The Happiness Issue

FINDING YOUR HAPPY PLACE

Joy is often where you least expect it. USC Dornsife scholars illuminate the path.
Faculty reflect on what brings them happiness.

Finding Joy

“Happiness is to live a life of love. To be surrounded by those I love, to do the things I love and to see those I love thrive, these bring me happiness. For me, being happy means to be around my sisters, spend time with my husband, cuddle with my dogs, do yoga with my guru, Arya, binge-watch Homicide Hunter and all the murder mystery TV shows I can find, read a book, write and learn about people and their experiences.”

RHACEL PARREÑAS, professor of sociology and gender studies

“I love anticipating happiness, perhaps because happiness itself can be so fleeting. I love the moment when you are sitting on a plane and it takes off. I like putting Christmas gifts out early so I can look at them and wonder. I might even set a time every evening for a treat so I can look forward to it after dinner.”

LINDA O’NEILL, associate professor (teaching) of history

“A major source of joy and serenity are my (almost) daily walks on the beach. Hearing the ocean, watching the waves and feeling the sand between the toes clear my mind like few other things can. And, amazingly, in SoCal we can do that year-round.”

NORBERT SCHWARZ, Provost Professor of Psychology and Marketing

“First things first. I love living in San Diego. Morning runs on the beach followed by working together productively with my graduate students, making progress in understanding processes that matter make me happy.”

DAPHNA OYSERMAN, Dean’s Professor of Psychology

“Fatherhood has taught me that children are the source of all happiness. They are curious, funny, dynamic, opinionated, joyful, thoughtful, calm, intense and indiscriminately loving. Their energy is infectious and gives them a marvelous ability to impact their surroundings. They are living examples of humans in perfect form, as God intended us all to be.”

OLU ORANGE, adjunct assistant professor of political science

“I have enjoyed a wonderful life that has taken me from a small town in New Zealand to Toronto, Bozeman, Montana; and, most recently, to Los Angeles, California. This journey has exceeded my wildest dreams, but the joy and happiness I have experienced each day can be traced to the opportunities my life and career have afforded me to help and assist others in pursuing their goals and dreams.”

JOHN WILSON, director of the Spatial Sciences Institute and professor of sociology, civil and environmental engineering, computer science, architecture and preventive medicine.

“I love a good walk on the beach, but nothing beats a good hike in the mountains. The views are breathtaking, the exercise is great, the plants and wildlife are stunning, and the sense of solitude and peace are indescribable.”

SUSAN FORSBURG, professor of biological sciences

“My daughters, sons and grandchildren; cocktails on the patio at sunset; dining out with my wife; piano concertos and opera arias; watching Trojan and Eagles football with my family; golf with buddies; summer at our family’s Adirondack island home; beautiful natural scenery; sailing; reading and writing about happiness.”

RICHARD EASTERLIN, University Professor Emeritus of Economics

“Fatherhood has taught me that children are the source of all happiness. They are curious, funny, dynamic, opinionated, joyful, thoughtful, calm, intense and indiscriminately loving. Their energy is infectious and gives them a marvelous ability to impact their surroundings. They are living examples of humans in perfect form, as God intended us all to be.”

OLU ORANGE, adjunct assistant professor of political science

“My daughters, sons and grandchildren; cocktails on the patio at sunset; dining out with my wife; piano concertos and opera arias; watching Trojan and Eagles football with my family; golf with buddies; summer at our family’s Adirondack island home; beautiful natural scenery; sailing; reading and writing about happiness.”

RICHARD EASTERLIN, University Professor Emeritus of Economics

“I love a good walk on the beach, but nothing beats a good hike in the mountains. The views are breathtaking, the exercise is great, the plants and wildlife are stunning, and the sense of solitude and peace are indescribable.”

SUSAN FORSBURG, professor of biological sciences
What Happiness Looks Like

We puzzled long and hard over what to put on our cover for this issue. Happiness means so many different things to so many different people. How to distill its essence into one perfect image of joy?

Our creative journey began with photographs of children. After all, aren't children a universal symbol of joy? It was an obvious place to start, even though we were keen to avoid cliché. We first considered the black and white picture below, by French photographer Raymond Depardon. Taken in 1981, it shows a group of kids jumping rope in Harlem, their grinning faces and leaping bodies bursting with the sheer energy of happiness. Literally jumping for joy! Then, as we widened our search, another image stood out—a shot of a child in Nepal. Depardon. Taken in 1981, it shows a group of kids jumping rope in Harlem, their grinning faces and leaping bodies bursting with the sheer energy of happiness. Literally jumping for joy! When it comes to searching for lasting happiness.

We believe love and money will make our lives happier. But will they? Perhaps we’re barking up the wrong tree

The fact that this photograph was taken in Bhutan, a nation committed to Gross National Happiness—its signature quality-of-life indicator—gave it even more resonance. If you’re curious about what makes us joyful and what does not, you may find some answers within this issue of USC Dornsife Magazine. As you read it, consider the words of author Kurt Vonnegut: “I urge you to please notice when you are happy, and exclaim or shout or write it down. It is more important than knowing who you are.”

Depardon. Taken in 1981, it shows a group of kids jumping rope in Harlem, their grinning faces and leaping bodies bursting with the sheer energy of happiness. Literally jumping for joy!
Mysteries of Beatboxing

Beatboxers expertly manipulate their vocal tracts to make sounds unknown in any language. Thanks to cutting-edge technology, USC researchers show how it’s done. By Susan Bob

On the screen, a grainy magnetic resonance imaging (MRI) scan of a human mouth shows a tongue, leaping and curling as a sound like a snare drum rings out. This is a beatboxer in action — viewed from a new perspective: inside her mouth.

Once heard, never forgotten, beatboxing is a form of vocal persuasion in which humans mimic drum machines, laying down beats using only their mouth, lips, tongue and voice. If in the future we ask what it means to be human, we may find the answer in our mouths.

To do this, the researchers analyze real-time MRI videos they have created of the vocal tract in the process of producing beatboxing sounds, using data from five beatboxers. Among them is award-winning beatboxer Nimisha Patil ’17, who, as a sound like a snare drum rings out. This is a beatboxer in action — viewed from a new perspective: inside her mouth.

The project needed a linguist to analyze the videos, figure out what the beatboxers are doing, how they coordinate the movements of the lips and tongue with the soft palate to make all the different sounds,” said Blaylock, who is writing his doctoral thesis on beatboxing. "As a linguist who studies the mouth, I was equipped to do that.”

The first phase of the team’s research is figuring out different sounds beatboxers make and how they make them. Beatboxers already have some knowledge of how they make their own sounds, but until the USC study, there hadn’t been any real video evidence for what’s actually happening inside their mouths. The research team is developing algorithms to study the live MRI and provide feedback on exactly how the performers create the sounds.

The next phase looks at how beatboxers might change sounds, depending on what other sounds are around them. One of Blaylock’s hypotheses is that when a certain beatboxing sound — the clickroll — is used, it changes how nearby sounds are produced.

"There is a theory that because language needs only a handful of sounds to make an infinite number of words, we may as well use sounds that are relatively easy to produce,” Blaylock says.

By analyzing the movement patterns beatboxers use, we can better understand how the human body learns and produces coordinated actions.

"The whole point of all this research, from a linguistic or cognitive science perspective, is to figure out what’s going on in the human mind,” Blaylock says.

His research tries to answer such questions as: If someone is learning how to beatbox, how do they transition from speech to beatboxing sounds? Once they’ve learned beatboxing, does it affect the way they speak or how they unconsciously think about and manipulate sounds in their head?

"Beatboxing research is important,” Blaylock says, “because it shows us what the limits of human vocal behavior are, and that helps us understand how we conceive of sound and movement in our minds.”
Sid Vicious and a Silurian named after Sex Pistols bassist which also features a trilobite exhibition “Rock Fossils,” the award-winning traveling former paleontologist.

JINGMAI O’CONNOR ’09

fossils after rock stars, rocker King Diamond.

was over the moon when she saw the “Rock Fossils” show. A
day, O’Connor says. “Graffin signed it … and I keep it here as

is a world leader in her

legendary.”

and biological sciences at the

lucky every step of the way.”

knew they were going to be.

Mudding Broken Wings

the “Rock Fossils” show. A

A SINGULAR STYLE

she can feel herself

origin of her freedom.

she’s working isn’t a hardcore

laziness.”

But for women in science, it’s

Her fascination with her

Her choice worked out, but

O’Connor is determined to help

son

enantiornithine (Enantiophoe-

During a fossil hunting trip,

Her decision to focus on birds

enantiornithine (Enantiophoe-

birds, O’Connor says. “I never had

O’Connor has 35 at last count, including a hummingbird skull; a trilobite, an amnicola, a crop circle; a pleurodont skeleton (think the Loch Ness monster); the Buddhist goddess of mercy, Quan Yin; her first pet dog, bargum; a crocodile, and a giant Chinese phoenix, which she says is Qiliania graffini.

with Bottjer in September

the height of the age of dinosaurs.”

the Loch Ness monster); the Buddhist goddess of mercy, Quan Yin; her first pet dog, bargum; a crocodile, and a giant Chinese phoenix, which she says is Qiliania graffini.

and biological sciences at the

and biological sciences at the

lucky every step of the way.”

Her fascination with her

Her fascination with her

to be a rooster while doing fieldwork

in feathered dinosaurs and

in feathered dinosaurs and

Her decision to focus on birds

Her decision to focus on birds

Her decision to focus on birds

she’s working isn’t a hardcore

and biological sciences at the

she’s working isn’t a hardcore

Her fascination with her

paleontologists by the Geological

she’s working isn’t a hardcore

to be a rooster while doing fieldwork

Her fascination with her

lucky every step of the way.”

