A SHOT IN THE DARK

Mark Trodden’s Scientific Imagination Reshapes Our Understanding of the Universe

FACULTY PERSPECTIVES ON THE CIVIL WAR’S LEGACY

LATIN AMERICAN MUSICIANS AND CULTURAL EXPECTATIONS

MAIL-ORDER BRIDES AS AN ISSUE OF NATIONAL SECURITY

SPRING/SUMMER 2011
University of Pennsylvania School of Arts and Sciences
12 A SHOT IN THE DARK
Mark Trodden’s Scientific Imagination Reshapes Our Understanding of the Universe
by Blake Cole

16 150 YEARS LATER
Faculty Perspectives on the Civil War’s Lasting Legacy

10 FACULTY OPINION
A Better Way to Reduce Illegal Mexican Immigration
Why the Restrictionists Are Wrong About Birthright Citizenship
by Rogers M. Smith

20 FOREIGN AFFAIRS
Grad Student Explores Why Mail-Order Brides Have Become an Issue of National Security
by Priya Ratneshwar

22 RIFFING ON IDENTITY
Jairo Moreno Examines the Impact of Cultural Expectations on Latin American Musicians
by Katy June-Friesen

26 WITH CLASS—TEACHING & LEARNING
Power Analysis
Calculating the Future of Energy, Oil and Global Warming
Q&A: Core Lessons

28 MOVERS & QUAKERS
A Labor of Love

29 LAST LOOK
Symmetry

SPECIAL INSERT
PENN STARTS HERE
Making History in the Arts & Sciences
Dean’s Column

Faculty Matters
by Dean Rebecca W. Bushnell

One of the most challenging and rewarding parts of my job as dean is helping to shape the faculty of the School of Arts and Sciences. The important first step is deciding the areas in which we want to search for new faculty and then approving new appointments. The challenge of the job is that, simply, we do not have the resources to hire everyone we would like to bring here. (In any given year, I receive three times the recruiting requests from departments than the School can afford—and they are mostly great suggestions.) Because every new appointment matters so much, the task of making strategic decisions about the faculty must be collaborative, engaging the current faculty in a conversation about their priorities for their research and teaching, and for the needs of SAS overall. Herein lies the reward—the privilege of working with the School’s extraordinary community of teacher-scholars.

Becoming a faculty member in SAS is no small feat because we ask a lot of our professors. We expect them to have highly productive research programs—whether they’re physicists in their labs or humanists working on medieval manuscripts. Sometimes that research takes place in labs or libraries here on campus, but you will also find our faculty in the field around world, from archives in China to the jungles of Costa Rica. Each of them must also teach graduate and undergraduate students, where teaching means much more than just time spent in the classroom. One loses count of the hours devoted to preparation, grading, lab supervision and office hours, as well as to the mentoring of research and careers that can last long after a student leaves Penn. We also expect faculty to take a role in making the School run, including chairing departments and programs, serving on committees and actively engaging in service at Penn and in their professional organizations. The faculty must and do take responsibility for overseeing the rigor of the School’s curriculum and academic policies.

Our high expectations and constrained resources conspire to make shaping the faculty one of the most intellectually demanding activities the School pursues. What guides that process? I always say I have two rules that inform all decisions about hiring: one, we don’t hire people who can’t teach; and two, we don’t hire people who can do only one thing—that is, we must hire people with the intellectual breadth and vision to connect across the School and University.

Consequently we look for faculty whom we can appoint in areas where we have the highest student need and where they can have the greatest impact on education, for example, in political science and economics, our most popular majors right now. We seek professors who are research pioneers—evidenced by a proven track record or by exciting potential—who can not only advance a single discipline, but also stride confidently across disciplinary boundaries to address emerging questions. For instance, we recently hired a new faculty member who works in the history and sociology of medicine in South Asia. We also make sure to recruit faculty who can help lead the School and will reach out to the Penn community. And finally we want to make sure that the diversity of the School of Arts and Sciences faculty is comparable to that of our exceptional student body. Having a multiplicity of backgrounds and perspectives represented vitally enriches teaching and research and fosters a community of scholars that reflects the full scope of human experience.

In short, we are looking for faculty who resemble some of our current stars: people like Sharon Thompson-Schill, a brilliant neuroscientist who is currently directing the University’s Center for Cognitive Neuroscience while also serving as the undergraduate chair of the psychology department; or Devesh Kapur in political science, who leads the Center for the Advanced Study of India and is also an inspirational teacher; and Peter Struck in classical studies, a scholar of Greek literature and culture who is renowned for his teaching both online and in the classroom and who directs the University’s Benjamin Franklin Scholars program. These are just a few of the people on whom I rely to help me take the School forward in the next decade.

I hope the stories in this magazine highlighting our amazing faculty help you to get to know them as I do—brilliant, diligent and tirelessly committed to their students, the School and to advancing the frontiers of knowledge.
Twenty students from the College of Arts and Sciences, the College of Liberal and Professional Studies, and the Graduate Division were recognized as 2011 Dean’s Scholars at this year’s Levin Family SAS Dean’s Forum. This honor is presented annually to SAS students who exhibit exceptional academic performance and intellectual promise.

—PR

**College of Arts and Sciences**

- Ioana Aron (Chemistry)
- Ilana Cohen (Philosophy and English)
- Lauren Kapsalakis (Anthropology)
- Kathryn Llewellyn (Communication and Sociology)
- Eileen Moison (Biochemistry and Accounting)
- Benjamin Moskowitz (Philosophy, Politics and Economics)
- Daniel Shiff (Philosophy)
- Jessica Wetstone (Logic, Information and Computation)
- Doyle Yuan (Biochemistry and Biophysics)

**College of Liberal and Professional Studies — Undergraduate Program**

- Molly O’Neill (English)

**Professional Master’s Programs**

- Inam Ur-Rahman (Master of Science in Organizational Dynamics)

**Graduate Division — Doctoral Programs**

- Joanne Baron (Anthropology)
- Ashley Cohen (English)
- Matt Handelman (German)
- Erin Kelley (History of Art)
- Darien Lamen (Music)
- Jisun Lee (Chemistry)
- Joanna Radin (History and Sociology of Science)
- Eli Tsukayama (Psychology)
- Bradford Reed Winegar (Philosophy)
According to the World Health Organization, one in eight people in the world lack safe drinking water. It’s a crisis that the School of Arts and Sciences Student Sustainability Advisory Board (SSAB) is meeting head-on with a $5,000 fundraising campaign supporting A Drink for Tomorrow (ADFT), a non-profit organization dedicated to bringing clean water to communities around the world. The money will go toward ADFT’s project in Medinipur Province, India, to build a well and implement a sanitation education program at the Ajaya Girls School.

