“This is a serious clinical concern for physicians treating cancer survivors,” Heflin said. “Further research should identify mechanisms that mediate the relationship between cancer and cognitive dysfunction and explore whether specific treatments are associated with long-term cognitive effects. This knowledge will help health care providers and patients make informed decisions about treatments.”

In a recent study published in the Journals of Gerontology, Gatz, Meyerowitz and their team found that older female cancer survivors are significantly more likely to suffer from long-term cognitive impairment. Compared to those with other cancers, the risk was higher among survivors of gynecologic cancers and those who had treatments potentially affecting ovarian functioning.

The researchers initially thought chemotherapy might be associated with cognitive impairment. Instead, researchers found the impairment was linked to treatments that may have affected ovarian functioning, which likely resulted in declines in estrogen levels. Although most in the study were past menopause, the loss of estrogen may have affected their cognitive performance.

The study raises the question that the loss of estrogen, even in older women, may be associated with memory function — which appears to differ from other highly publicized studies that claim giving estrogen therapy to women increases their risk of dementia.

“I think it may be important to look at how and when estrogen levels are changed through surgery or estrogen therapy,” said Keiko Kurita, a psychology Ph.D. student and lead author of the Journals of Gerontology cancer study, referring to the seemingly contradictory findings.

Kurita, who is pursuing a dual master of public health degree at Keck School of Medicine of USC, is writing her dissertation on the association between the removal of ovaries — which produce estrogen — before or after menopause, and cognitive functioning in older adult women.

“By examining the effects of ovarian removal, we may have a better understanding of the association between estrogen decrease resulting from a surgical procedure and cognitive functioning,” Kurita said. “To the extent that estrogen decrease results in poorer cognitive function including memory loss, there may be implications for treatments that involve prophylactic ovarian removal or that replace the function of estrogen.”

Gatz also pointed to brain injury as a risk factor for later developing dementia as well as other neurological diseases. It’s not only severe brain injuries that predispose people to dementia.
A concussion or mild brain trauma can put a person at risk, Gatz said. Soldiers, boxers, athletes and cyclists are most prone.

“So there’s another reason to wear a bicycle helmet,” Gatz said.

There are so many different genes and risk factors that Gatz is dubious there will be one single cure or one single recipe for prevention.

“You want to do something good to reduce your chances of dementia and memory loss?” Gatz said. “Hop on a treadmill.”

**PLAQUES AND TANGLES**

Another leading scholar in the investigation of Alzheimer’s disease is University professor Antonio Damasio, who holds the David Dornsife Chair in Neuroscience and is professor of psychology and neurology. In the ’80s, Damasio led a number of crucial studies mapping the distribution of damaged cells and neurons in the brain that correlated with Alzheimer’s disease.

The paper that launched a series of studies was published in Science in 1984, when Damasio was professor and head of neurology at the University of Iowa. The paper marked the first time scientists were able to show how the hippocampus — located in the medial temporal lobe — becomes isolated and taken off line by Alzheimer’s-damaged cells in another part of the temporal lobe — the entorhinal cortex.

In a paper published in the journal *Cerebral Cortex* in 1991, Damasio and his team mapped Alzheimer’s patients’ damaged brain cells that were filled with neurofibrillary tangles, aggregates of the hyperphosphorylated tau that is now known as the primary marker of Alzheimer’s.

“WE FOUND THAT... NANOPARTICLES FROM FREEWAY TRAFFIC ACCELERATE THE RATE OF BRAIN AGING AND MAY ACCELERATE ALZHEIMER’S DISEASE.”

“Tau proteins are extremely important because they damage the neurons themselves as opposed to damaging the environment of the neurons,” Damasio said.

They also mapped in brains another characteristic of Alzheimer’s disease, the accumulation of amyloid plaques between nerve cells, or neurons. Amyloid is a general term for protein fragments that the body produces normally. As people susceptible to Alzheimer’s grow older, their cells produce a much higher percentage of amyloid, leading to its accumulation and formation of hard, insoluble plaques.

Damasio, founder and director of the USC Brain and Creativity Institute, housed in USC Dornsife, is most famous for finding the neural basis for emotions and showing that emotions play a central role in decision-making and social cognition — or the processes we use to understand the world around us.

Emotions can have both a positive and a detrimental effect on memory, Damasio said.

“It depends on the amount of emotion,” Damasio said. “Positive emotion can help you learn things very well — to a point. When you are overjoyed you can actually get distracted and learn less.”

Negative emotion can be helpful as well. When a person becomes emotional as a result of being in pain, “that gets your attention and actually may make you learn much better,” Damasio said.

“Let’s say you burn yourself,” he continued. “You learn very quickly not to go to the place where you burned yourself. However, if the pain is excruciating and you are in immense suffering, you may lose the gains that the emotion gives. So emotion, positive or negative, can be a positive influence on learning and memory, but beyond a certain point you actually have diminishing returns.”

A bit of stress and anxiety can increase one’s memory, he said.

“But too much suffering may actually block the availability of the memories you create. You end up not knowing what you learned.”

**BRAIN GRIDLOCK**

External factors, such as high urban pollution, can also adversely affect memory, said University Professor Caleb Finch, an expert on the aging process. In a 2011 study published in *Environmental Health Perspectives*, Finch and his authors showed that freeway pollution affects brain neurons, raising the possibility of long-term brain health consequences.

Many studies have drawn a link between vehicle pollution and pulmonary and cardiovascular problems, but Finch was the first to explore the physical effect of freeway pollution — particles from burning fossil fuels — on brain cells.

“For example, people who live along the 405 or 101 and other urban freeways are exposed to a river of toxic fumes and particles that come off of traffic,” said Finch, holder of the ARCO/William F. Kieschnick Chair in the Neurobiology of Aging in USC Dornsife and the USC Davis School of Gerontology.

“That’s a fact of urban life. We found that in mouse models nanoparticles from freeway traffic accelerate the rate of brain aging and may accelerate Alzheimer’s disease.”

In 1984, Finch founded the USC Alzheimer Disease Research Center and was its director for 20 years. He’s now co-director.

In 2009, with an award from USC’s James H. Zumberge Research and Innovation Fund and support from the provost’s office, he also helped to create the USC AirPollBrain Group, a network involving five USC schools (USC Dornsife, gerontology, engineering, pharmacy and medicine). The group researches the effects of environmental pollution on the brain from conception across a lifespan.

Using technology developed by Constantinos Sioutas of USC Viterbi School of Engineering, Finch and his team recreated air filled with freeway particulate matter and found that in live mice and mice brain cells in vitro, neurons involved in learning and memory showed significant damage.
A Little Bird Told Me

SARAH BOTTJER OF NEUROBiology AND PSYCHOLOGY AND HER TEAM ARE THE FIRST TO LOCATE THE NEURAL CIRCUIT IN THE SONGBIRD BRAIN THAT ENCODES A REPRESENTATION OF LEARNED VOCAL SOUNDS.

Although less than half the size of a walnut and weighing one gram, the brain of a songbird is fully capable of generating complex learned behaviors. Songbirds are one of the few groups of animals other than humans that actually learn the sounds used for their vocal communication and for that reason are fascinating to study.

In a process similar to speech acquisition in humans, vocal learning in songbirds requires a period of sensorimotor integration early in life during which vocalizations are evaluated via auditory feedback and progressively refined to achieve an accurate imitation of a “tutor,” such as a parent. Specifically, auditory feedback of vocal babbling (hearing self-produced vocalizations) is compared to a neural memory of tutor sounds in order to correctly match vocal production to those sounds.

A major question with regard to mechanisms of vocal learning is: What neural circuits carry out comparisons of auditory feedback to the neural representation of tutor vocal sounds?

Like a human infant, a juvenile songbird must first listen to and memorize the vocal sounds made by tutors (adult members of their own species). This auditory memory of vocal sounds is called a template, since it forms the pattern that must be translated from an auditory neural representation into a motor program that enables vocal muscles to imitate those sounds. Once this template memory has been learned, a juvenile songbird listens to its own auditory feedback, and then practices for about a month before gradually transforming unorganized “babbling” sounds into replicas of the tutor vocal sounds.

Hearing an adult tutor produce vocal sounds during a specific period of development is critical.

“Without that you’ll strike out,” Bottjer said. “For songbirds and humans, the first base of learning is having the right auditory experience in order to memorize vocal sounds.”

Despite this fact, discovering the neural locus of the auditory template memory in the brain has been an elusive goal.

In a recent breakthrough, Bottjer’s laboratory has located the neural signature of memorized tutor sounds in the songbird brain by studying the lateral magnocellular nucleus of the anterior neostriatum (LMAN) — a region in the cortex of the songbird brain crucial for learning. To their surprise, the LMAN region turned out to contain two subregions, a core of larger neurons that drive vocal production, and a surrounding shell of smaller neurons.

The core and shell regions of LMAN give rise to parallel circuits through the basal ganglia and back to the cortex — an architecture that is well suited for comparing feedback of current vocal production to the template memory of tutor sounds.

Jennifer Achiro, a neuroscience doctoral student in Bottjer’s laboratory, wondered if the function of the shell region of LMAN might be to carry out this comparator function. She and Bottjer hypothesized that the parallel circuit made by the shell region somehow compared auditory feedback of current vocal behavior to the template memory in order to achieve an accurate imitation. If so, then the shell circuit of LMAN should contain neural representations of both current vocal behavior (babbling) and the target vocal behavior (the memorized tutor sounds). Achiro recorded and studied the activity of more than 1,000 individual neurons while birds were listening to a battery of different vocal sounds.

“What we found is that any given neuron in this region is selectively tuned to either tutor sounds or to the bird’s own vocalization but not both,” Achiro said. “Individual neurons never respond to both vocal babbling sounds and the tutor sounds. It’s one or the other.”