Her fascination with her

Her fascination with her

Her fascination with her

Her fascination with her

Her fascination with her

Her fascination with her

Her fascination with her

Her fascination with her

Her fascination with her

Her fascination with her

Her fascination with her

Her fascination with her

Her fascination with her

Her fascination with her

Her fascination with her

Her fascination with her

Her fascination with her

Her fascination with her

Her fascination with her

Her fascination with her

Her fascination with her

Her fascination with her

Her fascination with her

Her fascination with her

Her fascination with her

Her fascination with her

Her fascination with her

Her fascination with her

Her fascination with her

Her fascination with her
Socially Sustainable

Social science may open new pathways to solving environmental challenges.

Greenhouse gases have caused rising sea levels. Air pollution has intensified health problems. Competition for natural resources has created political instability. As humans respond to the growing environmental crisis, we are proving to be our own worst enemy, raising many of the barriers that prevent the adoption of readily available solutions.

To help unbind this Gordian knot, the USC Wrigley Institute for Environmental Studies will become the nexus for a far-reaching sustainability initiative at USC Dornsife that asks scholars from the natural and social sciences to develop and implement creative approaches for overcoming these self-imposed obstacles.

“Building this big new initiative in the social sciences is about understanding how to use the knowledge we have about human motivation and the functioning of society in ways that accelerate the adoption of solutions,” said Dean Andrew Lakoff. “We plan to collaborate with government agencies, advocacy organizations and businesses.

“With our work on sustainability, we have the most impact if we reach out of the academic,” said Divisional Dean for the Social Sciences and Professor of Sociology Anne Crigler, “to maximize our effectiveness, USC Dornsife is looking beyond technical innovation to the systems, policies and mindsets that must drive societal change.”

USC Wrigley Marine Science Center on Santa Catalina Island provides a test bed for sustainable solutions, where scholars and students are working on early-stage innovations that could be implemented in communities. But many of these innovations require ideas from social scientists to take the next leap forward.

“This vital work of Wrigley’s natural scientists continues to inform all aspects of human health to one that thrives on harmony with the environment driven by sustainability — including renewable energy such as solar, wind and hydro power, and battery storage. The demonstration showed the energy stored in food and illustrated chemistry principles ranging from exothermic noise and flame as it emits carbon dioxide and water vapor. The fun while learning,” said Brent Melot, associate professor of chemistry.

“Our big goal is just making sure that students have some fun while learning,” said Brent Melot, associate professor of chemistry. “Like SERGE can help reverse this trend.

The Fun in Science

Fun, educational summer camp encourages Native American middle school students to pursue science.

Want to teach middle school students the science behind green energy? Let them build and race their own solar-powered minicars.

That’s one way the Summer Experience in Renewable and Green Energy (SERGE), a four-day science camp for Native American middle school students, aimed to spark interest in science, technology, engineering and mathematics (STEM) education and careers.

Nationally, college attendance among Native American students lags and has been declining since 2000. Programs like SERGE can help reverse this trend.

“Our big goal is just making sure that students have some fun while learning,” said Brent Melot, associate professor of chemistry.

But the USC Wrigley Institute is just getting started.

The USC Wrigley Institute for Environmental Studies will become the nexus for a far-reaching sustainability initiative at USC Dornsife that asks scholars from the natural and social sciences to develop and implement creative approaches for overcoming these self-imposed obstacles.

“Building this big new initiative in the social sciences is about understanding how to use the knowledge we have about human motivation and the functioning of society in ways that accelerate the adoption of solutions,” said Dean Andrew Lakoff. “We plan to collaborate with government agencies, advocacy organizations and businesses.”

“With our work on sustainability, we have the most impact if we reach out of the academic,” said Divisional Dean for the Social Sciences and Professor of Sociology Anne Crigler, “to maximize our effectiveness, USC Dornsife is looking beyond technical innovation to the systems, policies and mindsets that must drive societal change.”

Camp leader and Ph.D. student JoAnna Milam-Guerrero summed it up: “My goal was to get the kids interested and excited about science, so that involves blowing things up, that’s fine.” — R.H.

Fun, educational summer camp encourages Native American middle school students to pursue science. The USC Wrigley Institute for Environmental Studies will become the nexus for a far-reaching sustainability initiative at USC Dornsife that asks scholars from the natural and social sciences to develop and implement creative approaches for overcoming these self-imposed obstacles. “Building this big new initiative in the social sciences is about understanding how to use the knowledge we have about human motivation and the functioning of society in ways that accelerate the adoption of solutions,” said Dean Andrew Lakoff. “We plan to collaborate with government agencies, advocacy organizations and businesses.”

“With our work on sustainability, we have the most impact if we reach out of the academic,” said Divisional Dean for the Social Sciences and Professor of Sociology Anne Crigler, “to maximize our effectiveness, USC Dornsife is looking beyond technical innovation to the systems, policies and mindsets that must drive societal change.”

Camp leader and Ph.D. student JoAnna Milam-Guerrero summed it up: “My goal was to get the kids interested and excited about science, so that involves blowing things up, that’s fine.” — R.H.

USC Dornsife USC Dornsife Magazine

Fall 2019 / Winter 2020 | 9

FROM THE HEART OF USC

Distinction

USC Dornsife Magazine Earns High Honors

USC Dornsife Magazine earns high honors in the “Magazine, Best in House or Corporate Publication” category.

The magazine also took first place in the “Magazine, Page Design” category for the Los Angeles issue’s “Talk the Talk” article, with judge’s statement: “Well-designed, well-written and filled with an interesting mix of thoughtful content, this publication goes well beyond expectations for a college magazine.”

Socially Sustainable

Social science may open new pathways to solving environmental challenges.

Greenhouse gases have caused rising sea levels. Air pollution has intensified health problems. Competition for natural resources has created political instability. As humans respond to the growing environmental crisis, we are proving to be our own worst enemy, raising many of the barriers that prevent the adoption of readily available solutions.

To help unbind this Gordian knot, the USC Wrigley Institute for Environmental Studies will become the nexus for a far-reaching sustainability initiative at USC Dornsife that asks scholars from the natural and social sciences to develop and implement creative approaches for overcoming these self-imposed obstacles.

“Building this big new initiative in the social sciences is about understanding how to use the knowledge we have about human motivation and the functioning of society in ways that accelerate the adoption of solutions,” said Dean Andrew Lakoff. “We plan to collaborate with government agencies, advocacy organizations and businesses.

“With our work on sustainability, we have the most impact if we reach out of the academic,” said Divisional Dean for the Social Sciences and Professor of Sociology Andrew Lakoff. “We plan to collaborate with government agencies, advocacy organizations and businesses.

“The USC Wrigley Marine Science Centre on Santa Catalina Island provides a test bed for sustainable solutions, where scholars and students are working on early-stage innovations that could be implemented in communities. But many of these innovations require ideas from social scientists to take the next leap forward.

“The vital work of Wrigley’s natural scientists continues to inform all aspects of human health to one that thrives on harmony with the environment driven by sustainability — including renewable energy such as solar, wind and hydro power, and battery storage. The demonstration showed the energy stored in food and illustrated chemistry principles ranging from exothermic noise and flame as it emits carbon dioxide and water vapor. The fun while learning,” said Brent Melot, associate professor of chemistry. “Like SERGE can help reverse this trend.

Our work on sustainability will have the most impact if we reach outside of the academy,” said Divisional Dean for the Social Sciences and Professor of Sociology Andrew Lakoff. “We plan to collaborate with government agencies, advocacy organizations and businesses.

“Our work on sustainability will have the most impact if we reach outside of the academy,” said Divisional Dean for the Social Sciences and Professor of Sociology Andrew Lakoff. “We plan to collaborate with government agencies, advocacy organizations and businesses.

“We plan to collaborate with government agencies, advocacy organizations and businesses.

“With our work on sustainability, we have the most impact if we reach out of the academic,” said Divisional Dean for the Social Sciences and Professor of Sociology Andrew Lakoff. “We plan to collaborate with government agencies, advocacy organizations and businesses.

“The USC Wrigley Marine Science Centre on Santa Catalina Island provides a test bed for sustainable solutions, where scholars and students are working on early-stage innovations that could be implemented in communities. But many of these innovations require ideas from social scientists to take the next leap forward.

“The vital work of Wrigley’s natural scientists continues to inform all aspects of human health to one that thrives on harmony with the environment driven by sustainability — including renewable energy such as solar, wind and hydro power, and battery storage. The demonstration showed the energy stored in food and illustrated chemistry principles ranging from exothermic (heat-generating) reactions to energy transformation — while delighting the campus. Camp leader and Ph.D. student JoAnna Milam-Guerrero summed it up: ‘My goal was to get the kids interested and excited about science, so that involves blowing things up, that’s fine.’” — R.H.
**Linguistics of Pokémon**

The popular media franchise holds useful lessons in how the human mind makes the connection between sounds and their meanings. By Michelle Boston

Researcher Stephanie Shih and her colleagues are taking a closer look at the linguistics of the Pokémon universe to help them understand ways that the brain processes language.

One of the underlying fundamentals of human language is that there is no specific connection between the form of words and their meanings — the sound of a word doesn’t inherently carry meaning. This allows for free expression and flexibility in language.