This past January, the SSAB kicked off the campaign by hosting a campus panel that included ADFT and The Philadelphia Global Water Initiative (PGWI), a regional organization that has water experts on the ground around the globe. PGWI was co-founded by Stanley Laskowski, a lecturer in the Department of Earth and Environmental Science.

“The campus panel grew out of the idea that these groups would be a source of inspiration for the students and a perfect match for Penn’s ‘Year of Water’ theme,” says Sara King, who is projects manager in SAS Facilities Planning & Operations and volunteers as the School’s sustainability coordinator.

On hand to moderate was SSAB member Rosaline Zhang, a freshman in the Vagelos Scholars Program in Molecular Life Sciences. “I was always really interested in sustainability and the environment,” Zhang says. “In high school I involved my family in a composting project.”

SSAB hosted other fundraising efforts throughout the spring semester, such as pretzel and beverage sales on Locust walk, a letter writing campaign, a raffle, and a happy hour from which a portion of sales went toward the campaign. The organization reached its goal and was preparing to send the funds to India in May.

“These organizations show us that you don’t have to wait for some magical thing to happen before you act,” says Ramin Sedehi, Vice Dean for Finance and Administration and the School’s Chief Financial Officer. “You can just take on a project and go out there and do it.”

—BC

Kaja Silverman, the Katherine Stein Sachs (CW’69) and Keith L. Sachs (W’67) Professor of Art History, has received the Andrew W. Mellon Foundation Distinguished Achievement Award in recognition of her exemplary contributions to humanistic scholarship. She will receive a $1.5 million dollar award to be used over approximately six years in support of her scholarly pursuits as a visual theorist. The prize is one of the most prestigious given to scholars in the humanities.

Silverman received her Ph.D. from Brown University. Her research encompasses film, photography, art, psychoanalysis, literature and feminist theory. She is the author of eight books, including the widely acclaimed *Flesh of My Flesh*, and in 2008 she was awarded the Guggenheim Fellowship. Silverman is currently writing a book about photography titled *The Miracle of Analogy*.

“This award is a fitting recognition,” says Rebecca Bushnell, Dean of the School of Arts and Sciences. “Kaja’s scholarship is truly remarkable for its breadth and creativity, and she energizes discourse across the humanities.”

—BC
School of Arts and Sciences faculty claimed all four of the 2011 Lindback Awards for Distinguished Teaching given in the non-health schools. The award is Penn’s highest teaching honor. Recipients included Sarah Barringer Gordon, Professor of History and Arlin M. Adams Professor of Constitutional Law in the Law School; Scott Poethig, Patricia M. Williams Term Professor of Biology; Jean-Michel Rabaté, Vartan Gregorian Professor in the Humanities and Professor of English and Comparative Literature; and Greg Urban, Arthur Hobson Quinn Professor of Anthropology.

Urban, along with Catriona MacLeod, Associate Professor and Chair of Germanic Languages and Literatures, also won this year’s Ira H. Abrams Memorial Award for Distinguished Teaching—the School of Arts and Sciences’ highest teaching honor. Urban, author of *Metaculture: How Culture Moves Through the World*, teaches cultural and linguistic anthropology. MacLeod is an expert on 18th- and 19th-century German literature, aesthetics and film studies.

Other faculty who were recognized this year by SAS for their teaching include Professor of Physics Paul Heiney, who won the Dean’s Award for Innovation in Teaching; Professor of Physics Alan T. Johnson, who won the Dean’s Award for Mentorship of Undergraduate Research; Andreea Nicoara, Assistant Professor of Mathematics, who received the Dean’s Award for Distinguished Teaching by an Assistant Professor; Jennifer Heerding, Associate Director of the Biological Basis of Behavior Program, who received the Dean’s Award for Distinguished Teaching by Affiliated Faculty; and Rudra Sil, Associate Professor of Political Science, and Edward Dixon, technology director for the Penn Language Center and lecturer in German language and culture, who both received the LPS Distinguished Teaching Award.

Other SAS recipients of the University’s 2011 teaching awards include Paul Guyer, Florence R. C. Murray Professor in the Humanities and Professor of Philosophy, who received the Provost’s Award for Distinguished Ph.D. Teaching and Mentoring; and Rebecca Stein, Director of the Microeconomic Principles Program and senior lecturer in the Department of Economics, who was awarded the Provost’s Award for Teaching Excellence by Non-Standing Faculty.

—BC
Several School of Arts and Sciences alumni and faculty were among the 2011 Pulitzer Prize winners and finalists.

Jennifer Egan, C’85, was awarded the 2011 Pulitzer Prize for Fiction for her fourth novel, *A Visit From the Goon Squad*, an examination of an aging record executive who becomes caught up in the digital age. The novel, which won the 2011 National Book Critics Circle Award in Fiction, utilizes a unique framework that weaves technology-based formats into the narrative.

Stephanie McCurry, Merriam Term Professor of History and undergraduate curriculum chair, was a finalist for the Pulitzer Prize for History for her book *Confederate Reckoning: Power and Politics in the Civil War South*. She is a specialist in 19th-century American history, the American South and the Civil War era. Alan Schwarz, C’90, a *New York Times* sportswriter, was a finalist for the 2011 Public Service Pulitzer for his coverage of head trauma in football and other sports, which led to renewed debate on safety standards and medical outcomes. Ricardo Zohn-Muldoon, G’91, GR’93, was a finalist for the Pulitzer Prize for Music for *Comala*, a cantata that pays homage to the novel *Pedro Páramo* by Mexican author Juan Rulfo.

—BC

Eight College of Arts and Sciences students were among this year’s Marshall Scholarship and Thouron Award winners. Both of these prestigious awards fund graduate studies in the United Kingdom. Marshall Scholar Kristin Hall graduated in 2011 through the Huntsman Program in International Studies and Business, receiving a B.A. in international studies from the College and a B.S. in economics from the Wharton School, as well as a minor in mathematics. She plans to study financial and development economics at Oxford University.

