CUTTING THROUGH THE STATIC

Exploring the world around (and within) us, USC Dornsife scholars look for answers.
A graduate student applying computer science to the study of nerve cells. A physics and astronomy professor who creates graphic novels to depict complex science. An expert in immigrant integration analyzing the formation of the Mexican-American middle class. An undergraduate fighting for environmental justice.

From Belize to the Arctic to Los Angeles, we are USC Dornsife’s frontline scholars.

In laboratories, in classrooms and all around the globe, our faculty and students work side by side. Through thoughtful collaboration, creative problem solving and dogged persistence, we seek the most direct paths to effecting lasting change in the world.

We take full advantage of our location in one of the world’s most diverse cities. Using L.A. as the test bed for our innovative ideas, we strive to create solutions that transcend geography, making global contributions that will endure the test of time.

Today, we stand at the horizon of possibility. From health to sustainability to social welfare to education, society faces great challenges. But we see paths forward to real solutions. We came to USC Dornsife with hopes and ideals, and through the university’s vast resources, we have gained the skills to succeed on the frontline of any issue.
Beyond False Peaks

Jonas Salk, the legendary scientist who developed the first successful polio vaccine, said, “Hope lies in dreams, in imagination and in the courage of those who dare to make dreams into reality.”

In 1952, the year of the worst polio outbreak in United States history, the extremely high likelihood of succumbing to the disease was viewed as “reality.” Salk refused to accept that, choosing instead to forge his own story. Now polio has been nearly eradicated from the globe.

I imagine reality as an infinite puzzle — one that we continually create even as we work to solve it. Our humanity drives us to put the pieces together in a way that makes sense and leads to more answers, but ultimately we know there is no single solution.

We are learning more and more that this puzzle is anything but one-dimensional. What makes USC Dornsife unique is our determination not just to understand the contours of our individual pieces, but also to seek out those whose pieces might interlock precisely with our own. A linguistics professor collaborates with a marine biologist to understand speech disorders associated with Parkinson’s disease. A physicist reaches out to a USC Viterbi colleague to improve screening for diabetic retinopathy, a leading cause of blindness. Through partnerships such as these we uncover potential new solutions that may lead to better realities.

Dedicating oneself to scholarship means embarking on a lifelong journey to discern what is true — what is real. Every crest we encounter is another false peak on the climb to a summit we know we will never reach. But we keep climbing — because along the way there are so many smaller discoveries, each with the power to change our shared reality, improving quality of life for all.

Steve Kay
Dean of USC Dornsife
Anna H. Bing Dean’s Chair
The Game of Life

While college is designed to prepare students to pursue their life’s goals, some lessons can only be learned through experience. Recent graduates talk about their adventures after USC Dornsife and what their post-collegiate lives have taught them. By Laura Paisley

The Universe As We Know It

No one is quite certain what constitutes the fundamental building blocks of existence, but theoretical physicists may be closer than ever to an answer. By Darrin S. Joy

Through the Lens

Kate Flint and Geoff Dyer delve into photography’s role as a window on life and an evolving method of defining reality. By Geoff Dyer and Kate Flint

As Seen on TV?

A quintet of alumni leapt into public consciousness through appearances on television reality programs — but what did they learn from their experiences? By Susan Bell, Michelle Salzman Boston, Laura Paisley and Dan Knapp

Within Reach

The United States is at historic levels of income inequality. What will it take to balance the scales between low-income workers and the top 1 percent? By Michelle Salzman Boston

Addressing Perception

As the British writer and philosopher Aldous Huxley noted, “There are things known and there are things unknown, and in between are the doors of perception.” Psychologists examine how our minds perceive the world around us — and how those perceptions can vary from reality. By Susan Bell
The “Iranian Culture and Diaspora” conference organized by the MIDDLE EAST STUDIES PROGRAM unites top researchers in sociology, anthropology, art history, literature, communications, and cinematic arts to discuss how Iranians living in diaspora integrate their culture into that of their host or adoptive nations.

Following a week of historic diplomacy across the United States, JAPANESE PRIME MINISTER SHINZO ABE, a former USC student, visits the University Park campus.

The CENTER FOR ECONOMIC AND SOCIAL RESEARCH co-hosts the “Frontiers of Behavioral Economics: Choice and Well-Being in the Asia Pacific” conference held in Singapore.

"While we’ve made much progress in the fight to end the global water crisis, we’re even more excited about our planned goals for Africa Water, Sanitation & Hygiene through 2020." DANA AND DAVID DORNISFE are among the first recipients of the WATER WARRIOR AWARD presented by the humanitarian organization World Vision.

USC Dornsife Dean Steve Kay and professors Scott Fraser and Peter Kuhn participate in the "QUANTITATIVE BIOLOGY: FROM MOLECULES TO MAN" forum, held at the New York Academy of Sciences, which brings together professionals in science, medicine and engineering to articulate a vision for the future of improving patients’ health outcomes.


THE INSTITUTE FOR ADVANCED CATHOLIC STUDIES, USC Caruso Catholic Center and USC Dornsife host a panel discussion featuring USC Dornsife experts in environmental studies, international relations, earth sciences and ethics to explore how Pope Francis is shaping the debate on climate change and environmental policy.

WILLIAM CLAY FORD JR., executive chair of the Ford Motor Company, accepts the USC Shoah Foundation — The Institute for Visual History and Education’s AMBASSADOR FOR HUMANITY AWARD.

Two faculty chairs are established and inaugural holders installed: STEPHEN D. SMITH as ANDREW J. AND ERNA FINCI VITERBI EXECUTIVE DIRECTOR CHAIR at USC Shoah Foundation and MOH EL-NAGGAR as the ROBERT D. BEYER ’81 EARLY CAREER CHAIR IN NATURAL SCIENCES.

USC Dornsife honors Nobel Laureate and Distinguished Professor ARIEN WARSHEL with a symposium, which brings together leading scholars and Nobel laureates from around the world to celebrate Warshel’s achievements and to mark his 75th birthday.
#DornsifeDay

A DAY IN THE LIFE OF USC Dornsife
On Feb. 16, we filmed students, faculty and alumni on campus and around the world to capture the amazing breadth and depth of academics and opportunities available at USC Dornsife.

A Day in the Life of USC Dornsife premiered on campus on Sept. 3 to a crowd of hundreds gathered near Tommy Trojan. Student ambassadors were on hand to talk about their studies as well as the clubs, organizations, research and study-abroad opportunities they have participated in at USC Dornsife. Attendees cooled off with ice cream treats and entered an opportunity drawing for great prizes.

SHOW US YOUR #DORNSIFEDAY!
We invite you to share your day at USC Dornsife with us — from wherever you are — using the hashtag #DornsifeDay. Snap a photo for Instagram, tweet your campus experiences, shoot a Vine. Shine a light on your #DornsifeDay. To see how your fellow Trojans are spending their #DornsifeDay, visit dornsife.usc.edu/dornsifeday.

Scan pages 4-5 to start your Layar augmented reality experience.
Numbers

**CITIZEN CHILDREN, UNDOCUMENTED PARENTS**
Roughly 5.5 million children who are U.S. citizens have parents who are undocumented immigrants. The Deferred Action for Parents of Americans and Lawful Permanent Residents (DAPA), an executive action proposed by President Obama to shield illegal immigrants from deportation, would allow undocumented individuals to apply for deferrals of deportation and work permits for three years. To be eligible, immigrants must have lived in the country for five years, be the parents of U.S. citizens or lawful permanent residents and meet certain other criteria.

A new report from the USC Dornsife Center for the Study of Immigrant Integration found that DAPA would boost parents’ earning potential and create stability in their children’s lives.

**3.7M** parents are eligible for DAPA in the U.S.

**86%** of DAPA-eligible parents’ children are U.S. citizens.

**40K** approximate number of California children that could be lifted out of poverty.

**$1.6B** the potential increase in family earnings in California if DAPA is implemented.

**600K** children of DAPA-eligible parents are of voting age.

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**Rewards of Failure**

Giorgio Coricelli of economics and psychology shows how failure can be a rewarding experience. By Emily Gersema

Scientists have long understood that the brain has two ways of learning. One is avoidance learning, which is a punishing, negative experience that trains the brain to avoid a situation in which it made a mistake. The other is reward-based learning, a positive, reinforcing experience in which the brain feels rewarded for reaching the right answer.

A new study by Giorgio Coricelli and a group of international researchers using magnetic resonance imaging has found that having the opportunity to learn from failure can turn it into a rewarding experience — if the brain has a chance to learn from its mistakes.

“We show that, in certain circumstances, when we get the chance to contextualize the choices, then our brain essentially reaches toward the reinforcement mechanism, instead of turning toward avoidance,” said Coricelli, associate professor of economics and psychology at USC Dornsife.

For the study, researchers engaged 28 subjects, each around 26 years old, in a series of questions that challenged them to maximize their gains by providing the right answers. If they chose a wrong answer, they lost money, while right answers helped them earn money.

One trial prompted their brains to respond to getting the wrong answer with avoidance learning. A second trial prompted a reward-based learning reaction, and a third but separate trial tested whether participants could learn from their mistakes, allowing them to review and understand what they got wrong.

In that third round, the participants responded positively, activating areas in their brains that some scientists call the “reward circuit” — or the ventral striatum. This experience mimicked the brain’s reward-based learning response, as opposed to an avoidance-learning response, which is an experience that involves different parts of the brain that together comprise the anterior insula.

Coricelli said this process is similar to what the brain experiences when feeling regret. “With regret, for instance, if you have done something wrong, then you might change your behavior in the future,” he said.

Coricelli collaborated with scientists from University College London, Pierre and Marie Curie University, the École normale supérieure and the University of Lyon. The study was published in the journal *Nature Communications.*
This four-week Maymester course deepened undergraduates’ understanding and appreciation of Los Angeles as they were introduced to the history of modern architecture, experiencing firsthand many of the city’s most iconic 20th-century homes.

“The built environment of Los Angeles is a rich laboratory for understanding social concerns that have shaped the city’s history over the last century,” Luke said. “By enabling them to physically experience the work of major architects like Charles and Henry Greene, Frank Lloyd Wright, Rudolph Schindler, Richard Neutra, John Lautner and A. Quincy Jones, students are gaining the critical skills and historical knowledge necessary to answer questions about how a private home can exemplify particular arguments about the collective life of a city.”

The course required students to think about questions of urbanism, preservation and mediation of architecture, particularly through photography. To further their knowledge, undergraduates visited the archives of Greene and Greene, Neutra and noted architectural photographer Julius Shulman. They also considered the defining principles of L.A. modernist architecture, foremost among them its commitment to indoor-outdoor living.

Through the course, Luke aimed to enhance students’ visual acuity for architecture. “I wanted them to go beyond questions of taste and think critically about what specifically in the built environment is causing an emotional response and what these buildings want to tell us.”

The concept of architecture as manifesto was one with which the students rapidly became familiar.

“We’ve been thinking a lot about Los Angeles as a very receptive environment for radical modernist architectural ideas to support and foster progressive political bohemian lifestyles,” Luke said. “These buildings are not just meant for private use, but are declarative statements.” —S.B.
Imagine a world without the enigmatic smile of da Vinci’s Mona Lisa or the seductive swirls in van Gogh’s The Starry Night. Had F.T. Marinetti’s nihilistic art revolution known as Futurism actually been successful, humanity would have lost its greatest treasures.

In the 1900s, Marinetti began crafting his now-notorious Futurist Manifesto, which, among other unsentimental ideals such as overt aggression, anarchy and war, called for the destruction of libraries, museums and schools, and the elimination of the “smelly gangrene of professors, archaeologists, ciceroni and antiquarians” in order to sever ties with what he perceived as an ossified, conservative past.

Marinetti melded the radical tenets of destruction with his love for speed — along with the technological advances made during World War I — in his own artistic endeavors. Marinetti believed that poetry should reject all pre-established concepts of form and meter. He created works that liberated words from syntax, grammatical structure or linear typesetting. He dubbed this style “words-in-freedom.”

One of Marinetti’s seminal works that emphasizes his anti-conventional artistic ideals is Après la Marne, Joffre visita le front en auto. Published in early 1915, Après la Marne used the form of a military map to recount Gen. Joseph Joffre’s victorious tour of the French troops after the Battle of the Marne.

“With this and similar works, Marinetti gives us an extraordinary example of the striking, provocative visual effects that have since laid the groundwork for much of what we view as experimental poetry and graphic design,” added Annovi.

Although Futurism eventually fell out of favor due in large part to Marinetti’s association with Italian dictator Benito Mussolini, the movement based around the notion of eschewing the past influenced other artistic movements, including Dadaism, Surrealism and Vorticism.

Published in leaflet form under another name, Après la Marne, Joffre visita le front en auto was subsequently republished in 1919 in the book Les Mots en Liberte Futuristes. Gian-Maria Annovi recently supervised students Madeline Karabian, Zoe Kemp, Gabriella Koek, Michael Ramsey and Emma Ross in his “Italian Poetry: Tradition and Experiment” course as they curated an exhibit of the avant-garde style.
Blockbuster Busted

Earthquake experts find the recent movie San Andreas offered lessons both solid and shaky.

Last summer’s disaster flick San Andreas had a harsh take on what might happen if the largest earthquake in history struck the West Coast. But could it ever really get as bad as this worst-case scenario?

USC earthquake and preparedness experts found that it oversstates some dangers but understates others.

Thomas Jordan, University Professor, William M. Keck Foundation Chair in Geological Sciences and professor of earth sciences, said the temblors were too big. “They have a 9.1 and a 9.6, and the largest earthquake that the San Andreas Fault can support is about an 8.0.” While devastating, it would be more than 200 times weaker than a 9.6 magnitude event.

Also, a strike-slip fault such as the San Andreas cannot produce gigantic tsunamis like those in the movie. “The faults that produce those types of events are offshore thrust faults,” said Jordan, who also is director of the Southern California Earthquake Center (SCEC) and coordinates an international research program in earthquake system science that involves more than 600 scientists at more than 60 universities and research organizations.

He noted that the movie exaggerated the potential damage to Los Angeles’ buildings while also completely overlooking true dangers such as soil liquefaction, landslides — and fire.

“One of the things we are most worried about is fire following earthquake. You actually can get firestorms that start to sweep across large sections of the city,” Jordan said.

In U.S. Geological Survey simulations, an 8.0 earthquake on the southern San Andreas Fault would cause an estimated 1,600 multi-alarm fires across the L.A. basin — at a time when even the nearest firefighters might lack water, fuel, personnel or viable roads.

Mark Benthien, director of communications for SCEC, pointed out that the movie’s focus on downtown areas misses the reality for the vast majority of residents.

“The population of downtown Los Angeles and downtown San Francisco is less than 1 percent of the affected area of the movie,” he said. “What most people are really going to be dealing with is their bookshelf falling on them, and that is a risk that you can actually reduce.” —R.P.

Spread the Word

Linguist Edward Finegan explores the social implications of words added to online dictionaries.

“Agender” and “bigender” were new additions this year to dictionary.com’s database — along with such other neologisms as “lifehack” and “microaggression.” Oxford Dictionaries, the Oxford English Dictionary’s website for modern usage, also accepted new words, including “lamestream” and “bae.”

Edward Finegan, professor emeritus of linguistics and law, as well as a member of the Dictionary Society of North America and editor of its journal, believes that language must evolve based on circumstance. Adding terms keeps communication effective.

For instance, snarky words such as “slacktivism” — that is, actions taken to bring about political or social change but requiring only minimal commitment, effort or risk — may elucidate the inefficacy of electronically signing petitions to end dolphin fishing.

“Legitimatizing a word like this almost shames people into realizing what they’re actually doing,” he said. “And giving words power is a wonderful thing.”

President of the International Association of Forensic Linguists, Finegan consulted on a case in which a student was expelled from a private university because she had indicated her “gender” as female, although she was biologically male.

Though the court ruled that the school had the right to ask the student to leave, the school later changed its application, asking candidates to indicate their “sex” rather than “gender.”

“The evolution of social constructions often begins in language,” Finegan said. “It’s important that our vocabularies keep up with these social changes.” —L.H.
James Heft is founder and president of the Institute for Advanced Catholic Studies at USC Dornsife.
A Genome in Peril

Biology researchers gain insight into a hazard that arises during early embryonic development.

In the earliest stages of an organism’s existence, its genome suffers a terrible, self-imposed shock. After a sperm and egg cell join to form a single-celled zygote, leftover proteins from the original egg cell continue driving life processes. As the zygote divides — first into two cells, then four and so on — to form an embryo, the residual proteins dwindle. The embryonic cells counter by jumpstarting their genome so they can produce the proteins they need for themselves.

In a study published in Developmental Cell, recent biology Ph.D. recipient Melina Butuci and her mentor, Matthew Michael, associate professor of biological sciences, found that this lifesaving jolt into activation is, paradoxically, the cause of widespread genome instability.

One reason is that the DNA, tightly packed in chromosomes, must first be unraveled and opened up for gene-reading machinery to access it. This process leaves the genome vulnerable to potential damage, especially because an enormous number of genes are unraveling quickly and all at once.

Despite the danger, the primitive cells survive because, as the scientists found, robust repair mechanisms — much better than those of mature cells — efficiently fix the DNA damage.

But why would cells evolve such a risky approach? Michael explained that the cells are “trading the risk of mutation [caused by DNA damage] for speed in activating gene expression” when they need to start making their own proteins.

“It’s easy to imagine that a rapid gene expression response is very advantageous, and as long as repair is efficient, then this seems like a reasonable trade,” he said.

The researchers continue to tease apart this genomic puzzle. “As a scientist, I am extremely intrigued to understand more about this mechanism and the evolutionary path that just seems so bizarre at first glance, but surely has arisen with a great purpose,” Butuci said. —D.S.J.
**Zombie Cells**

Susan Forsburg of biological sciences and colleagues create mutant yeast cells that survive DNA damage.

When cells divide normally, they duplicate their DNA so each new cell has a copy. Disruptions in the DNA replication process can lead to cancer and other diseases. USC Dornsife researchers have developed a mutant form of yeast to help them understand how this can happen.

The modified yeast cells harbor a gene mutation that disrupts DNA duplication during cell division — causing massive damage to chromosomes — while somehow allowing the cell to continue dividing. The result is zombie cells that by all rights shouldn’t be able to survive, let alone divide. Their chromosomes appear shattered and strung out between tiny bodies called micronuclei, which are often found in human cancer cells.

With their new yeast model, researchers hope to learn more about both the mutation and micronuclei.

The yeast are “a powerful genetic model to investigate a recently identified characteristic of human cancer cells,” said Susan Forsburg, professor of biological sciences. “This will enable us to rapidly identify genes responsible for this abnormal division.”

Since the genes that regulate division in human and yeast cells are the same, this simple organism provides a tool for human cell discovery, Forsburg said.

DNA is vulnerable to injury when it’s unzipped into two single strands for replication. The damage usually triggers repair or drives the damaged cell to suicide. Either way, cell division is halted. But in cancer cells, the cells continue to divide — creating tumors full of genetic mutations.

In their study, the yeast cells’ mutation triggered responses like those seen in mammals where similar mutations are associated with cancer and the formation of micronuclei.

Forsburg and Sarah Sabatinos, who conducted the research while a postdoctoral fellow at USC Dornsife, collected videos of the damaged cells dividing. Then, they used a super-resolution microscope at USC to examine the damage structures in crisp detail.

“We’re able to see that these mutant cells ignore the damage caused during DNA replication, which results in the creation of unusual structures like micronuclei,” Sabatinos said.

Their work will inform future studies into how a cancer cell evades biological checkpoints that should halt its division and spread. —R.P.

**Being First-Gen**

A group representing 14 percent of USC’s student body finds motivation in high expectations.

USC Dornsife launched a new program for first-generation students and their family members this Fall. “The First in the Family: Bridging Communication Between Home and the University” aims to address the unique challenges this group may encounter.

“We have found that parents of low-income, first-generation students are typically the opposite of the helicopter parent,” said George Sanchez, vice dean for diversity and strategic initiatives and professor of American studies and ethnicity and history at USC Dornsife.

“Because they didn’t go to college themselves, these parents tend to drop their kids off at college and that’s it. We want to see continued involvement with their kids because we know that is important to students’ success.”

Human biology major Artie Garcia said his mother’s high expectations have been a welcome driving force for him. “It really pushes me harder.”

His mother, Melina, like most moms, said sending her son to college is bittersweet.

“It’s really emotional because he’s going away, but we’re really proud of him, and we want him to stay motivated,” she said, and then turned to Artie. “So, work hard.” —A.B.
Teaching to Learn

A new preceptor program opens doors for doctoral graduates of the humanities and social sciences.

USC Dornsife has developed the Dornsife Preceptor Program, which offers full-time, salaried preceptor positions to recent doctoral graduates of USC. The program aims to address an increasingly competitive job market, particularly for positions in the humanities and social sciences.

The program also responds to another teaching related issue gaining attention across academe, said Steven Lamy, vice dean for academic programs and professor of international relations. He said there has been a sense of dissatisfaction with research universities around a perceived lack of attention to teaching, which is why cultivating preceptor opportunities benefits both USC and its students.