However, there are some instances where sounds do appear to signal meaning, a phenomenon called sound symbolism, in which sounds are linked with specific shapes. For example, the word “beast” might conjure something large and round while “kiki” might make you think of a smaller, sharper object. These two words were actually shown to have these particular associations across different and unrelated languages in a series of studies by different linguists dating back to the 1920s.

To dig deeper into the phenomenon, Shih and her colleagues are looking to Pokémon character names — or “pokémonikers” — as a dataset.

“One of the challenges of studying patterns across languages is that not only are languages different from each other, how people perceive the world around them is different from culture to culture,” Shih explained.

With more than 800 Pokémon characters, pokémonikers are a constant reference across many different languages, with slight divergence from one language to the next.

Also, Pokémon characters are categorized by their physical characteristics — weight, height, color, among a host of other traits — and they metamorphose over the course of the game into a similar but stronger species. As their physical attributes evolve, so do their names, which is what makes them such a compelling dataset, says Shih.

In an initial study looking at sound symbolism in English and Japanese, Shih and her colleagues found a tendency in both languages to encode the same attributes with sound symbols.

For instance, in both English and Japanese, the length of a Pokémon character name correlates to the size and power of what it represents. Abra, the character and name, is smallest and has the least power, while Alakazam is largest and has the most power.

These findings help us understand more about how the mind operates.

“It gives us a clue to the question: Are sound symbols something that we’re born with in our cognitive system or is it something that gets learned from our exposure to our native languages?” Shih explained.

No Love for Hate Speech

Tolerance for bigoted speech has declined for some,coloring their devotion to First Amendment principles.

Debates about hate speech have transformed Americans’ understanding of the right to first expression and its limits, argue USC Dornsife’s Dennis Chong, professor of political science, and Morris Levy, assistant professor of political science.

“Tolerance for most controversial types of speech continues to decline, particularly among younger Americans, liberals and the college educated,” Levy noted.

“For an increasing number of Americans, hostile, abusive or demeaning speech constitutes a distinct category of expression that is not entitled to First Amendment protection because it inflicts harm on its targets and undermines the value of equality,” Chong said.

Americans born before 1980 saw no contradiction between supporting racial equality and tolerating the right of racist groups to express their views, prior research showed. “That’s changed,” Levy noted, “because growing support for racial equality has influenced our attitudes toward hate speech.”

Describing the study as “powerful and revelatory,” Robert Shrum, director of the USC Dornsife Center for the Political Future, noted it shows increasing levels of tolerance for one widely disdained groups, ranging from atheists to the LGBTQ community. “At the same time — and this is an encouraging sign about our society — the study also reports Americans’ tolerance for racist speech has declined, although despite a slight increase in tolerance for conservatives, it is still something that gets learned from our exposure to our native languages.” Shih explained.

Targeting Insomnia

New 3D models of two cell receptors may give rise to sleep disorder treatments.

A third of all Americans suffer from sleep disorders. While many take melatonin supplements to drift off to dreamland, the effect of melatonin on the biological clock is not fully understood.

Scientists at the Bridge Institute at USC Michelson Center for Convergent Bioscience and an international team of researchers have shed much-needed light on melatonin by developing a 3D model of two key melatonin receptors, MT1 and MT2. They are two of the tiny antennae on the surface of cells that synchronize the body’s internal clock.

This finding enables researchers to design drug molecules that better target the receptors than over-the-counter melatonin supplements. A better drug could reduce side effects.

“Our goal is to provide the structural information to other researchers who can use it for designing new drug compounds or study mutations of these receptors in patients,” said corresponding author Vadim Chernyev, professor of chemistry and physics and astronomy at USC Dornsife.

MT1 and MT2 receptors are associated with over 800 receptors in humans that are known as “G protein-coupled receptors,” (GPCRs) that appear on the surface of a cell. About a third of all drugs on the market are designed to bind with the GPCRs, and each one has a different role in regulating bodily functions.

“The benefits of understanding these melatonin receptors could go well beyond improving sleep. There have been several mutations identified in the MT2 receptor that are associated with type 2 diabetes,” said Linda Shrum, associate professor at the Bridge Institute and USC Dornsife Department of Chemistry. “That also would be important to understand.”

The MT1 and MT2 receptors are also associated with some cancers, as well as the immune and reproductive systems. — E.G.
BRAIN POWER

After decades of research on Alzheimer’s disease, scientists are beginning to focus on effective prevention and management rather than a cure.

“The idea that there is going to be a one drug that fixes all this seems more and more unlikely. It is a multifactorial disease,” said Margaret Gatz, professor of psychology at USC Dornsife.

Sticky amyloid plaques and tangles in the brain are an obvious Alzheimer’s hallmark, but they are not the sole factors behind the memory-erasing illness, which affects more than 5.7 million Americans.

The search for solutions is urgent amid an aging baby boomer population. Annual costs associated with Alzheimer’s disease in the United States are projected to quadruple to $1 trillion by 2050, according to USC researchers. Studies at USC Dornsife have identified a host of factors that raise the risk for Alzheimer’s and that could be potential targets for treatment or prevention.

“USC’s angle on this is that we need to incorporate things other than just amyloid and tau, such as vascular and inflammatory contributors,” said Daniel Nation, associate professor of psychology at USC Dornsife. “And that treatment may need to target, more generally, how to sustain brain health and how to stop neurodegeneration.”

Alzheimer’s research at USC is advancing because a cadre of scientists in several fields — biological and computational sciences, medicine, neuroscience, psychology and policy — have collaborated on studying the disease.

The ApoE4 gene, sometimes called the Alzheimer’s gene, can raise someone’s risk for the disease, but it’s not the only genetic risk factor. Carol Prescott, professor of psychiatry and gerontology at USC Dornsife, and T. Em Kyung Kim, assistant professor of gerontology and neuroscience at USC Dornsife, found that the Gene TOMM40 may also be influential.

“Genes are not the only reason someone may develop a disease or become immune to it,” said the Interim dean of the USC Price School of Public Policy. “The interplay of some genes, their environment, lifestyle, diet, stress, learning, even their own mental state can interfere with Alzheimer’s onset.”

Together, they may have the right amount of fire power to curb Alzheimer’s disease.

“We know what kind of work these individuals are in, and we can tell whether those are jobs physically or socially demanding, to see whether that factor can protect them from cognitive decline. We then want to see if, for example, cognitive or preventive interventions on the job can delay the onset of Alzheimer’s to a more cognitively, physically or at-risk individuals.”

Regardless of their various approaches to tackling Alzheimer’s, the researchers all agree on the hunt for a cure with the same price — more lives saved.

Together, they may have the right amount of the power to curb Alzheimer’s disease.

“Treating earlier and treating all of these pathologies may not be realistic, but if we can come up with ways to intervene in brain function, then that will benefit the brain in the face of many other diseases,” Nation said. — E.G.

[Data from Alzheimer’s Association, National Institute on Aging and Johns Hopkins Medicine ]
USC Dornsife’s Joint Educational Project (JEP) launched its inaugural Service Exchange Program this summer. JEP partnered with Hong Kong Polytechnic (PolyU) for the program, which enabled students to explore issues of homelessness in Los Angeles and Hong Kong.

In L.A., students visited Skid Row and served at nonprofit organizations, including the Union Rescue Mission and Midnight Mission, they prepared food and helped homeless clients find employment. At the Union Rescue Mission and Midnight Mission, students prepared food and helped homeless clients find employment.

In Hong Kong, students also learned about local housing issues, including overcrowded housing, and helped deliver meals to the elderly living in public housing.

Alina Thyagar of PolyU said gaining deeper insights into causes of homelessness enabled her to empathize with homeless people, rather than blame them for not working or trying hard enough. Now she sees homelessness as an issue that everyone has a responsibility to help solve.

USC Dornsife’s Morgan Lu, a mathematics and economics major, who graduated in 2017 from USC Dornsife with degrees in mathematics and economics, and executive director for science’s sake, but also to improve emergency planning and response, and advance research. From an engineering perspective, we want to not only understand earthquakes for science’s sake, but also to really help build a better, more resilient society,” Goulet says.

The Fisher Fellowship also funded students to work on a program for a select group of students enrolled in his Trial Advocacy Program at USC Dornsife who lost that year to Republican Dwight D. Eisenhower.

Robert Shrum was just 9 years old in 1952, when he witnessed the explosion of the nuclear bomb on the U.S. Pacific Test Range. For Shrum, the experience was transformative. “I remember thinking that the whole world was going to end,” he said.

Now those children may be provided legal representation and assistance with their cases, the Fisher Fellowship students are being trained to help.

“From an engineering perspective, we want to not only understand earthquakes for science’s sake, but also to really help build a better, more resilient society,” Goulet says.

The combined data will help scientists understand how Jupiter formed and what role it played in the formation of the solar system as a whole. —D.S.J.
Happiness Across the Life Span: Not a Slippery Slope After All

Contrary to popular opinion, when it comes to well-being, our lives do not represent an inevitable decline from the sunny uplands of youth to the valley of death. Instead, the opposite is true — we can confidently look forward to old age as the happiest time of our lives. By Susan Bell

Things they do look awful c-c-cold, I hope I die before I get old.

More than 50 years have passed since The Who’s Pete Townshend penned these immortal lines on his 20th birthday, resulting in the band’s iconic ode to rebellious youth, “My Generation.” These days there is no hint that the rock star, now a spritely septuagenarian, is entertaining any regrets that his youthful wish didn’t come true.

But as a young man, Townshend certainly wasn’t alone in dreading old age, and while his suggested remedy for avoiding the unavoidable may have been extreme, he also wasn’t alone in wanting to dodge what we tend to believe will be the miseries of aging.