“These data support the hypothesis that the shell subregion of LMAN is critical in vocal learning by comparing the babbling sounds being produced to the template memory of tutor sounds,” Bottjer added.

Bottjer and Achiro believe neurons that respond only to memorized tutor sounds act as a filter: Juvenile birds occasionally produce a sound that is similar enough to a tutor sound to activate tutor-tuned neurons and this would enable these neurons to act as a filter for correct matches of current vocal production to the template memory. In addition, feedback of tutor-similar babbling sounds (i.e., that are a close enough match to tutor song) would activate both tutor-tuned and babbling-tuned shell neurons simultaneously. They predict these two types of neurons will converge somewhere downstream to complete the comparison process.

Human speech also requires auditory experience during a critical period of development in which both memorizing vocal sounds and the auditory-motor integration needed to imitate those sounds is occurring. In numerous human speech disorders, neurodevelopmental aspects of this process are disrupted.

Autism and Tourette syndrome, for example, involve deficits in social interactions and vocal communication. For people who stutter, it is the neural processing of their own auditory feedback that is critically disrupted, generally early in vocal learning. That involves cortico-basal ganglia circuitry similar to the circuits that Bottjer and Achiro are studying in songbirds.

“Humans and songbirds are both matching their own early vocalizations to the neural representation of vocal auditory memory,” Bottjer said. “This encoding and integration process is very likely to be disrupted in people with disordered speech and we can begin to understand this by studying the songbird brain.”

SARAH BOTTJER, professor of neurobiology and psychology, and co-director of USC Dornsife’s Undergraduate Neuroscience Program.  

“Humans and songbirds are both matching their own early vocalizations to the neural representation of vocal auditory memory. This encoding and integration process is very likely to be disrupted in people with disordered speech and we can begin to understand this by studying the songbird brain.”
The nanoparticles in the experiment were minuscule — roughly one-thousandth the width of a human hair, much too small to be trapped by car filtration systems. The mice were exposed for 150 hours over 10 weeks, in three sessions per week lasting at least five hours each.

In contrast, frequent commuters are exposed to smoggy freeway air over a longer period than the mice were in the study.

How can urban dwellers and drivers be protected from this type of toxicity?

“That’s a huge unknown,” Finch said. Electric cars would not solve the problem on their own, Finch said. They do sharply decrease the local concentration of nanoparticles, but currently electrical generation depends upon other combustion processes — coal — that in a larger environment contribute nanoparticles anyway.

“Reducing the amount of nanoparticles around the world is a long-term global project,” Finch said. “Whether we clean up our cars, we still have to clean up our power generation.”


Typically, inflammation — redness and swelling — is part of a healthy immune response, a surge of cells and chemicals that heal injury and fight infection. But the process also has a silent, dangerous side. Chronic inflammation occurs throughout the body when something activates the immune system and disengages the shut-off button.

Inflammation can be sparked by repeated or prolonged infections, smoking, gum disease or obesity — fat cells churn out inflammatory proteins called cytokines. The end result is the same: An endless stream of immune cells interferes with the body’s healthy tissues, triggering genetic mutations that can lead to cancer, the bursting of plaque in an artery wall or Alzheimer’s.

“We’re trying to find out what aspects of inflammation during Alzheimer’s are therapeutic targets,” Finch said. “There are some aspects of inflammation in the brain that are beneficial because it removes toxic proteins; other aspects cause further damage to neurons.”

Those processes can coexist, he added.

“I’m not running a drug development lab, but we’re trying to figure out therapeutic approaches. In the field generally, we’re trying to identify which processes of inflammation and Alzheimer’s disease are amenable to particular drugs.”

In combating Alzheimer’s, scientists are trying to remove the amyloid protein, one of the sources of the toxic process.

“We as a field are trying to develop immunotherapy; making antibodies that get into the brain and remove the amyloid — the bad stuff,” Finch said.

Artificial hormone blocking, however, is not the only way to halt the hormone receptor in humans. Restriction of calories or of specific components in food such as proteins appears to have the same effect.

Longo’s team is assessing the effect of dietary restriction in humans and other primates. A recent study by Longo’s group showed that fasting induces rapid changes in growth factors similar to those caused by the Laron mutation.

But fasting or restricting particular nutrients for long periods can lead to dangerous conditions, including anorexia and reduced blood pressure. Also, people with rare genetic mutations can suffer life-threatening effects from even short periods of fasting. Longo emphasized that additional studies are needed and that any changes in diet must be approved and monitored by a physician.

However, short periods, say four days per month, may be beneficial, Longo said.

“In terms of endangering somebody, it’s very unlikely that could happen after four days of fasting,” said Longo, referring to people in excellent health. “All evidence so far indicates it’s healthy, but we’re doing a tremendous amount of work to make sure that it is. But it takes time. Whereas with cancer we’ve done an abundance of work already, with Alzheimer’s we’re just getting started.”

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**VOCAL BABBLING**

The juvenile songbird (far left) must hear its own self-produced vocalizations (called vocal babbling) and compare that to a neural memory of tutor sounds in order to correctly match vocal production of those sounds.

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**EMPTY STOMACH, FULL MIND?**

One of Finch’s former postdoctoral researchers is Valter Longo, now professor of biological sciences in USC Dornsife and gerontology at the USC Davis School of Gerontology.

Longo, Edna Jones Chair of Biogerontology, studies the mechanisms of aging in organisms from yeast to humans.

Working with Ecuadorian endocrinologist Jaime Guevara-Aguirre, in collaboration with the Keck School of Medicine of USC and other partners, Longo conducted a 22-year study published in *Science Translational Medicine* in 2011 suggesting that a growth-stunting mutation may thwart cancer and diabetes.

The group is studying Ecuadorians with Laron-type dwarfism, a deficiency in a gene preventing the body from using growth hormones. The study team followed about 100 such individuals and 1,600 relatives of normal stature.

Researchers found that none of the community members with the gene mutation developed diabetes — though they had a high rate of obesity — and only one developed cancer, albeit a nonlethal form.

Now, the team is testing the hypothesis that the gene mutation leading to dwarfism may protect against dementia and Alzheimer’s. Longo’s laboratory is involved in clinical studies to determine whether people with Laron syndrome are protected from age-dependent cognitive decline. The Longo laboratory hopes to eventually use growth hormone-blocking drugs such as pegvisomant to prevent age-related diseases.

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**THERE ARE SOME ASPECTS OF INFLAMMATION IN THE BRAIN THAT ARE BENEFICIAL BECAUSE IT REMOVES TOXIC PROTEINS; OTHER ASPECTS CAUSE FURTHER DAMAGE TO NEURONS.”**
For Macarena Gómez-Barris, memories weave a complex chronicle of culture and power in South America.

By Michelle Salzman

At Villa Grimaldi in Santiago, Chile, the majority of buildings that stood on the grounds between 1974 and 1977 have been demolished. There are no known photographs or historical registers that capture what transpired during that period.

Throughout those four years Villa Grimaldi functioned as a secret prison. Horrific acts of torture and violence were perpetrated under the leadership of dictator Gen. Augusto Pinochet.

In 1973, Pinochet staged a coup overthrowing the democratically elected, socialist government of President Salvador Allende in Chile. Villa Grimaldi was one of a number of facilities where Allende supporters and members of the unarmed Revolutionary Left Movement (MIR) were imprisoned.

According to testimony, about 4,500 prisoners were detained at Villa Grimaldi; 229 were executed or disappeared. In all, Pinochet’s regime was responsible for the execution, torture or disappearance of an estimated 40,000 people in Chile during that time.

Following Pinochet’s rise to power, every effort was made to hide or erase evidence of the human rights abuses that proliferated, including dismantling Villa Grimaldi. For a time, many Chileans let the memories of the period fade. But traces persisted.

Macarena Gómez-Barris, associate professor of sociology and American studies and ethnicity in USC Dornsife, analyzed those remnants in her first book, Where Memory Dwells: Culture and State Violence in Chile (University of California Press, 2009), which looks at memories as a mechanism for interpreting the past.

“What’s so interesting about memory is that it tells us a lot about the present and its zeitgeist,” she said. “Memory is about politics, the mediations of the past; it’s a terrain of struggle. It paradoxically operates in a time frame that reflects upon the past to build the future.”

What began as the subject of her doctoral dissertation — Gómez-Barris earned her Ph.D. in sociology from the University of California, Santa Cruz in 2004 — developed into Where Memory Dwells.

“Looking at memory helped me analyze many different aspects of state violence,” she said. “It was important to think about how young people remembered and dealt with, or did not have access to, what happened during the Pinochet era. The recent movements in Chile over the privatization of education and debt are intimately connected to Pinochet’s neoliberal turn.”

The book is an intimate and multifaceted study of memory forms that reconstruct the past, which Gómez-Barris terms “memory symbolics.” Her analysis includes detailed discussions of Villa Grimaldi, paintings by Guillermo Núñez, a prisoner at the torture camp, and truth commission reports produced by the state 20 to 30 years after the Pinochet regime’s crimes.

Gómez-Barris juxtaposes these memory symbolics against one another: the construction of memory through state-led initiatives versus alternative forms of memory reconstructed through visual art, documentary film and other media. These accounts provide different interpretations of the same set of events to produce a complex memory kaleidoscope of state terror and its aftermath.
“Memory symbolics can be mobilized to selectively manage history in ways that reproduce state hegemony, reinscribing national identity in the fragility after collective violence,” Gómez-Barris writes. “Alternative memory symbolics, however, can challenge and cast doubt on these limited renditions by suggesting that memory-making is complex, fluid, unending and incomplete; it can construct, rather than merely flatten, human agency.” A memory symbolic is mercurial as it continues to unfold and change, Gómez-Barris noted.