By providing preceptors with direct teaching experience, the Dornsife Preceptor Program aims to make Ph.D. graduates more marketable both to research universities and high-end liberal arts colleges where teaching is paramount.

In addition to leading four discussion sections as a teaching assistant for a general education course, each preceptor designs a syllabus for a course that relates to his or her area of expertise. Preceptors can receive mentorship from the faculty member teaching the general education course, and they have time for refining personal research with the goal of publication, further strengthening their portfolios as they search for tenure-track positions.

Alex Young, who received his doctorate in English last summer, is one of this year’s preceptors. Already an award-winning researcher, he wants to continue his career as a humanities scholar and is looking for tenure-track jobs in American studies or English.

“The program] fills the gap that’s getting increasingly hard to fill between completing a Ph.D. and successfully finding a tenure-track job. This gives me an opportunity not only to build my teaching profile but to continue to build my research profile in ways that will assist me as I continue my search,” Young said.

Lamy noted that preceptors can propose new kinds of undergraduate summer courses — and some have.

“I think our undergraduates are benefitting from some really smart people who care about students,” he said. —L.P.

Marine Milestone

USC Wrigley Marine Science Center marks 50 years and debuts an important new research facility.

The USC Wrigley Marine Science Center on Catalina Island, Calif., marked its 50th anniversary this year and last summer unveiled its latest advanced facility.

A new, high-tech research greenhouse supports both marine and freshwater projects.

The marine section will support studies with saltwater algae and shellfish. These include projects under the Future of Food From the Sea initiative, a program with the USC Wrigley Institute for Environmental Studies and headed by Dennis Hedgecock, Paxson H. Offield Professor in Fisheries Ecology and professor of biological sciences, and Donal Manahan, professor of biological sciences and vice dean for students at USC Dornsife.

The freshwater half of the greenhouse will house a new system for aquaponics — the “hydroculture” of plants in water without soil and the “aquaculture” of fish.

The center also has plans to create a large aquaponics teaching lab, funded by a generous gift from the Thornton Family Foundation, according to Diane Kim, director of undergraduate programs for the USC Wrigley Institute.

This year also marked the 20th anniversary of the USC Wrigley Institute for Environmental Studies. The city of Los Angeles voiced its support of both the institute and the center with an acknowledgment spearheaded by L.A. City Councilmember Paul Krekorian (B.S., political science, ’81) and read during an August council meeting. —R.H.

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Numbers

LIGHT INTO DARK CORNERS
USC Shoah Foundation — The Institute for Visual History and Education has teamed with La Fundación de Antropología Forense de Guatemala (FAFG), a Guatemalan forensics organization, to collect video testimonies of survivors and witnesses of the Guatemalan Genocide. The partnership marks the first academic oral history project connected to the Cold War-era conflict, which is among the least publicly understood genocidal events in modern times.

36 years that civil war raged in Guatemala, from 1960–96.

200K civilians, mainly Maya indigenous to Guatemala, were killed from 1981–85.

90% of Ixil Indian villages were lost in the war.

10/150
10 video interviews have been collected from survivors and witnesses of the Guatemalan genocide; USC Shoah Foundation and FAFG aim to collect 150 more.

1st
The verdict against Gen. Efraín Ríos Montt, past dictator of Guatemala, marked the first time in which a former head of state was convicted of genocide in his or her own country. (The conviction was overturned shortly thereafter and a new trial was ordered.)

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FROM THE HEART OF USC

IN THE NEWS QUOTABLES

“The idea that we can have multiple types of feminism underneath this broader definition has pretty much been the history of feminism.”

ANGE-MARIE HANCOCK, associate professor of political science and gender studies, in a July 2 KPCC “Take Two” interview on how women define feminism.

“No one has ever seen an organism do what this does, which is to get stuck — to evolve into a new space and then not be able to change back.”

DAVID HUTCHINS, professor of biological sciences, in a Sept. 1 Washington Post article about his research showing that climate change could cause irreversible changes to ocean-borne bacteria.

“Social media put a huge premium on the instant sharing of experience. And not just with immediate family and friends, but with a whole network of people who, it’s implicitly assumed, will be somewhere between envious and admiring that you’ve actually made it into the Louvre or the Uffizi.”

KATE FLINT, Provost Professor of Art History and English, in a June 4 Los Angeles Times article on the trend of museums promoting their patrons’ selfies to attract millennials.

Bright Idea

Travis Longcore of the Spatial Sciences Institute leads studies of a new kind of light bulb that could save electricity while providing a major boon to public health. By Andrew Good

How many researchers does it take to change a light bulb? And how many lives could they save by changing it? The answer to both questions is larger than you might expect.

A light bulb’s illumination is attractive to a range of insects, which means that the type of bulb you use can increase the risk of catching vector-borne diseases. Worldwide, 8 million people are infected with Chagas disease, which is transmitted by a bug that is attracted to lights. Also drawn to light are mosquitoes, which carry malaria, and sand flies, which can infect people with a protozoan parasite.

A study led by Travis Longcore, assistant professor of architecture and spatial sciences, found that what matters most in attracting insects is not just how bright your bulb is, but what color wavelengths it gives off.

The white light given off by bulbs is attractive to all insects, but white is not actually a color — it is a combination of light of all colors. Different insects are sensitive to particular combinations of these wavelengths. Blue, violet and ultraviolet wavelengths are especially attractive to moths and many other insect groups.

With this in mind, Longcore and a team of his former students from the University of California, Los Angeles investigated if they could mitigate these effects as part of a project with Philips Research in the Netherlands. Their primary goal was reducing the number of insects an LED bulb would attract while still maintaining its white light for indoor use.

“For the purpose of this study, we created unique and one-off LED lamp designs that can be customized to emit different color wavelengths to reduce the attraction of insects,” said André Barroso, a senior scientist at Philips. The special bulbs were tested against off-the-shelf commercial LED bulbs, compact fluorescent bulbs and a control with no bulb.

Longcore and his team fixed each bulb over soapy pan traps in several Los Angeles County sites. In just over a month, they collected nearly 5,600 insects in the traps. The specially made bulbs attracted about 20 percent fewer insects.

“The research provides proof in concept that LED lamps can be customized to avoid specific areas of the spectrum that could have adverse environmental consequences, while still providing light for indoor use,” Longcore said.

“For places in the world where glass windows and screens are uncommon, reducing insect attraction to indoor lights is a big deal.”
PETRICHOR

/ˈpɛtrɪk, ˈpɛtraɪk/ noun

1. A pleasant, distinctive smell frequently accompanying the first rain after a long period of warm, dry weather in certain regions.

2. An oily liquid mixture of organic compounds which collects in the ground and is believed to be responsible for this smell.

Origin: Though coined in 1964, the term is derived from the Greek “petra” (stone) and “ichor” (in Greek mythology, the blood of the gods). The name for this rain-induced chemical reaction was put forth by two scientists in a journal article for Nature. The oily essence is said to contain nearly 50 different compounds, not unlike a cosmetic fragrance.

Usage: Actinobacteria, a soil-dwelling microbe, is one of the simplest forms of life. It creates bioactive metabolites that give rise to numerous pharmaceuticals and also produces organic compounds that contribute to petrichor, simultaneously saving lives and making them more enjoyable.

Matthew Pratt, assistant professor of chemistry and biological sciences, leads cutting-edge research aimed at understanding and stemming cancer. Focusing on glycosylation, the modification of proteins by carbohydrates, he studies the biochemical reactions behind these processes with an eye toward using or developing pharmaceuticals to interrupt them.
**The Bench**

**BIOLOGICAL SCIENCES**

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**71/96**

The vast majority of Earth’s surface — about 71 percent — is covered by water. More than 96 percent of that water is found in oceans.

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**1 MICROMETER**

Protists — complex, single-celled organisms such as algae and amoebae — constitute the base of the food chain. They vary in size, but the smallest are just 1 micrometer across. Two of them could safely move abreast along the length of a strand of spider web.

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**¼-10 hours**

Certain marine protists produce toxins that can accumulate in shellfish that feed on them. When animals — or humans — consume those shellfish, they can become dangerously ill, with symptoms arising anytime from 15 minutes to 10 hours after ingesting them.

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**IT’S THE LITTLE THINGS**

For David Caron, professor of biological sciences, “The small things are where it’s at in the ocean.” Caron studies marine microorganisms. Though most are too small to see with the naked eye and less toothy than certain other ocean denizens, these creatures are crucial to the ocean ecosystem. Without them, none of the larger sea-faring creatures — sharks, dolphins, seals and whales — would have a chance.

The sea organisms studied at USC include viruses and one-cell bacteria, archaea and protists — and there are a whole lot of them floating around out there. “If you were to line them up like beads on a string, they would make it past the next galaxy,” said Jed Fuhrman, McCulloch-Crosby Chair in Marine Biology and professor of biological sciences.

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**4 tons**

In one of nature’s most ironic twists, the largest animals ever to grace the planet feed on some of the smallest. A blue whale, reaching 100 feet long, consumes each day about 4 tons of tiny krill, most of which are less than an inch long. Krill, in turn, dine on even smaller organisms such as single-celled algae.

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**700 SAMPLES**

Researchers at the USC Microbial Observatory have taken samples — totaling about 700 — from the same location midway between Los Angeles and Catalina Island, California, every month since 2000.

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**CHAIN OF LIFE**

Microbes get the whole food chain started. Tiny phytoplankton, or microalgae, are the plants of the marine microcosm, using sunlight as energy. They get eaten by microbes called protozoa — the microscopic equivalent of herbivores — that in turn become lunch for other protozoa and tiny crustaceans called copepods. Little fish eat the copepods, medium fish eat the little ones, right on up the chain.

As they harvest sunlight by photosynthesis, phytoplankton also release oxygen, a nice favor to animals. “Every other breath you take is produced by those organisms,” Fuhrman said.

The protists Caron studies, called mixotrophs, combine photosynthesis with ingestion of other organisms — like miniscule Venus flytraps of the sea.

His lab has discovered that it’s tough for mixotrophs to manage both kinds of energy intake at once. So they tend to focus on photosynthesis during the day, and then switch their attention to surrounding foodstuffs at night.

Caron and Fuhrman jointly run the USC Microbial Observatory, part of the USC Wrigley Institute for Environmental Studies’ San Pedro Ocean Time-series for oceanography research. The scientists sample water from the same spot, midway between Los Angeles and Catalina Island, every month.
Sea microbes such as viruses, bacteria and protists are infinitesimally small; however, what they lack in size they more than make up for in numbers. Laid end to end, they would extend more than 2.5 million light years — beyond the Andromeda galaxy.

SEASONAL CATCH
People may think there are no seasons in Southern California, Fuhrman said, but the microbes on the ocean’s surface show that’s not so. He sees different kinds at different times of the year. “You can pretty much tell what month it is from what microbes are there,” he said.

And certain microbes have their own version of spring break. When the ocean goes from clear blue to murky green, Fuhrman and Caron know they’re looking at an algal bloom. Some of the participating microalgae are harmless, but others make toxins, which can collect in shellfish. If larger animals — including humans — eat the contaminated shellfish, they might suffer the malefic consequences.

Blooms are just one of the ways tiny marine microbes exercise their power over the big animals that think they run the planet, though most ocean microorganisms are not dangerous to people. What’s more, those microbes have been there for millennia. “There’ll probably still be some microorganisms left when we’re gone,” Caron predicted. “They’re way more important than sharks.”

A Divine Doctorate

The University of Southern California was founded in 1880 thanks in large part to land donated by three men of varying religious persuasions: the German-Jewish banker Isaias Hellman, the Protestant horticulturalist Ozro Childs and John Gately Downey, an Irish Catholic former governor of California.

The multifaith origins of USC are reflected in the multidisciplinary and multireligious aspects of a new Ph.D. program at the USC School of Religion, housed at USC Dornsife.

The degree combines substantive research with contemporary relevance, based on the idea that influential studies in religion require both field-specific expertise and meaningful engagement with contemporary issues.

Three distinct tracks are offered through the program: Asia Pacific Religions, Comparative Christianities and Global Islam.

“These tracks build on existing strengths among our faculty,” said Lori Meeks, associate professor and chair of religion, and associate professor of East Asian languages and cultures. “They also build on strengths within the university, such as relevant library collections, language programs and research centers.”

Duncan Williams, associate professor of religion and former chair of religion, was instrumental in shaping the degree. “By taking advantage of its location in Los Angeles and on the Pacific Rim, USC is perfectly positioned to put a distinctive stamp on the teaching and research of religion,” said Williams, also director of the USC Shinso Ito Center for Japanese Religions and Culture.

Meeks said the program emphasizes transnational connections and interdisciplinary study.

“We want students to think about religious traditions not just in a single time and place,” she said, “but as they change over time and across different parts of the world.” —L.P.

Going ‘Primitive’

Nancy Lutkehaus explores the significance of the Met’s decision to collect and display non-Western art.

The history of the Metropolitan Museum of Art’s controversial decision to incorporate “primitive art” into its fine art collection in 1969 is the subject of an upcoming book by Nancy Lutkehaus, professor of anthropology and political science.


“When an encyclopedic museum like the Met finally decides to incorporate non-Western art, it is making a statement saying this art is as important as Greek statues and the Impressionists,” Lutkehaus said. “That has a cultural impact in terms of a statement about a broader recognition, a more multicultural, more racially and ethnically diverse national identity.” —S.B.
Spotlight

Ghost Metropolis

Philip J. Ethington’s ambitious multimedia history Ghost Metropolis stirs up more than ghosts — it seeks to raise and answer complex questions about how Los Angeles came to be. By Lynell George

Philip J. Ethington, professor of history, political science and spatial sciences, has spent the last 15 years sifting through the tangled histories of Los Angeles. “I like to visualize the presence of the past. I see myself making ghosts visible,” he explained.

Those histories might be elusive or fading, but they have not entirely vanished. The specter of the past is all around us, he has observed. “And often it is hidden in plain sight.”

Ghost Metropolis, Ethington’s multimedia “book” due out in Fall 2016 from University of California Press, explores how greater L.A. came to be such a fluid and volatile site of re-invention, one both haunted and bound by its history.

Through words, interactive maps, photographs and video, Ethington is building a text that is as alive and sprawling as the city itself. At 500 pages in online form, it traces a path across not just regions but epochs.

Ethington landed in L.A. in the ’90s “right after the Rodney King uprisings,” he said, an incident that he knew had deep roots. The racial, ethnic, socioeconomic and political tensions had been written into the understructure of L.A. for millennia. Those three days of civil unrest became his narrative’s seed.

That moment, both in time and place, Ethington said, “was an important site in global history to account for. So I wanted to do that — address that ‘why?’ ”

Ghost Metropolis pushes against accepted “truths” about the city and covers 13,000 years of L.A. history. “I explain all the ruling regimes of Los Angeles — they’re all linked. Each one establishes institutions that the next group finds on the ground when they come to conquer the places. It’s well known that Los Angeles has had many rulers — Native American, Spanish, Mexican — so I have to tell this story from multiple beginnings, multiple factors, different levels of society.” These histories thread out from the same place, as do the tensions. “Rodney King, to me, has the same relationship to the Watts Rebellion as World War II does to World War I: It’s just unfinished business.”

In devising creative ways into a many-portal narrative, Ethington realized that it was imperative to find some innovative way to house it. The effort produced Scalar — the online platform where the digital book will live. “It’s free and open-source and everyone can use it,” Ethington said.

Ultimately what is most important to Ethington is crafting a compelling narrative about a region long misunderstood from within and without.

“I just want to tell a great story about a great city. Great in a massive sense, but also in a creative sense. Because it’s not all about the bad guys and the injustices and the oppressions. I also want to achieve accountability. That’s a really big goal.”

While growing up in California, junior Tiffany Lian traveled annually to her father’s homeland of Indonesia — where she also watched her grandfather weaken from a heart condition.

“Seeing this always made me want to go into the health profession and bring my knowledge to help people in other parts of the world,” Lian said.

Recently, the biochemistry major has explored pharmaceutical development. She is studying protein receptors in the heart under the direction of Raymond Stevens, Provost Professor of Biological Sciences and director of The Bridge@USC. While these receptors might seem insignificant to some scientists, they could be the key to unlocking much greater health issues.

Lian is excited that her efforts now have the potential to effect lasting changes, and she hopes other undergraduates will follow her lead and apply for research positions.

“I hope to graduate knowing that I contributed,” she said. “Even if just in a small way.”
Psychologist Henrike Moll finds that children begin to empathize at a younger age than expected.

Suspending Study

Her study took an integrative approach, combining interview questions with videotaping children’s responses as they watched the drama unfold. “We really want to know when children start being able to understand another’s mind. There’s this idea that young kids are egocentric, that they’re locked into a perspective of the world and fail to understand what others are thinking. We’re fighting this notion of childhood egocentrism.” —A.G.

Preventing Blindness

Researchers at the Translational Imaging Center are developing a method to save eyesight.

Diabetic retinopathy is the chief cause of blindness in American adults, affecting nearly 8 million people. Researchers in the Translational Imaging Center, a joint venture between USC Dornsife and USC Viterbi School of Engineering, are developing a method to catch the disease earlier.

Scott Fraser, Provost Professor at USC Dornsife, Children’s Hospital Los Angeles, the Keck School of Medicine of USC, and USC Viterbi, and Jeff Fingler, senior scientist at the center, are improving optical coherence tomography (OCT).

OCT, a system that quickly images the retina to simplify screening for diabetic retinopathy, was originally invented by Keck School of Medicine of USC Dean Carmen A. Puliafito. Fingler and Fraser are working to make the system more accessible, helping more patients receive adequate treatment — and saving many from blindness.

The two hope to make OCT screening stations available in pharmacies, akin to blood pressure monitors frequently found in drug stores.

“If these instruments were in pharmacies, patients could pick up their medications and look into the machine, making screening [for diabetic retinopathy] more of an everyday thing,” Fraser said. —E.R.

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Buffeted by a chilly wind blowing from the choppy grey waters of Southern California’s Salton Sea, the group of USC students stood on the vast inland lake’s southern shore and gazed out across the desolate beauty of the environmentally stricken landscape. Calcified fish skeletons crunched underfoot and the ghostly, blanched trunk of a long-dead tree rose from the murky water.

The 16 Thematic Option honor students from diverse majors were participating in a course led by Jim Haw, professor of chemistry and environmental studies.

“We are looking at water and energy issues through the lens of the Southern California desert, where the effects of a reduced water supply are obvious on the landscape and where a disproportionate share of the transition to renewable solar, wind and geothermal energy will be hosted,” Haw said.

As California experiences an unprecedented drought and state-mandated water restrictions, the course could not be more relevant — or more timely.

From their base at a desert research center in Borrego Springs, the group explored the Anza-Borrego Desert and the Salton Sea over a two-week period. Students chose to research diverse projects, ranging from the history of California’s complex water rights to West Nile Virus to the functionally extinct Sacramento Delta smelt.

“Many of these students had never seen a desert before,” Haw said. “Now they are empowered to visualize a world with a very limited water budget. I want them to have a real boots-on-the-ground, minds-in-the-sky kind of understanding of critical contemporary problems.”

For Nepal, the hits just keep coming.

It started with a magnitude 7.8 earthquake in April, which led to ongoing aftershocks. All the shaking has triggered an estimated 5,000-plus landslides — and now, material from these landslides is filling up riverbeds with sediment.

Joshua West, assistant professor of earth sciences, traveled to Nepal this summer to conduct an assessment of the condition of the rivers and landslides.

“Though this [earthquake] was a tragic event, we can potentially learn a lot,” West said. If we understand where the landslides occurred this time, we may get a better understanding of where they’ll occur in future earthquakes as well as the sequence of post-earthquake hazards.

“That understanding may help others to better plan recovery efforts,” he said.
In the shrinking forest fragments between Budongo and Bugoma reserves — a roughly 1,200-square-kilometer area along Lake Albert on Uganda’s western border — graduate student Maureen McCarthy found evidence of a far larger population of endangered eastern chimpanzees than previously estimated.

“Our results show a surprisingly widespread and large chimpanzee population in the region, especially given the extent of habitat loss there,” said McCarthy, who is pursuing her doctoral degree in integrative and evolutionary biology.

An estimated 76,400 to 119,600 eastern chimpanzees remain in the world. About 5,000 live in Uganda.

Because the area is unprotected, the chimpanzees are vulnerable to trapping and loss of the fruit trees they rely on for food, McCarthy said.

“Hundreds of kilometers of forest are estimated to have been lost in this region in recent years, and we saw plenty of evidence of this while collecting data.”

The population in the region McCarthy studied represents the emerging status quo. No longer inhabiting wide expanses of forest, the chimpanzees instead carve out an existence in shrinking forest patches.

Next, McCarthy will investigate whether the chimpanzees are using the fragments as a corridor to move between the two reserves or if the populations remain genetically isolated.

**Alumni Palau**

Michele Felberg ’13 knows the connection between tourism and the marine environment, having worked where they intersect for the past two years. Thanks to a scholarship, she plans to study how the dive industry that provides her livelihood connects its business plans to marine conservation.