Seven students received 2011 Thouron Awards. Grace Ambrose, C’11, a history of art major and creative writing minor, plans to study curation. Sourav Bose, C’11, W’11, graduated from the Roy and Diana Vagelos Program in Life Sciences and Management and plans to study global health science. Nimit Jain, C’11, W’11, graduated with a B.A. in science, technology and society and a B.S. in economics, and he intends to study information, communication and social science. Aaron Levy, C’11, G’11, earned a B.A. and an M.A. in physics and will study applied mathematics. Recent alum Julia Luscombe, C’10, W’10, plans to study local and international development. Rachel Romeo, C’11, a psychology and linguistics major, intends to study language sciences, and speech, language and cognition. English major Valeria Tsygankova, C’11, will study the history of the book.

—PR
No one likes a hypocrite, or so the saying goes, but hypocrisy has never been so glaring as it is today. It has become part of pop culture to expose self-contradiction. Cable news networks and programs like The Daily Show place contradictory political remarks side-by-side on a nightly basis, pointing out instances of hypocrisy to great effect. What if there were a scientific explanation? Associate Professor of Psychology Robert Kurzban’s most recent book, Why Everyone (Else) Is a Hypocrite: Evolution and the Modular Mind, applies evolutionary insights to this all-too-human behavior. Kurzban argues that the mind does not function as a single unit, but instead a collection of adaptations—“modules”—customized to take over when a given situation arises.

“The reason smart phones are smart is not because of some single killer app,” he explains, “but because they bundle together a bunch of useful niche applications. The brain works in the same way, and for this reason it is capable of simultaneously housing opposing views. Take optical illusions, for instance. While decoding them we are able to register multiple visual ‘truths’ in reference to a single physical entity.”

How does this phenomenon apply to social situations—and what advantage could possibly come of self-contradiction? Kurzban cites a study in which college professors were asked to rate their own teaching ability. Ninety-four percent of the participants rated themselves above average, while another 68 percent said they would place themselves in the top quarter—an impossible ratio. But whether true or false, Kurzban says, a belief can be useful in persuading others to agree with your point of view.

Modules are also responsible for prompting us to pass judgment on those seeking to oppose our value systems. “We’re intuitive moralizers, even as children,” Kurzban says. “Moralistic modules identify potential offenders and attempt to punish them. On their most basic level, these modules are sticks, poised over others, ready for use when someone breaks a rule.”

While we are eager to reveal the hypocrisy of others, however, we are usually blind to our own. Kurzban says it’s a classic example of our modules at war with one another: “If we were aware of our own inconsistencies, we might tip off other people about our own hypocrisy. We’re actually better off not noticing.”

—BC
An international collaboration led by Virgil Percec, P. Roy Vagelos Professor of Chemistry, and Daniel Hammer of Penn Engineering developed a library of new synthetic biomaterials that show potential to be a superior mode of drug delivery. They were created from a class of organic molecules named Janus dendrimers, so-called because their amphipathic structure (hydrophobic on one side and hydrophilic on the other) is reminiscent of Janus, the Roman god of time often depicted with two heads facing in opposite directions.

Percec’s group synthesized more than 100 Janus dendrimers and immersed them into water. The molecules self-assembled into a family of supramolecular vesicles—dubbed “dendrimersomes”—in the form of bubbles, tubes, disks and other shapes. In a paper published in Science last summer, the researchers provide the first description of the preparation, structure, assembly and mechanical properties of these novel nanostructures. “The big surprise,” Percec says, “was how quickly and easily the dendrimers spontaneously formed uniformly sized vesicles when injected into water.”

Dendrimersomes have endless possibilities in the area of drug delivery—a major clinical challenge. Many drugs are so small that they are cleared by the kidneys; enclosing them in stable vesicles would allow them to stay in the body long enough to be effective. Gene therapy also relies on vesicles because naked DNA would be digested by enzymes before it could become incorporated into the chromosomes it is destined to fix.

To date, synthetic vesicles have been made from polymers or lipids. However, these vesicles are quite laborious to make, and the process usually yields a mixture of different sizes that Percec notes are not likely to receive FDA approval. Additionally liposomes tend to be unstable and short-lived, and polymersome membranes are too thick to be biocompatible. Because they are stable for longer periods of time, are highly uniform in size and mimic natural cell membranes, dendrimersomes could be more broadly useful for delivering drugs and other substances than these competing technologies for nanoparticle delivery.

Dendrimersomes have the potential to deliver a wide variety of useful molecules to cells—not only drugs, but also nucleic acids, proteins, gene therapy, diagnostic compounds and imaging agents. Additionally, their amphipathic nature could enable the delivery of cocktails of drugs with different properties—rather than requiring specific delivery systems for each drug—and they have unique properties that allow them to be almost infinitely customizable. The challenge now for researchers is using dendrimersomes to make precise molecular vehicles that can function as safe biological carriers of their precious freight.

—Diana Gitig, C’94
What happens to the arts in a society that is becoming ever more virtual? According to Wendy Steiner, the Richard L. Fisher Professor of English, the arts, conversely, become increasingly focused on the real.

In her latest book, *The Real Real Thing: The Model in the Mirror of Art*, Steiner suggests the Internet’s blurring of the lines between reality and fantasy, increased media saturation and technologies like bioengineering are paradoxically leading artists to search for the elusive “real real thing.” That real thing, she says, is embodied in the artist’s model.

“This blurring of the boundary between the real and the virtual is focusing attention on the model, that is, whatever is real—whatever is represented in works of art,” she says. “This is the opposite of what was going on through much of the past century when works of art were trying to accentuate their difference from reality very strongly.”

In her book, which was published by the University of Chicago Press last November, Steiner explores what models and modeling have meant in the arts. Her diverse examples range from ancient stories like the Greek myth of Pygmalion to novels like J. M. Coetzee’s *Diary of a Bad Year* to reality shows and musicals like “America’s Next Top Model” and “Hairspray.” If studio models were a hallmark of classicism, she explains, they were used much less frequently by avant-garde modernists, who preferred abstraction, surrealism and self-referential form. Representation reappeared in the 1960s with Pop Art and the rise of supermodels and celebrity artists like Bob Dylan. Art’s focus on phenomena that lie outside it has escalated in a 21st century fascinated with memoirs, documentaries and other forms of aesthetic “truth-telling.”