So it may come as something of a shock to many of us to learn that the research shows we’ve been dead wrong all this time — not only about growing old, but also about when we’ll experience the happiest days of our lives. No, they won’t happen during our schooldays, as the old adage dictates, or when we’re forging ahead in our careers, or even when we’re raising our children. It may seem counterintuitive, but study after study shows that the happiest days of our lives will occur in old age.

U-TURN TO HAPPINESS

In fact, if we were to plot a graph with a line representing our life satisfaction across the life span, it would not, as we might assume, show a steady decline into old age, nor would it hold fast from youth until we reach, say, our 70s, and then fall off a cliff. Instead, research shows it resembles a U-shape, with a pronounced midlife dip in our 40s and early 50s.
“Emotional well-being looks pretty good as we age, sometimes even better than when we’re young.”

“When we ask people, ‘Are you satisfied with life?’ we consistently find this U-shaped pattern,” says alumna Susan Charles, who earned her Ph.D. in psychology in 1997 and is now professor and chair of psychological science at the University of California, Irvine.

While this day might sound like bad news for those hitting middle age, there’s a silver lining: As Charles explains. “After middle life, satisfaction goes back up, until you see people who are about 65 looking as happy, as satisfied with life, as younger adults in their 20s.”

That’s not all. A landmark longitudinal study across the adult life span — the first of its kind — by Charles and USC Dornsife Professor of Psychology Margaret Gatz showed that negative emotions such as anger, anxiety, stress and frustration, far from increasing as we get older, actually decrease steadily with age. Positive emotions, such as excitement, pride, calm and elation, remain stable across the life span. Only the very oldest group registered a very slight decline in positive emotions.

But despite all the heartening evidence that well-being improves as we age, we still tend to dwell growing old, clinging obstinately to the belief that happiness declines as we get older. So while 70-year-olds report higher current happiness than 50-year-olds, both expect that happiness declines with age. That is, at least when thinking about other people — both older and younger adults are optimistic about their own emotional futures but pessimistic about others.

So, why are we all getting it so wrong?

“For a lot of people, when you say, ‘What does 80 look like?’ the first thing we think of is dementia and nursing homes,” says Charles.

That’s a key part of the problem, according to Norbert Schwarz, Provost Professor of Psychology and Marketing at USC Dornsife. Schwarz notes that when we are evaluating our lives, we only pay attention to a few aspects. So, when we imagine old age, we tend to focus on the negative — increasing frailty, declining independence, the inevitable loss of loved ones, and then, eventually, our own death, whether sudden or following a protracted illness. “Of course, none of this is very pleasant, and it leads us to expect that life would be quite miserable,” says Schwarz.

However, as he points out, our reasoning about aging is faulty. By omitting many negative aspects of life that we won’t have to deal with any longer when we are old, we’re young.

So why do people grow happier as they age? Is it an absence of stress, or are they able to focus more on what brings them joy? Scouras says the answer is actually much simpler and is linked to activity.

Research he conducted with USC Dornsife’s Arthur Stone, professor of psychology, economics and health policy and management and director of the USC Dornsife Centre for Self-Report Science (CSS), shows that activity is a major determinant of how we feel moment to moment. “For instance, many people don’t have jobs they enjoy that much. When we retire, we have better days as we spend less time on activities that aren’t very enjoyable and cause high levels of stress. We also have more time to spend with others,” Scouras notes.

“Who we spend time with is also key. Studies show that the elderly may be better at avoiding situations and people that make them feel bad, they have more control over how they spend their time and whom they spend it with. It seems that as we age, our brains become increasingly wired to concentrate on the positive. A study by Charles, Mara Matter, professor of gerontology and psychology at USC Dornsife, and Laura Carstensen of Stanford University shows that older people pay more attention to positive stimuli, such as images of babies or athletes celebrating, whereas younger people pay more attention to the negative, such as images of a couple visiting a graveyard or of someone being threatened with a knife or gun. This also affects memory, with older people remembering the positive images more often than younger people, who are more likely to remember the negative. “From what we can tell, older adults are trying to focus more on emotional goals and enhance their well-being, whereas younger adults are devoting resources to other things,” Matter said.

Schwarz also debunked another common misconception about aging — that increasing awareness of mortality causes unhappiness.

“There are moments of sadness when your first friends are dying, but it’s not the case that people are all very unhappy when suddenly facing their own mortality,” he says.

While acknowledging that age does bring inevitable loss, Charles agrees.

“People just assume that loss brings decreases in positive affect. So, it’s kind of amazing — kind of wonderful, actually — that with age we don’t see that,” Charles says. “Almost everything else you study in aging oftens doesn’t end well, but emotional well-being looks pretty good as we age, sometimes even better than when we’re young.”

Of course, happiness can look very different depending on the measures we use. Psychologists use three methods to measure subjective well-being. The first, evaluative well-being, measures life satisfaction. The second, hedonic or experiential well-being, measures moment-to-moment mood. And the third, what the ancient Greeks termed eudaimonia — aka, “Is my life meaningful?”

The there are different, but related, and interestingly, many people are willing to temporarily sacrifice the first and second to achieve the third. To illustrate this point, Stone cites the example of a student undergoing the brutal rigors of medical school. While her mood may be poor because she’s stressed and sleep-deprived, and her life satisfaction may be low because she isn’t pleased with her lack of ability to see friends and relatives, she may still find great meaning in her life because it’s getting her where she wants to be.

“People may subject themselves to lower levels of certain kinds of well-being in order to achieve other things,” Stone, who, like Gatz, prefers to avoid the word “happiness” because of the ambiguity between evaluative well-being and mood. “Alternatively, a person might be happy-go-lucky, very good in terms of their satisfaction and mood, but their life may not be particularly meaningful, which on some larger existential basis may be important to them.”

A good life, Schwarz argues, probably lies in finding the right mix: accepting temporary misery or discomfort to achieve something meaningful, finding enough pleasant activities to feel good for a significant chunk of the day and accomplishing some things that make you feel satisfied when you step back and evaluate your life.
LOOKING AT EMOTION

In a landmark 2010 study Stone published with Nobel laureate and USC Dornsife Presidential Professor of Economics Sir Angus Deaton, the researchers looked at evaluative and moment-to-moment measures of happiness and unhappiness in an attempt to measure happiness in different ways. Psychologists see different patterns emerging when they measure happiness in different ways.

When we look at life satisfaction in Western cultures, Schwarz notes, the family life cycle shows that people are very happy shortly before they get married. That settles back down to normal levels once they wed. Then comes the big dip in life satisfaction that we experience in our 40s and early 50s.

Stress and feelings of distress were highest for younger adults and gradually lessened with age, resulting in a linear U-shaped dip corresponding to the notorious so-called midlife crisis! Charles says there’s little evidence to support that, with only a meager 7 percent of people attributing a crisis to middle age. “It did happen,” she says, “but a lot less than you’d expect.”

Instead, Schwarz suggests two other reasons for the midlife dip.

First, this is when people typically strive for success in their career, a period accompanied by higher demands and increased stress. The second reason, he says, is parenthood. “People all say they do their best work when the kids are born, then it starts shooting up through age 80,” Stone says. “It’s important to realize that no matter what your illness is, you’re not a patient 24 hours a day. Much of your day is still pleasant. The sun still shines, you spend time with friends, your toddler is hell. Then the kids go to school and it gets a little bit better, and then they’re out of the house and daily life improves.”

“Older adults perceive time left in life as growing more precious. They also have experience from time lived, so they know how to regulate their emotions by controlling their environments and minimizing their exposure to things that will upset them.”

So, for example, we know from many studies that older adults will get out of a conversation if it becomes heated or unpleasant. Unlike younger adults, who are more likely to dig in, older adults are more likely to change the subject. “It’s a case of ‘been there, done that,’ ” Gatz says. “It’s maturity, and that’s a good thing.”

The fact that 30-year-olds aren’t as happy as 70-year-olds isn’t widely accepted, Schwarz says, largely because people struggle to accept it as true. He compares how we view aging with the way we think about health or disability. “It’s a case of ‘been there, done that,’” Gatz says. “It’s maturity, and that’s a good thing.”

We believe that if we’re sick or in a wheelchair, life would be miserable, and yet study after study shows that is not the case. “Older people think, ‘Let’s make the most of the time we have, let’s optimize our emotional experience,’” Charles says. “They just don’t sweat the small stuff anymore. “Older adults perceive time left in life as growing more precious. They also have experience from time lived, so they know how to regulate their emotions by controlling their environments and minimizing their exposure to things that will upset them.”

The result is that our older selves are able to handle with equanimity experiences that our younger selves would have found deeply upsetting. “It’s a case of ‘been there, done that,’” Gatz says. “It’s maturity, and that’s a good thing.”

In our later years, we pay attention to and what we do.

“Older adults … know how to regulate their emotions by controlling their environments and minimizing their exposure to things that will upset them.”

In our later years, we pay attention to and what we do.

“Older adults … know how to regulate their emotions by controlling their environments and minimizing their exposure to things that will upset them.”

And what of Pete Townshend? Schwarz, when asked what he would say if he could go back in time to the moment when the budding rock star committed to paper his desire to die before he reached old age, replied, “Well, I’d tell him, ‘You’ve missed one of the best parts of your life!’”

“Older adults … know how to regulate their emotions by controlling their environments and minimizing their exposure to things that will upset them.”