A graduate of USC Dornsife’s Environmental Studies program and the USC Scientific Diving program, Felberg was awarded a one-year Rolex Scholarship.

David Ginsburg, assistant professor (teaching) of environmental studies and assistant USC dive safety officer, extolled the significance of the honor. “This is a very prestigious award — it’s the Fulbright scholarship of the diving community — and Michele is the representative for North America,” he said.

Felberg credits the scientific diving program and subsequent research trips to the western Pacific nations of Micronesia, Guam and Palau — arranged through the Environmental Studies program — as key factors in her recent honor. Since graduation she has worked in Palau as a dive guide and underwater naturalist.

Felberg hopes to expand her network of diving colleagues worldwide through her Rolex Scholarship, believing diverse perspectives are key to ensuring the future of ocean habitats. “There is no one perfect solution but rather endless possibilities for successful marine conservation,” she said.

**Alumni Indonesia**

Chemistry alumnus Dave Chapman, now a veterinarian, lends his skills to care for animals in underserved countries such as Nepal, Costa Rica and Indonesia.

Dave Chapman recalls traveling through Bali, Indonesia, with a group of veterinarians, stopping in different villages to spay and neuter hundreds of stray dogs. The work, on behalf of the nonprofit Bali Street Dogs Foundation, aimed to reduce the stray dog population in rural Indonesia without resorting to euthanasia.

“It worked. “We saw pretty significant population reductions,” he said.

Originally from Yorkshire, England, in a family that included dogs, cats, rabbits and guinea pigs, Chapman — who earned his Ph.D. in chemistry from USC Dornsife in 1988 — was always drawn to veterinary medicine, though he chose a different path early on.

After earning an undergraduate degree in England, he moved to the United States to pursue a master’s degree at the University of Georgia. He then headed to USC Dornsife for his doctorate in organic and medicinal chemistry.

While a postdoctoral fellow, Chapman decided to finally fulfill his dream and attend veterinary school at Washington State University — taking every opportunity to gain global insight.

One summer, he studied the incidence of snake bites on livestock in Nepal and later volunteered at a wildlife rehabilitation facility in Quepos, Costa Rica.

Chapman, who now owns a private practice in Costa Mesa, Calif., continues to give back. He volunteers with the Wetlands and Wildlife Care Center of Orange County, a rescue facility that treats sick and injured native species, releasing them back into the wild. He also delivers supplies to an underserved veterinary clinic in Mexico.

Committed to providing the best care possible, Chapman believes that what separates a good vet from a great vet is empathy.

“Ninety percent of veterinary medicine is your relationship with the two-legged client,” he said. “I deal with many different characters — a lot of whom come to me in very vulnerable states — so unless I can communicate clearly and effectively, I probably can’t do the best for the animals.”
While college is designed to prepare students to pursue their life’s goals, some lessons can only be learned through experience. Recent graduates talk about their adventures after USC Dornsife and what their post-collegiate lives have taught them. By Laura Paisley

College students hear an awful lot about the “real world.” Relatives, professors, neighbors and even well-meaning strangers feel compelled to dispense advice about this almost mythical place. For some it can provoke a sense of foreboding and uncertainty; others may have an overly rosy view of what is in store for them after graduation. The fact is, most young alumni will experience a reality check of some sort once they adjust to their new lives. Indeed, their education doesn’t stop beyond the USC campus — it’s just a much bigger classroom.

**THE ADVANTAGES OF ADAPTABILITY**

After all the effort and subsequent excitement of landing a new job, experiencing occasional bad days at work is inevitable. Adjusting to less than ideal circumstances and negotiating difficult situations becomes part of the deal. But good or bad, each day offers opportunities to learn along the way, both professionally and personally.

Kelly Hann ’13 works as a nurse at the Children’s National Medical Center in Washington, D.C. Her current post is on the pediatric hematology, oncology and bone marrow transplant floor, where she often cares for young cancer patients. At times it is an emotionally draining experience.

“[The job] can be exhausting, but a good kind of exhausting,” she explained. “You focus on the small victories, like ‘I made that kid laugh today’ or ‘that parent gave me a hug.’”

Recently, Hann had a 4-year-old patient who was undergoing chemotherapy, and one day the little girl was particularly resistant to her treatment. “She was fighting tooth and nail,” Hann said. “We finally agreed that if she took her medicine, she could paint my fingernails light blue. After that she was in the best mood. I saw her the next day and she was so excited to see I’d kept the polish on.”

That, Hann said, was a good day.

Laura Martinez ’14 decided to teach English as a second language after graduating with an international relations degree. She took a job in Thailand through the Council on International Education Exchange.

“As an ESL teacher, each day is exciting and new, but also coupled with its own set of challenges and frustrations.”

The single greatest strategy Martinez has developed to work through difficulties in her job is to keep an open mind and go with the flow.

“I’m much more aware of how conditioned I used to be to constantly over plan and try to over control situations. In a job that is continually changing and full of unexpected occurrences, the best thing I can do is to be flexible and adjust accordingly.”

**GRADUATING TO GRADUATE SCHOOL**

Some new grads postpone their entry into the workforce by pursuing further education, which presents different challenges. As a first-year student at Cornell Law School, Anthony Wu ’14 experienced “the hardest academic year of my life.” The reality of law school meant letting virtually no time go to waste, he said, and being keenly aware of the importance of his investment.
“You’re paying a lot of money and using time that could be spent working, so in that sense you have to focus even harder on your studies and really dedicate yourself. “You have to be very careful about time management and sticking to schedules.”

“I THINK SOME PEOPLE TRY TO SCARE YOU ABOUT THE REAL WORLD. BUT IT’S NOT NEARLY AS SCARY AS THEY MAKE IT OUT TO BE.”

For Hann, as she pursued her nursing credentials at Johns Hopkins University and then began working, she found the unique academic focus she had as a health and humanity major at USC Dornsife to be very beneficial, particularly her concentration in psychology.

“I use the material I learned from my undergraduate psychology training all the time. At Hopkins, having the combined psychology/biology background made my nursing classes easier. It felt like I had a leg up in terms of understanding things like cognitive processes and empathy.”

WE’RE NOT IN KANSAS ANYMORE
Following graduation in 2013, international relations alumna Rebecca Braun served two years in Cameroon with the Peace Corps. Working as a youth development volunteer, she taught young people about sexual reproductive health, healthy life skills and empowerment for girls.

Going into the experience, Braun was aware that the Peace Corps would be challenging.

“I said, ‘OK, I may not have running water or electricity. I won’t have supermarkets. How am I going to take care of myself?’

“But once I figured all that out, I realized that physical discomfort is the easiest part of living in a foreign country. It’s much harder to adjust to different ways of communicating, a second language or differences in the relationships between men and women.”

Living abroad helps you learn a lot about your own culture, she said, when you see all the peculiar aspects of a foreign culture and then realize how peculiar your own can be.

“When you travel, you learn things you can’t learn from a book. I’ve learned so much about race, poverty and development,” she said. “Seeing the world is the best education you can get.”

In Thailand, Martinez said she has learned innumerable lessons surrounding the themes of perspective, patience and adaptability. A commonly used phrase in Thailand is mai pen rai, which approximates “no worries.”

“It captures an essence of the Thai culture that permeates the country across its people and customs and the lifestyle,” she said. “It means go with the flow, don’t sweat the small stuff, and recognize it’s all going to be OK.”

Although she initially experienced frustration in the face of a very different pace of life in Thailand, after a year in the country, she has come to deeply internalize this ethos. She is more patient and easy going.

“Living and working in another country has taught me that there is always another lens to view an issue through. Living abroad forces one out of one’s dominating life perspective and to consider an alternative.”

A DIFFERENT SOCIAL SCENE
One aspect that graduates do not always anticipate is the transformation that their social lives undergo once they leave school. When they are living in the dorms, there is always an open door down the hall and someone who feels like talking or going out. But in the full-time working world, they have to navigate differing schedules and the fact that friends are now scattered across the country.

“In college, everyone is basically your age and you have common interests,” Hann said. “In the real world, it’s a lot harder to meet new people and there isn’t always someone who wants to go out. That’s been a bit shocking — it’s like, ‘Wait, how do grown-ups make friends?’ ”

Those living abroad are even farther from the comfortable social bubble they knew as students. For Braun, the Peace Corps was the first time she had ever lived alone, and being so far from family and friends, she had a lot more time on her own.

“College for me was about learning to live with other people, like roommates. Being in Cameroon, one of the things I’ve had to learn is how to live with myself.”

NETWORK IT
Even before they land their dream job or move on to further educational opportunities, many graduates have already learned the importance of planning and forethought as a critical step toward attaining their goals. One invaluable tool they can use as undergraduates is networking, which can yield everything from work experience and mentorship to potential job offers.

Wu took part in the Gateway Internship Program while a junior at USC Dornsife. The program offers work experience, professional mentorship, networking opportunities and an academic leadership skills course. He interned with ARC Document Solutions Inc., a company that provides document and information management solutions for businesses of all types.

“It was a great experience to see what it’s like working with colleagues and showing up to work every morning — normal things about work that you don’t really know as a student but you learn about through internships,” Wu said.

He got the chance to meet with mentor and company CEO K. “Suri” Suriyakumar, a USC Dornsife Board of Councilors member. His internship supervisor provided a glowing letter of recommendation that bolstered his law school application.

During her nursing job search, Hann received offers in four states. All came about through her networking efforts, she said.

“If I’ve learned anything, it’s that networking is the key to success. Society 53 [USC Student Alumni Society’s leadership program] taught me how to network, be professional and interact with people. I learned how to build those relationships, which always used to make me a little uncomfortable.”

Hann reflected on her experiences as a full-fledged member of the workforce.

“I think some people try to scare you about the real world,” she said. “But it’s not nearly as scary as they make it out to be, especially if you find a career that you want to be in.”

SHIFTING RESPONSIBILITIES
Some of the wake-up calls of life in the “real world” include having less free time, having to manage personal finances, and getting used to a different kind of social life. But new freedoms and growing wisdom are also part of the equation.
THE UNIVERSE AS WE KNOW IT

By Darrin S. Joy
Teeming with countless planets, stars, galaxies — and perhaps a host of as yet unimagined phenomena — the universe is incomprehensibly large.

Despite its massive nature, reality ultimately boils down to infinitesimal basic building blocks. No one is quite certain what they are, but two USC Dornsife physicists explain how scientists may be closer than ever to an answer.

Sitting in a small French bistro across from Pershing Square in downtown Los Angeles, Clifford Johnson held the pumpkin-hued drinking straw parallel to the table.

“Essentially, this straw has two dimensions to it. I can walk along the straw,” he explained, running his index finger along the length, “or I can walk around the straw.” His finger traced the object’s glossy curved surface.

Johnson, professor of physics and astronomy at USC Dornsife, was explaining how the universe could hold extra, hidden dimensions.

“But let’s imagine the straw is really, really long and thin, and I’m walking along the length and I don’t have the equipment to look at very, very small distances.” With those limitations, a traveler would only be able to see the one dimension of length ahead and behind.

Johnson motioned toward a point past the noisy traffic and pedestrians passing by, across the street. “It’s basically the same as if I took the straw over there. You would see its orange length, but you wouldn’t see the roundness. Still,” he said, his finger again circling the straw, “notice everywhere I am in the one-dimensional universe, I could go around if I wanted to. That extra dimension is always with me.”

In a similar way, the four-dimensional universe that humans know, comprising three dimensions of space and one of time, could actually harbor other dimensions that are too small to detect, Johnson said.

Why is that important? One word: strings.

Johnson, who describes his research as an attempt to understand the basic fabric of nature, is a renowned expert in string theory, the closest thing scientists have to a single theory that explains everything in the universe — all of reality.

If he and his fellow physicists are right, strings may be the most basic unit of existence. Every particle of force or matter may boil down to a simple, one-dimensional, vibrating string.

THE LARGE AND SMALL OF IT

For most of history, humankind’s view of the universe and how it works focused on large-scale phenomena — planetary motion, visible properties of light and effects of magnetic fields, for example. Around the turn of the 20th century, as physicists began to examine the microscopic universe of atoms and their constituent pieces, they found that the subatomic world seemed to be governed by a very different set of rules. Max Planck, Albert Einstein, Niels Bohr and a host of brilliantly creative scientists began exploring this realm through mathematics and direct experimentation.

As the scientists worked over the next several decades, they discovered that there were two different classes of fundamental particles, fermions and bosons. The former are the core constituents of matter while the latter mediate interactions between pieces of matter.

Stated simply, different kinds of bosons transfer forces between different kinds of fermions. Photons, for example, transmit the electromagnetic force between charged fermions such as electrons.

“This major breakthrough — that there are particles that can communicate forces or interactions — that was an amazing piece of quantum physics that was understood in the middle of the last century,” Johnson said.

This quantum system seems to work nicely for three of the four known forces of nature — the strong nuclear force, which holds the particles in the atomic nuclei together; the weak nuclear force, which strains to break those nuclei apart as radioactive decay; and electromagnetism.
“The coolest thing about string theory is it’s the only theory out there that reconciles quantum mechanics and general relativity.”

In other words, these subatomic forces fit a single, unified theory of quantum physics.

The one force that seems to resist following quantum rules — and therefore confounds a unified theory of everything — is gravity.

**A CURVACEOUS CONUNDRUM**

Einstein famously described gravity as a curvature in the fabric of space-time. His revolutionary general theory of relativity — which marks its centennial anniversary in November 2015 — seems to work almost entirely on large scales (the level of planets, stars and galaxies) and at low energies. It breaks down in the tiny, high-energy spaces where bosons and fermions play.

Put another way, quantum physics works best where gravity is ignored, and general relativity works best on large systems — far above the subatomic scale — where quantum effects are very small.

In addition, physicists have yet to find a particle that conveys the force of gravity — the so-called graviton.

“We think it’s inevitable that there’s something like a graviton if you quantize gravity, and we’d be surprised if gravity isn’t quantum mechanical,” Johnson said. “The fact that we haven’t succeeded in doing it yet is our failure, not nature’s.”

The attempt hasn’t been completely fruitless, however.

**PULLING STRINGS**

In the late 1960s and early ’70s, physicists began to take a different look at the bosons and fermions in the nuclei of atoms. They found the particles involved could be described as incredibly small, one-dimensional, vibrating strings.

This string theory quickly captured attention, but just as quickly fell out of favor as other models of particle interaction arose. This oscillation in interest would continue for some time.

“The theory has gone in and out of favor for quite a few years,” explained Nicholas Warner, professor of physics and astronomy and mathematics. “It was first invented as a theory of the strong interaction, and it was a failure at that. But then it resurfaced in the ’80s as a theory of quantum gravity, and it works extremely well.”

In fact, one very important observation stood out from early on — these vibrating strings were able to describe, to a T, the expected properties of gravitons.

“The coolest thing about string theory is it’s the only theory out there that reconciles quantum mechanics and general relativity,” said Warner, who uses string theory to understand the quantum physics of black holes, the most gravitationally intense phenomena in the universe. “It does seem to do that to the extent we’ve been able to calculate.”

Those calculations require a key caveat, however. The universe must contain extra dimensions.

**BEYOND 4D**

Fortunately, extra dimensions need not be a problem. As Johnson illustrated with his orange straw, the universe may contain countless dimensions that are just too small to detect. But, because strings also are incredibly minute — smaller than anything previously conceived — and only one-dimensional, they can vibrate in essentially any of those dimensions. That’s important, because while string theory works very well to describe all of the observed particles — and even gravitons — it only succeeds if the strings can vibrate in as many as 10 dimensions.

“When you start writing down the mathematics, the strings come back and they tell you that the mathematics isn’t going to work out unless you allow us the freedom to vibrate in other dimensions as well,” Johnson said.

“When you allow the strings to be extra-dimensional … then it gives you a much richer range of possibilities, and the possibility that you can incorporate everything we’ve observed into string theory suddenly becomes viable,” he added.

In other words, each specific particle can be described as a string vibrating in a particular dimension.

“String theorists are trying to say there’s only one basic kind of particle and everything is just some different vibrational state of the string,” Warner explained. “The graviton is one fluctuation or vibration of the string, the photon is another … and so forth.”

So in the end, everything may boil down, essentially, to the same basic thing — strings.

**EXCEPT, MAYBE NOT…**

While string theory is remarkably adept at potentially describing all of the known particles of matter and force, it has yet to be tested.

“There’s always the possibility that the framework is incomplete, or just plain wrong,” Johnson said. “We need a way of getting measurable predictions from the theory that we can go away and test — a key step in any scientific endeavor.”

Strings, however, are likely too tiny to be seen directly by any experiment that scientists can hope to design soon, he said. So they need to look for indirect signs of strings, and string theory so far is not understood well enough to predict what those signs are.

But there is hope. String theory may get an indirect test when applied to what appears to be the most abundant material in the universe.

Observations show that dark matter and energy constitute more than 95 percent of the universe. Scientists have established that they are new forms of matter and energy, but so far their precise nature is unknown. They may hold the key to confirming the veracity of string theory, Johnson said.

“It’s really kind of amazing — and humbling. There are forms of matter that seem to show up naturally in string theory that could well be good candidates to be dark matter,” he said. “People are hoping that this could be a key to making contact between theory and nature.”
Life on the Holodeck  By Darrin S. Joy

AS THEORETICAL PHYSICISTS ENDEAVOR TO UNDERSTAND THE INTRICACIES OF MYSTERIOUS BLACK HOLES, STRANGE THEORIES OF EXISTENCE BEGIN TO Emerge.

When Albert Einstein published his general theory of relativity 100 years ago, he revolutionized the way scientists perceived the physical world. Redefining the force of gravity as a curvature in the combined fabric of space and time, the theory presented previously unimagined possibilities.

The concept also led to new ways of contemplating the fundamental properties of the universe and what it is all made of. Seeking answers, theoretical physicists have turned to one of the more bizarre phenomena in the cosmos — black holes.

BREAKING FREE

Formed when a massive star, in its last death throes, collapses in on itself, a black hole creates a gravity well — a warp in space-time — so strong that even light cannot escape. (Hence, the name.)

A defining feature of a black hole is its event horizon, the point at which gravity becomes inescapable. Once across a black hole’s event horizon, nothing — no atom, no planet, not even a starship traveling at light speed — can return from the super-dense interior. Or can it?

“According to general relativity, stuff falling into a black hole never comes out,” explained Nicholas Warner, professor of physics and astronomy at USC Dornsife, ”but Hawking showed it can.”

Warner, who studies black holes using string theory, was referring to noted theoretical physicist and cosmologist Stephen Hawking. In the 1970s, Hawking showed that black holes can, in fact, emit radiation, at least on paper. Now termed “Hawking radiation,” the process is akin to evaporation. So, what goes into making a black hole will come back out, albeit in a much different form and after many eons.

A black hole with the mass of Earth’s sun “will take 10^67 years — that’s a ‘r’ with 67 zeroes after it — to decay with Hawking radiation. It’s an incredibly, insanely long time,” Warner said.

SKIMMING THE SURFACE

Hawking’s work, along with that of theoretical physicist Jacob Bekenstein, led to another surprising revelation: a black hole’s entropy — a measure of all of the substance that formed it — is proportional not to the volume of the black hole, as expected, but rather to its surface area.

“For most things if you ask, ‘How much can I put in a box?’ it depends on the volume of the box,” Warner explained. “The bigger the box, the more I can put in — the more books, or rocks or information.

“So, usually information in the box is proportional to the volume of the box. Not true for a black hole! It has information in it that’s proportional to the surface area, not the volume.”

That insight — that the surface area provides a window into the inside of a black hole — gave a vital hint at a different way to view not just black holes, but the universe altogether.

“That was the hint that for theories of gravity, if you dig deep enough, the most information you need may actually be just three-dimensional,” said Clifford Johnson, professor of physics and astronomy.

In other words, the universe may be a hologram.

ONE LESS DIMENSION

Most people recognize a hologram as a two-dimensional image that has three-dimensional information. A common example is the small security feature on many credit cards.

In the broader sense, however, a hologram is an image of an object in one less dimension that preserves its higher dimensional information.

For physicists, the insight provided by Hawking and Bekenstein into the nature of black holes led to the realization that the four-dimensional universe, comprising three dimensions of space and one of time, might also be described mathematically using just three dimensions, two of space and one of time. One spatial dimension might be unnecessary, perhaps even an illusion, Johnson explained.

Because gravity, as Einstein showed, is tied up in those four dimensions that constitute space-time, this can simplify how scientists model the universe and how gravity fits within it.

“The idea essentially is that theories involving gravity, or dynamical space-time, are such that when you try to characterize gravity … you don’t need as many dimensions as you thought,” Johnson said. “The theory of gravity in four dimensions may be more efficiently described as a theory that is not gravitational in one dimension fewer.”

That means that physicists can more simply describe everything in the four-dimensional world that includes gravity by using three dimensions without gravity, he explained.

This also works in reverse; physicists can describe what takes place on a three-dimensional surface by addressing its effect on the gravitational field in the fourth dimension, according to Warner, who provided some of the first conclusive evidence that supported this notion.