“Representation,” says Steiner, “is our only access to much that counts as real.” 

“At a time when virtually everything is virtual,” she writes, “art is attempting—earnestly, bemusedly, wryly—to return us to the real.” A photography exhibit on “the disappeared” in Latin America uses portraiture to underline the reality of those missing. Pseudo-histories like *The Da Vinci Code* ask readers to consider what is truth and what is fiction. The sculpture “Three Soldiers” counters the stark abstraction of the nearby Vietnam Veterans Memorial with a realistic portrayal of disheveled servicemen. YouTube, Facebook and blogs make everyone a model and place celebrity within reach of so-called real people.

Steiner’s book forms a loose trilogy with two of her previous works: *The Scandal of Pleasure: Art in an Age of Fundamentalism* (1995), in which she argued that art’s very virtuality—its separation from reality—defended it from censorship, and *Venus in Exile: The Rejection of Beauty in Twentieth-Century Art* (2001), in which she explored beauty as an interactive notion in art. She says this third volume focusing on reality doesn’t contradict the virtuality she explored in *Scandal*. “Art is by definition virtual,” Steiner says. “The challenge when lived experience is so permeated with the virtual is to work out an understanding of the changed relationship between the two.”

—Tracey Quinlan Dougherty, G’03
Homeowners are reeling in the wake of the recent housing slump, searching for answers to their depreciation woes. But what if the value of one’s home—even the probability of one’s chances of owning a home in the first place—goes far beyond the oft-cited “location, location, location?” A scholar of racial and ethnic stratification, Assistant Professor of Sociology Chenoa Flippen has been conducting research on how social structure affects homeownership.

In a paper recently published in the journal *Demography*, Flippen used nationally representative data to investigate the impact of residential segregation, as well as new demographic shifts due to internal migration, on black and Hispanic homeownership. “Residential segregation,” Flippen concluded, “is always bad,” resulting in decreased home values as well as poverty. Homeownership, she explains, is strongly related to neighborhood quality because it confers benefits that lead to more stable communities. “In the U.S., homeownership historically has been promoted and has become a very important investment,” Flippen says. “It’s a hedge against inflation, a tax-favored form of savings, and comes with associated benefits like better quality schooling.” If minorities are systematically less likely to achieve homeownership, they get caught in a vicious cycle that undermines upward mobility.

The impact of recent demographic shifts—such as Hispanics moving to the Southeast and Midwest or the migration of African Americans back to southern cities like Atlanta—is more varied. In comparing Chicago, Atlanta and Phoenix housing markets, Flippen found that blacks were more likely to own a home in Atlanta than in Chicago—the former being cheaper and less segregated than the latter. However they were not more likely to own a home in Phoenix, even though it too is a cheaper and less segregated housing market.

A new destination like Phoenix, Flippen says, is not beneficial to black homeownership because it lacks the benefits of an established co-ethnic community, such as lenders and realtors who will target homeownership services toward that community. But a city like Atlanta has neighborhoods, banks and networks of real-estate professionals that have long been open to black homebuyers. Flippen is especially concerned about the detrimental effect of new destinations on Hispanic homeownership.

“They’re moving to places that are less segregated but where there’s no established Hispanic population,” she says. “When you consider language and other cultural barriers in those places, you can expect Hispanic homeownership to take a hit or at least to experience a drag.”

Flippen is currently working on research aimed at quantifying factors contributing to the enormous racial gap in wealth in the U.S. In 2001, for example, the median white family had accumulated assets about 10 times that of the median black family—and the inequality is growing. Homeownership discrepancy is a primary factor. “Over a lifetime, the homeowner has a lot more money than the renter because they’ve been paying themselves for part of that time,” Flippen says. “When they pass that money onto their heirs, it just exacerbates the inequality in subsequent generations.”

Working with data collected on Hispanic communities in Durham, N.C., Flippen identified additional factors, including predatory lending to immigrant populations, fueled, in part, by their lack of access to financial services; the lower wages that result from employers’ use of subcontracting, which diverts part of workers’ wages to intermediaries; and outright wage theft, where workers are either not paid at all or are paid less than the previously agreed upon wage. Undocumented workers are especially vulnerable to these problems because they have almost no legal recourse.

“The simple explanation is that poor people are poor because they don’t earn a lot,” Flippen says, “but what many people don’t realize is how leaky the bucket is. You have a population that’s really balanced on the knife’s edge; it’s very important to try and figure out what, if anything, we can do so these families and communities are more stable.”

—BC
A BETTER WAY TO REDUCE ILLEGAL MEXICAN IMMIGRATION

WHY THE RESTRICTIONISTS ARE WRONG ABOUT BIRTHRIGHT CITIZENSHIP

BY ROGERS M. SMITH

Early in 2011 a group called State Legislators for Legal Immigration, founded by Pennsylvania State Rep. Daryl Metcalfe, proposed two model state laws. One declares that children of parents who immigrated illegally are not born “subject to the jurisdiction” of the U.S. and so are not birthright citizens under the 14th Amendment. The other authorizes two types of state birth certificates, one for those born “subject to the jurisdiction” of the U.S. and one for all others. Rep. Steven King of Iowa also introduced a new federal bill, one of many in the last two decades, which would eliminate birthright citizenship when both parents are illegal immigrants.

Because Section 5 of the 14th Amendment gives Congress the authority to enforce the amendment and its Section 1 “Citizenship Clause,” the states have no power to enact the first law. In a 1985 book written with Yale Law professor Peter Shuck, I suggested that Congress does have the power to pass such laws. Most current proposals rely on our constitutional interpretation—which most scholars have rejected.

But I have long viewed the constitutional debate as moot because as a matter of policy, revoking birthright citizenship is a bad idea. It would probably increase, not reduce, the presence of illegal immigrants in the U.S. since more children born here would not be citizens. Politically, these proposals cannot succeed. This Senate and president will never support them, and the courts would strike down any such national and state laws. Most proponents of these bills know these facts. Still, they hope that by sending hostile signals to illegal aliens, they can persuade many to leave.