There is a personal element to her work. She was a child when her family fled Chile, first to Los Angeles then to Northern California, to escape Pinochet’s brutal regime. Through her research, she has explored the connection between memory and exile. In 2003, as part of the 9/11 Collective — a group of nine daughters and sons of Chilean exiles — she helped create another memory symbolic. Like the 2001 terrorist attacks in the United States, the military coup marking Pinochet’s rise to power took place on a Sept. 11.

In the exhibit “Two 9/11s in One Lifetime: A Project and Exhibit on the Politics of Memory,” Gómez-Barris participated as an artist-performer and ethnographer. Showing in San Francisco, Calif., the exhibit connected the military attack in Chile with the 2001 attacks in the United States, with artwork, readings, a lecture and a performance. It concluded with members of the collective and their audience sharing names of those affected by the turmoil in Chile and other countries, such as Guatemala and El Salvador. Many also commemorated victims of the World Trade Center attacks.

“This participatory performance, where dozens of audience members gave public witness, made it possible to link the personal and collective levels of terror dislocation and its resistance,” Gómez-Barris writes. “The social identities of different generations of exiles produced by political violence activated relevant and meaningful cultural memory with other social groups.”

Gómez-Barris said participating in these kinds of activist experiences gives her deeper insight into her research, though it’s not without its challenges.

“I think there should be more cultural intellectual projects that allow one to play multiple roles as curators, organizers, ethnographers and witnesses,” she said. “Those can be very complicated spaces to negotiate but they are also fruitful imaginaries behind my eyes,” Núñez told the student. “No one has painted this world from where the spectator can imagine the situation.”

For her next book, Gómez-Barris has widened her research focus from Chile to the larger region of South America.

“Memory has classically been tied to the nation-state. What I’m now interested in is regionality and the forms of cultural memory that have a longer arc.”

Gómez-Barris considers the hunger strikers’ starving bodies — a result of resistance against colonial subjugation by the modern nation-state — a form of bodily memory.

“We often discuss memory as if it’s lodged somewhere, waiting to be uncovered, a premise of psychoanalysis,” she said. “Or memory is discussed as an empirical fact that can be unearthed and has a material trace. For me, part of the feminist decolonial project is to suggest that memories dwell in the archive of the body, and so in newer work I feature various female figures in South America whose scholarship and activism resoundingly makes this point.”

In the past few years, Gómez-Barris has seen a shift in the way Chileans are dealing with the violence of their past, even if forms of racialized violence are not yet well understood. Memories that were neglected, buried or forgotten have now become the centerpiece of tourist excursions. Travel operators now run tours to the national cemetery where there is a mass grave turned historical monument and memorial where Pinochet’s regime buried the bodies of their victims. In Santiago, Chile, the Museum of Memory and Human Rights, dedicated in 2010, chronicles the history and human rights abuses of that era with exhibits and memorials.

And Villa Grimaldi, once a locus of terror, is now a memorial and cultural center, a place to remember those who perished during that dark period.

In Where Memory Dwells, artist Guillermo Núñez recounted that a student attending one of his exhibits noted that his paintings express both the victim and the perpetrator. “What force is there in the border between what is seen and what is not seen?” the student asked Núñez.

Núñez replied that in 1974, his eyes were blindfolded day and night at Villa Grimaldi.

“I realized that I began to retreat into the world of imagination behind my eyes,” Núñez told the student. “No one has painted this world from where the spectator can imagine the situation.”

Take his painting called “¿Qué hay en el fondo de tus ojos?” (“What is there in the depths of your eyes?”). It depicts a dark-haired, bearded male whose eyes are obscured by a blindfold colored with red dashes of paint. This motif, which recurs throughout Núñez’s work, is an analogue of the cover that veiled his eyes throughout his time as a captive at Villa Grimaldi.

“His abstract, haunting paintings construct a bridge from the interior to the exterior,” Gómez-Barris writes.

And now Núñez’s memories, along with those of so many others, have made that transition to the exterior. In museums, memorials and in Gómez-Barris’ research and writing, they are chronicled for the world to observe, experience, remember.
Packed neatly in brown paper and carefully tied with string, hundreds of bundles of music sat forgotten on the shelves of a linen closet in the Los Angeles home of Judith Anne Still’s mother.

One spring day in 1980, Judith Anne discovered them. “I felt a wave of grief wash over me,” she said. “My father had died two years earlier and now it was as if his music — his entire reason for living — had died with him.

“My father’s work was forgotten and nobody cared about it anymore. It was like a second death.”

William Grant Still had been considered “the dean of African American classical composers.” “What a tragedy, nobody is standing up for this man,” Judith Anne thought as she studied the rows and rows of bundles. Then and there, she resolved to devote her own life to rescuing her father’s memory from obscurity. “I had to do it,” she said. “There was no one else.”

Born in Woodville, Miss., in 1895, William Grant Still blazed a trail through the American musical landscape for half a century, composing more than 150 classical works, including symphonies, ballets and operas.

His distinguished career included stints as the recording director of the first African American owned record label, Black Swan, and as an arranger of film and popular music. A recipient of two Guggenheim fellowships, he chalked up an impressive series of firsts.

In 1931, his Afro-American Symphony was the first symphony composed by an African American to be played for an American audience. His work leading the Los Angeles Philharmonic at the Hollywood Bowl in 1936 marked the first time an African American conducted a major orchestra. In 1949, Still became the first African American to have an opera staged by a leading company when the New York City Opera performed Troubled Island, his opera featuring a libretto by Harlem Renaissance poet and writer Langston Hughes. He was also the first black composer to have an opera screened on national American television. In 1955, when he led The New Orleans Philharmonic, he was the first African American to conduct a major orchestra in the Deep South.

But despite his outstanding talent and prodigious output, Still struggled with financial hardship for most of his career. This was compounded latterly by a noticeable decline in attention to his music following the production of Troubled Island, which he and his family attributed to racial discrimination.

Still was a man of faith. His greatest desire was that his music serve to create racial harmony. “My father had so much hope during the great success of the Afro-American Symphony that his music would really make a difference and bring people together,” Judith Anne said. “But after Troubled Island everything seemed to go in the other direction.”

“He believed in the rectitude of the creative impulse. So although very disappointed that he wasn’t going to see it in his lifetime, he believed that one day his music would foster racial harmony.”

Following a series of heart attacks and strokes, William Grant Still died in 1978 at age 83, in his adopted city of Los Angeles, largely forgotten and deeply saddened that he had failed to achieve this mission during his lifetime. At the time of his death, interest in his work had dwindled to such a degree that not a single viable recording of his compositions existed and only a handful of performances of his music, including radio broadcasts, were being given on average each year.

Determined to resurrect her father’s legacy, in 1980 Judith Anne founded William Grant Still Music, now based in Flagstaff, Ariz., where she now lives. “This is going to be easy,” Judith Anne thought at the start. “But I’d write to conductors and they wouldn’t answer, or I’d write to record companies and they’d tell me black classical music doesn’t sell.”
My father was a wonderful mixture of Gandhi, Einstein and your kindergarten teacher.”

Judith Anne realized that to have any success rekindling her father’s memory in the face of such widespread indifference, she would have to do everything herself. She used an old air check radio recording of *Lenox Avenue*, her father’s ballet set in Harlem, to create an LP. She then persuaded the North Arkansas Symphony Orchestra to record the first performance of her father’s *Third Symphony*. She was also instrumental in getting her mother’s biography of her father, *In One Lifetime* (The University of Arkansas Press, 1984), published.

She wrote to music professors across the country to market these products.

“They were successful, so we took that money and then mortgaged everything: the house, the furniture.” She paused before humorously adding for emphasis, “the pets — even the goldfish.”

“With the money, we made more books and recordings, and sent out records and CDs to radio stations.”

From these humble beginnings, Judith Anne’s determination to revive her father’s music has grown into a flourishing business that has brought many of his greatest works to new generations of music lovers. William Grant Still’s work is now performed or broadcast on the radio more than 40,000 times a year. Numerous recordings of his compositions and a wide selection of books and articles that tell his inspiring life story — many written or edited by Judith Anne — are readily available online and in libraries. Recently, she had built a new climate controlled building to safely house her father’s vast archive.

Born in 1942, Judith Anne grew up a few blocks from USC in the family’s modest Spanish-style stucco home on Cimarron Street, in what at the time was a segregated neighborhood. Her mother, Verna Arvey, Still’s second wife, was of Russian-Jewish descent and a successful music journalist, librettist and concert pianist. Circumventing California laws banning interracial marriage, they wed in Mexico.

Judith Anne’s childhood memories are happy ones. Her parents did not have much money, but they enjoyed a wealth of warmth and love, and a wide circle of friends, many of them well-known artists who frequently visited their home.

However, while her parents could relax with their trusted friends, she remembers they erected a 5-foot-high chain link fence around the house for protection. Racism during that period was rife, even in supposedly liberal Los Angeles, and interracial couples were targets. Despite these concerns, her parents created a secure and nurturing environment for her and her brother Duncan, and the house on Cimarron Street was filled with laughter and music.

“The sounds of slowly evolving chords and harmonies coming from the workroom piano were as familiar to us as the smells of the evening honeysuckle or of the sheets fresh from the clothesline,” Judith Anne wrote in her collection of essays about her father, *A Voice High-Sounding* (The Master-Player Library, 1990).

Her father was also a talented carpenter who made furniture for their home and intricate jigsaw puzzles and toys for his children. He was an enthusiastic gardener whose “victory garden” during World War II produced an abundance of vegetables, which he shared with friends and neighbors.