“If you want to understand something happening on a surface … you can do it by studying gravity in one extra dimension because the things moving on that surface source the gravitational field out in the extra dimension,” he said. “I did some of the earliest, most nontrivial tests of this hypothesis, and it worked!”

LIVING IN THE MATRIX

This idea of the world as a hologram has further led to conjecture of a more fanciful nature — that the universe, rather than being a four-dimensional reality, might instead be a vast computer simulation using a hologram.

If an intelligence were to construct a “virtual reality,” holography would simplify the process, Johnson said. “Your simulation wouldn’t need to have gravity in it; gravity would emerge because of holography.”

Ultimately, he dismisses the concept as extremely speculative. But, Johnson does acknowledge its allure. “It’s a fun idea. It’s appeared in a million and one pieces of fiction,” he said. “If we were going to make sense of it in physics, it probably would be through this holographic idea.”
Not long after its emergence in the early 19th century, photography gained prominence both as visual art form and as a means of journalistic documentation — with the two seemingly disparate genres often overlapping. Kate Flint, Provost Professor of Art History and English, and Geoff Dyer, writer in residence, delve into photography’s role as a window on life and an evolving method of defining reality.
Two related questions: How long do we have to go back to trace the origins of what happened last year in Ferguson, Missouri? And when does the aftermath of what happened begin?

In terms of narrative history, origins and aftermath — causes and effects — are continuous, capable of being lengthily extended in either direction so that “what happened” is the aftermath. While many strong photographs captured protests, unrest, rioting and the way the police provoked or responded to them, the BEAUTY picture by Justin Sullivan seems directly to engage with these questions.

What it lacks in photojournalistic immediacy is more than compensated for — especially now, many months later — by its reach. (Since it was taken in Dellwood, Missouri, that reach is geographical as well as historical.) Given the number of camera crews and press photographers camped out in Ferguson, waiting for the verdict on the killing of Michael Brown, hoping for photogenic action, it also serves the useful function of reminding us that there was a time when reported events went unphotographed.

In showing the aftermath of a demonstration, Sullivan harks back to a time when the machinery of photography was too cumbersome and slow to capture events as they occurred. Unable to record a cavalry charge in the Crimea, Roger Fenton famously photographed cannonballs lying in the Valley of Death in 1855. What was absent could only be suggested or implied by what was present. So it is here — except the implication is, so to speak, explicit.

Back in the 1960s, the phrase “Black Is Beautiful” was more than a slogan; it was part of a movement and force for change. During the Ferguson protests, the main message on placards was “Black Lives Matter,” which seemed a less radical, even humble claim — not a claim at all, in fact, so much as a reminder. In this photograph, all that remains of the militant 1960s assertion is “BEAUTY” — a plea rendered not just meaningless but visibly contradicted by the ruination of which it is part and to which it provides a wanly ironic caption.

The extent of the damage done is exacerbated by another aspect of the photograph’s reach. This is almost spelled out, since the damaged “BEAUTY” sign cannot but recall another self-captioning image, possibly the most famous one of all. In about 1929, Walker Evans (born, incidentally, in St. Louis) photographed workers loading a long, neon “DAMAGED” sign onto the back of a truck. The two signs are tilted at exactly the same angle (20 degrees, I’m guessing) but it is, of course, the differences that make the resemblance so effective.

The DAMAGED picture is anything but. On the contrary, it’s pristine and perfect — a thing of such obvious aesthetic beauty as to instantly label itself as an Evans, as an American Photograph! Sullivan’s is altogether less assured of its standing and status. Sure, it’s an impressive picture (that’s why we’re still looking at it, long after its retail value as a news picture has passed), but it lacks the capacity to assert and define — as Evans did, again and again — both the centrality of the medium and the photographer’s instantly eminent place in its history. One might almost say that it stands amid the rubble of that tradition and history, in the long aftermath of the original.
Somber irony infuses this image by photographer Justin Sullivan, taken just after the Nov. 25, 2014, demonstrations in Dellwood, Mo., that followed the shooting death of teenager Michael Brown in nearby Ferguson.

The literal message of the “Damaged” sign photographed by Walker Evans (ca. 1929) serves to emphasize the pristine beauty not just of the clearly unblemished sign, but of this exceptional image, as well.
**LITTLE SUSIE AT WORK**

Jacob Riis’ iconic documentary style uses flash photography to capture a split-second in the lives of child laborers (ca. 1890), casting them as victims and evoking empathy from the viewers.

**CHILD WITH CAT AND TWO WOMEN**

Captured by an anonymous photographer, this historic pre-1950s flash image captures unexpected details illuminated by a burst of chemically generated light and exposed for viewers to ponder their significance.
In 1887, Jacob Riis was working as a journalist in New York City when a four-line newspaper item caught his eye: “There it was, the thing I had been looking for all those years … The darkest corner might be photographed that way.” Two German chemists had just invented flash powder.

For more than 30 years, until the invention of the flash bulb, this magnesium compound was essential to the taking of pictures in dark places.

For Riis, the literal associations of illumination were infused with biblical overtones of revelation. He saw it as his mission to expose terrible living conditions in lodging houses and tenements, and the crowded sweatshops of Manhattan’s Lower East Side.

Sometimes his subjects stare out of the frame, angry at this interruption of light; sometimes they seem clearly posed. Sometimes, as in the image of “Little Susie,” they appear too busy with piecework to stop. Indeed, as she pastes linen on tin covers for pocket flasks, this 12-year-old works “with hands so deft and swift that even the flash could not catch her moving arm.”

Riis deliberately sought a compassionate response. He contextualized his subjects, making us see them as types — and often victims — rather than individuals.

At the same time, we see not just his human subjects, but all the details of a room. Flash is a great democratizer. Light cannot be carefully directed, and this means that work tools, crockery and lace curtains often take on unplanned prominence as a sudden flare makes them more noticeable than at any other time in their existence. Were the room’s inhabitants aware that the picture was crooked? Does the flash reveal a material reality that is not, in fact, visible to those who inhabit dark interiors? Or, there’s another possibility: Did Riis himself tilt the frame, giving a compositional unity through this diagonal?

How far, in other words, can one trust the details given in a documentary picture, where a photographer may move an object to improve aesthetics or reinforce a polemical point? Does her expression suggest mistrust of the photographer, or of the woman in a hat, or bewilderment at the whole set of circumstances? Is the younger woman sad to see her leave, or happy to have her home? Is she saying goodbye to the kitten? Does the array of pill bottles on the mantelshelf suggest that someone — mother, child, absent family member — is sick? Why the flag on the same mantelshelf? What of the mismatch — surely revealed by flash — between the untidy newspapers shoved into the grubby area behind the stove and the mess of papers on the table behind, and the china and trinkets that display a desire to decorate and beautify these shabby surroundings?

What does the image say about the intersection of human resilience and charitable intervention?

What happens next?

Reality is not readily captured. It’s a complex, messy thing — not just illuminated by a brilliant light and caught on a photographic plate. Photography may stop its flow for a moment, and even bring out and fix details that are not readily apparent in reality’s daily flow. But very often, the most provocative images are those that suggest tensions, stories, circumstances and inner lives that the camera can hint at, but never fully reveal.

Kate Flint is Provost Professor of Art History and English. She is currently completing her book Flash! Photography, Writing, and Surprising Illumination.
A quintet of USC Dornsife alumni leapt into public consciousness through appearances on television reality programs — but what did they learn from their experiences? By Susan Bell, Michelle Salzman Boston, Dan Knapp and Laura Paisley

Although its popularity exploded in the 1990s, reality television — in one guise or another — has been around almost as long as the medium itself. While the genre is frequently derided as being anything but real, many programs have opened the eyes (and minds) of viewers to people and situations they otherwise might never have encountered. MTV’s The Real World, for example, put a face on the AIDS epidemic for an entire generation when Pedro Zamora, who was HIV-positive, was cast in the series’ third season. And Sharon Osbourne, who co-starred with her husband, rock star Ozzy Osbourne, and their children on The Osbournes, confronted the stigma surrounding colon cancer when she famously chose to continue filming the show following her 2002 diagnosis.

Over the years, dozens of USC Dornsife alumni have found their own 15 minutes of fame by appearing on reality television programs. We caught up with five notable participants who left their marks on their respective shows and who were, in turn, forever changed by the experience.
THE ART OF STYLE

Brad Goreski has worked hard to become a successful stylist. And he remains chic, even under pressure.

Case in point: During the first season of It's a Brad, Brad World — the 2012 Bravo reality television series that chronicles the launch of Goreski's styling business — there is an emotional moment captured on camera when Goreski confides in his then-boyfriend (now fiancé), writer Gary Janetti, about just how challenging his new venture is.

“I'm getting to do the thing that I've always wanted to do, and it's just overwhelming sometimes,” Goreski admits. Even amid tears, Goreski appears stylish, wearing a short-sleeve magenta button-down shirt and horn-rimmed glasses.

“The cameras are on you, you end up playing the best and worst versions of yourself,” said Goreski who earned his bachelor’s degree in art history from USC Dornsife in 2007.

“On It's a Brad, Brad World, people were genuinely watching me start my business and go through the ups and downs,” he said. “I was getting jobs and losing jobs. It was an emotional roller coaster for me, and to have it all filmed, too. That was an added pressure.”

Those days of uncertainty are behind him now. As a stylist, Goreski, 38, has a growing client list of glamorous celebrities including Demi Moore, Rashida Jones, Lea Michele and Sarah Hyland. This year, he joined E! Entertainment Television’s Fashion Police as a co-host, and signed on as creative director of the retail clothing brand C. Wonder. He has also worked as the exclusive brand stylist for Kate Spade New York.

Goreski cut his teeth in the fashion world interning in the New York offices of Vogue and W magazines. Those experiences inspired him to study art history at USC Dornsife.

“At Vogue I saw all of the fashion editors with stacks and stacks of books on painting and photography,” Goreski said. “They were all marked and tagged, and the editors all knew so much about different periods of costume design and sculpture. It influenced the way that they would construct their photoshoots. I thought, ‘Well, I better get a hold on this.’”

He chose USC because of its reputation for small classes and one-on-one time with professors, and for turning out successful alumni.

“That was really appealing to me,” said Goreski, who grew up in the small town of Port Perry in Ontario, Canada. “Coming from Canada and living in L.A., I thought that USC would be the quintessential California and university experience, which it was.”

At USC Dornsife, Goreski found inspiration in the opulence of Rococo style and, in particular, the grandeur of Madame de Pompadour, a longtime mistress of King Louis XV who influenced French culture and arts.

“I loved the idea of court life and everything that was associated with it, especially the way that everyone dressed,” Goreski said.

He also fell in love with works by the contemporary photographer Nikki S. Lee. In her photo series “Projects,” Lee adopts the style of different social groups — skateboarders, hip hop musicians, young urban professionals — and poses alongside them in photographs.

“I'm so fascinated by the way that she approaches photography and documents cultures in America,” Goreski said.

One of the highlights of his time at USC Dornsife was a course that took place at the Getty Villa in Pacific Palisades, which is modeled after a first-century Roman country house, the Villa dei Papiri in Herculaneum, Italy.

“We got to spend the entire afternoon learning about the art and construction of villas in an actual villa in California,” Goreski said. “It was a really incredible experience, and a way to live the class that we were taking. I think that the exposure to so much art in Los Angeles really helped to influence the things that we were taught.”

Goreski sees his training in art history come into play in his work as a stylist.

“One of the main ways is knowing how things are composed and how colors go together — what’s appealing to the eye,” he said. “Being an art history major really helped to fine tune the way that I see things, and obviously that’s a skill that’s useful when I'm dressing a client for the Oscars.”

“I also think in terms of putting together a concept for a photoshoot or a mood board or any of those things that we use in styling all the time, having a database of visual references is incredibly useful. Whether it’s color blocking or the graphics of Mondrian, you’re always seeing artistic influences in whatever you’re doing.”

Now that he is five years into running his own styling business, Goreski said that he is grateful to work with so many incredible people and to get to do so many different things within his field.

“I get to work in a business that I only dreamed of,” he said. “I had no idea how I was going to go from a small town in Canada to having my hands on trays of Harry Winston diamonds that I’m taking to some of the most beautiful women in the world to get them ready for the most glamorous night in Hollywood. There's not a day that goes by that I don’t shake my head and say, ‘How did this happen?’”

“I'm just incredibly thankful. I was prepped and educated really well as a Trojan.” — M.S.B.
Stylist Brad Goreski ’07 broke into popular culture on The Rachel Zoe Project. Now, he dresses his own roster of celebrity clients for the red carpet, armed with a love of fashion and a foundation in art history from USC Dornsife.
A contestant on the 16th season of the CBS competitive reality TV show *Survivor*, Alexis Jones ’05, ’06 used the media interest around her participation to launch her nonprofit I AM THAT GIRL.
GIRL POWER

Whether she is navigating the mangroves of Micronesia as a contestant on a reality TV show, or encouraging girls and young women to nurture their self-esteem while negotiating the pitfalls, paradoxes and perils of today’s image-obsessed social jungle, alumna Alexis Jones knows what it takes to be a survivor — both literally and metaphorically.

Since 2008, the media personality and activist has empowered a generation of young women through her nonprofit organization, I AM THAT GIRL, inspiring them to love themselves unconditionally.

A self-described Texas tomboy and sports junky, Jones used the media interest around her participation as a contestant on the 16th season of the CBS competitive reality television series Survivor to launch I AM THAT GIRL.

“I was excited about using a reality TV show to expedite the process of building a personal brand,” she said. “I’ve always been passionate about using media as a vehicle to empower and educate, and USC Dornsife prepared me to use nontraditional means to achieve success.”

Amid growing national concern over sexual assault of young women, this year she turned her attention to instilling in young men the importance of respecting the girls and women in their lives by launching her “ProtectHer: Redefining #MANHOOD” speaking tour in locker rooms across the country.

Jones grew up in Austin, Texas, with four older brothers. She earned a bachelor’s degree in international relations from USC Dornsife in 2005 followed by a master’s in communication management from USC Annenberg School for Communication and Journalism in 2006. She has worked at Fox Sports and ESPN and was cast as a life coach for the MTV reality show MADE — an offer that sprang from her inspirational speaking role at I AM THAT GIRL.

“When I speak in schools, I hear some awful things, about eating disorders and self-harm — things that girls have never told anyone because they don’t feel safe,” said Jones, who has spent the last seven years speaking to more than 250,000 girls in person, and millions more online, regarding self-esteem, bullying, leadership, activism, and social entrepreneurship.

Often those talks address survival tactics, among them how to stay afloat in a sea of self-doubt.

“A girl’s physical, emotional and mental well-being is rooted in her self-worth,” Jones said. “I AM THAT GIRL exists to transform self-doubt into self-love and inspire that in others.”


“Business is easy. I can put together financial and communication plans in my sleep. But asking people the hard questions in life — if they really love themselves, and if they’re happy — that’s tough,” Jones said.

In 2011, she was invited to the White House for the 100-year anniversary of International Women’s Day. There she met Michelle Obama.

After giving the first lady her card and suggesting that her group co-host an event at the White House, Jones got a call from Obama’s assistant, saying the first lady was impressed with her bravado and wanted to invite her back.

Jones returned to the White House to discuss a media initiative she created to examine media impact on girls.

“We live in a world that teaches us from a very young age that our self-worth is commensurate with our physical attractiveness. In that very dangerous paradigm, girls are not taught to love themselves unconditionally. Instead, we are held up against unattainable expectations of beauty.”

This insecurity has been exacerbated by a multibillion dollar beauty and fashion industry with its digitally altered images, Jones said. That problem is compounded further by social media, with its focus on posting highlights of our lives, and — in worst-case scenarios — cyberbullying.

“Girls aren’t talking about what is really going on in their lives, or the pressure they are under,” Jones said. “We are bred to create this idealized façade, but beneath the surface we’re all too scared to admit our insecurities.”

Paradoxically, despite her own — apparently limitless — self-confidence, Jones is no stranger to insecurity.

“One of my greatest struggles as a student was thinking I had to do things to deserve love, rather than believing I am intrinsically worthy of it,” she said.

She cites Steven Lamy, professor of international relations and vice dean for academic programs, as her greatest influence at USC Dornsife.

“I don’t think I would have the courage or confidence to do what I’ve done in my life if he hadn’t poured all that faith into me,” she said.

Also, in her sophomore year, Jones experienced two life-changing events.

First, she landed a role in a campus production of Eve Ensler’s play The Vagina Monologues, which got her excited about girls’ and women’s issues.

Then, she won a three-year gig hosting a USC television show about the celebrity red carpet, Doing It for Reel, enabling her to get an inside look at the entertainment industry and build some powerful relationships.

“Both events testify to the caliber of USC, which provides not only the theoretical education, but the opportunity to tackle new experiences and step outside your comfort zone,” she said.

A Kappa Kappa Gamma sorority member, Jones started I AM THAT GIRL at USC so young women could discuss issues they struggled with, whether pressure at school, relationship problems or body image.

She began holding weekly meetings at which young women undergraduates could talk about what really mattered in their lives. Six showed up to the first meeting, but soon hundreds were attending.

“That’s when it dawned on me that there was a real lack of community for girls. And maybe there was a need to create a community for girls at other universities, too — spaces where young women could be courageous enough to be vulnerable,” Jones said.

“We’re all starving for that message of unconditional love, and being given permission to feel insecure and scared is so powerful for all of us.”

Jones, who sees the digital revolution as both the culprit and the solution, acknowledges the irony.

“In today’s world, media is the most powerful tool to influence how a girl defines herself. Through our website and social media, we’re providing tangible tools and resources with an interactive curriculum to teach girls emotional intelligence, professional skills and personal development.”

Jones said her education at USC Dornsife taught her to think outside the box and be a creative, innovative leader.

“Now I’m considered a ‘thought leader’ in the media world. I literally have to pinch myself sometimes because I’m actually living out my dreams.” —S.B.
Fifteen years ago, Curtis Kin ’93 was a participant on the popular CBS reality TV show *Big Brother*. Now a judge for the Superior Court of California in Los Angeles County, he talks about his career and life in the real world.

**GOOD JUDGEMENT**

With his easy laugh, even keel and boyish face, Curtis Kin is immediately likeable. Perhaps the type of guy you would cast in a reality television show as a foil to the more outrageous characters. It stands to reason, because Kin is exactly that, having been cast in the first season of the American edition of the CBS television show *Big Brother*, back when the whole reality TV phenomenon was a nascent strain in our culture.

As a 29-year-old in the summer of 2000, Kin and nine strangers lived together in a house where they were under near constant surveillance. For 88 days, scores of cameras and live Internet feeds laid bare the contestants’ existence. Individual housemates were regularly evicted — by vote of the American public — as they competed for a final cash prize, reserved for the last person standing. The show aired six nights a week on primetime television. America knew Curtis Kin.

“Overall it was a positive experience,” Kin mused. “I think I learned a lot from it and had a lot of fun doing it.”

Does he still get recognized in public? He said it took years to not be.

“Over time it morphed from being recognized as Curtis from *Big Brother* to people having this general sense that they knew me but couldn’t quite place me. Now it’s finally gone away entirely.”

Indeed, 15 years later, the experience seems distant. Kin’s public recognition now comes from a very different source — he is currently a judge for the Superior Court of California in Los Angeles County. California Gov. Jerry Brown appointed him to the position in 2013. Prior to that, Kin was chief of the Criminal Appeals section at the U.S. Attorney’s Office for the Central District of California, the office he had worked in since his stint on *Big Brother*.

“I had a great career at the U.S. Attorney’s Office, and what I loved the most is the fact that I was able to change things up every few years,” he said. “I was able to do a lot of different things and always be able to challenge myself.”

Kin started out working on general crimes, as rookie prosecutors often do, then he moved on to white collar crimes and fraud, eventually becoming a supervisor in the office for the trial unit. In 2009, Kin successfully prosecuted the largest human sex trafficking case ever tried to verdict by the U.S. Department of Justice. The feat garnered him the Attorney General’s Award for Distinguished Service. Criminals knew Curtis Kin.

“That was really gratifying, working with the victims of those crimes and being able to vindicate them,” Kin said. “As a result of that case, I learned quite a bit about how to work with victims and investigate and build a case for trafficking. Thereafter, I served as the coordinator for the human trafficking unit at the office. I was fortunate to travel around the country and internationally, teaching law enforcement officers and victims’ rights advocates about sex trafficking and how to combat it. It was a very rewarding part of my career.”
Kin grew up in Tustin, Calif., the youngest of three children. As a teenager in the late ’80s, “back when L.A. Law was big,” Kin developed an interest in the legal profession that followed him to USC Dornsife. He majored in international relations and graduated in 1993 before going on to Stanford Law School and earning his J.D. three years later.

Within the first few years of practicing, Kin knew he wanted to be a trial lawyer and a prosecutor. But, after law school, he served as a clerk for a couple of judges — including future U.S. Supreme Court Justice Sonia Sotomayor. The judicial experience inspired him. Eventually he was able to work in both areas.

“As a federal prosecutor, writing is constant,” he continued. “At the end of the day, a lawyer is a purveyor of information in a persuasive way. It can be oral, but most often it’s going to be in written form. Particularly in federal cases, decisions are made mostly on the basis of the briefs and written submissions. So all of the writing really matters.”