Those hostile signals are directed chiefly at Mexican immigrants—as shown by the Arizona Legislature’s recent actions, not only against illegal aliens, but also against Chicano studies programs. Mexicans do comprise almost 60 percent of the nation’s undocumented population, for it is primarily Mexicans who have access and motives to enter the U.S. illegally.

Why so? In large part, because the U.S. has treated Mexico in ways that it has treated no other nation, creating potent incentives for Mexicans to move north. Yet U.S. immigration policy treats Mexico identically to all other nations, applying the same per-country cap that it does for countries from which few wish to leave. If the U.S. apportioned many more of its legal immigration admissions to Mexicans, it would do far more to reduce illegal aliens than any change in birthright citizenship. Mexicans would still come, but they would do so legally.

Why should the U.S. privilege Mexicans over other nationals? Precisely because the U.S. has long used its military and economic power to shape Mexico and Mexicans. The result is that many Mexicans have found they cannot live
decant, unless they become part of the country doing so much to make them and their opportunities who and what they are. This story goes to the present, but it begins in 1846, when, partly due to concerns that Mexico had abolished slavery, the U.S. provoked a war—denounced as unjust by Abraham Lincoln and Ulysses Grant—that resulted in America acquiring half of Mexico's territory, including the vast natural resources of California and Texas. No other nation has lost so much land to the U.S. except the Indian tribes, who now all have U.S. citizenship. Mexicans could stay on their conquered lands if they became American citizens. However, few could provide land titles to American courts, so most lost their lands and had to work for U.S.-owned farms, mines and industries. In the late 19th century, in alliance with American leaders, the modernizing Mexican dictator Porfirio Diaz drove many Mexican small farmers off their soil, turning the lands over to American-owned railroads and mining companies, who again employed many of those they helped displace.

Patterns were set: many Mexicans found they could only make a living by working for American companies, often moving north to do so. Throughout the 20th century, American employers in farming, manufacturing and service industries often recruited Mexicans when cheap labor was needed. But they callously supported mass deportations—even of Mexican-American citizens—whenever labor surpluses arose. And Mexicans in the U.S. often suffered from severe discrimination and segregation, despite their desires to work hard and contribute to America. Many therefore had strong senses of their distinct cultural identities, developing a kind of cultural “dual nationality,” American and Mexican. The modern civil rights movement led to bans on legal discrimination against Mexican-Americans as well as African Americans. But since 1996, the U.S. has stripped away many procedural protections against deportation and expanded its often hidden detention centers for suspected immigration law violators, thereby making both Mexicans and Mexican-Americans feel vulnerable again to arbitrary U.S. coercion.

But American employers still want Mexican laborers, and so Mexican workers keep coming. In the last two decades they have increasingly brought their families as well because tougher border enforcement has made it more risky to go back and forth. So heightened enforcement has only increased the numbers of the undocumented.

In sum, U.S. policies have created to our south a large population with strong kinship ties to Mexican-American communities and well-founded beliefs that they have better economic opportunities in northern areas—many once part of Mexico. So they identify with the U.S. as well as Mexico; they immigrate more than any other nation's people; and most are then productive, peaceful residents who seek to retain their cultural identities, like many other Americans, but who are glad to become loyal Americans.

Of course, not all Mexicans fit those descriptions. It is also true that states receiving many immigrants often face special burdens, even as Americans generally benefit from immigrant labor and cultural contributions. But if the U.S. altered its policies to expand opportunities for Mexicans to immigrate to the U.S. lawfully while also providing federal aid to immigrant-receiving states and communities to ease newcomers’ transitions, the results would be a reduced illegal alien population and more domestic peace and prosperity. It may seem unrealistic to advocate these policies at a time of intense opposition to Mexican immigrants. Yet Arizona recently refused to enact new anti-immigrant laws due to pressures from a coalition of immigrant and civil rights groups, unions, churches, and above all, the Chamber of Commerce, who deemed opposition to Mexican immigration bad for the state economy. Though immigration reform is very difficult, it is more likely to succeed if the U.S. heeds these voices rather than those of the new restrictionists.

Rogers M. Smith is the Christopher H. Browne Distinguished Professor of Political Science and Chair of the Penn Program on Democracy, Citizenship, and Constitutionalism Executive Committee.
Nicolaus Copernicus, often considered the father of modern astronomy, had a crazy theory—one so controversial he initially refused to share it even with his closest friends. His hypothesis placed the sun, not the Earth, at the center of the universe. This heliocentric model, based largely off observations with the naked eye, offered a new vision of the world and, in turn, set off a scientific revolution. It’s a tradition of prescient thinking honored every day by physicists like Mark Trodden.

Trodden’s particular area of expertise is particle physics and cosmology. Like Copernicus, he’s an idea man. For the better part of a decade, he has been working to explain why the universe is not only expanding, but doing so at an increased rate—a phenomenon called cosmic acceleration. Trodden, the Fay R. and Eugene L. Langberg Professor of Physics, is at the forefront of research on the topic. He has authored articles that have helped define new research directions pertaining to this central problem of cosmology, and he is also on the editorial boards of a number of journals in the field, including Physics Letters B, New Journal of Physics and the Journal of Cosmology and Astroparticle Physics.

The key to theoretical physics is tying ideas to data. Many of these ideas can be broken down into two major categories: quantum field theory, the study of the tiniest things we know, and cosmology, the study of the biggest bodies in the universe, based on Einstein’s general theory of relativity. Trodden’s research sits at the intersection of these two areas, focusing on the physics of the very early and the very late universe.

“I leave the experiments to my colleagues,” he laughs. “Trying to figure out complex questions of the theoretical consistency of ideas is exhilarating in its own right and poses fascinating intellectual challenges, but behind it all is the goal of connecting theory with something concrete.”

Trodden’s first foray into research came on the heels of the launch of the Cosmic Background Explorer (COBE) satellite, which used cosmic microwave
background radiation—the leftover “glow” of the Big Bang—as a means of measuring fluctuations in temperature. Somewhere in the distant past, the universe was very smooth, but over time, gravity sucked matter into certain locations and grew big structures like galaxies. Because it’s difficult for radiation to escape these structures, it cools down. Using these tiny variations in temperatures, COBE was able to take a snapshot of the early universe.