“My father was a wonderful mixture of Gandhi, Einstein and your kindergarten teacher,” Judith Anne said affectionately. “He was a sweetie, very spiritual in nature and not at all an egotistical person.”

He enjoyed sharing his love of music with his children, creating homemade kazoois out of combs and tissue paper to amuse them. However, painful memories of his own mother’s insistence that he study medicine rather than music — which she believed was not a respectable career for an educated person of color — impelled him to never force his children to play an instrument.

Thus, when Judith Anne’s mother pushed her to learn the piano, the celebrated composer intervened, saying, “Leave her alone, she’s going to be a writer.”

And she did, winning several awards for her writing, including an Independent Publisher Book Award in 2008. Still won a full scholarship offered by USC to academically gifted students of color and majored in English in USC Dornsife.

“USC was thinking out of the box in offering these wonderful opportunities,” she said, referring to some of the nation’s first minority programs.

The Still family already had close connections with USC. Still had given talks at the university, where he had many friends. Students and faculty were familiar with his music from the concerts he gave at nearby Exposition Park.

While attending USC Dornsife, Judith Anne was active in honor societies Phi Kappa Phi and Phi Beta Kappa. She also fondly remembers evenings spent playing the card game bid whist and reciting poetry with friends at the Trojan Grill, then a popular eatery in the basement of the student union.

Judith Anne met her future husband, Larry Allyn Headlee ‘65 at USC, while he was studying for his master’s in marine geology in USC Dornsife. The couple married in 1962 and had four children, the second of whom, Lisa, was born seven days after Judith Anne graduated *magna cum laude*.

Although her years at USC coincided with a period of major political upheaval, including the assassination of President John F. Kennedy, Judith Anne’s devotion to her children and her studies kept her preoccupied. Despite the demands of her growing family, she continued her studies and graduated from Cal State Fullerton with a master’s degree in English in 1968.

After graduating, her husband worked on a mini-submarine for a private company, General Oceanographics. In 1969, Headlee’s mini-submarine rescued crewmembers of another mini-submarine trapped on the ocean floor at a depth of 432 feet. Judith Anne’s marriage was tragically cut short when Headlee drowned saving a fellow crewmember while attempting to raise a sunken pleasure cruiser off the coast of Catalina Island on Sept. 21, 1970.

“USC helped us through in the lean years after my husband died,” she said. “The USC Symphony played my father’s piece *Rhapsody*, dedicated to the memory of my husband, and my whole family attended.”

Both she and her father maintained lifelong ties with USC, which never forgot William Grant Still’s outstanding contribution to classical music. The university awarded him an honorary doctorate in 1975. The composer’s final public appearance before his death was at a USC-hosted tribute dinner to commemorate his 80th birthday. Then-Los Angeles Mayor Tom Bradley was among the many guests.
and the eminent composer and conductor Howard Hanson flew out from New York to lead the tributes.

When Still died three years later and his family struggled to pay the funeral expenses, USC stepped in and organized a memorial concert.

USC has played a continuing role in her family’s life, Judith Anne said.

“Sometimes it seems as if everything radiates from there,” she said. “A couple of years ago USC had a concert of my father’s work and our old neighbors from Cimarron Street came to hear it.”

Five generations of the Still family have forged and perpetuated the legacy of William Grant. The composer acquired his deep love of music from his grandmother, Anne Fambro, a former slave who taught him the great African American spirituals, then called Negro spirituals, and from his stepfather, Charles Shepperson, who brought home a Victrola gramophone and introduced him to the operas of Verdi and Puccini. His father, William Grant Still Sr., who died when the younger Still was a baby, routinely traveled 75 miles from Woodville, Miss., to Baton Rouge, La., to learn the coronet and later started a uniformed band in Woodville. His mother, Carrie Still Shepperson, an English teacher, pianist, choral director and strict disciplinarian, was the dominant force in his early life, giving him the determination to succeed against all odds.

Now his daughter’s devotion to his memory has ensured that his musical legacy will not be forgotten. Judith Anne’s daughter, Lisa Headlee, who is working on a book of photographs of her grandfather, is poised to receive the baton from her mother and carry it forward.

“My father’s motto was ‘We all rise together or we don’t rise at all,’ ” Still said. “My cherished hope is that my father’s story will one day be brought to an even wider audience through a feature film.

“I want to accomplish my father’s longed-for dream of using his music to bring racial harmony and understanding to our country.”

MAESTRO
William Grant Still conducting the Los Angeles Philharmonic at the Hollywood Bowl in a piece titled Old California that he wrote for the city of Los Angeles’ Birthday Concert on Sept. 8, 1965.
Whether it’s standing in for a Seattle library in Gore Verbinski’s 2002 thriller, *The Ring*, providing shelter against bad guys on the ’70s television show *Charlie’s Angels*, or serving as an elegant backdrop during recent photoshoots for retailers H&M and Oliver Peoples Eyewear, the Seeley Wintersmith Mudd Hall of Philosophy remains one of the most recognizable buildings on USC’s University Park campus.

More than merely an aesthetically pleasing edifice with a 146-foot carillon tower and cloistered patio, Mudd Hall — described by the *Los Angeles Times* as a “temple of contemplative study” — has housed USC Dornsife’s School of Philosophy since its completion in 1929.

As Ralph Tyler Flewelling, the school’s first director, wrote shortly before the building’s dedication in 1930, “Its purpose is not to function as a mere classroom structure, but as a thing of beauty which shall symbolize the importance of philosophical thought in the pursuit of culture and in the world order.”

Modeled after a Tuscan monastery, Mudd Hall is where countless Trojan scholars have gathered to debate issues of ethics, logic, science, art, politics, and the social and political philosophy of language. Upon construction, a number of items were sealed in the hall’s cornerstone, including a copy of the university catalogue, issues of the *Daily Trojan* and the *Los Angeles Times*, and a copy of the university’s philosophical quarterly, the *Personalist*.

Built for $285,000 under the watchful eye of USC’s fifth president, Rufus B. von KleinSmid, Mudd Hall was named in memory of copper baron and philanthropist Seeley Wintersmith Mudd.

The Mudd family is now synonymous with the support of higher education and their name appears at more than a dozen elite universities across the country. — D.K.

(above): The Seeley Wintersmith Mudd Hall of Philosophy has been home to the School of Philosophy for more than 80 years. (right): Descendants of Seeley Wintersmith Mudd donated a portrait of their celebrated ancestor in 2012. It now hangs in the hall’s House Library. From left to right: Joshua Dragge (great-great-grandson), Darian Dragge (great-granddaughter) and Wendel Bruss (great-granddaughter).

SEND YOUR MEMORIES TO USC Dornsife Magazine, Citigroup Center 8206, 41st Floor, Los Angeles, CA 90089-8206 or magazine@dornsife.usc.edu
Faculty News

FRANK ALBER, associate professor of biological sciences, has been named a Beckman Young Investigator by the Arnold and Mabel Beckman Foundation.

DON ARNOLD, associate professor of biological sciences, received the McKnight Award for Technological Innovations in Neuroscience.

JOHN BOWLT, professor of Slavic languages and literatures and director of the Institute of Modern Russian Culture, received a grant from the Albert and Elaine Borchard Foundation for his work on the artists of the Russian Silver Age.

RICHARD BRUTCHEY, assistant professor of chemistry, was featured in Dalton Transactions, “New Talent: Americas.”

MANUEL CASTELLS, University Professor, Wallis Annenberg Chair in Communication Technology and Society, and professor of communication, sociology, planning, and international relations, was awarded Norway’s 2012 Holberg International Memorial Prize.

KELVIN J. A. DAVIES, James E. Birren Chair in Gerontology and professor of gerontology and biological sciences, was named a chevalier, or knight, in the Ordre National de Mérite by the French Ministry of Education.

DION DICKMAN, assistant professor of biological sciences, received a 2012 New Scholar Award in Aging from the Ellison Medical Foundation.

SUSAN FRIEDLANDER, professor of mathematics and director of the Center for Applied Mathematical Sciences, was elected a fellow of the Society for Industrial and Applied Mathematics.

CHRISTIAN GROSE, associate professor of political science, received the American Political Science Association’s award for the Best Book on Race, Ethnicity and Representation for his book Congress in Black and White: Race and Representation in Washington and at Home (Cambridge, 2011).

ROBERT GURALNICK, professor of mathematics, has been invited to give a plenary address at the Joint Mathematical Meetings in January 2013.

SHERMAN JACKSON, King Faisal Chair in Islamic Thought and Culture, and professor of religion and American studies and ethnicity, was named for the second time among the world’s 500 most influential Muslims by The Royal Islamic Strategic Studies Centre.

THOMAS JORDAN, University Professor, W.M. Keck Foundation Chair in Geological Sciences, professor of earth sciences, and director of the Southern California Earthquake Center, received the American Geosciences Institute Award for Outstanding Contribution to Public Understanding of the Geosciences.

ADAM LEVENTHAL, assistant professor of preventive medicine and psychology, has received the 2012 Young Pharmacologist Award from the American Psychological Association’s division of psychopharmacology and substance abuse.

NANCY LUTKEHAUS, professor of anthropology, gender studies and political science, has been invited by the Frobenius-Institut of Goethe University to give the 2013 Jensen Memorial Lectures.

CHARLES MCKENNA, vice dean for natural sciences and professor of chemistry, was invited as a plenary lecturer at the International Conference in Phosphorous Chemistry in Rotterdam, Netherlands.

MICHAEL MESSNER, professor of sociology and gender studies, received the American Sociological Association’s 2011 Jessie Bernard Award for his contribution to feminist teaching.

SRI NARAYAN, research professor of chemistry, was elected as a fellow of The Electrochemical Society.