Kin took part in all kinds of activities at USC, from being a resident adviser and orientation adviser to being a Pi Kappa Alpha fraternity president, a campus tour guide and a member of the choir.

“I loved USC. It was such a great experience and those really are your formative years. I felt I walked out of there very well-rounded.”

In some ways, his experience on Big Brother still relates to his current life and career, as well.

“The biggest lesson I’ve taken away is that the way you conduct yourself in your private and public life should be the same. That’s been helpful for me as a prosecutor and a judge — as a public figure. The person you present to the outside is the person you should be in chambers, at home and in your private communications: straightforward and honest.

“Some attorneys really enjoy the spotlight and media attention, but I think as a result of Big Brother, it doesn’t matter as much to me. For my cases, no matter how big, the focus was always on the case. I suppose the novelty of the public spotlight just isn’t there for me after Big Brother.”

Curtis Kin knows himself. —L.P.
NO RUPAUL-OGIES

“I like my body,” Alpha Mulugeta ‘06 declared with a subtle rasp to his voice. A midsummer cold belied his normally dulcect tone. “I’m gender variant, but that doesn’t mean I want to be a woman.”

It may seem a provocative conversation starter, but given the recent focus on gender identity in the media, following a certain former Olympian’s public transgender declaration, Mulugeta’s comments appeared instinctive, as if he was compelled to counsel people on topics they might not understand.

Mulugeta has earned a reputation as a highly regarded social worker in the San Francisco Bay Area. He is also a multitalented drag queen who sings, dances and acts — and it is clear that he is comfortable in his own skin.

“Native Americans use the term ‘two-spirit,’” Mulugeta said, explaining his own experience with gender. “There’s a feminine energy within me that I embrace, and drag is a way for me to outwardly express it.

“Men are constantly told that the feminine is somehow inferior to the masculine,” he said. “But I always saw strength where I was taught to see weakness. I’ve always considered myself a feminist.”

Mulugeta first performed in drag during his sophomore year. A friend in the USC School of Cinematic Arts asked him to appear in a student production about a man who dresses as a woman.

“I was studying psychology, but I was also working toward a minor in musical theatre,” Mulugeta explained. “I did the film as a favor and it received a lot of positive feedback.”

Theatre offered Mulugeta a creative respite from the pressure of studying, but he largely left drag behind to focus on helping his community.

“During my time at USC, I worked on the Virtual Sex Project, where we tested HIV prevention interventions,” he said. “I discovered that I had a talent for counseling, and I’ve always felt called to help people, so it seemed natural I should pursue psychology.

“I grew up Roman Catholic. I went to a Catholic elementary school and a Jesuit high school. The thing that stuck with me most through that experience was the concept of being a person for others and a reflection of God’s love. I don’t think I’d ever experienced this more than when I began work at USC with JEP [the Joint Educational Project] and the Readers’ Plus program.”

As a student, Mulugeta also worked at USC’s LGBT Resource Center, at the Caruso Catholic Center, and as the resident adviser for the Rainbow Floor in Webb Tower Residential College.

After graduating from USC, Mulugeta — who is of Ethiopian descent — spent a year in Africa with the Joint United Nations Programme on HIV and AIDS, assisting efforts to stem the HIV pandemic. Upon returning home to San Francisco, he enrolled in the Master of Social Work program at the University of California, Berkeley, worked with homeless youth at Larkin Street Youth Services, and volunteered with Lavender Seniors, a San Francisco-based organization that works to foster a sense of belonging for elderly LGBT people in the Bay Area.

It was during this time that Mulugeta returned to female impersonation as a means of creative release. When he fused the names of two shades of makeup he used in his theatre days, his female character finally received a name: Honey Mahogany.

He performed in drag venues in Oakland, Calif., and Berkley, Calif., between classes, work and volunteer commitments.

Mulugeta graduated from UC Berkeley at the height of the economic downturn, yet found a tailor-made job as a programs director at the Rainbow Community Center of Contra Costa County in Northern California. There, he helped to establish a mental health clinic for the LGBT community in the area and continued to work with at-risk youth.

He balanced his professional social work responsibilities with a burgeoning entertainment career. By 2011, Honey Mahogany was a local celebrity in nightclubs throughout the Bay Area and was voted Best Drag Performer by the readers of SF Weekly.

Emboldened by the response to Honey Mahogany, Mulugeta auditioned for the fifth season of RuPaul’s Drag Race. Part America’s Next Top Model, part Project Runway with a dash of American Idol thrown in for good measure, the show thrust Mulugeta into the international spotlight.

Honey Mahogany did not exactly wow the judges, however. An excess of billowing Grecian gowns and caftans in Honey Mahogany’s wardrobe received the dubious distinction of being “very Bed, Bath and Beyoncé.” Following a difficult lip-sync-for-your-life performance, the titular host asked the San Francisco native to “sashay away” in the show’s first (and thus far, only) double elimination.

Critics and fans were quick to categorize Honey Mahogany as the sedate, cerebral contestant.

“I think I was a little naïve about how reality television works,” he said. “Fans would come up to me and say I was too nice.”

Still, Mulugeta does not think he would behave any differently if given a second chance at the crown.

“I think, with my educational background in psychology and my work as a social worker, it’s instinctive for me to try and be objective, to listen and to think before I speak. I’ve always prided myself on being levelheaded, and nonreactory. Not to mention I was worried how my co-workers, family and the youth that I work with would react if I completely flew off the handle on national television … but I don’t think levelheadedness makes for very good reality TV.”

Honey Mahogany appeared in just five episodes. Still, Mulugeta is optimistic about the experience.

“RuPaul’s Drag Race had a huge positive impact on me. It’s an opportunity to get your foot in the door in Hollywood — in both movies and television, and even music,” Mulugeta said. “It’s also a good way to take an objective look at yourself. Opportunities came to me out of the experience that probably wouldn’t have presented themselves if I hadn’t been on the show.”

Mulugeta now is focused on the future and looking for success in everything he does. He has appeared on television’s The X Factor and the HBO series Looking, on which he performed his single “Shoulda Known Better.” Last year, he released an EP titled Honey Love — available on iTunes — a collection of original compositions as well as Nina Simone and Madonna covers.

Away from his alma mater for nearly a decade, Mulugeta warmly remembers how USC bolstered his self-confidence.

“What was great about being a USC psychology major was that you’re allowed to take all of these amazing electives, so I was able to get a broad spectrum of academic experiences. It made me feel as though I could do just about anything after I graduated.” —D.K.
A LEG UP

The academic and creative interests that Alpha Mulugeta ‘06 explored during his time at USC allowed him to seize professional opportunities wherever they were presented. Mulugeta appeared on the fifth season of RuPaul’s Drag Race and is an in-demand cabaret performer.
A leading voice on the style scene, Los Angeles fashion lawyer-turned-fashion blogger Jenny Wu ’03 is known among her devotees for cutting an elegant figure in the alluring designer outfits she dons on her blog Good, Bad, and Fab. The wider American public, however, may now remember her in a much less glamorous pose — dripping from head to toe with glutinous, brown gunk.

As a contestant on the 26th season of CBS Television’s The Amazing Race in February, Wu was obliged to plunge into a giant man-made pool of mud and wade through it as fast as she could. As the cameras attested, she wore it well, showing that being a good sport can transform brown into the new black.

“It was a shock,” she said of the experience, “but I think it was the best way to prepare us for the race.”

The muddy endeavor “quickly put me into race mentality,” she added.

Wu, who earned a bachelor’s degree in political science from USC Dornsife, went on to take second place on the popular Emmy-winning reality show. She credits her education at USC with propelling her toward victory.

“It was a stressful, intense and competitive environment on the show, so having a strong sense of discipline, focus and drive to succeed helped me block out distractions,” she explained. “USC taught me to be meticulous in everything I do, and there were many challenges where being detail-oriented helped us pull ahead. And because USC taught me giving up is not an option, whether I was confronted with cutting down a long row of sugar canes in Peru or getting thrown from a horse, I simply kept going.”

Wu was at a 2014 Independence Day barbecue when she decided to try out for The Amazing Race with a friend. After submitting a video showcasing why the pair thought they would be a good fit for the show, Wu received an invitation to audition — without her friend. Instead of the usual format in which contestants race in self-made pairs, the season took a new turn. Five of the show’s 11 race teams were to be created at the show’s start.

It took many additional rounds of interviews, videos and phone calls, but Wu eventually got the call letting her know she had been selected as a contestant.

The Amazing Race requires contestants to perform various physical and mental challenges including deducing clues, navigating through foreign lands, interacting with locals, and vying for airplane, boat, taxi and other public transportation options on a limited budget. Teams are eliminated progressively until the winners take home the grand prize — $1 million.

For Wu, it was never about seeking fame or fortune. It was about pushing herself, finding and exceeding the boundaries of her courage and learning from the experience.

“I went on The Amazing Race not because I wanted to be on TV or become a reality star but because I wanted to challenge myself,” Wu said. “This was an opportunity to stand on my own two feet and do something for myself, and let go of any fears that were holding me back from achieving my dreams. I also saw it as an opportunity to make a symbolic journey and apply the life lessons I learned along the way to the rest of my life.”

Wu said she believes the diversity she experienced as a student at USC helped prepare her for the challenges of interacting with so many different cultures as she raced around the world on the show.

“The fact that she had gained an understanding of different governments, cultures and countries as a political science major also helped her compete,” Wu said.

“Before going on The Amazing Race, I hoped to learn more about myself, what I’m capable of, my strengths, my weaknesses,” she said, adding that the experience put her to the test. “I learned I’m a lot stronger than I give myself credit for. Now when I’m confronted with a stressful situation, I will trust myself more to go with my gut instinct.”

After earning her law degree from USC Gould School of Law in 2007, Wu worked as in-house counsel for an L.A. fashion company. Her love of fashion drove her to start blogging about her passion. What began as a hobby grew into a career opportunity. After fashion brands began approaching her to work with them, she decided to quit her day job as a lawyer two years ago to become a full-time blogger.

Wu credits her education at USC Dornsife with teaching her to be a versatile writer.

“As a political science major, my classes involved a lot of writing and reading, which definitely helps with my blog because I am writing content every single day,” she said. The added writing demands of a Thematic Option course in which she enrolled also helped hone her skills. Now she is turning those learned abilities into a successful, sustainable career.

“Not only am I a writer, creating content, I’m also a businesswoman,” said Wu. “Exercising both sides of my brain as I manage the creative and the business side of running my own business is a challenge. I’m learning every single day. It’s been such a great experience and I love it.”

Wu is also developing a book loosely based on her life and a travel show that seeks to empower and engage strong women.

“Now that the show has ended, I hope others can draw inspiration from my story. After all, I’m this ordinary girl who, through optimism, drive, passion for life and a fabulous undergrad education at USC Dornsife, was able to achieve and live out extraordinary dreams. And if I can do it, so can all fellow Trojans.” — S.B.
The United States is at historic levels of income inequality. What will it take to balance the scales between low-income workers and the top 1 percent? By Michelle Salzman Boston

When Zinahi Rodriguez turned 18, fresh out of high school, she took a retail job in downtown Los Angeles. She was excited. Her plan was to help support her parents, both garment workers, with whom she and a younger brother lived in a one-bedroom apartment in Koreatown.

The experience was demoralizing. She ended up working nine to 10 hours a day without any breaks. Her paycheck barely made a dent in her family’s expenses.

“I worked there for a month until I realized that I was getting paid $22 per day,” Rodriguez said. “It was a real struggle to help my family.”

Now 23 years old, Rodriguez is committed to fighting for workers’ rights, in particular for a decent living wage — a movement that has been percolating throughout the United States for some time — an ever-widening gap between the income of the working poor and that of the wealthy.

In fact, President Obama has called the growing inequality and lack of upward mobility in the U.S. “the defining challenge of our time.”

Manuel Pastor, Turpanjian Chair in Civil Society and Social Change and professor of sociology and American studies and ethnicity at USC Dornsife, noted, “There’s been a very rapid uptick of income inequality, particularly in the last 25 years.

“The share of income going to the top 1 percent of Americans is as high as it was during the years before the Great Depression, a period of extreme inequality,” said Pastor, who is an economist by training. “Much of it has to do with pay for CEOs and huge returns on capital gains.

Those at the top of the income distribution have seen
significant gains in their income while the working poor have seen absolute falls in their wage income over that period of time. The people in the middle have basically seen either wage stagnation or declines in their wages.”

The divide between low-income earners and the upper class is staggering. The average annual salary for chief executive officers is $122,200 while the average worker takes home $34,645 per year, according to the American Federation of Labor and Congress of Industrial Organizations. That means for every dollar that an average U.S. worker makes, a CEO makes $354. The amount a worker takes away is even less if that worker is a minority. In 2012, the median hourly wage for workers of color was $5 less than the median wage for white workers, according to the National Equity Atlas (NEA). That is a difference of $10,400 a year.

“A number of surveys reveal that, while the American public is aware that some inequities in income and wealth distribution exist, they are usually far off in understanding just how deep the divide is. One study in Perspectives on Psychological Science asked Americans to estimate distributions of wealth in the U.S. Respondents overwhelmingly underestimated the actual level of wealth inequality in the U.S., believing that the wealthiest fifth of the population held about 59 percent of the wealth. In reality, the top 20 percent of U.S. households own more than 84 percent of the wealth while the bottom 40 percent own just 0.3 percent of the wealth.

LESS INCOME MEANS FEWER OPPORTUNITIES
What is more problematic is that economic inequality leads to social inequality. Research shows that when people grow up in poverty, they are more likely to live in low-income neighborhoods with less access to clean air, healthy foods or a quality education. Disproportionately, those communities tend to be made up of people of color. That translates to poorer health outcomes and lower levels of education for minority populations, which in turn often mean jobs that offer lower wages. It is a difficult cycle to break.

Some suggest that one way to reduce inequalities is to raise the minimum wage to provide workers at the bottom income tiers with salaries that offer a more stable life for them and their families.

L.A. has been among several cities leading the movement to legislate a $15 minimum wage, along with New York City, Seattle and San Francisco. Seattle, L.A. and San Francisco have already adopted laws that will bring their minimum wages up to $15 over the next few years, and New York and other cities are poised to follow.

Meanwhile, the current federal minimum wage is set at $7.25 per hour. The rate varies according to the state and city, but many see the changes that are taking place in cities such as L.A. as a precursor to a hike in the U.S. minimum, which saw its last increase in 2008.

“One way to look at what's happening right now is that Washington can't solve its budget problem, it can't solve the nation's immigration problem, and it can't solve the low-wage problem, so states and metropolitan areas are beginning to move ahead on their own on almost all of those issues,” Pastor said.

California is a model of that theory. A swell to raise the wage to $15 is surging through the state.

California voted two years ago to increase its minimum wage (then $8 an hour, and now $9 an hour) up to $10 an hour in 2016. But advocates are pushing for more. They are currently collecting signatures for a ballot initiative that would take it up to $15 an hour statewide.

Meanwhile, detractors argue that increases in the minimum wage will lead to layoffs and small-business owners losing their livelihoods.

However, polls show that, overall, Americans favor raising the minimum wage.

“And it's not just a matter of red states versus blue states, as evidenced by the last election when voters in four solidly Republican states passed minimum wage increases,” Pastor said. Nearly three-quarters of the country support raising the federal minimum wage to $12.50 an hour, with backing from 53 percent of Republicans and 92 percent of Democrats.

“There's a tendency to think that anybody who is working full time shouldn't be lodged below the poverty level,” Pastor said. “There's also a tendency to think that there should be a fair wage and that there should be a mechanism for doing it besides the market.”

CHANGE GROUNDED IN RESEARCH
While the minimum wage is an increasingly popular tool to address stagnant wages, Pastor and his colleagues at USC Dornsife are interested in understanding other avenues to effectively overcome economic inequality.

Pastor directs PERE, a research center that focuses on issues of regional equity, social movement building and environmental justice. PERE's goal is to move research from university halls to public policy by working with change agents on the ground to help improve communities.

The program partners with organizations to provide them with foundational research based on what Pastor calls the “new three Rs” — rigor, relevance and reach — central to making a case for action. Staff expertise includes data analysis, urban planning, racial equity, grassroots organizing and policy development.

“The standard role of academics is that we produce reports and data and expect people to pay attention. But the reality today is that you also need to have both a communications strategy and a sense of who moves policy,” said Pastor, who also directs the Center for the Study of Immigrant Integration (CSII) at USC Dornsife.

PERE has done a lot of work looking at social-change organizations, trying to understand how they make change
happen and how policy shifts as a result. That includes studying how regions can grow equitably so that all residents can share in economic prosperity.

PERE’s work is critical at a time when many people in the U.S. are having what Pastor refers to as “fact-free conversations.”

“They’re tethered by people’s beliefs and not tethered by what the data tell us,” Pastor explained.

PERE teamed up with national equity advocacy group PolicyLink to create the NEA. This powerful online resource provides the public with data on demographic change, racial inclusion and the economic benefits of equity for the largest 100 cities and 150 metro regions, as well as each of the 50 states, the District of Columbia and the U.S. as a whole.

“It’s something that people are utilizing to understand inequality in their region and then to make fact-based arguments about what it is we can do about it,” Pastor said.

IMAGINE YOUR FUTURE SELF

Vermont Boulevard in L.A.’s Koreatown is lined with strip malls crowded with signs in English, Korean and Spanish offering payday loans, discount shoes, Korean barbeque, prepaid mobile phones and auto body services. Palm trees silhouette the skyline.

Here, more than 124,000 people live in 2.7 square miles. With 42,000 plus people per square mile, Koreatown is among the highest density regions in Los Angeles, made up mainly of Latinos and Asians. The median household income in Koreatown is $30,558 — low compared to other neighborhoods in L.A.

Born in Mexico, Rodriguez moved to L.A. when she was one. She grew up in Koreatown, where she and her family still live. “It’s pretty crowded with four of us in a one-bedroom apartment,” she said. “But there are way bigger families that are also living in the same place. Many of us are not privileged to have our own bedroom or a backyard.”

Rodriguez described her neighborhood as primarily Hispanic and a tight community.

“I know my neighbors pretty well,” she said. “We have a lot of trust.”

But there are challenges that come along with living in an urban area with high levels of poverty.

“I won’t deny it, there’s violence, there are gangs,” said Rodriguez. “It all depends on who you choose to hang around with and who you choose to make your friends.”

To support herself, Rodriguez now works as a barista at a local branch of a well-known coffeehouse where she earns minimum wage. She pitches in a portion of her paycheck for her family’s finances but had to cut down her contribution when California raised its minimum wage to $9 an hour in 2014. Her employer no longer offered full-time hours. Now, she works three days a week and takes home about $500 per month after taxes — half of what she was making before.

“T’m out there looking for another job until I find something secure,” Rodriguez said. “It’s the constant struggle for entry-level jobs.”

Rodriguez sees education as her ticket to earning a better living. “My brother is in high school and I always tell him to study,” she said.

In June, Rodriguez earned two associate degrees from
Los Angeles Trade-Technical College—one in culinary arts and another in restaurant management. She didn’t celebrate the achievement because it is not her ultimate goal. She sees earning the degrees as a stepping-stone that will help her strive for “something bigger” — a way to get a higher-paying job to put herself through a four-year college.

“I want to go to USC and study political science,” said Rodriguez. “I’ve always wanted to work as a city attorney, or maybe work for Congress.”

Imagining your future self is a key to unlocking your full potential, particularly when social and economic disparities challenge achievement, according to Daphna Oyserman.

“People who have less money to begin with, people whose mother did not go to college, people who are Latino, African American or American Indian, are less likely to finish high school, go to college and complete college,” said Oyserman, Dean’s Professor of Psychology and co-director of the Mind and Society Center at USC Dornsife.

So how can children who grow up with these challenges overcome them?

Oyserman, who holds a joint appointment with the USC Rossier School of Education and the USC Annenberg School for Communication and Journalism, developed identity-based motivation theory to understand when and how people’s images of what is possible for them in the future can be leveraged so that they will persist in spite of difficulties they encounter in their lives.

According to identity-based motivation theory, people use their identities to make sense of their experiences and assume that who they are — the identities they have — is stable. Yet, which identities come to mind — what these identities are taken to imply for action, and hence, how experienced difficulties should be interpreted — is highly context-sensitive. One area of Oyserman’s research focuses on how students can leverage their motivation to overcome inequalities and achieve goals such as attending and graduating from college.

School-to-Jobs is an intervention that Oyserman created to help disadvantaged students based on three basic objectives: make students feel like their future goals are connected to the present; help them understand that when something is difficult it means that it’s important; and let them know they can take actions now to work toward their final goals.

Oyserman launched School-to-Jobs in middle schools in Detroit. In 12 biweekly sessions held during homeroom periods, students participated in activities in which they created templates for fulfilling their goals. They were guided to form a mental image of adulthood, identify concrete steps to help achieve their goals and address their concerns for reaching goals. A randomly assigned control group did not participate in School-to-Jobs. Prior to the intervention, the groups did not differ on any measure.