**FOR THE BETTER PART OF A DECADE, TRODDEN HAS BEEN WORKING TO EXPLAIN WHY THE UNIVERSE IS NOT ONLY EXPANDING, BUT DOING SO AT AN INCREASED RATE—A PHENOMENON CALLED COSMIC ACCELERATION.**

Research like this introduced Trodden to his white whale, cosmic acceleration, which ended up becoming a career-long investigation into the phenomenon. To understand acceleration, Trodden says, you need to be acquainted with the contents of the universe. Regular matter, like protons and electrons, accounts for less than five percent. Dark matter, which sucks in regular matter in order to create formations like galaxies, makes up 25 percent of the universe. The missing 70 percent of the energy budget is dark energy—the force driving cosmic acceleration.

Einstein’s theory of relativity predicts that the universe should be falling prey to gravitational pull and expanding ever more slowly, but dark energy’s properties display something entirely different. It’s what Trodden calls one of the “most thrilling mysteries” in all of science, and an area that is ripe with potential.

Trodden wasn’t always interested in deep space. During his first year at Cambridge University, he studied mathematics, a program that, at Cambridge, exposes students to pure and applied math equally. It became clear to Trodden fairly early on that he was both better at, and more interested in, applied mathematics, so he began to hone his curricular choices. It didn’t hurt that he had a handful of memorable encounters with great minds like pioneering British cosmologist Hermann Bondi and world-renowned physicist Stephen Hawking.

“Hawking had just finished *A Brief History of Time*—a highly influential book,” Trodden reminisces about a talk by the famous scientist. “The lecture theater was jam-packed. The undergraduates were usually a little rowdy, but on this particular occasion you could hear a pin drop. It was incredible.”

Trodden remained at Cambridge for a master’s degree in math and went on to acquire his Ph.D. at Brown University, where he met his wife, a Ph.D. candidate in history whose career has since taken a unique turn.

“She knew from the start she didn’t want to be an academic,” Trodden says, “so for a time she was a journalist. She was covering an accident scene, and there were these volunteer firefighters there that inspired her. Long story short, within a few years she was a full-time paid firefighter and had aced the lieutenant test.” Asked if he worries about her being out in the field, Trodden laughs, “No—I mean, it’s more dangerous than being a theoretical physicist—but most things are.”

Following Brown, Trodden took jobs at MIT’s Center for Theoretical Physics and Case Western Reserve University before transitioning to Syracuse University, where he climbed the ranks to full professor. While there he was asked to apply for the position at Penn. He explains that one of the most enticing aspects about coming to Penn, in addition to its excellence in the field, was the creation of the Center for Particle Cosmology, which coincided with his arrival.

The Center, which Trodden co-directs with Edmund J. and Louise W. Kahn Term Professor in the Natural Sciences Bhuvnesh Jain, melds cosmology and particle physics (see “Of Galaxies and Quarks” on p. 15). Housed on the fourth floor of the David Rittenhouse Laboratory, the Center’s physical home is undergoing a dramatic renovation that will allow the now-dispersed researchers to work in one space, facilitating more convenient collaboration.

Various members of the Center are involved in prominent projects around the globe, including collaborations at the Large Hadron Collider in Geneva, Switzerland. Because much of modern particle physics and cosmology depend on understanding what happens at higher and higher energies, or in the case of the universe, temperatures, the collider is essential because it will reach the highest energies that scientists have ever achieved. The hope is that it will help researchers discover new particles and new symmetries of nature that will help reveal what happens at the smaller scales.
When I was asked to serve as co-chair of the Making History in the Arts and Sciences campaign, I couldn’t say no. Not only was it an honor to be asked, but I know from my years at Penn that the liberal arts are the heart and soul of the University. Through my years as an SAS alum, University Trustee and former member of the SAS Board of Overseers, I’ve come to believe deeply that a strong School of Arts and Sciences is essential to fulfilling the University’s mission to achieve excellence and eminence in all fields.

The School of Arts and Sciences truly sits at the center of what makes Penn great. As the largest of Penn’s 12 schools, it enrolls about half of the University’s students, including two-thirds of Penn’s undergraduates. In fact, all undergraduates at Penn take at least some courses in the School, along with many graduate and continuing education students. The School also houses 26 academic departments, which represent a full range of disciplines in the humanities, social sciences and natural sciences, and a faculty of nearly 500 world-renowned scholars. These professors push the frontiers of knowledge, serve as outstanding teachers and engage in nearly every area of interdisciplinary innovation across Penn.

PIK Professor Robert Ghrist is a prime example. With joint appointments in SAS and the School of Engineering, Robert is applying cutting-edge mathematical methods to real-world engineering challenges in areas like robotics. He has an infectious love of teaching that inspires and challenges his undergraduate students. One student commented in a course review: “I actually enjoy doing the homework to try out the methods he teaches us in class.”

In the Making History in the Arts and Sciences campaign, we have a unique opportunity to strengthen the University’s capacity to move forward. This means raising funds to support the finest and most diverse student body imaginable; for endowed professorships to recruit, retain and develop brilliant faculty like Robert Ghrist; and for resources to build the physical spaces that will enable tomorrow’s breakthroughs, including the new Neural and Behavioral Sciences Building. I urge you to join me in this endeavor in whatever way you can. Together, we can help Penn nurture tomorrow’s leaders and rise to the challenges and opportunities of this century and beyond.

Andrea Mitchell, CW’67
Co-Chair, Making History Campaign
A PASSION FOR PENN

Alum, parent and overseer Dhan Pai talks about the rewards of staying engaged.

Dhan Pai, W’83, Par’12, Par’15, jokes he’d love to be a Penn student again—as long as he didn’t have to take the SATs. While his student days may be over, he now enjoys the fulfilling roles of volunteer, benefactor and parent of two College students, Arjun (C’12) and Armaan (C’15). He serves on the SAS Board of Overseers, the International Advisory Board of the Center for the Advanced Study of India (CASI) and the University’s Making History Major Gift Committee. With his wife Heena, he’s also active with the Parents Leadership Committee and generously supports CASI, undergraduate financial aid and freshman seminars. This Wharton graduate, now chief operating officer and chief financial officer of P. Schoenfeld Asset Management in New York, is no stranger to the liberal arts, having studied three languages while at Penn. He recently told us how he and his family became involved with the School and why it’s been so rewarding.
Q: What made you gravitate toward the liberal arts as a volunteer and donor?