RHACEL SALAZAR PARREÑAS, professor of sociology and gender studies, and chair of the sociology department, has been awarded the 2012 American Sociological Association’s Distinguished Scholarly Book Award in the Area of Labor or Labor Movements for her book Illicit Flirtations: Labor, Migration and Sex Trafficking in Tokyo (Stanford, 2011). She also gave the keynote address at the 50th Anniversary Ford Fellows Conference held in Irvine, Calif., in September.

ELENA PIERPAOLI, professor of physics and astronomy, is part of a team that will be receiving a NASA Group Achievement Honor Award for its work on the Herschel & Planck Projects.

G. K. SURYA PRakash, George A. and Judith A. Olah Nobel Laureate Chair in Hydrocarbon Chemistry, professor of chemistry, and director at the USC Loker Hydrocarbon Research Institute, was elected a fellow of the European Academy of Sciences.

MATTHEW PRATT, assistant professor of biological sciences and chemistry, has been named a 2012 Damon Runyon-Rachleff Innovator.

Continued on page 54.
In the poem, “The Aurora of the New Mind,” the narrator fluffs up the pillows then won’t let the reader get comfortable.

“There had been rain throughout the province  
Cypress & umbrella pines in a palsy of swirling mists  
Bent against the onshore whipping winds  
I had been so looking forward to your silence  
What a pity it never arrived.


Still I look a lot like Scott Fitzgerald tonight with my tall  
Tumbler of meander & bourbon & mint just clacking my ice  
To the noise of the streetcar ratcheting up some surprise  
I had been so looking forward to your silence  
& what a pity it never arrived.

“With the repetition, that last line, that refrain is slightly different,” St. John said. “The first time it’s meaner and more aggressive. The second time it’s sadder; the reader experiences the line with a greater poignancy.”

Separated in three sections like a triptych, the book’s first part comprises poetry with songlike motifs and surreal imagery. The second section contains shortly lined poems with taut language recalling the landscapes of St. John’s youth. The final section switches to longer, meditative, philosophical and even discursive lines.

“I didn’t know if people would feel like these are three distinctly different parts,” St. John said. “But I’m relieved to know readers are experiencing the book as a whole.”


“Wallace Stevens has been one of the main influences on my poems from the beginning and I really wanted to acknowledge that,” St. John said. “Also, I liked the idea of The Auroras suggesting not only the ephemerality, but also the kaleidoscope — always in constant change.” —P.J.J.
Politics in the past few decades have transformed gender and sexual identity widely credited with helping to heal a fractured L.A. Professor of English, illustrates the complexity of the tectonic cultural shifts that have occurred.

**WHAT A BOOK?** The Study of Early Printed Books / *Joseph Dane*, professor of English, provides an introduction to the study of books produced during the period of the hand press from 1450 to 1800.

**AMERICAN CONSTITUTIONALISM:** Volume I: Structures of Government / *Howard Gillman*, professor of political science, history, and law, and his co-authors present a historicized and developmental account that unveils the political and institutional roots of contemporary constitutional controversies.

**SHADOW OF NIGHT:** Viking Adult / In her second novel in the All Souls trilogy, *Deborah Harkness*, professor of history, crafts a gripping journey through a world of alchemy, time travel and magical discoveries.

**AMERICAN CONSTITUTIONALISM:** Volume II: Developmental Aspects / *Joseph Dane*, professor of English, provides an introduction to the study of books produced during the period of the hand press from 1450 to 1800.

**Twice Tested by Fire: A Memoir of Faith and Service** / *Cecil “Chip” Murray*, senior fellow of the USC Center for Religion and Civic Culture and John R. Tansey Chair of Christian Ethics in the School of Religion, chronicles the inspiration, as well as the challenges, that shaped a ministry widely credited with helping to heal a fractured L.A.

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**BEYOND ALLIANCES:** The Jewish Role in Reshaping the Racial Landscape of Southern California / *George Sanchez*, professor of American studies and ethnicity and history, and vice dean for diversity and strategic initiatives, investigates the role that Jews played in reshaping the racial landscape of Southern California in the 20th century.

**PLANET WITHOUT APES** / *Craig Stanford*, professor of biological sciences and anthropology, warns that extinction of the great apes threatens to become a reality within just a few human generations and outlines how we can redirect the course of an otherwise bleak future.

**BARRIOS TO BURBS:** The Making of the Mexican American Middle Class / *Jody Agius Vallejo*, assistant professor of sociology, offers a new understanding of the Mexican-American experience.

**PUSHING THE MAKER:** Contesting Race, Sexuality, and the Law in the North American West / *Nayan Shah*, professor of American studies and ethnicity, reveals the intersections between capitalism, the state’s treatment of immigrants, sexual citizenship, and racism in the first half of the 20th century.

**SUFIISM FOR NON-SUFIS:** *Ibn ‘Ata’ Allah al-Sakandari’s Taj al-Arûs* / In his translation and analysis of Taj al-Arûs, *Sherman Jackson*, King Faisal Chair in Islamic Thought and Culture and professor of religion and American studies and ethnicity, demonstrates that violent, lax or rigid readings of Islamic texts are as much a result of readers’ spiritual states as of the substance of the Qur’an, Sunna and the teachings of Islam’s sages.

**A PEOPLE’S GUIDE TO LOS ANGELES** / *Laura Pulido*, professor of American studies and ethnicity, and her co-authors document 115 little-known sites in the City of Angels where struggles related to race, class, gender and sexuality have occurred.

**SUFIISM FOR NON-SUFIS:** *Ibn ‘Ata’ Allah al-Sakandari’s Taj al-Arûs* / In his translation and analysis of Taj al-Arûs, *Sherman Jackson*, King Faisal Chair in Islamic Thought and Culture and professor of religion and American studies and ethnicity, demonstrates that violent, lax or rigid readings of Islamic texts are as much a result of readers’ spiritual states as of the substance of the Qur’an, Sunna and the teachings of Islam’s sages.
Welcome
New Trustee

Thomas J. Barrack Jr. ’69 elected to USC Board of Trustees.

Thomas J. Barrack Jr. began his real estate investment career as president of Dunn International Corp. in New York, he became a principal with the Robert Ventures Inc., and senior vice president of E. F. Hutton & president of Dunn International Corporation, a builder of

Herbert W. Kalmbach as President Richard Nixon’s per-

ciology from USC Dornsife in 1969 and later attended the

our board,” said USC President C. L. Max Nikias. “His

an extraordinarily creative and successful entrepreneur to

global organization located in 13 cities and 10 countries. “A true Trojan, Tom brings the unique perspective of an extraordinarily creative and successful entrepreneur to our board,” said USC President C. L. Max Nikias. “His spirit of adventure, leadership and wealth of experience in finance and real estate development will be invaluable.”

An L.A. native, Barrack played on the varsity rugby team while at USC. He received a bachelor’s degree in sociology from USC Dornsife in 1969 and later attended the USC Gould School of Law and the University of San Di-

e in the (Charlotte) Observer was remembered as

a MacArthur Genius Fellow, an Arabic language expert, several National Science Foundation grant recipients, and a historian specializing in kabuki Theatre. Read more about USC Dornsife’s new faculty at dornsife.usc.edu/new-faculty-2012-13

Alumni News

1940s

“T.” Thebaud Jeffers (M.A., English, ’40), a high school prin-
cipal and the first black mayor of Gastonia, NC, was remembered as part of the (Charlotte) Observer’s tribute to Black History Month.

1950s

Carl Terzian (B.A., history, ’57) chairman of Carl Terzian
Associates, recently celebrated his 44 years in practice. His first public relations client was Norris Industries. Terzian helped launch the USC Norris Comprehensive Cancer Center.

1960s

Victoria Riskin (B.A., humanities, ’69; Ph.D., educa-
tion, ’86), a Santa Barbara human rights activist, has been honored by the California Legisla-
tive Women’s Caucus.

Dennis Welch (M.A., English, ’69; Ph.D., English, ’71), associate professor of English in the College of Liberal Arts and Human Sciences at Virginia Tech, has been named associate professor emeritus.

Continued on page 56.
‘Home of Olympians’

USC Dornsife students and alumni add to Troy’s Olympic glory, taking 10 medals at the 2012 London games.

This year, of the 41 Trojan athletes who participated in the Summer Olympic Games in London, 24 were either past, current or incoming USC Dornsife students.

The first USC Dornsife Olympian to take home the gold — thereby assuring that USC’s 100-year record of having at least one gold medal in every Summer Olympic Games remained unbroken — was former Trojan All-American Clement Lefert (B.A., economics, ’11) who won as part of France’s 400-meter freestyle relay. Two days later, Lefert clinched a silver as part of France’s 800-meter freestyle relay.

Shortly after his second victory, Lefert gave his alma mater a shout-out from his Twitter account. “Gold and silver in the house for USC Athletics!” Lefert tweeted. “Thanks for the support. It’s amazing to be a Trojan.”

Felix Sanchez (B.A., psychology, ’01) captured gold for the Dominican Republic in the men’s 400-meter intermediate hurdles. He previously took home the same medal — with the identical winning time of 47.63 seconds — at the 2004 games in Athens. “No one expected this,” said Sanchez, 35, who is the oldest man to win an Olympic race of 400 meters or fewer and who remains the USC record holder in the 400-meter intermediate hurdles. “Many people said I should retire but I stuck with it. They’ll all be celebrating now.”

Like Lefert, Kami Craig (B.A., sociology, ’10) took home Olympic gold in a team sport: water polo. Craig and fellow Trojans Tumua Anae (B.A., USC Annenberg School for Communication and Journalism, ’10) and Lauren Wenger (B.S., USC Price School of Public Policy, ’10) took home the medal for the United States, besting — with a score of 8-5 — the team from Spain, that included USC Dornsife freshman Anni Espar. Craig also competed for Team USA at the 2008 games in Beijing, where the squad won silver.