Fall 2019 / Winter 2020 | 21
It seems like every text message now arrives with an emoji. It’s often that grinning yellow face — tilting to and fro, dribbling tears of glee. Could this interminable cheerfulness be genuine? If so many of our friends and relatives were truly rolling on the floor, laughing out loud at any benign amusement, we’d expect some sort of protocol from the Centers for Disease Control and Prevention. But what if this is the happiest time in history? At face value, it sure seems that way. Sculptural masterpieces, such as the Venus de Milo, cast a stoic gaze on the world. President George Washington’s pokerfaced portraits suggest a practiced austerity. And Grant Wood’s famous painting, American Gothic, depicts common rural folks in the early 20th century, a pitchfork-wielding farmer and his daughter looking happy as vampires in the sunlight.

Of course, these faces don’t tell the whole story. Historical research provides context through which we can better understand happiness across place and time. Yet, generalizations are difficult when the notion eludes clear definition. From ancient Greece to modern America, philosophers, raconteurs and self-help “experts” have tried to pin down the essence of happiness. C.S. Lewis said it’s God; Karl Marx said it’s the abolition of religion. Friedrich Nietzsche said it’s desire; Carl Sandberg said it’s admiring without desiring. Walt Disney said it’s a state of mind; Buddha said it’s the path and Charles Schultz said it’s a warm puppy. And then there’s Genghis Kahn — he said it’s “to scatter your enemy and drive him before you.” No doubt, it’s complicated.

**CLASSICAL CONDITIONING**

“Call no man happy until he is dead.” Ancient Greek statesman and antiquity’s Oscar the Grouch, Solon had good reason to be pessimistic. The Greeks were constantly at war. Day-to-day pursuits of personal fulfillment were judiciously supplanted by an existential fixation: Don’t get speared.

By the 4th century B.C., Athens had lost more than half its population, and people had soared on the perpetual fray. Out of centuries of bloodshed arose a movement toward peace, democracy and contemplation.

“Aristotle introduces the idea of intentionality,” said USC Dornsife Professor of Classics Susan Lape. “He posited that there was a purpose to life, something we seek for its own sake. But, if we do not know what that purpose is, we will miss it. The purpose, he contends, is happiness.”

The result is eudaimonia, which roughly translates to “human flourishing.” Different from happiness as pleasure or an externally validated status, flourishing, for Aristotle, is achieved by living a life of virtue in pursuit of human excellence.

“Aristotle believed we need to prioritize our role as social beings as opposed to just human beings,” Lape said. “This included performing acts of reciprocity, altruism, temperance and valuing your friend as yourself.”

History has no laugh track, so how do we measure our changing conceptions of happiness through the ages?

By Stephen Koenig

It Was the Best of Times

Illustrations by Dennis Las for USC Dornsife Magazine
“Character and discipline for the long haul may be making a comeback against personality.”

As the Middle Ages gave way to the Renaissance and its prophecies of the Enlightenment, the idea of ‘personality’—a transfiguration of the self full of energy and discipline for the long haul—may be making a comeback against personality. While the first two had long been held as fundamental, the pursuit of happiness was both an ambiguous and a novel idea. Thomas Jefferson, who drafted the document in 1776, provided no definitive context for what constituted a ‘happy’ person.

Better treatments for disease and an emphasis on self-reliance meant that people were no longer destined to suffer through life. With more opportunities for leisure to create commons, seeking pleasure was no longer frowned upon. Yes, Jefferson, then, referring to a holistic happiness?

Was he promoting the egalitarian anti-vices story central to the American Dream?

It’s not about being happy, says Andrew W. Mellon Professor of the Humanities and the Linda and Harlan Martineau Director of the USC-Huntington Early Modern Studies Institute Peter Mancall. “It’s about the right to property—land, material possessions and, unfortunately, slaves.”

In colonial times, only those who owned land were allowed to vote. With this in mind, we can interpret the pursuit of happiness as the equal capacity for (almost exclusively white, male) landowners to have a finger in the pie of politics. Rather than an individual right to seek pleasure, it establishes this pursuit as a participation in democracy.

Given the century and a half of relative success that people in the colonies had found prior to the American Revolution, it becomes clear why the desire for religious canon law had long been unfulfilled. Thus, some kinds of speech, dancing, food and physical intimacy were no longer frowned upon or considered deviant.

Living under so many constraints may seem counterintuitive to happiness, but if heaven were anything like the way it’s portrayed in the art and culture of medieval times, it would be small price to pay.

“People didn’t have one big party,” says Dickason. “There’s dancing, music, and you’re in close proximity to God.”

Indeed, shoes, orbs and movement common in artwork of the Middle Ages give the promised land a decidedly disco vibe. For example, Sandro Botticelli’s The Mystical Nativity—of Christ, as 12 angels perform a chorus graphed within a goldfish bowl—has enjoyed considerable success in the sky.

This ethereal heavens was further illustrated by medieval men and women, deemed mystical who entered a state of jubilo—a transcendent chasopathy of joy, triggering sensory overload. Dreams often filled moody in the mystic presence of Christ or the Virgin Mary. Many of these narratives take a tactile—even erotic—turn for paper, or alchemical anger.

“They get really, you know, pretty wild,” said Dickason.

Happiness in the Middle Ages was largely divorced from material goods and freedom. Happiness was considered death to be the beginning of a new and better state of being.

And then came the rise of social media. Happiness, today, has become more than mere pleasure. And while we are developing one’s personality, people develop a highlight reel of the most enviable slices of their lives.

On the surface it may seem like incessant navel-gazing, yet it’s often the opposite—a highly curated performance for an external audience. It’s a coping mechanism for the new kind of status anxiety that percolates within a hyper-connected culture, competing for attention; one that is not just communicating “look at me,” but also “here’s what I can offer you.”

But what isn’t captured in these depictions are the calls to action that might have otherwise gone unanswered. Major challenges in the world are inspiring the next generation to look for happiness through collective and intentional endeavors.

‘It struck by how many students today are fixed up by the idea of pursuing public goods in addition to private ones,’ says Fox. “Yes, they want careers. But climate change, gun violence and inequality have given them pause. Character and discipline for the long haul may be making a comeback against personality.”

Could it be that we are redefining eudaimonia for our hyper-connected world? Whereas the virtues that Aristotle suggested enabled individuals to flourish in each moment, flourishing in the 21st century might be best accomplished by collaboration. If we accept this idea of modern happiness, then complex social problems could be solved, not by asking, “Am I making the most of my talent in this moment?” but rather by demanding, “Am I making the most of our talents in this moment?”
Back when she was a student at USC Dornsife majoring in biological sciences, Ego Nwodim wouldn’t be shy about having a little fun in her organic chemistry lab. She often would break into song, startling her fellow pre-med students. “Mainly Britney Spears,” she says with a laugh. “My go-to song was ‘I’m a Slave 4U.’”

Her classroom cohorts didn’t know it at the time, but Nwodim (pronounced “Woh-dim”; her first name is pronounced “Aye-go”) was dead set on a career as an actor. But she had to make a deal with her mother, a doctor who raised her and her three siblings, and who insisted she go to college while pursuing her dream.

“Always a good student growing up, Nwodim gave it a go — but knew acting was her destiny. Hence, her classroom song-and-dance escapades. I wasn’t taking that class too seriously, I think,” says Nwodim, who graduated from USC Dornsife in 2010. “I was doing well, but I was having fun with it at the same time.”

Nwodim recently reached a height to which all comedic performers aspire: becoming a cast member of Saturday Night Live, one of the most high-profile stages of all for working comedic actors.

Nwodim is the seventh African American female to be hired as an SNL cast member.

Ego Nwodim ’10, now in her second season as a cast member of Saturday Night Live, graduated from USC Dornsife with a degree in biological sciences — never doubting she would succeed as an actor. By Greg Hardesty
SNL be a highly versatile SCENE STEALER the show. of memorable characters on member performing a variety "TO BE ABLE TO MAKE PEOPLE LAUGH IS SUCH A GIFT." KNEW IT AS A KID quickly. across the country, I wanted to be part of that 40 percent so it thought, 'This campus is huge!'" Nwodim says. "I went to visit and in biology as a premed student," Nwodim says. "I remember to college across the country, I would go to college and major a better shot at being accepted to an L.A. university. Nwodim knew she had to get the best grades possible to make it into the university of her choice. And she knew she had to live in or near Los Angeles to become a successful actor. She worked hard to boost her grades during her senior year in high school, which gave her a better shot at being accepted to an L.A. university. And she was. "I kind of made a deal with my family that if they let me go to college across the country, I would go to college and major in biology as a premed student," Nwodim says. "I remember thinking, I wanted to go to UCLA. Nwodim attended Eastern Technical High School in Essex, Maryland, near Baltimore. By the time she was a junior, she knew she had to get the best grades possible to make it into the university of her choice. And she knew she had to live in or near Los Angeles to become a successful actor. She worked hard to boost her grades during her senior year in high school, which gave her a better shot at being accepted to an L.A. university. And she was. "I kind of made a deal with my family that if they let me go to college across the country, I would go to college and major in biology as a premed student," Nwodim says. "I remember thinking, I wanted to go to UCLA. Nwodim says of professional acting. "As an immigrant, my mother just wanted her children to be stable and successful," she says. "And when you say you want to pursue a career in acting, nothing about that sounds stable, and the process of achieving success as an actor is incredibly unlikely." And yet, Nwodim's mother was supportive. "Go all out and don't give up," Nwodim recalls her mother telling her. "You've got this." LOS ANGELES BOUND Nwodim knew that comedy was her destiny after she made a character reel — a short demo video of her portraying different characters — and showed it to her USC friends, who saw how she had come out of the acting closet. "They told me, 'This is the most 'you' thing I've ever seen you do,'" Nwodim recalls. "And I thought, this is me. It's kind of cool to do the thing that's you." Deciding to pursue a career in comedy, Nwodim took more classes at the Upright Citizens Brigade Theater in L.A. She became a regular cast member and also performed her one-woman show, Great Black Women... and Then There's Me. Nwodim was named one of the New Faces at the 2018 Just for Laughs festival in Montreal. Supporting roles on television include Love & Order, True Crime: The Menendez Murders, 2 Broke Girls and Living Biblically. She has also made several guest appearances on the podcast Comedy Bang! Bang! And now, Nwodim's on the big stage at SNL. "Her acclaimed skits include the way ‘Thirty Cups,’ about two female cops hitting on a handsome man played by Seth Meyers."