For two years, Oyserman and her colleagues tracked the students’ progress.

The researchers found that those who took part in School-to-Jobs got better grades, were less likely to have unexcused absences, saw their standardized test scores rise, and reported that they spent more time on homework.

“All of those changes were more positive than they were for the kids who were in the control group, for whom things got worse over time,” Oyserman explained.

Now Oyserman is implementing School-to-Jobs in middle schools in Chicago, and with funding from the Institute for Education Sciences in the U.S. Department of Education, she is training teachers to train other teachers to run the program. She is also working with the country of Singapore to implement the program nationally. Her book *Pathways to Success Through Identity-Based Motivation* (Oxford University Press, 2015) is being used in school districts and community colleges. She is collaborating with groups running after-school programs to adapt the program to their own settings.

### “The goal is really to help kids get to what you might call the ‘American Dream’— finish school in a position to get higher education and lead more stable and productive lives.”

“The goal is really to help kids get to what you might call the ‘American Dream’— finish school in a position to get higher education and lead more stable and productive lives,” Oyserman said.

“At the most proximal level, this is an amazingly cost-effective way of improving society,” she said.

### MOBILIZING KIDS FOR HEALTHY LIVING

Behind the apartment where Rodriguez lives is a tiny oasis, the Francis Avenue Community Garden. The space was once an empty lot. Neighbors cleaned it up and turned it into a garden and meeting place.

In densely populated Koreatown, women and men from the surrounding neighborhood grow corn, tomatoes, chiles, squash, beans, bananas and mangoes in raised beds. The community holds events there, too, such as planting workshops, weddings and music and crafting classes for kids.

“It’s for the community, a place where kids can be outside and not be behind four walls,” said Rodriguez. “You find some relief.” Her mother grows vegetables that she uses to prepare family meals. The harvest helps supplement the groceries purchased from a nearby discount supermarket, which the family finds more affordable and accessible than other options in the neighborhood.

But not all similarly burdened neighborhoods are as lucky to have such a garden where they can supplement their diets with nutritious produce. Low-income communities of color, much more than affluent areas, must contend with “food swamps” and “food deserts” — meaning they have a disproportionately high number of fast-food outlets (“swamps”) and very few options for healthy food (“deserts”). Research shows they also experience higher incidences of diabetes, heart disease and obesity.

Donna Spruijt-Metz understands these challenges. Her work at USC Dornsife focuses on promoting healthy habits in children who are faced with an uphill battle in the fight to eat nutritiously. In particular, she studies obesity prevention and treatment in minority children.

Diet, physical activity, sleep and stress are the four factors that influence obesity, and minority populations have extra challenges surrounding all of these areas, said...
“In the book, we ask the question: How do people come to a realization in which they begin to value equity and growth, prosperity and inclusion in the same dialogue?” Pastor said.

MANUEL PASTOR, Turpanjian Chair in Civil Society and Social Change, and professor of sociology and American studies and ethnicity
Spruijt-Metz, professor (research) of psychology.

“In some of the interventions that we’ve done, we’ve taken people grocery shopping in their communities to help them learn how to shop in a more healthy way within their budgets,” she said. “That can be really tricky because there are often not a lot of fresh fruits and vegetables available.”

Between waning activity levels, stress from any number of factors such as food insecurity or acculturation, as well as challenges getting a good night’s sleep, you’ve got a recipe for poor nutrition.

Spruijt-Metz is using mobile technologies in her lab at USC Dornsife and in the field to understand the biological, behavioral, social and environmental causes of childhood obesity.

With 88 percent of American teens age 13 to 17 having access to a mobile phone, according to a recent Pew Research Center study, smartphones are a perfect way for her to access research subjects.

“My work now is almost entirely in mobile-health technologies — it’s a great way to reach the hard-to-reach because they have access to mobile phones, often smart phones,” said Spruijt-Metz, who directs the USC mHealth Collaboratory in the USC Dornsife Center for Economic and Social Research. The collaboratory brings together researchers to advance research in health and well-being through mobile strategies.

In one intervention called the KNOWME Networks, led by Spruijt-Metz in collaboration with several colleagues in the USC Viterbi School of Engineering, a small group of Hispanic youth wore nonintrusive monitors that collected data on their physical activity over a period of about three days. The data were analyzed using a combination of agile analyses on the phone and on a secure server, and used to determine in real time how long children were sedentary after school or during the weekend. Members of the Spruijt-Metz lab then used text messaging when the children were sedentary for more than two hours to encourage them to get moving.

The children increased their activity by a mean of 171 minutes in a weekend.

“That’s clinically significant,” Spruijt-Metz said. While the original study was small, she is planning to scale the project up in the near future.

Virtual Sprouts is another intervention that Spruijt-Metz and an interdisciplinary team of researchers have developed to teach children and families how they can grow vegetables and fruits in whatever space they might have available — backyards, windowsills, balconies or even living rooms.

The interactive multimedia gardening game allows players to plant crops, tend to them, harvest them and then prepare them as part of a healthy meal.

Virtual Sprouts is an offshoot of L.A. Sprouts, a program started by former USC researcher Jamie Davis that puts edible gardens in schools around the city. The Virtual Sprouts game, which can be played on an iPhone or iPad, provides an alternative to living gardens, which are not always sustainable in low-income neighborhoods because they require funding and constant maintenance.

Virtual Sprouts was pilot tested in two schools last year with promising results. This fall, Virtual Sprouts will be tested in two clinics in the L.A. area.

“I’m very excited,” Spruijt-Metz said. In the future, she noted, she hopes to make the game publicly available.

L.A. — THE U.S. IN FAST-FORWARD

If the effort to lessen inequalities in the U.S. must begin somewhere, L.A. is a perfect city to study in terms of determining what kinds of progress can be made.

The city is making huge strides to revitalize its downtown, reclaim its transit system and create new mechanisms to collaborate with its immigrant and undocumented populations.

“Together with the other great universities that are here, we can contribute to the future of Los Angeles and through that the future of California, the future of urban America and the future of the United States.”

“...both the city and the county — is now trying to bring up the bottom of the labor market through minimum wage legislation and coupling that with support to make sure that business grows, as well,” Pastor said. “All of that says that L.A. is on the cutting edge of policy experiments to deal with the problems of inequality, the challenges of demographic change and the concerns of those who are being left behind.” The conversation is underway.

“Indeed, a key part of PERE and CSII’s work is to bridge research-driven conversations among dynamic, diverse stakeholders, including leaders from across sectors such as the Los Angeles Business Council and the Los Angeles Chamber of Commerce,” Pastor said.

“So for us to be researchers in the midst of all of this, at a university situated in the heart of downtown L.A., it’s the most exciting and opportunity-filled time folks like us could be in. Together with the other great universities that are here, we can contribute to the future of Los Angeles and through that the future of California, the future of urban America and the future of the United States. This is a tremendous laboratory.”

Rodriguez is also hopeful.

She shares her story as a minimum-wage worker to help articulate the larger experience of other minimum-wage workers. She’s a member of the Koreatown Immigrant Workers Alliance, whose mission is to empower low-wage immigrant workers. She emceed the group’s rally at the 2014 International Workers’ Day march, and also spoke about her own experiences.

“I talk about myself and my experiences. I also talk about other people. There are thousands of people who are too shy to share their story,” Rodriguez said. “I am the voice of those people.”

Her big-picture goal is to make a difference in her community by helping to level the playing field so that everyone has a fair chance to succeed.

“It’s not just about making money,” she said. “It’s about being as educated as everyone else. Being able to take a seat at the table where we are all speaking at the same level. It’s about achieving the American Dream.”
addressing
As the British writer and philosopher Aldous Huxley famously noted, "There are things known and there are things unknown, and in between are the doors of perception." USC Dornsife psychologists examine how our minds perceive the world around us — and how those perceptions can vary from reality. By Susan Bell
A couple on the tiny Hebridean island of Colonsay in Scotland were planning their wedding earlier this year when the bride’s mother sent her daughter a photograph of the dress she planned to wear. When the bride showed the picture to her fiancé, the pair could not agree on what they saw.

To the bride, the dress was white and gold. The groom, however, saw blue and black. The couple posted the image on Facebook, asking friends to settle the dispute. Little did they guess that they would set the Internet alight, sparking one of the biggest social media conversations of 2015.

“The image of the dress triggered such a global furor because it challenges our seemingly self-evident and unquestioned assumption that we see the world as it really is, thereby raising questions about perception and reality,” said Bosco Tjan, professor of psychology and an expert on visual perception.

Why do our perceptions differ? What does this say about the way we view the world? USC Dornsife psychologists consider these questions, looking also at how our perceptions are affected by those closest to us and examining some of the most extreme cases of differing perception — those rooted in schizophrenia, eating disorders and dementia — while giving their views on the question: Does an objective reality exist?

But first, back to the dress: Why do people see it differently?

“Perception is about how your brain interprets your sensory input,” said Tjan. A founding member and co-director of the USC Dornsife Cognitive Neuroimaging Center, Tjan studies the human visual system; in particular, the neural computations that underlie the perception of form.

“Our perception of color depends on our perception of the light in a room or scene,” he said. “When cues about ambient light are missing — as was the case in the photograph of the dress — people may perceive different color for the same object because they implicitly make different assumptions about the ambient light.”

This is because color, or more precisely “reflectance,” is a physical property of the material — how much light it reflects at different wavelengths, Tjan explained. A red object, for example, reflects more long-wavelength light than short-wavelength light. Our eyes cannot see reflectance (the color of an object). Instead, we see the light that the object reflects. In order to infer the color of an object, we need to know the color of the light shining on the object, or more precisely, the wavelength or spectral distribution of the light. In the case of the dress, we may make different assumptions about the time of day at which it was photographed, and hence assume a different color of the light.

“By intuition, we assume that when we look at objects, we know the ambient light that is shining on them,” Tjan said. “However, this simply isn’t true. We make assumptions about the ambient light to allow us to perceive the color of objects.”

“Perception doesn’t emerge fully formed on our first day of life. It is shaped.”

The debate rapidly went viral, as differing perceptions split friends, families and co-workers.

“The image of the dress triggered such a global furor because it challenges our seemingly self-evident and unquestioned assumption that we see the world as it really is, thereby raising questions about perception and reality,” said Bosco Tjan, professor of psychology and an expert on visual perception.

Why do our perceptions differ? What does this say about the way we view the world? USC Dornsife psychologists consider these questions, looking also at how our perceptions are affected by those closest to us and examining some of the most extreme cases of differing perception — those rooted in schizophrenia, eating disorders and dementia — while giving their views on the question: Does an objective reality exist?

But first, back to the dress: Why do people see it differently?

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“The brain is always working to infer information, and if it doesn’t have access to direct information, it makes assumptions,” said Tjan, whose work addresses questions pertaining to vision loss, restoration and rehabilitation, including object and face recognition, reading, attention and visual navigation.

“Different people’s brains make different but equally reasonable assumptions. Perception is not direct; it is an implicit or unconscious inference process. Our brains are constantly solving these problems for us behind the scenes, very quickly.”

The fact is that humans, like all organisms, are simply not equipped with sufficient sensors to eliminate all ambiguity to directly perceive our world, without assumptions.

“Instead, the brain relies on the fact that our world is governed by physical principles to compensate for our inherently limited and incomplete sensory input and make decisions about what we are really dealing with,” Tjan added. As we have to fill in the gaps with what we know about the world — something that varies according to each individual’s experience — there is room for error and diversity.

What is not present in the photo — in this case the light source — forces our brains to infer the color of the dress from the imagined color of the light source, which influences how we see the dress. Our brains make the decision for us, unconsciously about the color of ambient light and consciously about the color of the dress, and once it has done so, we see it that way.

“The pairing of the colors in the dress materials turned out to hit just the right spot where assumption about daylight matters a lot for seeing the colors of the dress,” Tjan said.

SHAPING EMOTIONAL AND SOCIAL PERCEPTION

Perception of the world is not limited to the visual, but is also rooted in the way we experience it emotionally. Much of our emotional — and consequently social — perception is influenced by our earliest experiences, as well as by those people closest to us.

“Perception doesn’t emerge fully formed on our first day of life. It is shaped,” said Darby Saxbe, assistant professor of psychology. Saxbe’s research focuses on how early experiences frame the development of emotion regulation, stress response and social perception, and how these phenomena influence subsequent psychosocial functioning.

“I’m interested in how nature and nurture intersect,” she said. “Our perceptual lens, our way of appraising situations, is influenced by our earliest experiences.

“How we start to form perceptions is very much in coordination with a caregiver. Infants start to figure out how the world makes sense by perceiving patterns through this coregulation with a parent on everything from sleep, emotion, temperature, feeding, circadian rhythms, and so on.”

These early influences continue into childhood and adolescence. Saxbe found. Children raised in families that experience more trauma and adversity make different appraisals of social situations when they reach adolescence compared to those who grew up in more peaceful households.

Saxbe gives the example of a neutral situation where one high school student says to another, “The teacher wants to talk to you after class.”

“One student might think, ‘Oh, maybe I’ve won an award,’ and another might think, ‘I’m going to be expelled,’ ” Saxbe said. “Our perception of reality is shaped by our history.”

That perception may also go some way toward creating our realities.

“If you have experienced a lot of trauma, then you might have more negative attributions and expectations. That, in turn, can shape how people are going to react to you because if you have negative expectations you might also be more hostile or aggressive.”

Saxbe cites a study by researchers at Northwestern
University and the University of Pittsburgh showing that teenagers are more pre-emptively aggressive if they make negative interpretations of other people’s behavior. Thus, if a high school student from a nonaggressive family is jostled while walking down a hallway, he will probably conclude it was an accident. However, someone with a lot of hostile expectations might assume the action was deliberate and want to start a fight.

“Here we have a case where someone’s history is creating a perception, and that perception is then creating or reinforcing their reality because they may react aggressively, and so that perception will become a very negative, hostile reality,” Saxbe said.

Her research suggesting that our perception of reality is not formed in isolation but is clearly influenced by those closest to us — often spouses and parents — was borne out by her studies of cortisol.

Saxbe found that couples share similar patterns of the stress hormone, suggesting they pick up on each other’s negative affect or stress.

“So when our partner is experiencing a lot of stress, we might start to view the world through their eyes and display some of the same physiological stress patterns they are showing,” she said. “We link up with people we are close to, not just in a conscious way, but also physiologically, and we even start to share a common way of functioning biologically. These findings certainly fit with the idea that our social context really shapes who we are and our own frame on the world.”

The way in which perception can shape reality can also be seen in those suffering from depression who are convinced that people do not like them. “That perception becomes self-perpetuating because if you are somebody who isn’t friendly, then people don’t want to be around you,” Saxbe said. This is an oft-occurring factor in mental illness, and many cognitive behavioral therapies — which focus on examining the intricate links between thoughts, feelings and behaviors to help people improve their lives and reduce suffering — are built around trying to combat this type of mental distortion.

ENTERING THE REALM OF THE UNREAL
Like Saxbe, Shannon Couture, assistant professor of the practice of psychology and director of the USC Psychology Services Center (PSC), is interested in the intersection between social relationships and well-being. Couture’s research explores social cognition and its link with social functioning and behavior in schizophrenia. She is the author of numerous studies on the mental disorder, mostly focusing on understanding factors that underlie the social functioning deficits frequently documented in schizophrenia.

Couture is also responsible for the day-to-day running of the PSC, which serves as a teaching clinic for USC doctoral students earning their Ph.D.s in clinical psychology. The center provides individual, group, couples and family treatments as well as psychoeducational and neuropsychological assessments. Most clients have depression, anxiety disorders and other life difficulties such as relationship or occupational problems.

Couture’s wider clinical experience has made her familiar with the distorted perception that can occur in people with anorexia nervosa who may develop unrealistic body images.

“To bring this home to patients, therapists often ask people with anorexia to draw their body outline on a wall,” said Couture.

The therapist will then trace around the patient’s actual body to show how the patient’s perception deviates from reality.

“Usually patients draw themselves several inches wider than they actually are,” said Couture, who supervises Ph.D. students as they learn how to conduct therapy sessions.

While depression and eating disorders can cause distortion in perception, those suffering from schizophrenia — a mental disorder often characterized by failure to recognize what is real — may truly find themselves in the realm of the unreal.

Disturbances in sensory perception can be seen in individuals with schizophrenia, 50 to 80 percent of whom experience auditory hallucinations, according to a 2007 review of the literature by Thomas McGlashan at Yale University.

“During these episodes they perceive voices, sounds or music that do not exist in reality,” Couture explained. So why does this happen?

That, said Couture, is the million-dollar question.

“In some cases, the content may be similar to a conversation or traumatic event the individual with schizophrenia may have experienced in the past. One theory is that those types of auditory hallucinations may be related to memories being triggered, but the person is not experiencing them as a memory.”

Other types of auditory hallucinations are not associated with the past but feature voices commenting on what a person is doing in the present moment.

“Psychologists think those types of voices may be more related to inner speech, such as talking to ourselves or imagining having a conversation with someone else,” Couture said. “Neuroimaging shows that parts of the brain activated in normal individuals engaged in those activities are also activated in people with schizophrenia experiencing auditory hallucinations.”

Individuals with schizophrenia can also experience tactile hallucinations, in which they might feel insects crawling on their skin, or olfactory hallucinations, in which they report smelling odors that are not there.

According to a 2014 study published in Schizophrenia Bulletin, between 15 and 40 percent of people with schizophrenia also experience visual hallucinations. These can manifest as distortion of perception, Couture said, so that an individual with schizophrenia may perceive an advertising slogan on a billboard or a newspaper headline as changing into words that have personal meaning. Those with schizophrenia may also experience full-blown visual hallucinations in which a person who is not there is experienced as being present, although these tend to be more rare.

WHEN DEMENTIA DISTORTS PERCEPTION
Individuals with schizophrenia are not alone in experiencing episodes of distorted perception in which they believe someone is present who is not.

“People with dementia may see some sort of shadow and think there is someone in the house,” said Margaret Gatz, professor of psychology at USC Dornsife and an expert on aging and Alzheimer’s disease. “This may sound similar to a visual hallucination of the type observed in people with schizophrenia, but in the case of dementia it’s very limited and specific and caused by trying to make sense of a neural signal that has become confused.”

A 2010 National Public Radio report on dementia featured 87-year-old Emmorry Jackson, a former carpenter with...
Alzheimer’s disease, who found pleasure in using imaginary tools to “mend” a chair he falsely perceived to be broken.

“Perceiving the chair to be broken is another example of mistaken perception caused by dementia,” said Gatz, who also holds joint appointments in gerontology from USC Davis School of Gerontology and in preventive medicine from Keck School of Medicine of USC.

“When people become demented or develop some kind of neurocognitive disorder, the functions that most people think about being impaired are mostly related to memory, but in fact many aspects of the brain are affected in different ways.”

“We live in a physical universe and share certain consensually validated beliefs about what the world is like. Without that, it would be chaos.”

One early sign of dementia is faulty spatial perception, which often results in minor fender benders. “It’s not infrequent to see people having trouble getting through the garage door or hitting another car in a parking lot,” said Gatz, who co-developed Forgotten Memories, inspired by a fotonovela — a small pamphlet akin to a comic-book, with photographs combined with dialogue bubbles. Targeted at the Latino community, it aims to inform its audience about the early signs of Alzheimer’s disease and dementia and encourage action. An audiovisual version of the original fotonovela recently aired on PBS.

With severe dementia, temporal perceptions also get muddled and the likelihood of confusing family members of different generations is increased. “Remembering the immediate present and the long past are OK, but everything in between is problematic,” Gatz said.

**A SUBJECTIVE LENS THROUGH WHICH TO VIEW REALITY**

People don’t need to be suffering from mental disorders as extreme as schizophrenia or severe dementia to experience distortion of reality. Couture notes that many people also hear voices who do not have any psychiatric diagnosis, while people with social anxiety may experience distorted perception.

“We see distorted recollections of events in people with social anxiety because they pay attention to cues that people are rejecting them or judging them,” Couture said. “When you’re constantly looking out for those cues, it distorts your perception because you’re not observing the big picture. Instead you’re looking for something that’s consistent with your own issues.”

Couture argues that we probably all experience somewhat distorted perceptions of our world. “This is because we process our perceptions through memory, which is impacted in turn by the subjective lens through which we each view reality,” she said.

She sees this when couples come in for therapy and want to discuss the same argument, yet have totally different perceptions of what happened. “There are many shared features, of course — we don’t have drastically different perceptions of the world — but because we are inundated with information, we all attend to specific facets of what is going on around us and that affects our perception of the world.”

Gerald Davison, professor of psychology who holds a joint appointment at USC Davis School of Gerontology, concurs. “We basically confirm our own predilections,” he said. An expert in mental health, Davison is the author of more than 150 publications, including *Abnormal Psychology* (John Wiley and Sons, 2016), a seminal undergraduate textbook, used globally, that explores perception-altering mental disorders such as schizophrenia. His research employs a think-aloud method that enables study participants to verbalize their thoughts and feelings as they imagine themselves in complex interpersonal situations. In this way, he has been able to explore how people construe events that are open to different interpretations.