Minutes after the women’s water polo team’s victory, the U.S. women’s soccer team also took gold, with USC Dornsife alumna Amy Rodriguez (B.A., psychology, ’08) helping to ensure the team’s third successive Olympic tournament victory.

Also among the USC Dornsife scholars who captured medals at the London games were former Women of Troy greats Jennifer Kessy (B.A., history, ’08) and April Ross (B.A., international relations, ’03) who took silver for the U.S. in a match-up that pitted them against another American team; Josh Mance (B.A., sociology, ’15) who won a silver for the U.S. in the men’s 4 x 400 relay; and Nicole Davis (B.A., political science, ’03) who took silver for the U.S. volleyball team. Russian swimmer Vladimir Morozov (B.S., kinesiology, ’14) faced off against Lefert in the 400-meter relay, taking home a bronze for his team’s efforts.

“Based on their performances and medals they won, this is the most successful class of USC Olympians ever,” said Pat Haden (B.A., English, ’75), holder of USC’s Charles Griffin Cale Director of Athletics’ Chair and director of athletics. “Considering our long Olympic heritage, that is a remarkable achievement. It is safe to say that USC is the ‘Home of Olympians.’ ”

In its history, USC has sent more athletes to the Olympic Games than any other university. Since 1904, there have been 418 athletes who attended USC before, during or after their Olympic appearances. —D.K.
CLIFF SKELTON (B.A., international relations, ‘78), has been named executive vice president and chief information officer of Fiserv, Inc., a leading global provider of financial services technology solutions.

SUSANNE STIRLING (M.A., international relations, ‘76), vice president of international affairs for the California Chamber of Commerce, has been elected to University of the Pacific’s Board of Regents.

HOWARD GAUNT (B.A., political science and international relations, ‘84), head of the Corporate and Business Banking Group at Abu Dhabi Commercial Bank, was interviewed by Banker Middle East about the evolution in the United Arab Emirates corporate banking sector and the challenges ahead.

OMAR KADER (Ph.D., international relations, ‘81) has been selected as Utah Valley University’s 2012 recipient of the Kirk Englandhardt Excellence in Business Ethics Award. He was recognized for his work related to civil rights and democracy in the Middle East.

DAVID LOUIE (B.A., economics, ‘85) has been named managing director and vice chair of client advisory at Bank Sarasin.

GEOFF MATHIEUX (B.A., international relations and economics, ‘89) has been appointed CEO of Tickengo, an Internet start-up based in San Francisco, CA.

GEN. DUNCAN J. McNAB (M.A., international relations, ‘84), retired, U.S. Air Force, was elected to the board of directors of Atlas World Airlines.

OWEN NEWCOMER (Ph.D., political science, ‘80), was chosen as mayor of Whittier in April 2012. He has taught political science at Rio Hondo College for 37 years.

MARCUS PERL (M.A., economics, ‘87) is a vice president and portfolio manager for Quantitative Management Associates (QMA) and a member of the asset allocation team and the investment committee.

CHOUDHURY SHAMIN (M.A., international relations, ‘84; Ph.D., international relations, ‘87), a political science professor at California State University, Fullerton, led the Cal State Fullerton Model United Nations delegation team to the U.N. conference at Harvard University.

RICHARD VERDUGO (Ph.D., sociology, ‘81) has founded The Goldview Group, a firm that specializes in selling excess inventory on behalf of their clients. He launched the company upon his retirement from the National Education Association in Washington, D.C., where he was the senior research scientist.

ANAMARIE DEL RIO (B.A., international relations, ‘76; MPA, public administration, ‘78), serves as Steadfast Companies secretary and compliance officer and the chief operating officer. She is responsible for managing human resources, information technology and legal services departments as well as risk management and company-wide communications.

Geraldine Knatz (M.S., engineering, ‘77; Ph.D., biology, ‘79), executive director for the Port of Los Angeles, has been appointed to the California Ocean Protection Council. She also has been named the 2012 recipient of the Blue Frontier Campaign’s Peter Benchley Ocean Award for Excellence in Solutions.

Christopher Layne (B.A., international relations, ‘72), professor and Robert M. Gates Chair in Intelligence and National Security at the George Bush School of Government and Public Service at Texas A&M University, joins a select group of faculty members that hold the title of University Distinguished Professor. He is the author of two books and has contributed extensively to American foreign policy scholarly and policy journals.

Leonard Pitts Jr. (B.A., English, ‘77), The Miami Herald syndicated columnist who won the 2004 Pulitzer Prize for commentary, presented a lecture during Syracuse University’s 26th annual Dr. Martin Luther King Jr. Memorial Public Affairs Lecture.
2000s

NICOLE CASTRALE (B.A., social sciences and economics, ’01) tied for fourth place at the Kraft Nabisco Championship. She has one LPGA victory and 19 top-10 finishes in her career.

PO CHEN (Ph.D., geology, ’05), associate professor of geology and geophysics at the University of Wyoming School of Energy Resources, is conducting research using a supercomputer at the National Center for Atmospheric Research-Wyoming Supercomputing Center to model seismic events. He has received funding support from the National Science Foundation, the U.S. Geological Survey and the Southern California Earthquake Center (SCEC), housed in USC Dornsife.

BRAD GORESKI (B.A., art history, ’07), celebrity stylist, stars in Bravo’s “It’s a Brad, Brad World.” The show was recently renewed for a 2nd season.

MATT LEINART (B.A., sociology, ’05), a quarterback in the NFL, signed a one-year contract with the Oakland Raiders.

JORDAN MICHAELS (B.A., neuroscience and biological sciences, ’09), founder and chief executive of Ringadoc, a start-up that connects patients with doctors over the phone or online, explained why he decided to drop out of medical school and become a health technology entrepreneur in a Forbes Magazine article.

2000s

The chestnut thoroughbred had a certain je ne sais quoi. “He’s all class,” said J. Paul Reddam (Ph.D., philosophy, ’82), who owned the racing horse, I’ll Have Another. “It’s just something you sense when you’re near him. Class is somewhat intangible. You know it when you see it.”

Yet, I’ll Have Another was dismissed by most. When he raced in the Robert Lewis Stakes at Santa Anita Park in Arcadia, Calif., his odds were 43 to 1.

“My horse crushed the field that day,” Reddam said. The longest shot in the field of eight 3-year-olds, the colt won by 2 ¾ lengths.

Competing against sheiks from Saudi Arabia who have unlimited resources to spend on a thoroughbred, Reddam, who owns CashCall, a company offering personal and mortgage loans, bought the horse for a relatively modest $35,000. In the 2012 Kentucky Derby, the colt, which Reddam named after never resisting having another of his wife, Zillah’s, chocolate chip cookies, was favored 15 to 1.

Sitting in the grandstands at Churchill Downs, Reddam remembered watching the pack of horses coming around a turn.

“From the corner of my eye I could see forward movement of one of the horses and I realized it was him,” Reddam said. “He had an eighth of a mile to go and he was in second. We’ve all heard the cliché time stands still. Well, I’ve got to tell you that 13 seconds from the eighth pole to the wire seemed like an hour and a half.”

Reddam snapped his fingers: “Bang! He crossed the wire.” Then with his mane braided and his coat shimmering, I’ll Have Another went on to become a Preakness Stakes champion — the second jewel of the Triple Crown. On his way to becoming the first horse to win the Triple Crown in 34 years, the colt tore his front tendon and Reddam was forced to scratch him the day before the big race.

Never once the favorite, I’ll Have Another exceeded everyone’s expectations and took Reddam on what he called “an adventure of a lifetime.”

“You learn in horse racing — just like in philosophy — that most people are wrong about most things,” Reddam said. “So don’t be worried about what everybody thinks. Cut your own path.” —P.J.J.
A WINTER’S BLOOMING
HNN Press / Patricia (Travis) Anders (B.A., English, ’85) tells a story of a man on the edge of despair trying to find his place in the world.

HANDIWORK Slope Editions / Amaranth Borsuk (M.A., English, ’06, Ph.D., literature and creative writing, ’10) explores the constructive and destructive work of hands through a combination of constraint-based writing and fragmented lyricism in this book of poetry.
Also by Amaranth Borsuk with programmer Brad Bose BETWEEN PAGE AND SCREEN Siglio Press

BABE IN BOYLAND Penguin Dial / Penguin / Jody Gehrman’s (MPW, ’00) book is about a high school student who writes her school’s relationship column.
Also by Jody Gehrman AUDREY’S GUIDE TO WITCHCRAFT Independent

Also by Colleen Aycock BOXING’S GREATEST PROMOTER McFarland

UNDER COVER Finishing Line Press / Paul Cummins (Ph.D., English ’87) has published a collection of poetry.

CITY OF WOMEN Amy Einhorn Books / G.P. Putnam Sons / David Gillham (MPW, ’87) explores what happens to ordinary people thrust into extraordinary times, and how the choices they make can be the difference between life and death.

BUTTERFLY JAR Dancingquills Industries / Jalandra Davis (MPW, ’08) spins a tale that follows a mischievous young girl growing up in a tumultuous family in South Central L.A. at the time of the ’92 uprisings.

GIRLCHILD Farrar, Straus and Giroux / Tupelo Hassman’s (B.A., creative writing, ’09) first novel follows Rory Dawn Hendrix, a sassy young girl growing up in the Calle, a cluster of mobile homes on a plot of dirt outside Reno, Nev.

ONE MARriage UNDER GOD The Campaign to Promote Marriage in America NYU Press / Melanie Heath (Ph.D., sociology, ’06) explores the politics of marriage, its reinforcement as a cultural norm, and the anxieties surrounding the same-sex marriage debate. Her research was funded with a grant from USC Dornsife’s Center for Religion and Civic Culture.