COMEDY AND HAPPINESS Nwodim recalls a professor at USC who taught a communication class. "She taught a communication class," Nwodim says. "One day she told me, you're not cynical. And that's really an important thing to carry through life." It's this positive, can't-fail mindset that has taken Nwodim far in her successful career as a working actor. And she's just getting started. "You kind of have to know (you will succeed)," Nwodim says of professional acting. "Some of the people who don't think they'll make it do. But for me, I just kind of knew for sure that it was going to work out. That's a big part of pursuing it. I just knew that, against all odds, things were going to work out. It was nice knowing I had a college degree, but I can't imagine a world in which I would have actually gone to medical school." Nwodim finds a direct link between happiness and being a comedic performer. "It's really important for me to do work — whatever work I'm doing — that adds real value to society, or impacts people's lives for the better," she says. "What I really think is great about comedy, and why I'm so fulfilled by performing comedy, is that it certainly brings joy to people while at the same time illuminating social issues. "And to be able to make people laugh is such a gift," Nwodim adds. "Having purpose like that, in turn, impacts my happiness. There's kind of a synergy going on there. I get to make people laugh, and that helps me feel fulfilled because I'm adding something to people's lives that makes them feel joyful. "Comedy is just a very cool thing"
We believe love and money will make our lives happier. But will they? Perhaps we’re

Looking for Happiness in All the Wrong Places

By Susan Bell

If only we could win millions on the lottery — or failing that, at least convince our boss to give us a massive raise. And then, if we could just meet the love of our life on that new dating app, we could Instagram our perfect, exotic honeymoon pictures to all our friends and followers and then, maybe, just maybe, we could be truly happy.

Scholars who study human happiness might well quibble with those common aspirations. Research shows that additional income, dating apps and social media don’t necessarily bring us the joy we think they will.

One of the major misconceptions of happiness is income, notes USC Dornsife’s Norbert Schwarz, Provost Professor of Psychology and Marketing.

“Everybody wants higher income and is willing to do quite a bit for that. In reality, income makes much less of a difference than we usually expect,” Schwarz says. “When you are poor, earning more money is very beneficial, but once needs are met, making more and more adds ever less to one’s well-being.

“You don’t need a lot of luxury to feel good as you go through your day,” he adds. “And many high-income jobs come with long hours and high stress, which makes the day less enjoyable.”

In fact, the relationship between income and life satisfaction, he notes, is relatively minor, with income explaining only about 4 percent of the variation in people’s evaluation of their life as a whole and even less in how they feel moment to moment.

SWEET DREAMS

Other variables play a far greater role in improving day-to-day mood. For instance, one big factor in how you’ll feel tomorrow is how well you sleep tonight, Schwarz says. In a 2004 study, Schwarz and USC Dornsife Professor of Psychology, Economics and Health Policy and Management Arthur Stone found that the difference in mood between people who slept six hours or less, versus seven hours or more, was equivalent to earning $30,000 a year versus $90,000 a year.

“If you told most people, ‘You can increase your income by $60,000 if you’re willing to drive a bit longer to work, but you’ll have to sleep an hour less,’ most people would leap at the chance,” Schwarz says. “But in terms of how they feel as they go through their day, they would actually be better off getting a good night’s sleep.”

HAPPINESS OVER TIME

Indeed, when it comes to income and happiness, it’s a mixed picture, says University Professor Emeritus of Economics Richard Easterlin, creator of the so-called Easterlin Paradox.

His paradox states that if we look at any given point of time, on average people who have more income are happier. However, this finding is contradicted by time series data, which follows people’s happiness over a length of time as their income increases.

“It’s the time series relationship that’s relevant to questions like, ‘would more money make me more happy?’” Easterlin notes. “Because you’re thinking what’s going to happen over time as you get more money, will you become happier? And the answer to that is quite consistently no.”

A QUESTION OF COMPARISON

This seems counterintuitive, but Easterlin explains that it’s all down to a psychological concept called “social comparison.” To illustrate how this works, he would ask students whether they would prefer their income to increase by $100,000 or by $50,000.

Next, Easterlin put two situations to his students. In the first, their income increases by $100,000, but everybody else’s goes up $200,000. In the second option, their income increases by $50,000, but everybody else’s goes up $25,000.

“Two thirds of my class, when I used to teach this, would shift to the second option,” Easterlin notes. “They opted for less income for themselves if it was more than others were getting.”

When we evaluate our happiness, he explains, we have a comparison or reference level, a benchmark against which we judge the amount of income we get.
“We make judgments about our own income based upon what others are getting, and if others are doing a lot better than us, we tend to be less happy,” Easterlin says.

So, while it is true that higher income and greater happiness do go together if we drill down to a specific, point in time, once we look at the relationship between income and happiness over a period of time, then we see a very different picture — one in which higher income does not bring more happiness.

“Over time, what’s happening is that the incomes of others with whom you compare yourself are going up on average to the same extent as your income goes up. So, you’re no happier,” Easterlin explains. “The increase in your own income by itself will make you happier. The increase in others’ incomes by itself, if yours didn’t change, would make you less happy. But what happens in practice is that, on average, as your income goes up, everybody else’s goes up, and the result is that nobody is happy.”

**DIMINISHING RETURNS**

A 2010 study by Nobel laureate and USC Dornsife Presidential Professor of Economics Sir Angus Deaton, co-authored with psychologist and Nobel Prize winner Daniel Kahneman, found that emotional well-being increases with money but only up to an income of about $75,000 per annum — enough to cover the basic necessities. Any amount on top of that won’t make a huge difference to happiness. While more money does appear to increase satisfaction with your life, when it comes to improving day-to-day emotional well-being, money generates diminishing returns.

“Deaton and Kahneman wrote in the study, “We conclude that high income buys life satisfaction but not happiness.”

Easterlin argues that what we consider to be enough money to live happily changes over time. “What we would like to have increases with what we’re able to have, and what we consider to be the essentials of a decent or good or a happy life is not a fixed amount, it’s variable,” Easterlin notes.

Easterlin sums up the problem by citing a favorite quote from Ralph Waldo Emerson: “Want is a growing giant from whom the coat of Have was never large enough to cover.”

However, Easterlin refutes the idea that we’re necessarily discontented. Most people are happy, he says. “It’s just that where they think that more money will make them even happier, it does not.”

**LOVE NOT MONEY?**

So, if more money isn’t going to make us happier over time, perhaps finding true love could be the answer.

While the joy we find in our relationships has always depended on a whole host of variables, the way we are searching for love has undergone a revolution in the last decade as more and more of us are turning to dating apps in the eternal human quest for love and romance.

USC Dornsife’s Julie Albright, a sociologist specializing in digital culture and communications, says the ways we now look for love in the eerie digital world of retouched selfies, “breadcrumbing,” “catfishing” and “ghosting” are affecting us more deeply than we realize, impacting our relationships, our health — and, yes — even our well-being.

“Everybody wants higher income and is willing to do quite a bit for that. In reality, income makes much less of a difference than we usually expect.”

**THE LONELINESS PARADOX**

While we may believe that online dating will allow us to banish loneliness once and for all, Albright’s book, *Left in Their Own Devices: How Digital Natives Are Reshaping the American Dream* (Prometheus Books, 2019), argues that online dating can, in fact, do just the opposite, resulting in increased feelings of isolation.

“Dating apps promote the idea that we have endless choice. Why commit, the thinking goes, when someone better might come along? The problem with that approach, Albright argues, is that people who don’t choose will end up lonely because they’re not committing to building a relationship.

Traditions like marriage or buying a home, she says, provide a guiding North Star by which people can navigate their lives. Now, young digital natives, hyper-attached to digital technologies and no longer choosing commitment and marriage, are unhooking from traditional social structures and are cast adrift — a process Albright, a lecturer in the Department of Psychology, calls “coming untethered.”

A young man couldn’t try to pick up 300 women in one night at a bar, she says, but by using a dating app, he can easily throw out a thousand hooks and get 300 bites.

“Taking the endgame out of courtship changes the dynamic of what dating is about. If you’re not dating in a constant churn, there’s no future and no hope on the horizon,” she said. “Instead, it becomes all about experience.”

This leads to heightened levels of loneliness or anxiety, as paradoxically, instead of becoming more connected, we become increasingly separated from one another by using our devices.

**KICKING THE HABIT**

Even if we know online dating is making us depressed, it’s not easy to stop. Albright notes. She compares using dating apps to playing one-armed bandits in Las Vegas. “Sometimes you win, sometimes you lose, and that’s why you keep going back for more,” she says.