“People bring into any situation a series of assumptions about what the world is like, and these assumptions, or paradigms, drive and heavily influence how we end up perceiving that situation and how we react to it. Even things that appear to be something everyone could agree upon — what we call consensually agreed-upon reality — can often be perceived differently, depending on a variety of different circumstances.”

Davison cites an example he often uses in undergraduate classes.

“You can look at a pencil and simply see a pencil. But if I hold it aloft and point it at you, you may perceive it as dangerous. If I do that and also tell you this pencil is a device equipped with a gas canister that was used during World War II to fire a mace-like substance at the enemy, you would probably feel threatened.”

One example of the way our perceptions can play tricks on us lies in our built environment.

“Our cultural experiences guide us into thinking that doors and windows are rectangular, even though our retinas do not show them as such,” Davison said. “We can be fooled into thinking that everything that is a door is necessarily rectangular.”

However, some architects, such as Frank Gehry, manipulate this by constructing forms that are intentionally not rectangular.

“Gehry’s architecture plays with forms and tricks you into thinking a thing is a certain shape when it really isn’t,” Davison explained. “Taking advantage of the way we think the world is constructed can be an effective tool to get our attention.”

So is it possible to know whether there is an objective reality?

While he maintains that the way we construct our realities is governed by individual perception that can depend upon a whole host of factors, including our moods or even whether we are hungry, Davison argues that it would be illogical not to assume that some objective reality exists.

“We live in a physical universe and share certain consensually validated beliefs about what the world is like,” he said. “Without that, it would be chaos.”

Couture agrees.

“As a society and in our relationships we tend to agree on some sort of shared perception of what is going on,” she said. “But the only way we could really know for sure is by recording everything and reviewing it. Even then we would be constrained by what is being attended to, which direction the camera is pointed.”
Perhaps the most recognizable and photographed building on the USC University Park campus, the Von KleinSmid Center has its golden anniversary of service to the university this fall. Although the building was formally dedicated on Oct. 2, 1966, classes commenced in the three-story, 105,000-square-foot structure the previous year.

Constructed for $3.26 million, the Von KleinSmid Center for International and Public Affairs (VKC), as it was originally named, served as a practical memorial to Rufus B. von KleinSmid, USC’s fifth president and former chancellor. During the dedication ceremony, Norman Topping, then USC president, declared that the building was a fitting monument to the beloved “Dr. Von” and his “courage as an educational pioneer, for his brilliance as a major university’s administrator and for his vision as a statesman to higher learning.”

VKC originally housed the School of International Relations, the department of political science and the School of Public Administration, as well as a library dedicated to those disciplines. While the school of public administration has been renamed the USC Sol Price School of Public Policy and moved to another building, VKC still houses several disciplines within USC Dornsife, including international relations, political science and art history. —D.K.

The most striking feature of the Von KleinSmid Center is the 167-foot tall carillon tower and the 2½-ton, globe-shaped finial. The sphere was hoisted into place on May 16, 1966.

SEND YOUR MEMORIES TO
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Citigroup Center 8206, 41st Floor,
Los Angeles, CA 90089-8206 or
magazine@dornsife.usc.edu
American Identity at Sea

A new book by Nathan Perl-Rosenthal explores how the efforts of American sailors to establish their nationality created the first racially inclusive model of U.S. citizenship.

“Now sir, you are dished!”

Addressing these mocking words to a captured American sailor, an 18th-century British boatswain ripped up the seaman’s identity papers and tossed them overboard.

This incident occurred two decades after the end of the American Revolutionary War. It is one of many descriptions of tribulations faced by American sailors during this period recounted by Nathan Perl-Rosenthal in Citizen Sailors (Belknap Press, 2015) — a work brimming with swashbuckling maritime drama.

“In the decades after the U.S. formally declared independence in 1776, Americans struggling to gain recognition of their new republic and their rights as citizens,” writes Perl-Rosenthal, assistant professor of history and spatial sciences, “None had to fight harder than America’s sailors, whose profession took them far from home and deep into an often hostile Atlantic world.”

Citizen Sailors charts a chronological journey beginning at the start of the 18th century — a time when nationality was determined largely by the language an individual spoke, when status mattered more than nationality and when identity papers were virtually nonexistent. The story carries through to the close of the century, when American sailors finally won the right to carry papers issued by the U.S. government, identifying them as American citizens.

“The importance sailors attached to these identity documents can be seen in the efforts they made to preserve them by gluing heavier stock or newspaper to the back and making little wallets to carry them,” said Perl-Rosenthal.

Before identity papers, captured American sailors often struggled to identify themselves as Americans. Without papers to prove citizenship, American sailors had to resort to their powers of persuasion to convince captors they were not British citizens fighting on the side of the Americans — an act of treason spelling almost certain death.

“Thousands of African American sailors were also given these citizenship papers around 1803, a time when African American citizenship in the U.S. was very tenuous,” Perl-Rosenthal said. “To see the federal government in this period publicly acknowledging and certifying the citizenship of African Americans is remarkable.” —S.B.
only (neibu) policy assessments to unearth the perspectives and disagreements currently shaping China’s trajectory, sheds light on divisions over the nation’s future that have gone largely unreported.

**Faculty News**

**Thorsten Becker**, professor of earth sciences, was elected an American Geophysical Union fellow.

**Francis Bonahon**, professor of mathematics, was honored by the Office for Science and Technology of the Embassy of France in the U.S. with a French-American mathematics conference celebrating his contributions to the field.

**T.C. Boyle**, writer in residence and Distinguished Professor Emeritus of English, won the prestigious Robert Kirsch Award for Lifetime Achievement. Boyle also won the Rea Award for the Short Story.

Professors of psychology and neurology, and Brain and Creativity Institute co-directors **Antonio Damasio**, University Professor and David Dornsife Chair in Neuroscience, and **Hanna Damasio**, University Professor and Dana Dornsife Chair in Neuroscience, received honorary degrees from the Université Paris Descartes, more widely known as the Sorbonne.

**Richard Fox**, professor of history, was appointed a Distinguished Lecturer by the Organization of American Historians.

**Solomon Golomb**, University Professor, Distinguished Professor of Electrical Engineering and Mathematics and Andrew and Erna Viterbi Chair in Communications, was awarded the 2016 Benjamin Franklin Medal in electrical engineering.

**Pierette Honnagne-Sotoelo**, professor of sociology, received the 2015 Distinguished Career Award from the American Sociological Association, Section on International Migration and was honored with the Sociologists for Women in Society’s 2015 Feminist Mentor Award.

**Heather James**, associate professor of English and comparative literature, earned a fellowship for a year in residence at The Huntington Library, Art Collections and Botanical Gardens, and was elected president of the Shakespeare Association of America.

**Saori Katada**, associate professor of international relations, has been awarded a fellowship from the East/West Center in Washington, D.C., to conduct research on Japan’s foreign economic policy.

Continued on page 70.

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**Stamp of Approval**

A new Israeli postage stamp honors USC Dornsife Nobel Prize winner Arieh Warshel.

On a recent trip to accept an honorary doctorate from his alma mater, Technion-Israel Institute of Technology, Nobel Laureate **Arieh Warshel** was also honored with a commemorative Israeli postage stamp.

The imprint, which celebrates the United Nations’ 2015 International Year of Light, was dedicated to the three 2013 Nobel Prize laureates in chemistry: Warshel, Distinguished Professor of Chemistry, Biological Sciences, Biochemistry, and Chemical Engineering and Materials Science at USC Dornsife; Martin Karplus; and Michael Levitt.

One of the most important achievements in the work of these Nobel laureates is molecular dynamics simulations of biological processes, which provide a computerized description of actual events that occur in nature. Among the earliest and most significant examples of this strategy is the deciphering of the precise molecular dynamics that occur during the process of vision. Warshel was the key researcher who deciphered the role of the protein rhodopsin, the biological pigment in retina cells.

The right side of the stamp features this protein, a bundle of seven helices connected to each other by peptide loops. Rhodopsin is embedded within the cell membrane and binds a small, light-sensitive molecule called retinal, shown as a group of grey spheres on the stamp.

“It is an interesting selection since the Year of Light has largely been adopted by physicists in view of the great impact of lasers,” said Warshel. “However, photochemistry and photobiology reflect the relationship between light and life. I am delighted to see that they chose to depict rhodopsin on the stamp.”

Warshel’s research on rhodopsin represents one of his most important scientific contributions: his prediction in 1976 of what transpires in the first picosecond after light strikes the eye. The corresponding simulation of this event was also the right side of the stamp.

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**Details Page 5**
Write on Target

For five years, Oliver Queen was presumed dead, killed in a shipwreck. Unbeknownst to his family and friends, the billionaire Playboy survived but was stranded on a remote island. When he finally returns home, he finds corruption rampant in his city and sets out to take down the criminal element, armed with a bow and arrow — and a few secrets taken from the mysterious island.

So begins the gripping CW television drama Arrow, based on the DC Comics character Green Arrow. Oscar Balderrama (B.S., creative writing, ’05) has written the first novel in a series based on the popular television show. Arrow — and a few secrets taken from the mysterious island.

It was fun coming up with the story lines for these characters,” said Balderrama, a script coordinator on the show. “I grew up reading comics as a kid, so the fact I’m now writing a book that taps into that universe is pretty incredible.”

Balderrama’s experience studying creative writing at USC Dornsife set him up for success in his career. “The whole environment of being critiqued and putting yourself in front of people helped me develop a thick skin,” he said.

He recalled how his professors T.C. Boyle, writer in residence and Distinguished Professor Emeritus of English, and Susan Segal, associate professor (teaching) of English, would communicate enthusiasm for writing and a love of literature and storytelling. “Being in a supportive environment like that definitely instilled confidence in me,” he said. —M.S.B.

Tell Us About Your Book Write to USC Dornsife Magazine, Citigroup Center 8206, 41st Floor, Los Angeles, CA 90089-8206 or magazine@dornsife.usc.edu

Reading Contemporary African American Literature: Black Women’s Popular Fiction, Post-Civil Rights Experience, and the African American Canon

Lexington Books / Beauty Bragg (B.A., American literature, ’94) argues that black women’s popular fiction foregrounds gender in ways that other narrative production modes frequently miss.

The Turner House

Houghton Mifflin Harcourt / Angela Flournoy (B.A., creative writing and literature, ’07) reveals the stories of a clan from the East Side of Detroit, as well as the history, lies and myths that can bring a family together, or tear it apart.

Son of a Son: Fathers and Sons Unconditional Love and Unintentional Misunderstandings

New Alliance Publishing and IngramSpark / Marilyn Gould (B.S., occupational therapy, ’50) presents a family tale of love and survival amid the upheavals of 20th-century anti-Semitism.

A Boy with a Halo at the Farmer’s Market

Codhill Press / Sonia Greenfield (MPW, ’14) shows the reader how looking at the surface can illuminate the depths.

The Banquet of Donny & Ari: Scenes from the Opera

Brick Books / Naomi Guttman (M.A., English, ’94; Ph.D., English, ’99)

Everyone Wants to Be the Ambassador to France

Starcherone Books / Bryan Hurt (Ph.D., literature and creative writing, ’03).

A Delicate Affair on the Western Front

The History Press / Terrence J. Finnegar (M.A., international relations, ’81) recounts the battle that introduced U.S. troops to 20th-century warfare.

Tom & Lucky (and George & Cokey FLO)

Bloomsbury / C. Joseph Greaves (B.A., psychology, ’78) recounts the story of gangster Lucky Luciano’s 1936 vice trial, which launched the political career of Thomas E. Dewey.

Everyone wants to be the Ambassador to France

Starcherone Books / Bryan Hurt builds a star in his basement, an astronaut falls in love with a moose and loses his nose in a sword fight, and an aristocrat adopts two teenage girls in hopes of raising one to become his perfect wife in the debut book by Bryan Hurt (Ph.D., literature and creative writing, ’03).
BUDDIES: Heartwarming Photos of GIs and Their Dogs During WWII Zenith Press / L. Douglas Keeney (B.A., economics, ’73; MBA, ’76) presents photos of patriotic soldiers and their morale-boosting pups, along with stories of their military service. Also by L. Douglas Keeney THE ELEVENTH HOUR / Wiley / Turner

TERMIAL ISLAND: Lost Communities of Los Angeles Harbor Angel City Press / Co-author Geraldine Knatz (Ph.D., biological sciences, ’79) traces the origins of Terminal Island, from its days as a resort area to its time as a thriving fishing village for Japanese immigrants until its WWII decline.

SLOW BURN Spinsters Ink / Marlene Leach (MPW ’90) weaves a smoldering tale of women united against a corrupt government.

GRANT PARK Agate Bolden / Leonard Pitts Jr. (B.A., English, ’77) takes a provocative look at black and white relations in contemporary America.

GARDEN OF RAIN (LE JARDIN DE PLUIE) Aldrich Press / Mike Maggio (M.A., linguistics, ’80) invites the reader along in his existential quest for purpose.

UNDERWATER Macmillan / Farrar Straus & Giroux / Marissa Reichardt’s (MPW, ’98) debut novel follows a traumatized, agoraphobic teenager who must face the life she’s been missing when a surfer boy moves in next door.

A DEATH IN VEGAS White Whisker Books / Christopher Meeks (MPW, ’82) spins a tale of murder, betrayal and the importance of beneficial insects.

THE CAKE HOUSE Vintage Original / In a suburban-gothic literary thriller, Latifah Salom (MPW, ’08) wraps a mysterious suicide in a cloak of family dysfunction with subtle Shakespearean trim.

INKED Texas Review Press / Ph.D. candidate Corinna McConahan Schroeder (literature and creative writing) chronicles the fierce wildness of adolescence and a more reflective adulthood, in which she becomes “no longer the dreamer / but the woken, the watcher, the guard.”

DADDY’S BACK-TO-SCHOOL SHOPPING ADVENTURE Disney-Hyperion / In the latest tale by Alan Lawrence Sitomer (B.A., creative writing, ’89), glow-in-the-dark glue sticks, an electronic garbage truck pencil sharpener and neon paper clips somehow make it into the shopping basket right before the kids surprise daddy with one more special item.

A TRUNK FULL OF ZEROES Rothco Press / Brian Townsley (MPW, ’03) transports the reader to 1950s Los Angeles where a disgraced ex-LAPD officer runs afoul of mobsters, uncovering a secret in a dying man’s last breath.

CITY OF BRICK AND SHADOW Tyrus Books / Ph.D. candidate Tim Wirkus (literature and creative writing) recasts the classic buddy-cop dynamic in a pair of hapless young Mormon missionaries unraveling a mystery set in a sweeping Brazilian slum as they look for a missing congregant they had recently baptized.

THE ELEVENTH HOUR / Macmillan / L. Douglas Keeney (B.A., eco-nomics, ’73; MBA, ’76) presents photos of patriotic soldiers and their morale-boosting pups, along with stories of their military service.

THE IMPERIAL SENSES: A Novel Pantheon / In her debut historical novel, Alexis Landau (Ph.D., literature and creative writing, ’14) writes about the juxtaposition of events that led to the Holocaust, and why it was unimaginable to ordinary people.

THE CAGE HOUSE Vintage / L. Douglas Keeney (B.A., English, ’77) takes a provocative look at black and white relations in contemporary America.

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This Must Be the Place

Angela Flournoy ’07 weaves together her fascination with history, the city of Detroit and the bonds of family in her debut novel, The Turner House.

Angela Flournoy can recall visiting Detroit with her father when she was a young girl. He drove Flournoy and her sister around the East Detroit neighborhood where he had grown up, pointing out the locations of formative events in his life such as his baptism and his first fight.

But these lots now lay empty, razed and abandoned during the intervening years, holding only the shadows of a once vibrant quarter.

The experience led Flournoy to set Motor City as the backdrop for her debut novel, The Turner House (Houghton Mifflin Harcourt, 2015).

“It was a place that left me with a lot of questions — how does this happen to a community?” said Flournoy, who earned her bachelor’s in English with an emphasis in creative writing from USC Dornsife in 2007, along with a degree in communication from the USC Annenberg School for Communication and Journalism.

Centered around a house on Detroit’s east side, the novel — a National Book Award finalist — weaves 50 years of the city’s history, richly researched, around the lives of 13 children and their parents in the sprawling Turner family.


Flournoy, a Presidential Scholar at USC, relished her writing classes at USC Dornsife and the support of her instructors, including Writer in Residence and Distinguished Professor Emeritus of English T.C. Boyle, who wrote a blurb for her novel.

“I never took an English class with more than 15 people, and having access to professors was really easy,” she said. “They were very generous with their time.” — L.P.

ANNA KRYLOV, professor of chemistry, was elected a member of the International Academy of Quantum Molecular Science.

MEGAN LUKE, assistant professor of art history, was awarded the Dedalus Foundation’s 2015 Robert Motherwell Book Award and was honored at the national PROSE Awards for her book Kurt Schwitters: Space, Image, Exile (The University of Chicago Press, 2014).

NANCY LUTKENHAUS, professor of anthropology and political science, received a fellowship from the American Council of Learned Societies for her book project The Met Goes Primitive: Postwar America, Cultural Politics, and the Creation of the Rockefeller Wing of the Metropolitan Museum of Art.

RHACEL PARRÉÑAS, professor of sociology and gender studies, was selected as a 2015–16 Distinguished Professor of Social Sciences at the Institute for Advanced Study and was awarded a 2016 Visiting Research Chair in Global Issues by Fulbright Canada at the University of Toronto’s Munk School of Global Affairs.

G. K. SURYA PRAKASH, George A. and Judith A. Olah Nobel Laureate Chair in Hydrocarbon Chemistry and professor of chemistry, was selected to receive the 2015 Henri Moissan Prize.

CLAUDIA RANKINE, Aerol Arnold Chair of English, received a 2015 PEN Center USA Literary Award for her book Citizen: An American Lyric (Graywolf Press, 2014).

VANESSA SCHWARTZ, professor of history and art history and director of the Visual Studies Research Institute, received a Guggenheim Fellowship for her book project Jet-Age Aesthetics: Media and the Glamour of Motion. She also received the USC Associates Award for Creativity in Research and Scholarship.

FENGEHU SUN, professor of biological sciences and mathematics, was named a fellow of the American Statistical Association.

MARK THOMPSON, Ray R. Irani, Chairman of Occidental Petroleum Corporation, Chair in Chemistry and professor of chemistry and chemical engineering and materials science, received the 2016 IEEE Photonics Award from the Institute of Electrical and Electronics Engineers.

ARIH WARSHEL, Distinguished Professor of Chemistry, Biological Sciences, Biochemistry, and Chemical Engineering and Materials Science, and Dana and David Dornsife Chair in Chemistry, received an honorary doctorate from his alma mater Technion-Israel Institute of Technology in Haifa, Israel, and the honorary degree of doctor honoris causa from Lodz University of Technology in Lodz, Poland. Warshel was also elected a member of the International Academy of Quantum Molecular Science and was named a “Great Immigrant” by Carnegie Corporation of New York.

ERIN GRAFF ZIVIN, professor of Spanish and Portuguese, and comparative literature, was awarded the Latin American Jewish Studies Association’s 2015 Best Book Prize for Figurative Inquisitions: Conversion, Torture and Truth in the Luso-Hispanic Atlantic (Northwestern University Press, 2014).
Meeting Trauma Head On

Through a prestigious fellowship, alumnus Shinichi Daimyo will bring better mental health care to the most marginalized and vulnerable patients.

Alumni News

1970s

GERALD ADACHI (B.S., biological sciences, ’77) received the “Best Dentist in Hawaii” award from Honolulu magazine.

A Taste of Honey, a book by ROCKY BARILLA (B.A., mathematics, ’70), won second place at the International Latino Book Awards in the fantasy category.


1980s

Santa Clara University appointed RENEE BAUMGARTNER (B.A., Spanish, ’87) athletic director. She has spent the past four years as a deputy in the University of Syracuse athletic department after a 17-year tenure at the University of Oregon.

In May, the Board of Supervisors of Santa Barbara County, CA, appointed GEORGE CHAPJIAN (B.A., psychology, ’81; MSW, ’84; M.S., gerontology, ’84) director of the Community Services Department.

DENISE L. EGER (B.A., religion, ’82) was named president of the Central Conference of American Rabbis, an international organization of more than 2,300 reform rabbis.

KERN LOW (B.S., psychobiology, ’88) was appointed chief medical officer at St. Thomas More Hospital in Canton City, CO.

First 5 California named ERIN KIM PAK (B.A., social science and communication/psychology, ’86; M.S., School of Education, curriculum and instruction, ’91) its newest commissioner. First 5 California supports and promotes early learning, health and quality child care for California children.

Multimedia artist TONI SCOTT (B.A., international relations, ’87) was selected for the 2015 Dame Jillian Sackler International Artists Exhibition Program at the Arthur M. Sackler Museum of Art and Archaeology at Peking University in Beijing, China.

DAVID STARRETT (B.S., biological sciences, ’84) was named the first provost of Columbia College in Columbia, MO. He had been an administrator and biology professor at Southeast Missouri State University.