Pai: My involvement began eight years ago through CASI. What I liked is they weren’t doing just traditional academic research. They were looking at issues that faced contemporary India and actually trying to analyze situations and propose solutions. That led me to learn more about what SAS does. Soon after, I met [Dean of the College] Dennis DeTurck, who believes college students should find a passion, something that really interests them, in life—an approach I fully support. These experiences got me more involved in talking to Dean Bushnell and others, as well as working with the Major Gift Committee in support of the Making History Campaign. All these activities probably led Rebecca Bushnell to invite me to join the SAS Board of Overseers.

Q: Your wife’s parents, who live in India, are also quite engaged. What prompted them to become involved?

Pai: I think they’ve seen what Penn has done for me and how it helped me in my career and in life. They see Arjun thriving on campus and feel Armaan’s excitement about starting in the fall, and I think they are thankful. Their way of showing gratitude is by hosting events in Mumbai, where they can help Penn build better relationships with other alumni and parents and help more students find out about all the great things Penn has to offer.

Q: With a family and a demanding professional schedule, how do you find time to be so active on Penn’s behalf?

Pai: You just set your priorities—there’s a certain portion of your day or your week where you know you have to make calls or have a lunch or do things that are for the benefit of the University. If it is important enough to you, and if you’re passionate enough about what you’re doing, then you’ll find the time.

Q: What has been most rewarding about reconnecting with the University?

Pai: Getting to meet the fantastic faculty and getting to know my fellow overseers. The overseers are a group of talented and brilliant individuals who have each used their experience at Penn to succeed in their individual way. Their achievements highlight the value of Penn’s educational and social experience.
“You can give your money; you can give your time; or you can give both,” says Greg Trubowitsch, MD (C’83). When Trubowitsch graduated, he was short on the first but determined to give back to the institution where he spent what he calls the four most significant years of his life. So over the past 15 years, he and his wife Holly, W’83, spearheaded efforts to build a team of Penn alumni interviewers in El Paso, Texas, where he established his practice as a retina surgeon. Giving a substantial gift to Penn always remained a longstanding dream, however. While Trubowitsch continued to devote his time, he also created a fund and invested in it over the years with the sole intention of making a large donation to the University.

“Rather than giving small chunks along the way,” he explains, “I worked hard and I invested to build a war chest that I could later donate—and donate with gusto.”

When the time came last fall for Trubowitsch to finally make his contribution, he found a natural target for his generosity—the Neural and Behavioral Sciences (NBS) Building. Along with housing collaborations between top-flight biologists and psychologists, this facility will provide a home for Penn’s pioneering Biological Basis of Behavior (BBB) major. As a member of the second class of BBB majors, Trubowitsch was a pioneer himself, embracing a cutting-edge subject that has since become one of the College of Arts and Sciences’ most popular majors and a hot topic for research.

“My BBB major stimulated my interest in psychobiology, neuroscience and then finally, ophthalmology,” Trubowitsch says. “Holly and I think the idea of contributing to a building to promote this unique major and important area of science is an exciting and appropriate way of showing our appreciation for the impact that Penn has had on our lives.”
SAS ANNUAL FUNDS

School of Arts and Sciences alumni share why they participate in annual giving at SAS.

My wife and I feel passionately that it is critical to support the institutions where we earned undergraduate degrees and doctorates. By targeting my Penn annual giving to the Graduate Fellowship Fund, I hope I can help others afford a premier graduate education that will lead them to careers as personally satisfying as ours have been.

Dr. Eric S. Pasternack, Gr’78

The School of Arts and Sciences provided me with opportunities I couldn’t have received anywhere else. It’s important to give back, especially if that giving contributes to attracting even one more brilliant student who will choose Penn for its unique offerings.

Dr. Bhaskar Deb, C’84, G’85

I strongly support a liberal arts education and have a deep sense of loyalty to the College. I was so appreciative to learn I could direct my gift in a way that would best serve SAS and advance what’s important to me.

Elise Benatar, Esq., C’85, Par’15

A PERFECT MATCH

As part of the Making History campaign, many SAS donors have taken advantage of Challenge Funds to match their donations of endowed scholarships and maximize their giving. Under the new Excellence to Eminence Initiative announced by Campaign Chair George Weiss, W’65, in April, Penn will now offer a broader range of matching levels for both new and existing donors, with six different options ranging from $125,000 to $1.5 million. Among these enhancements is the Young Alumni Scholarship, which can be created by alumni up to 10 years after graduation with a $75,000 gift that will be matched with $75,000.

For more information on scholarship matching funds, please visit www.makinghistory.upenn.edu/priorities/undergraduates; or contact Donna Armand, 215-898-5262, or armandd@sas.upenn.edu.
CAMPAIGN PROGRESS TO DATE

The Making History in the Arts and Sciences campaign is an integral part of the University’s $3.5 billion Making History campaign. The graph below shows progress toward the School’s fundraising goal of $500 million as of May 26, 2011.

Faculty Support
$173,572,845 / $200,500,000

Undergraduate Student Financial Aid
$59,687,544 / $150,000,000

Graduate Fellowships
$22,805,128 / $30,000,000

Undergraduate Programs
$38,249,978 / $54,000,000

Neural and Behavioral Sciences Bldg.
$12,967,140 / $25,000,000

Expansion/Other Facilities
$37,611,234 / $40,500,000

Campaign to Date
total: $347,255,534

Goal
total: $500,000,000
A PERSONAL COMMITMENT TO INTERDISCIPLINARY LEARNING

Every year in Manhattan, over Mexican food and sangria, Steven F. Goldstone, C’67, and students on the Philosophy, Politics and Economics (PPE) undergraduate advisory board hash out the program’s accomplishments and goals. “We have a great time,” he says, “but we also get down to business. We discuss what the program achieved over the past year, what the students want to do during the coming year, and how I can help them do it. It’s really fun to work with people who are motivated to make something better than the way they found it.”

The opportunity to work with PPE students has, in part, inspired Goldstone’s decade-long relationship with the program—one that extends far beyond his generous financial commitment to it. The partnership began when he and former Penn president Judith Rodin were discussing the challenges of convincing parents of the practical value of a liberal arts education. Rodin mentioned PPE, then a fledgling program that founder Sam Freeman, Avalon Professor in the Humanities, modeled after one offered by Oxford University.