SO L.A. Lettered Press / Bridget Hoida (Ph.D., literature and creative writing, ’07) explores a grief-stricken artist’s mind as she learns to accept the accidental death of her brother and the gradual demise of her marriage.

SWIRLING Atria Books / Janice Rhoshalle Littlejohn (MPW, ’06) and co-author Christelyn D. Karazin offer advice and insight on interracial relationships, along with interviews and personal stories.

THE SECRETS OF MARY BOWSER Morrow / Lois Leveen (M.A., English, ’93) presents the story of a woman born into slavery.

MApSEd VOICEs Gay Men and Lesbians in Cold War America SUNY Press / Craig Loftin (Ph.D., history, ’06) analyzes letters written to the first gay magazine in the United States from 1953 to 1965 to better understand how gay men and lesbians coped with the challenges of the McCarthy era.
Also by Craig Loftin LETTERS TO ONE: Gay and Lesbian Voices from the 1950s and 1960s SUNY Press
Sugar High

Think about Thanksgiving pumpkin pie — warm, silky smooth with just a hint of spice. Or Christmas cookies with their sweet doughy scent and the crunch of sugar on top. Or maybe a peach cobbler from the dog days of summer, or a tangy dose of strawberry shortcake with a dollop of whipped cream.

Tied up in all these delicious dishes are memories that go deeper than simple tastes, and that’s what Kimberly Robinson Reiner (B.A., French, ’92) explores in her collection of short stories and recipes titled Sugar, Sugar: Every Recipe Has a Story (Andrews McMeel Publishing, 2011), co-written with Jenna Sanz-Agero.

Reiner’s transformation from attorney to recipe maven began with cooking fudge in her home kitchen. Word soon spread about her chocolate confections, which came from family recipes passed down from generation to generation. Since then, Reiner’s desserts have been featured in *O Magazine* as one of Oprah Winfrey’s “Favorite Things,” as well as the *Rachael Ray Show* and *The Martha Stewart Show*.

For Reiner though, “the most important part of the fudge was the memory of making it.” True to form, Sugar, Sugar collects tales about hummingbird cake in the Deep South (so named because “it has everything in it except a hummingbird”) to Cape Cod blueberry pie made from handpicked wild fruit.

Using humor, the authors — dubbed the Sugar Mommas — balance the feel-good recollections with a splash of sass on the page. If that’s not enough to entice readers, the book is also filled with drool-worthy photos of icing-stacked cakes and gooey homemade candy. Mixed together, these aspects make delving into the history of each recipe (almost) as satisfying as biting into a slice of your favorite dessert. —B.P.
ALUMNI EVENTS

USC HOMECOMING CELEBRATION
November 10, 2012 | All Day
Campus-wide with USC Dornsife Tent on Trousdale Parkway in front of Bovard Auditorium

Join fellow USC fans as the Trojans take on the Arizona State Sun Devils at the Los Angeles Memorial Coliseum. Be sure to stop by the USC Dornsife tent on Trousdale Parkway in front of Bovard Auditorium. Take a commemorative USC Trojan Family photo, pick up giveaways, and reconnect with your friends and classmates. During the game, members of the USC Trojan Family who competed in the 2012 summer Olympic games in London — including representatives of the 24 from USC Dornsife — will be recognized on the field, the historic site of the 1932 and 1984 Olympic games.

2012 REUNION WEEKEND
November 9–12, 2012
Various Times

Every fall hundreds of alumni from the undergraduate 50th, 40th, 30th, 25th and 10th reunion classes return to USC to evoke fond memories and create new ones during Reunion Weekend. Sponsored by the USC Alumni Association, this two-day celebration of Trojan Family ties features a wide array of social, academic, creative and family-friendly activities for alumni and friends. More information at alumni.usc.edu/groups/reunion/2012.html

JENNIFER ROGLÀ (B.A., psychology and anthropology, ’09) has been named director of partnerships and special initiatives for the International Division of the University of North Texas.

JACOB VAWTER (B.A., economics and geography, ’08) is the recipient of a prestigious fellowship from the Japan Foundation, Center for Global Partnership for the Japan Travel Program for U.S. Future Leaders.

TRACY WANG (B.A., history, ’06) has joined Riker, Danzig, Scherer, Hyland & Perretti, a family law group in Morristown, NJ.

LU YU (M.S., mathematical finance, ’02) is vice president and portfolio manager at Alliance AGIC Growth Fund for systematic strategies as well as a research analyst.

MOSES ZAPIEN (B.A., political science, ’04) placed his name on the ballot for Stockton’s City Council District 4.

In Memoriam

RICHARD EARL ANDERSON (B.S., biological sciences, ’50) Glendale, CA (4/24/2012) at age 85; worked as an internist in a private practice in Burbank, CA, from 1959-1994; held several positions at Providence St. Joseph Medical Center, including chief of staff and chief medical officer; served in the U.S. Navy during WWII.

CLYDE ALAN LAWRENCE (B.A., psychology, ’63; Ph.D., psychology, ’66) La Jolla, CA (3/30/2012) at age 78; was president of the West Coast Division of Dunlap & Associates; opened CB & Associates in the 1980s; developed the Automated Performance Assessment and Readiness Training Systems for the U.S. Navy.

COL. EARL W. BROWNE (M.A., English, ’51; Ph.D., English, ’61) Ventura, CA (3/19/2012) at age 93; was an educator for 30 years at Canoga Park and El Camino Real high schools; served with the 40th National Guard; fought in the European Theatre; retired from the Army Reserve in 1975.

GLENN LEVAN BRYAN (Ph.D., psychology, ’52) Richmond, VA (7/7/2012) at age 90; worked for the Office of Naval Research from 1960-1983 as director of the Psychological Sciences Division; served in the U.S. Army infantry in the European Theatre; fought in the Battle of the Bulge.
Continued on page 62.
FRED MATUA (B.A., sociology, ’11) Los Angeles, CA (8/5/12) at age 28; was a three-year starting offensive guard for the Trojans from 2003–05; was part of the team’s 34-game win streak, the 2005 Notre Dame “Bush Push” game and the BCS title game victory against Oklahoma, which has since been vacated, 2006 seventh round NFL draft by the Detroit Lions, between 2006–08, spent time with the Lions, Tennessee Titans, Cleveland Browns and Washington Redskins; played in the United Football League in 2010.

RODERICK “ROD” DOUGLAS MCDANIEL (B.A., anthropology, ’51; Ph.D., education, ’67) Santa Monica, CA (8/5/12) served with the U.S. Army, most notably in Japan; held administrative and teaching posts with the Palos Verdes and Torrance school districts; taught periodically at USC; wrote a children’s novel, short stories and dozens of essays.

JACK WHITFIELD MURPHY JR. (B.A., political science, ’71) Owings Mills, MD (9/3/2012) at age 64; recently served as a hospice volunteer and state park chaplain; career included the Federal Trade Commission, landscape management, a family jewelry business in Bethesda, MD, and the ordained ministry; served in the U.S. Marine Corps during the Vietnam War.

VERNON C. NEWTON JR. (B.A., geology, ’49) Portland, OR (7/25/2012) at age 89; attended USC on a football scholarship; during WWII, he served in General Patton’s Third Army in the European Theatre; awarded both the Bronze Star and the Purple Heart; resided in Oregon for the past 60 years; worked as a petroleum geologist, mainly for the state of Oregon; enjoyed his 20-acre farm in Scholls. Where he raised registered black angus cattle.

RICHARD L. PEARLMAN (B.A., psychology, ’49) Northridge, CA (8/4/12) at age 84; taught math and music, especially enjoying his stint as leader of the band and orchestra at several schools in the Los Angeles Unified School District; retired as head counselor/assistant principal at Reed Jr. High in 1988; he donated his time in the office of Burbank Temple Emanuel El and the Skirball Center library.

VICTOR WELLINGTON PETERS (B.A., fine arts, ’24) Las Vegas, NV (8/12/12) at age 109; USC’s oldest living alumnus and the third oldest male in the United States before his death, Peters’ continued his studies in the United States before his death, in Seoul, Korea, in what turned out to be a 13-year sojourn; over the next 37 years served as a pastor and teacher at several Los Angeles-area churches, including the Korean Methodist Church; in 1959, joined the faculty of Azusa Pacific University and taught courses across several disciplines; an accomplished artist, he produced more than 150 canvases.

LEONARD PUNG (MPW) Los Angeles, CA (9/3/12) at age 50, entered MPW program in 2011; wrote in a myriad of genres; was an avid river rafter.

ROBERT PETER RAPP (B.A., international relations, ’41) La Mesa, CA (3/20/2012) at age 96; served in the U.S. Marine Corps as a captain in the First Marine Division, Pacific Theatre during WWII; joined the Marine Reserves, retiring as a major.

MANUEL CARLOS RAY (B.A., chemistry, ’54) Great Falls, MT (3/25/2012) at age 89, a chemist who worked for PPG and in product development for National Research and Chemical Company prior to his retirement; launched his own company, RK Industries in 1972, before he sold the company in the 1980s to ChemTech Corporation; served as a staff sergeant in the U.S. Army Air Corps; loved the USC Trojans football team.

JOHN TAMLIN HOLLAND REDFERN (B.A., physics, ’51) San Diego, CA (3/31/2012) at age 86; worked as a civilian researcher for more than 35 years at the U.S. Navy Laboratory in San Diego, CA, where he specialized in underwater acoustics; enjoyed photography and volunteered at the San Diego Historical Society.

DEBORAH GAY SHERMAN (B.A., physical education, ’72) Park City, UT (1/11/2012) at age 60; a retired high school teacher; had been a volunteer and recruiter with the Peace Corps; was named Miss Drill Team USA in 1969 when she led the Mira Costa High School Drill team to victory in a national competition.