SANDRA TSING LOH (MPW, ’84) presented her solo performance of “The B**** Is Back: An All-Too Intimate Conversation” at the Broad Stage Theater at the Santa Monica College of Performing Arts Center in July and August.

1990s

ARPEN AVANESIAN-IDOLOR (B.A., history, ’96) was appointed principal of the Armenian General Benevolent Union’s Manoogian-Demirdjian School.

The Washington Redskins hired JOE BARRY (B.A., social science and communications, ’94) as their defensive coordinator. Barry has been with the NFL for 15 years, serving the last four seasons as the San Diego Chargers’ linebackers coach.

The Hollywood Reporter named PETRA FLANNERY (B.A., political science, ’95) the most powerful stylist in Hollywood. Her clients include Emma Stone, Gwen Stefani, Amy Adams and Mila Kunis.

Shinichi Daimyo spent much of his early life among members of the Vietnamese boat-person refugee community in Los Angeles. He admired the strength and resolve of these courageous people seeking better lives for their families, many of whom fled political oppression during the Vietnam War.

“They sacrificed so much to escape persecution,” he said, “but found themselves quietly suffering new hardships in America.”

At USC Dornsife, a transformative experience working with the Navajo Nation steered Daimyo toward the honors program in psychology. His studies allowed him to help people care for themselves and one another. It also gave him a renewed awareness of far-flung communities that do not receive the care they need.

Since graduating in 2007, he has traveled to the poorest parts of the world, developing and implementing mental health systems within the world’s most underserved communities.

Daimyo recently received a Paul & Daisy Soros Fellowship for New Americans, which will support his work toward a Master of Science in Nursing degree. Eventually he plans to work as a psychiatric nurse practitioner.

“I am surrounded by people who are immigrants or the children of immigrants who have made sacrifices. So being able to support my vision of the world is the embodiment of my American dream.” —L.G.

Continued on page 72.
Surviving the Storm

Ten years ago, Hurricane Katrina blew Morgan Hawkins off his path to medical school, but with USC Dornsife’s help, the alumnus got back on course to realizing his dream.

When Hurricane Katrina struck, premed student Morgan Hawkins was holed up at Xavier University of Louisiana in New Orleans. Marooned in a murky, debris-filled sea of alligator-infested floodwater, he saw human corpses float past.

Eventually he was rescued. But with his transcripts lost in the floods and the sudden death of his father — the family’s primary breadwinner — times were “more than tough,” he said.

Then USC Dornsife admitted Hawkins as a transfer student. Graduating in 2008 with a bachelor’s degree in biological sciences, he landed a research and laboratory technician position with Susan Forsburg, professor of biological sciences.

Admitted to medical school at the University of Utah, he graduated in 2014, spent a year doing cardiology research and is now a resident in internal medicine at Loma Linda University Medical Center near Los Angeles.

After completing basic training in 2012 in San Antonio, Texas, he is also a fully commissioned officer with the U.S. Army Medical Command. Promoted to captain in August, he leads 300 subordinates and, as a reserve officer, provides medical care at the site of natural disasters.

Although Hawkins no longer suffers from nightmares, his hurricane experience still affects him.

“The positive side is that challenges now seem smaller,” he said. “Katrina put everything in perspective.” — S.B.

The U.S. Department of Energy’s Office of Fossil Energy appointed SAMUEL JULIUS FRIEDMANN (Ph.D., geology, ’96) deputy assistant secretary for clean coal. He was previously chief energy technologist at the Lawrence Livermore National Laboratory.

The International Municipal Lawyers Association honored Aleshire & Wynder partner TIFFANY J. ISRAEL (B.A., political science, and communication arts and sciences, ’93) with the Amicus Service Award for legal advocacy. The award recognized her for preparing and filing an amicus curiae brief in the U.S. Supreme Court for a case arising under the Americans with Disabilities Act and Fair Housing Act.

JENNIFER (NICHOLS) KEARNS (B.A., psychology, ’94) was appointed director of communications for San Diego City Council President Sherri Lightner.

SUMMER MOORE (B.A., environmental studies, ’98) wrote, produced and starred in a film called The Karma of Happiness, which was an official selection of the California Women’s Film Festival.

ANANYA MUKHERJEE-REED (Ph.D., political economy and public policy, ’95) was appointed dean of the Faculty of Liberal Arts and Professional Studies at York University in Toronto, Canada.

Swimming World magazine named USC head swim coach DAVE SALO (Ph.D., exercise science, ’91) among the “30 Most Swimfluential” for his innovative and successful approach to coaching elite swimmers.

LUCY FLORES (B.A., political science, ’07) announced her candidacy to represent the 43rd California State Assembly District in the 2016 election. She serves as dean of students at Providence High School in Burbank, CA.

2000s

The Simons Foundation named JAKE BAILEY (Ph.D., geological sciences, ’08) a 2015 Simons Early Career Investigator in Marine Microbial Ecology and Evolution. Currently assistant professor of geobiology at the University of Minnesota, Twin Cities, he is an Alfred P. Sloan Foundation Research Fellow in Ocean Sciences, University of Minnesota McKnight Land Grant Professor and recipient of a National Science Foundation CAREER grant.

NICHOLAS BUCCOLA (M.A., political science, ’04; Ph.D., political science, ’07) received the Samuel H. Graf Faculty Achievement Award from Linfield College in Oregon. The award recognizes a faculty member who has made an outstanding contribution to the life of the college that extends beyond regular duties.

DENNIS BULLOCK (B.A., political science and communication, ’03) is running for the 43rd California State Assembly District in the 2016 election. He serves as dean of students at Providence High School in Burbank, CA.

Erma Bombeck: At Wit’s End, a play co-written by ALLISON ENGEL (MPW, ’09) and her sister Margaret Engel, premiered at the Arena Stage in Washington, D.C., in October as part of the Women’s Voices Theater Festival.

The Northwest Asian Weekly Foundation named THANH TAN (B.A., broadcast journalism and international relations, ’04) one of 12 “Rising Stars.” She is on the editorial board of The
Conquering the Big Apple

A respected women’s rights advocate, Sri Lankan-born alumna Penny Abeywardena is New York City’s ambassador to the global community.

Appointed Commissioner for International Affairs by New York City Mayor Bill de Blasio in September 2014, Penny Abeywardena ’00 credits a lecture she attended as an undergraduate for setting her on her career path.

Abeywardena was majoring in political science when she attended the campus lecture by renowned women’s rights activist Dorothy Thomas. “That lecture shifted my entire focus,” said Abeywardena, herself a survivor of domestic abuse. “I started interning at Human Rights Watch near USC. That opened my eyes to women’s human rights, which became my main career trajectory.”

A former director of Girls and Women Integration at the Clinton Global Initiative, Abeywardena now serves as the primary liaison between New York City and its diplomatic community — the world’s largest. Her goal is to facilitate partnerships and collaboration between New York’s international community and the city’s many agencies and local communities. She is building a platform from which New York City can exchange innovative ideas and practices with other cities around the world.

Her job also includes managing relationships with high-level representatives of foreign governments, the United Nations and the U.S. State Department.

“How I got here, nobody could have planned,” she said. “The only thing that makes sense is the consistency of my passion to make a difference.” —S.B.

Weddings and Births

OLYMPIA LETRY-VAUBAN (B.A., political science, ’04) married Brenton Gregory McDonald on April 11, 2015, at the Church of St. Ignatius Loyola in New York City, NY.

MOJDEH NAVI (B.A., philosophy and communication, ’08) married Yonaton Rosenzweig at the Biltmore Hotel in Los Angeles, CA, on Feb. 15, 2015.

ATHENEO OCAMPO (B.A., social sciences, ’03) and TRINIDAD OCAMPO (B.A., political science and sociology, ’02) welcomed their second daughter, Diem Lores, on March 9, 2015.

LAUREN PEREZ (B.A., psychology, ’11) married JONATHAN GILDE (B.A., interdisciplinary studies, ’11) on March 27, 2015, on the island of Oahu in Hawaii. The couple resides in San Diego, CA.

JOSEPH RIOS (B.A., psychology, ’97; Ed.D., ’14) married XIAORUI “RAY” XIONG (Ph.D., neuroscience, ’14) on May 22, 2015, in Boston, MA.

ORADY SOUKSAMLANE (B.A., mathematics, ’95; Ph.D., molecular biology, ’00) welcomed twins, daughter Kaitlyn Allison and son Brayden Connor, on July 30, 2015.

Frontline Scholars

Inside front cover / page 1 photo (left to right)

Jake Roberts (B.A., economics and East Asian studies, ’15); students Pragya Goel (molecular biology) and Alfred Brown IV (literature and creative writing); David Kang (professor, international relations and business); Jody Agius Vallejo (associate professor, sociology); Clifford Johnson (professor, physics and astronomy), student Keefe Ignat (economics); Naomi Levine (Gabilan Assistant Professor of Biological Sciences and Earth Sciences); Steve Kay (dean); Kate Flint (Provost Professor of English and Art History), Richard Brutchey (associate professor, chemistry).
In Memoriam

JAMES MONTGOMERY ACKLIN III (M.A., international relations, ’70) Adamstown, MD (3/26/15) at age 74; graduate of the United States Military Academy at West Point, NY, M.S. in nuclear physics from Tulane University; retired from the U.S. Army after 24 years on active duty; founder and director of System Health Enterprises.

PAUL MISAK AIJIAN (Ph.D., philosophy, ’50) Newhall, CA (5/13/15) at age 97; head of the Department of English Language and Literature at Biola University in Los Angeles, CA; served as pastor at St. John’s Presbytery Church in Long Beach, CA, and First Presbyterian of North Hollywood, CA; licensed as a marriage and family therapist in 1975, practiced therapy until shortly before he died.

ALAMAPALLAM BALAKRISHNAN (M.A., cinema, ’49; Ph.D., mathematics, ’54; M.S., electrical engineering, ’54) Los Angeles, CA (3/7/15) at age 92; professor emeritus and research professor of electrical engineering at UCLA for 50 years; directed the NASA-UCLA Flight Systems Research Center specializing in problems of aerodynamic stability and control; received the NASA Public Service Medal in 1996.

DAVID BARR (B.A., psychology, ’50; M.S., education, ’70) Malibu, CA (6/12/15) at age 90; served in the 42nd Rainbow Division of the U.S. Army during WWII; taught math at Louis Pasteur Junior High School in Los Angeles for more than 30 years; co-founded Academic Tutors in West Los Angeles.

ARVETTA JO BERNER (B.A., sociology, ’46) Midland, TX (5/31/15) at age 92; member of Alpha Chi Omega; longtime president of her chapter of Church Women United.

JACK CHARLES COLLINS (B.A., anthropology, ’54) Searchlight, NV (6/12/15) at age 87; enlisted in the U.S. Navy at age 17; served during WWII, worked for the United Way; in 2000, opened Jack’s Trading Post in Searchlight.

WILLIAM “BILL” EMICK (B.A., English [speech], ’54) Claremont, CA (4/20/15) at age 85; attorney for the cities of Los Angeles and Long Beach, CA; was active in scouting and church; enjoyed golfing, camping, hiking and watching USC football.

JOHN CHARLES “Jack” GAFFNEY (B.A., political science, ’46; J.D., ’48) Folsom, CA (3/31/15) at age 94; enlisted in the U.S. Army Air Force in 1941; military meteorologist and chief weather observer of the newly formed 9th Weather Squadron, responsible for supervising the activities of 200 weather observers from Accra, Ghana, to the Middle East; later, attorney for Sonoma County, CA.

KERVIN HARRISON JR. (B.A., biochemistry, ’64) Palm Springs, CA (2/18/15) at age 78; world-renowned chemist, known as the father of HPLC chemistry; development helped advance research of cancer, human growth hormone and drug development; technique used by pharmaceutical companies to purify their products and cancer researchers when they compare healthy tissue to cancerous tissue; founding member of Hesperia Jr. All American Football and Hesperia Little League coach.

LILY KRISTJANSON HEARN (M.A., English, ’61) Redlands, CA (1/5/15) at age 92; born in the Icelandic-Canadian wheat-farming community of Wynyard, Saskatchewan; completed Canadian high school curriculum at 16 in a one-room school house and teacher training at 17; at 18 was teaching in small school houses on the Canadian prairie; once lived in remote African village of Mongu in Northern Rhodesia (now Zambia); 23-year career as a professor at San Bernardino Valley College teaching English, literature, library science and the history of writing and printing.

RONALD HOLDEN (M.A., economics, ’63) Redding, CA (6/9/15) at age 79; served for USAID, spending two years for the Treasury Department in the Republic of Liberia, West Africa; later worked as county administrative officer for Humboldt, Kern, Lassen, Tulare and Del Norte counties in CA.

RICHARD KANN (B.A., biological sciences, ’77) Lafayette, CO (5/4/15) at age 59; professional in the information technology industry; co-owned Scooter’s Coffee in Broomfield, CO; member of the American Iris Society.

EMILY MAHLER (B.A., social sciences and communications [history], ’49) Brea, CA (6/3/15) at age 87; taught in several junior high and high schools in the Los Angeles Unified School District; active in organizations such as the PTA, Boy Scouts and Girl Scouts.

MICHAEL D. MICHAELS (B.A., political science, ’76) Santa Ana, CA (7/7/15) at age 61; a passionate lawyer and history buff, practiced various areas of law, including business and personal injury.

ROBERT DERRICK MULLINS SR. (B.A., sociology, ’92) Detroit, MI (2/21/15) at age 45; earned a master’s degree in social work from Wayne State University, became a supervisor for the Department of Human Services in Detroit, active member of Phi Beta Sigma fraternity at USC and a founding member of the African American Film Association (AAFA), served as a lead organizer of recruitment and retention programs for African American students; passionate minister and preacher of the gospel; married for 13 years to Angela Mullins, with whom he had three children.

RUTH BYERS RADA (B.A., biological sciences [zoology], ’44; M.A., biological sciences [zoology], ’49) Los Angeles, CA (6/4/15) at age 91; professor of biological sciences with the Los Angeles Community College District; became dean of instruction and later dean of student personnel (now titled vice president) at Los Angeles Harbor College, East Los Angeles College and Los Angeles Mission College; authored several technical books on health, anatomy and bacteriology.

ROBERT STEWART RODDICK JR. (B.A., history, ’71) San Bernardino, CA (4/28/15) at age 91; former county editor of the San Bernardino Sun; served with the U.S. Army’s 10th Mountain Division (ski troops) and was wounded in northern Italy two months before WWII ended in Europe; received a Purple Heart and a Bronze Star; news director and advertising manager for the “National Orange Show;” life member of the San Bernardino Elks Lodge, Native Sons of the Golden West, the Combat Infantrymen’s Assn., the National Assn. of the 10th Mountain Division and Disabled American Veterans Assn.

MARCUS TUCKER (B.A., international relations, ’60) Long Beach, CA (8/8/15) at age 80; retired superior court judge who in 1976 became the first black judge appointed to the Long Beach Municipal Court and later rose to a post on the Los Angeles County Superior Court; earned 1997 Jurist of the Year Award from the Juvenile Courts Bar Association; cut truancy rates among kids tried in his court and established a playground for children awaiting court action.

DONN SHERRIN GORSLINE, Emeritus Professor of Earth Sciences, died on May 27, 2015, He was 88.

One of the leading marine geologists of the 20th century, Gorsline was described as pioneering and foundational in the field. He mentored 126 master’s degree and Ph.D. students.

“When with his arms across his chest but a twinkle in his eye ... he touched so many with his kindness and earnest love of geology,” said William Berelson, chair and professor of earth sciences.

Gorsline obtained his M.S. in geology in 1954 and his Ph.D. in 1958 from USC. He joined the USC faculty in 1962 and was named Wilford & Daris Zinsmeyer Professor of Marine Sciences in 1986. He later retired as Zinsmeyer Professor Emeritus.

BASIL (VASILIS) GEORGE NAPPAKTITIS, Emeritus Professor of Biological Sciences, died on May 24, 2015. He was 85. Nappaktitis was known for his studies of lanternfishes and bioluminescence in deep sea fish. He supervised the doctoral
work of more than 20 graduate students and received the USC Biology Students Association Award for Outstanding Teaching in 1971 and the USC Associates Award for Excellence in Teaching two years later.

“Toward his research and teaching, Basil had an unabashed and infectious enthusiasm,” said Albert Herrera, professor of biological sciences.

Said his daughter, Margarita Nafpaktitis: “He taught us how to pick a thing up with both hands, look at it with the keenest and most curious eye .... Our life was so much richer for his being in it.”

Emeritus Professor of Chemistry and Physics  
Howard Taylor  
died on May 17, 2015. He was 79.  
Described by his colleagues as “a brilliant research chemist and loyal and involved USC faculty member,” Taylor joined USC Dornsife in 1961. His career was distinguished by notable contributions to quantum chemistry, including computations and equations that found wide use among scientists in the field. His later studies improved certain types of nuclear magnetic resonance. He was honored with the USC Associates Award for Creative Scholarship and Research in 1974.

“Howard spent his entire academic career of 44 years at USC contributing to the eminence and growth of the USC Dornsife chemistry department,” said G. K. Surya Prakash, George A. and Judith A. Olah Nobel Laureate Chair in Hydrocarbon Chemistry.

Lynn Matteson, professor emeritus of art history, died on April 21, 2015. He was 75.

An expert on the history of British and French Romantic painting, Matteson taught at USC from 1980 to 2003. From 1988–93 he also served as dean of the USC School of Fine Arts — now the USC Roski School of Art and Design.

“Lynn contributed several important and still-cited articles on Romantic and early 19th-century painting, making us see the importance of apocalyptic visions to artists at the time,” said Kate Flint, Provost Professor of English and Art History, and chair of the Department of Art History.

Known for his exceptional memory for images, Matteson once discovered a piece by Paul Gauguin hanging in an obscure museum. Until then, the still life had been listed as “lost — whereabouts unknown.”

“Many might be surprised to know that in spite of his esoteric nature, Lynn was fun-loving and enjoyed sports, especially Trojan football,” said his widow, Lynn P. Kirst. “As dean, he always entertained donors and alumni at the luncheons before every home game. He found it ironic to bring art aficionados to football games, but he secretly relished having 40-yard-line seats in the Coliseum.”
I grew up in the 1970s and ’80s, a Hispanic boy living in the shadow of USC. One would think that there could be no greater divide. On my side a poor working-class neighborhood; two blocks away, an enclave of students and professors with whom I had little in common. They seemed of a different race, class and educational level.

Those two blocks may have appeared to most as daunting as a castle’s moat. But not to me, I lived in the present — the real world. I chose to see past the obstacles inhabiting that divide to the opportunities that awaited on a campus I knew to be obtainable with enough fortitude.

I was aware of the difference an education could make in my life; my immigrant Nicaraguan parents drilled that value into me — and all of my siblings — from a very young age. University was an important and necessary milestone that would allow us to achieve our potential. It offered our clearest route to realizing the American Dream.

But if attending university was a checkpoint on the road to the dream, the journey started well before that.

My friends, siblings and I saw USC all around us during our childhood. We could glimpse it — the globe atop the Von KleinSmid Center — from our kitchen window; when we would step out into the street to play; when we went to buy groceries.

The university reached out to us in our elementary school classrooms through its students, some of them from USC Dornsife’s Joint Educational Project. These students would deliver lessons and then they would tell us of the things they were doing and learning at the university.

Lectures, labs, projects, independence — it sounded awesome. The students always said USC was for us, too. That we, on the other side of the moat, could be there. Study hard and stay focused, which in retrospect I interpret as staying present, staying ready.

A group of us in the neighborhood took advantage of the offerings USC held for us — sports camps, the open campus, the fields, Heritage Hall. We would even sell programs at the Coliseum during football games. There, Trojans would buy us out of our wares and then invite us to join in the festivities. They would demand to know where we were going to college.

My answer was always clear: “USC.”

I worked hard through elementary and middle schools, earning a scholarship to a prestigious college-prep high school. There, I studied Russian. These were the days of the Cold War, after all, and I wanted to understand the world I lived in — to remain present. When representatives from USC visited my junior class, I sat at the front of the group, eager to learn how the university might help me stay focused as I ventured into that world.

They spoke about the School of International Relations and how a liberal arts education helps students visualize challenges and find effective solutions. I was a young man eager to make a positive impact, and this was USC offering me a path. My choice was sealed.

My studies in IR proved fortuitous, but in a way I could not have predicted. They exposed me to economics and, ultimately, to finance, and as global events led to the Cold War’s end, I was able to stay present, to stay focused.

I leveraged the knowledge IR had given me to forge a new journey. Four days after graduation, I found myself in San Francisco, embarking on a career in finance. That choice has since led me to New York City — across a moat infinitely larger than that of my childhood.

Here, I remain mindful of what has always been key for me in my journey — being present. With my family, my friends, my colleagues, that focus — that presence — underpins every interaction I have. As much as being a Trojan does. As deeply as the drive to Fight On.

Akir Gutierrez is director of research for Susquehanna Financial Group, a global finance company. He lives in New York City with his wife, Michelle, and children, Maya and Dylan. Gutierrez earned his Bachelor of Arts degree in international relations from USC Dornsife in 1995.
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