And that’s not all. Dating apps and social media also fuel a narcissistic desire for attention, satisfying primitive psychological needs for attention, affirmation and validation.

“People can get very hooked on that,” she says. “How do we find true love and happiness in this lonely, addictive digital world?”

Albright’s advice rings as true as it is simple: Switch off your phone.

“Spend time together, get to know each other, look into each other’s eyes and make building that relationship a sacred space,” she says, adding: “Just make sure it’s without the intrusion of a device.”
Finland, a land of the midnight sun and at the top of the world, is known for its intriguing history, excellent education system, flourishing culinary scene and natural wonders such as the aurora borealis. The Nordic country may be cold and remote, but it is also literally home to the happiest place on Earth. (Sorry, Disneyland.)

The latest World Happiness Report indicates that, among citizens of the top countries around the globe queried by Gallup for the United Nation’s Sustainable Development Solutions Network, Finns were most satisfied with their lives. Solutions Network, Finns were most satisfied with their lives. Sustainable Development Gallup for the United Nation’s across the globe queried by

**Why measure happiness, and which play a significant role in outcomes.**

Happiness is really the most subjective well-being.**

**Measuring happiness across cultures is not a straightforward endeavor. How people perceive what constitutes happiness, and the language that people use to describe their well-being, vary from culture to culture. Happiness may not translate in exactly the same way across countries, he said.**

A growing body of evidence in recent decades has revealed just how emotions can differ from country to country. Authors of a September 2004 study published by the Journal of Happiness Studies examined this very point.

Evidence shows that these emotions can differ from country to country. However, Stone warns that happiness may not translate in exactly the same way across countries, he said. “One way to think about that is when governments fail to provide social safety nets, communities often respond by coming together and compensating for shortcomings,” Carter said. But, where living standards are low, maternal and child mortality rates are high, safety nets are few and far between, and governments focus on their own self-interests over the well-being of citizens, finding happiness will continue to be a challenge. (Additional reporting by Emily Germain)
for 500 years, from the learning and higher education as the foundation of theological medieval Latin text served (Quattuor Sententiarum) Four Books of Sentences (Libri Library is an iconic symbol of its pages by its Italian-born statements on biblical derives its name from theδerects a monumental and authoritative for such an influential figure, “The university system, as a university is supposed to do. “That’s really the heart of what function the agenda that we continue to encourage people to think together, to systemize it and argue about it,” he says. Rubenstein nevertheless describes it as an essential emblematic and powerful when it is quiet — as in the case of poetry and photography,” Lewis wrote in her statement to the American Academy of Arts and Sciences (AAAS). “Four Corners/One Book” regional community-wide read program for the Antarctic Program. “I think there’s also kind of a real beauty to the book and its attempt to bring all knowledge together, to systemize it and to encourage people to think and argue about it,” he says. “That’s really the heart of what a university is supposed to do. Lombar is largely an eponymous figure, but he really set the agenda that we continue to follow as educators.” — A.R.

Rubenstein nevertheless describes it as an essential manuscript. “I think there’s also kind of a real beauty to the book and its attempt to bring all knowledge together, to systemize it and to encourage people to think and argue about it,” he says. “That’s really the heart of what a university is supposed to do. Lombar is largely an eponymous figure, but he really set the agenda that we continue to follow as educators.” — A.R.

Rubenstein neverthe less describes it as an essential manuscript. “I think there’s also kind of a real beauty to the book and its attempt to bring all knowledge together, to systemize it and to encourage people to think and argue about it,” he says. “That’s really the heart of what a university is supposed to do. Lombar is largely an eponymous figure, but he really set the agenda that we continue to follow as educators.” — A.R.

Rubenstein neverthe less describes it as an essential manuscript. “I think there’s also kind of a real beauty to the book and its attempt to bring all knowledge together, to systemize it and to encourage people to think and argue about it,” he says. “That’s really the heart of what a university is supposed to do. Lombar is largely an eponymous figure, but he really set the agenda that we continue to follow as educators.” — A.R.

Rubenstein nevertheless describes it as an essential manuscript. “I think there’s also kind of a real beauty to the book and its attempt to bring all knowledge together, to systemize it and to encourage people to think and argue about it,” he says. “That’s really the heart of what a university is supposed to do. Lombar is largely an eponymous figure, but he really set the agenda that we continue to follow as educators.” — A.R.

Rubenstein nevertheless describes it as an essential manuscript. “I think there’s also kind of a real beauty to the book and its attempt to bring all knowledge together, to systemize it and to encourage people to think and argue about it,” he says. “That’s really the heart of what a university is supposed to do. Lombar is largely an eponymous figure, but he really set the agenda that we continue to follow as educators.” — A.R.

Rubenstein nevertheless describes it as an essential manuscript. “I think there’s also kind of a real beauty to the book and its attempt to bring all knowledge together, to systemize it and to encourage people to think and argue about it,” he says. “That’s really the heart of what a university is supposed to do. Lombar is largely an eponymous figure, but he really set the agenda that we continue to follow as educators.” — A.R.

Rubenstein nevertheless describes it as an essential manuscript. “I think there’s also kind of a real beauty to the book and its attempt to bring all knowledge together, to systemize it and to encourage people to think and argue about it,” he says. “That’s really the heart of what a university is supposed to do. Lombar is largely an eponymous figure, but he really set the agenda that we continue to follow as educators.” — A.R.

Rubenstein nevertheless describes it as an essential manuscript. “I think there’s also kind of a real beauty to the book and its attempt to bring all knowledge together, to systemize it and to encourage people to think and argue about it,” he says. “That’s really the heart of what a university is supposed to do. Lombar is largely an eponymous figure, but he really set the agenda that we continue to follow as educators.” — A.R.

Rubenstein nevertheless describes it as an essential manuscript. “I think there’s also kind of a real beauty to the book and its attempt to bring all knowledge together, to systemize it and to encourage people to think and argue about it,” he says. “That’s really the heart of what a university is supposed to do. Lombar is largely an eponymous figure, but he really set the agenda that we continue to follow as educators.” — A.R.

Rubenstein nevertheless describes it as an essential manuscript. “I think there’s also kind of a real beauty to the book and its attempt to bring all knowledge together, to systemize it and to encourage people to think and argue about it,” he says. “That’s really the heart of what a university is supposed to do. Lombar is largely an eponymous figure, but he really set the agenda that we continue to follow as educators.” — A.R.

Rubenstein nevertheless describes it as an essential manuscript. “I think there’s also kind of a real beauty to the book and its attempt to bring all knowledge together, to systemize it and to encourage people to think and argue about it,” he says. “That’s really the heart of what a university is supposed to do. Lombar is largely an eponymous figure, but he really set the agenda that we continue to follow as educators.” — A.R.

Rubenstein nevertheless describes it as an essential manuscript. “I think there’s also kind of a real beauty to the book and its attempt to bring all knowledge together, to systemize it and to encourage people to think and argue about it,” he says. “That’s really the heart of what a university is supposed to do. Lombar is largely an eponymous figure, but he really set the agenda that we continue to follow as educators.” — A.R.

Rubenstein nevertheless describes it as an essential manuscript. “I think there’s also kind of a real beauty to the book and its attempt to bring all knowledge together, to systemize it and to encourage people to think and argue about it,” he says. “That’s really the heart of what a university is supposed to do. Lombar is largely an eponymous figure, but he really set the agenda that we continue to follow as educators.” — A.R.

Rubenstein nevertheless describes it as an essential manuscript. “I think there’s also kind of a real beauty to the book and its attempt to bring all knowledge together, to systemize it and to encourage people to think and argue about it,” he says. “That’s really the heart of what a university is supposed to do. Lombar is largely an eponymous figure, but he really set the agenda that we continue to follow as educators.” — A.R.

Rubenstein nevertheless describes it as an essential manuscript. “I think there’s also kind of a real beauty to the book and its attempt to bring all knowledge together, to systemize it and to encourage people to think and argue about it,” he says. “That’s really the heart of what a university is supposed to do. Lombar is largely an eponymous figure, but he really set the agenda that we continue to follow as educators.” — A.R.

Rubenstein nevertheless describes it as an essential manuscript. “I think there’s also kind of a real beauty to the book and its attempt to bring all knowledge together, to systemize it and to encourage people to think and argue about it,” he says. “That’s really the heart of what a university is supposed to do. Lombar is largely an eponymous figure, but he really set the agenda that we continue to follow as educators.” — A.R.

Rubenstein nevertheless describes it as an essential manuscript. “I think there’s also kind of a real beauty to the book and its attempt to bring all knowledge together, to systemize it and to encourage people to think and argue about it,” he says. “That’s really the heart of what a university is supposed to do. Lombar is largely an eponymous figure, but he really set the agenda that we continue to follow as educators.” — A.R.

Rubenstein nevertheless describes it as an essential manuscript. “I think there’s also kind of a real beauty to the book and its attempt to bring all knowledge together, to systemize it and to encourage people to think and argue about it,” he says. “That’s really the heart of what a university is supposed to do. Lombar is largely an eponymous figure, but he really set the agenda that we continue to follow as educators.” — A.R.
American Sutra had been targeted because of his prominent position in the local cultures and American studies and ethnicity at USC Dornsife. "We were told that because of our work, we would be targeted by the U.S. government and army officials of this period," Williams said.

As a majority Buddhist community in a predominantly Christian country, the American citizens, Williams notes, were refused entry to the United States. However, they persisted in their practice of Buddhism, and ironically, the American values they espoused were new modes of survival.