GILBERT SHOHAM (Ph.D., philosophy, ’75) Overland Park, KS (4/20/2012) at age 81, served the pulpits of Congregation Beth Hamedrash Hagadol in Montreal and Kehiliath Israel Synagogue in Kansas City, authored A Quest for Clarity in Religious Thought: A Case Against Fundamentalism; was adjunct professor of philosophy at the University of Missouri-Kansas City.

CRANE TENG (B.A., mathematics, ’68) Phoenix, AZ (3/30/2012) at age 68; managed the family business in Phoenix, AZ; in 2009, he was instrumental in establishing a fund-raiser for the Chinese American Citizen Alliance to provide scholarships for Asian American high school students in Phoenix.

ELLEN M. THOMASSON (B.A., English and political science, ’93) St. Louis, MO (6/12/2012) was co-owner of Paradigm New Media Group.

EDWARD ALEXANDER VEIT (B.A., East Asian studies, ’53) Paso Robles, CA (7/22/12) at age 87; still in his teens, he enlisted in the Navy to serve in major World War II campaigns in the South Pacific, including Guadalcanal, during the Korean Conflict, rejoined the Navy where he served at sea in the western Pacific, and on the ground in Korea, where he served as an ad-hoc translator in North Korea; worked as a correctional officer at Folsom State Prison, and by 1964, moved on to the Adult Parole Division; in 1985, appointed chief of parole for the state of California.

EMMETT WHITFORD WOOD (B.A., zoology, ’49; M.S., education, ’50) Bardstown, KY (6/25/2012) at age 88; earned his M.D. at University of Tennessee College of Medicine and was elected by the faculty of the medical school to the Alpha Omega Alpha Honor Medical Society; served in the U.S. Navy as pharmacist’s mate first class and spent 20 months overseas with the U.S. Marine Corps in the Solomon Islands as Navy corpsman; was past secretary and president of the medical staff of Flaget Memorial Hospital; was a member of several medical associations.

RICHARD D. ZANUCK Los Angeles, CA (3/13/12) at age 77, donor to USC Dornsife; the producer of Jaws and Driving Miss Daisy; served as a top executive at Warner Bros. and 20th Century Fox, where he helped oversee such classic films as The Exorcist and The Sound of Music; formed his own production entity, Zanuck Company, in 1988, served as a lieutenant in the U.S. Army.

DENIS MITCHELL, retired as- sociate professor of psychology in USC Dornsife, died Aug. 21, 2012, after a five-year battle with brain cancer.

“Denis was a humanitarian with exceptional talents, character and a sense of humor,” his wife, Kittling Mitchell, said. “He was versatile in every aspect of his unusual life. Teaching was his passion.”

Mitchell joined USC Dornsife in 1977 as a faculty member in the Department of Psychology. He is known for his research on animal models of phobias and eating disorders, specializing in neophobia in wild animals — the fear of eating anything with an unfamiliar odor or flavor — and geophagia — the compulsion to eat dirt or clay. He retired in August 2007. Margaret Gatz remembered Mitchell as an award-winning teacher who made a real difference in the lives of his students. Gatz, professor of psychology, gerontology and preventive medicine, and chair of the Department of Psychology in USC Dornsife, recalled how Mitchell focused on the individual development of each student in his class.

“Denis was amazingly dedicated to teaching. He read Piaget and other developmental psychologists in order to understand how he might become a better instructor,” Gatz said. “With his students, he was deliberately provocative in order to stimulate learning. One described Denis as ‘eccentric, hilarious, generous and caring.’”
Philip J. Stephens

The professor emeritus of chemistry was a Royal Society Fellow.

Philip J. Stephens, professor emeritus of chemistry in USC Dornsife, who invented and developed two major techniques for characterizing molecular structure, has died. He was 71.

Stephens died July 31 in Los Angeles after a battle with a dementia-related illness.

In addition to being a brilliant chemist, Stephens was “fun, witty, adventuresome and a go-getter,” said his wife, Anne-Marie Stephens. “I shall always remember him as a loving, funny, irrepressible and generous companion.”

In 2008, Stephens, then a USC Dornsife faculty member for more than 40 years, was named a Fellow of the Royal Society, the highest distinction given to a British scientist.

Stephens pioneered the use of two chiral spectrosopies — magnetic and vibrational circular dichroism (MCD and VCD) — and the application of advanced theory (density functional theory, or DFT) to ascertain the absolute molecular configurations of organic and biomolecules.

Professor Emeritus Philip J. Stephens earned his bachelor’s and Ph.D. at the University of Oxford. This photo was taken at the University of Oxford on the day he received his bachelor’s degree.
IN MY OPINION

Your Greatest Legacy

Cameron M. Thornton ’76 believes each of us has a story to tell.

I was born in East Los Angeles, Calif., in the fall of 1954. Shortly after that my family moved to a duplex that my grandfather had built in Wilmington near San Pedro. After that we moved to the suburb of Whittier. The majority of my formative memories orbit that space: my first bike; my first touchdown catch playing flag football; my first line drive in baseball; my first job mowing lawns; and playing in the streets with my neighbors.

My father was an L.A. County deputy sheriff. My mother worked for the county as well. The only way I could attend USC was on a Naval Reserve Officer Training Corps (ROTC) scholarship. I changed my major a couple of times before graduating with a degree in psychology. Then the Navy made me an engineering officer. I learned to adapt quickly, and that adaptability was crucial to the smooth operation of every team I’ve been part of. I came to know that there was always something new to appreciate, every single day, everywhere I went.

I remember the first time I marched onto the floor of the Los Angeles Memorial Coliseum on Sept. 15, 1973, as a sophomore and a member of the Naval ROTC color guard. The Spirit of Troy played the national anthem and afterward I scurried to change clothes and meet up with friends in the stands as USC beat Arkansas in the home opener.

I remember being at a party at the start of my junior year, where I met a woman who was just starting her freshman year. She used her glasses like a headband, and I could see her smile gleaming from across the room. It was the Fall of 1974.

Years later, as the owner of two businesses, I would find myself in a position to provide guidance to others on the importance of memory. Or, rather, on the importance of intentionally passing on to others those critical facets of our experiences that make us who we are.

As a wealth manager I have principally worked with professionals and other entrepreneurs. I have found that these people, on the whole, are so invested in their work that oftentimes other parts of their lives are out of balance.

In addition, parents are often particularly troubled to learn that their children — who have frequently been born into better circumstances than they themselves had experienced — don’t understand their family stories or beliefs, or how hard their parents had worked to provide such a life for them.

To these professionals, the initials they wore — like MBA, M.D. or J.D. — mattered a lot less than the smile on their child’s face when they came home from work. To these people, the material goods they had accumulated could not compare to the values that had guided them through good times and bad.

That was how it worked for my family as well. The beautiful woman I met at that campus party in the Fall of 1974, Jane, would become my wife and partner in raising our three children. We, too, have faced the daunting specter of the loss of memory, as we each lost our parents.

But today we have great hope that those things that mattered most in our lives will be communicated in a comprehensible and direct way to our children, and our children’s eventual children. We believe this hope is reasonable because we have committed to paper a statement of our heritage — our story, who we are, where we come from, what we believe, and why we believe it, as well as what we hope to see in the future for our family.

This basic idea — that it is important for a person to take the time to share his or her perspective on what it means to be alive, while they still can — formed the basis for the novel I co-wrote about the measure of a good life. It was the most interesting and profoundly fulfilling work I have been privileged to do in my life.

Our life lessons and experiences mold us into who we are and what we become. Don’t take it for granted that your family and loved ones know your story. Share yours now with those who matter to you.

Cameron M. Thornton ’76 is co-author with Rod Zeeb of the novel What Matters (Heritage Institute Press, 2011). Thornton graduated from USC Dornsife with a bachelor’s in psychology and later earned his MBA from the University of La Verne. He is currently a wealth manager with Cameron Thornton Associates, a registered investment advisory and financial consulting firm.
Here’s how you supported USC then.

Here’s how you can support USC now.

In these uncertain times, consider the benefits of a charitable gift annuity from USC:

- **Income**: Annuity payments for life for you or a loved one—possibly yielding higher income than the gifted asset is currently earning for you
- **Tax Benefits**: An immediate charitable deduction and potential for additional tax savings
- **Security**: Regulated by the state of California and backed by USC’s assets
- **Support USC**: The chance to take part in The Campaign for USC with a gift for a university program that’s important to you

**How It Works**: In exchange for a gift of $25,000 or more, USC will pay you (and/or another named beneficiary) a fixed annuity every year for life, no matter how long you or the other beneficiaries may live. The annuity rate is determined by the age of the beneficiaries at the time of the gift. USC invests your gift as a reserve, and upon your death (or the death of the surviving beneficiary) the remaining funds pass to the university to be used for the program or purposes that you designate.

The experts in the USC Office of Gift Planning are ready to help.

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**USC GIFT ANNUITY RATES**

<table>
<thead>
<tr>
<th>AGE</th>
<th>RATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td>4.4%</td>
</tr>
<tr>
<td>65</td>
<td>4.7%</td>
</tr>
<tr>
<td>70</td>
<td>5.1%</td>
</tr>
<tr>
<td>75</td>
<td>5.8%</td>
</tr>
<tr>
<td>80</td>
<td>6.8%</td>
</tr>
<tr>
<td>90+</td>
<td>9.0%</td>
</tr>
</tbody>
</table>

* Sample of current single-life rates as of 01/01/12. USC utilizes the annuity rate structure published by the American Council on Gift Annuities.

For more information on gift annuity rates, please contact USC’s Office of Gift Planning.
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