“When I was growing up in Los Angeles, I had a realization that my father had been interned, and my grandfather’s father had been interned, but no one else knew about it,” Williams said. “It wasn’t talked about.”

In addition to race, religion played a major role in the internment of Japanese Americans — and not German Americans or Italian Americans — into internment camps, Williams’ research reveals another significant factor.

“In addition to race, religion played a major role in the assessment by U.S. government and army officials of this period,” Williams said. “It wasn’t talked about.”

Pressing concerns, including recent political upheaval and developments and cultural shifts.

“From the time of World War II to the present day, the history of the internment of Japanese Americans has been studied extensively by historians and sociologists," Williams said. “But until now, no one has looked at the role of religion in this context.”

Thinking in the Past Tense: Eight Conversations
Sophia Tuttle (Ph.D., Columbia University, 1980)
Victor A. Meeker (B.A., history, ’79)
Victor A. Meeker (B.A., history, ’79)
Victor A. Meeker (B.A., history, ’79)
Victor A. Meeker (B.A., history, ’79)
Victor A. Meeker (B.A., history, ’79)
Does the family make us happy? It depends. Tolstoy wrote, “Each unhappy family is unhappy in its own way.” But happy families are unique, too, and no family ever manages to abide in perpetual happiness or constant despair.

Here’s what we know from the research: Families matter to well-being. Stable family relationships protect us from stress and promote health. Married people live longer than single people, and social isolation carries a greater public health toll than smoking, obesity and alcoholism. Stress hormones react less intensely to threat when a partner is nearby. Holding hands with a spouse or parent dampens the brain’s response to electric shock. At the same time, relationship conflict taxes the body. Partners heal more slowly from injuries after arguing with their spouse. Heart attacks spike following a divorce. Bringing home a baby creates greater upheaval in life satisfaction than unemployment or bereavement. The effects of adverse family relationships can be enduring. Children raised in unhappy families show more diabetes, heart disease and mental health problems in late life.

In short, the family can serve both as a haven from outside storms and a tempest that rages within its own walls.

No two families are the same. One person might name just their partner as “chosen family,” while others live in multigenerational households or families formed and reformed by adoption, divorce and remarriage. However, families typically live together, pool resources, share ties of kinship, obligation and commitment, and coordinate their language, emotions and behaviors. Other social groups also exhibit these characteristics, but rarely with the same intensity or duration. Family members therefore have greater potential to get under each other’s skin, literally and figuratively. For children, the family environment also has primacy; that is, the family typically constitutes the first social environment into which a child emerges and offers a template for the larger world.

Trends in migration, housing and social change have shrunk the average household size, meaning fewer extended family members to help care for the elderly and raise the next generation. Most families now consist of two wage earners, but our institutions lag behind: The United States is one of the few industrialized nations without paid family leave or universal child care. Public systems and policies can affect families deeply in sectors ranging from incarceration, immigration, health care and education, making the personal political.

USC Dornsife recently awarded seed funding to our faculty working group on the Changing Family to explore these issues and others. Comprising faculty from psychology, sociology, social work, gerontology, medicine, English and law, we trace the impact of stress within a family context on health outcomes that range from obesity to preterm birth to dementia. We use diverse methodological and statistical tools, and our research extends across the life span, from infants to adolescents, newlyweds to retirees.

We plan to collaborate on research and public outreach to the media, policymakers and to families themselves, seeking our own answers to the question of when and how families make us happy.

Learn more about the USC Center for the Changing Family here: dornsife.usc.edu/labs/usc-ccf/
Emergency Room: The Novel of a Family Affair


His students went on to obtain coveted faculty positions in top-tier research universities and medical schools, including departmental chairs. Mike’s intellectual and creative powers were, in National Institutes of Health parlance, “outstanding.”

“I was a biochemist of the first rank,” said Mynon Goodman, professor of biological sciences.

“His students went on to obtain coveted faculty positions in top-tier research universities and medical schools, including departmental chairs. Mike’s intellectual and creative powers were, in National Institutes of Health parlance, “outstanding.”

“I was a biochemist of the first rank,” said Mynon Goodman, professor of biological sciences.

“His students went on to obtain coveted faculty positions in top-tier research universities and medical schools, including departmental chairs. Mike’s intellectual and creative powers were, in National Institutes of Health parlance, “outstanding.”

“I was a biochemist of the first rank,” said Mynon Goodman, professor of biological sciences.

“His students went on to obtain coveted faculty positions in top-tier research universities and medical schools, including departmental chairs. Mike’s intellectual and creative powers were, in National Institutes of Health parlance, “outstanding.”

“I was a biochemist of the first rank,” said Mynon Goodman, professor of biological sciences.

“His students went on to obtain coveted faculty positions in top-tier research universities and medical schools, including departmental chairs. Mike’s intellectual and creative powers were, in National Institutes of Health parlance, “outstanding.”

“I was a biochemist of the first rank,” said Mynon Goodman, professor of biological sciences.

“His students went on to obtain coveted faculty positions in top-tier research universities and medical schools, including departmental chairs. Mike’s intellectual and creative powers were, in National Institutes of Health parlance, “outstanding.”

“I was a biochemist of the first rank,” said Mynon Goodman, professor of biological sciences.

“His students went on to obtain coveted faculty positions in top-tier research universities and medical schools, including departmental chairs. Mike’s intellectual and creative powers were, in National Institutes of Health parlance, “outstanding.”

“I was a biochemist of the first rank,” said Mynon Goodman, professor of biological sciences.

“His students went on to obtain coveted faculty positions in top-tier research universities and medical schools, including departmental chairs. Mike’s intellectual and creative powers were, in National Institutes of Health parlance, “outstanding.”

“I was a biochemist of the first rank,” said Mynon Goodman, professor of biological sciences.

“His students went on to obtain coveted faculty positions in top-tier research universities and medical schools, including departmental chairs. Mike’s intellectual and creative powers were, in National Institutes of Health parlance, “outstanding.”

“I was a biochemist of the first rank,” said Mynon Goodman, professor of biological sciences.

“His students went on to obtain coveted faculty positions in top-tier research universities and medical schools, including departmental chairs. Mike’s intellectual and creative powers were, in National Institutes of Health parlance, “outstanding.”

“I was a biochemist of the first rank,” said Mynon Goodman, professor of biological sciences.

“His students went on to obtain coveted faculty positions in top-tier research universities and medical schools, including departmental chairs. Mike’s intellectual and creative powers were, in National Institutes of Health parlance, “outstanding.”

“I was a biochemist of the first rank,” said Mynon Goodman, professor of biological sciences.

“His students went on to obtain coveted faculty positions in top-tier research universities and medical schools, including departmental chairs. Mike’s intellectual and creative powers were, in National Institutes of Health parlance, “outstanding.”

“I was a biochemist of the first rank,” said Mynon Goodman, professor of biological sciences.

“His students went on to obtain coveted faculty positions in top-tier research universities and medical schools, including departmental chairs. Mike’s intellectual and creative powers were, in National Institutes of Health parlance, “outstanding.”

“I was a biochemist of the first rank,” said Mynon Goodman, professor of biological sciences.

“His students went on to obtain coveted faculty positions in top-tier research universities and medical schools, including departmental chairs. Mike’s intellectual and creative powers were, in National Institutes of Health parlance, “outstanding.”

“I was a biochemist of the first rank,” said Mynon Goodman, professor of biological sciences.

“His students went on to obtain coveted faculty positions in top-tier research universities and medical schools, including departmental chairs. Mike’s intellectual and creative powers were, in National Institutes of Health parlance, “outstanding.”

“I was a biochemist of the first rank,” said Mynon Goodman, professor of biological sciences.

“His students went on to obtain coveted faculty positions in top-tier research universities and medical schools, including departmental chairs. Mike’s intellectual and creative powers were, in National Institutes of Health parlance, “outstanding.”

“I was a biochemist of the first rank,” said Mynon Goodman, professor of biological sciences.

“His students went on to obtain coveted faculty positions in top-tier research universities and medical schools, including departmental chairs. Mike’s intellectual and creative powers were, in National Institutes of Health parlance, “outstanding.”

“I was a biochemist of the first rank,” said Mynon Goodman, professor of biological sciences.

“His students went on to obtain coveted faculty positions in top-tier research universities and medical schools, including departmental chairs. Mike’s intellectual and creative powers were, in National Institutes of Health parlance, “outstanding.”

“I was a biochemist of the first rank,” said Mynon Goodman, professor of biological sciences.

“His students went on to obtain coveted faculty positions in top-tier research universities and medical schools, including departmental chairs. Mike’s intellectual and creative powers were, in National Institutes of Health parlance, “outstanding.”

“I was a biochemist of the first rank,” said Mynon Goodman, professor of biological sciences.
Fall 2019 / Winter 2020 | 344

President Folt

Carol L. Folt was formally inaugurated as USC’s 12th president on Sept. 20.

“Working as Trojans together, there are no limits on the power of change that we have.”

TROJAN COMMUNITY

COFFEE AND CONVERSATION

And a little breakfast, too.

USC Dornsife Dean Amber D. Miller welcomed Trojan Family Weekend attendees to a morning reception on Nov. 1 on the University Park campus’ Pardee Lawn.

The breakfast kicked off day two of the annual four-day event in which parents and family members immersed themselves in Trojan culture. Attendees heard USC President Carol L. Folt speak, listened to faculty presentations, attended classes, cheered the Trojan football team and, most important, connected with their student.
Life Moment

INAUGURATION OF USC’S 12TH PRESIDENT, CAROL L. FOLT

PHOTO BY GUS RUELAS