“I was immediately attracted to PPE’s cross-disciplinary approach to problem solving,” Goldstone explains. “It truly integrates philosophy, politics and economics to get to the fundamental rights and responsibilities of every citizen, and I couldn’t think of a better place for it than Penn.”

Over the past decade, Goldstone has donated $3.5 million to PPE to fund endowed professorships for faculty in departments involved in the program; student research; post-doctoral appointments and visiting lecturers; and programming like the Goldstone Forum, an annual lecture by leading figures in business, political and academic arenas.

Because he considers PPE one of his “best investments,” Goldstone makes sure to remain personally connected with the program. In addition to his annual lunch with the undergraduate advisory board, he visits campus during Goldstone Forums to meet with students and attend the lectures, and he consults with SAS Dean Rebecca Bushnell on PPE’s progress. He also works closely with program director Cristina Bicchieri, Carol and Michael Lowenstein Professor of Philosophy and Legal Studies, to discuss challenges the program may be facing and her plans to improve it.

“Cristina has amazing vision and a restless kind of energy that won’t allow anyone to rest on their laurels,” Goldstone says. “When you’re working with her, it’s onward and upward always.”

PPE has grown to become one of the College of Arts and Sciences’ most popular majors, attracting undergraduates for whom Goldstone feels a “renewed sense of respect and affection” each year. “PPE students are not narrow people,” he says. “They have broad interests, and they care about the School and about the quality of education they and their fellow students are getting.” He keeps in touch with a number of them after graduation, noting their success in fields as varied as law, journalism and education.

Goldstone looks forward to future collaborations with both the students and Bicchieri that will continue establishing PPE as the premier U.S. program in its area. “This requires intense efforts in team teaching and team learning,” he says. “It’s not an easy thing for a school to do well, but PPE has terrific leadership and a real commitment from Penn to make this valuable program work.”
Caroline Gittis Werther, C’83, L’86, Par’14, and Daniel Werther, Par’14, hosted a reception at their home for New York-area parents of freshmen and sophomores in the College. The Nov. 4 event featured Dennis DeTurck, Dean of the College of Arts and Sciences, Robert A. Fox Leadership Professor and Professor of Mathematics, who shared his thoughts on how students can get the most out of their Penn experience.

On Feb. 17, SAS, with the help of a committed alumni Steering Committee, hosted a reception and musical program for approximately 50 alumni and parents at the Museum of the City of New York. The program featured Edmund J. and Louise W. Kahn Term Professor of Music Guthrie Ramsey, Jr., co-curator of a traveling Smithsonian Institution exhibition (then on display at the Museum) celebrating the Apollo Theater’s seminal impact on American pop culture.

In March, Dean Rebecca Bushnell discussed a “day in the life of the dean” at receptions hosted by Marianne and Harvey Gold, Par’11, in Jupiter, Fla., and by Juliette and Benny Klepach, Par’14, in Indian Creek Village, Fla.

SAS Overseer Dhan Pai, W’83, Par’12, Par’15, and his wife, Heena, Par’12, Par’15, hosted over 65 alumni and parents on April 13 at New York City’s Union Club for cocktails and a lively conversation with Assistant Professor of Psychology Angela Duckworth about her research on self-control and grit.

OUT AND ABOUT WITH SAS

A New Way to Make a Difference
This new giving tool creates a way for you to participate in the Making History Campaign today, while helping to provide for your financial security tomorrow.

How it works:
In exchange for a gift of $25,000 or more, the School of Arts and Sciences will provide guaranteed lifetime annuity payments at an attractive rate. You designate one of the SAS priorities to receive the first five years of payments.† Thereafter, you enjoy the advantage of the annuity payments. On termination of the annuity, the balance again supports your designated SAS priority.

Benefits include:
• Tax advantaged payments for life guaranteed by the University
• Attractive annuity rates based on the age of the annuitant
• Eligibility for a federal itemized charitable income tax deduction
• Current and deferred support for the Making History Campaign
• Qualifies you for membership in the University’s Harrison Society

Single-life rate chart for $25,000 gift (two-life rates available)

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</tr>
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*Optional three-year payment commitment for donors age 75 and over.
†Deduction will vary slightly with changes in the IRS Discount Rate. Assumed Rate 3.0%. The examples are for illustration purposes only and are not intended as legal or tax advice. We encourage you to consult your own tax advisor.
One of the Center’s main priorities is community outreach. The new Elon Musk Public Lecture Series—named for Penn alumnus and Center donor Elon Musk, C’97, W’97—debuted in 2010. The annual lectures, part of a larger workshop program, are given by internationally known scholars and are open to the public. The inaugural speaker was Paul Steinhardt, who is the Albert Einstein Professor in Science at Princeton. Trodden says the lectures allow faculty to connect with a lay audience. He insists that “it’s important that we, as publicly funded scientists, make our research available and comprehensible to a wide range of people.”

Trodden himself speaks at many institutions in the U.S. and abroad. This summer he will travel to England, Brazil and Poland to deliver invited lectures at international conferences. He also oversees a number of students and postdoctoral researchers. In preparation for the next workshop, he is collaborating with research fellow Kurt Hinterbichler and graduate student Garrett Goon to complete work on a set of completely new particle physics theories derived from extra-dimensional models that may be able to shine light on phenomena like cosmic acceleration.

◆

Gregory Benson

Bhuvnesh Jain, Edmund J. and Louise W. Kahn Term Professor in the Natural Sciences and Center for Particle Cosmology co-director, discusses how the Center probes the very large and very small mysteries of the universe.

Q: Renovations are underway for a new physical home for the Center for Particle Cosmology in David Rittenhouse Laboratory. What impact will this have on the Center’s research?

Jain: The biggest impact of the renovations will be in bringing the particle physicists and astrophysicists together in one space. Particle cosmology is about connecting the micro- and macro-universe. Fostering new ideas at the interface of these two traditionally separate fields of physics requires frequent, spontaneous interaction, so sharing a space will be invaluable.

Q: The Center boasts researchers with a wide range of specialties—some theoretical and some experimental. How do these two modes complement each other?

Jain: There is a long tradition—going back millennia—of speculative ideas in cosmology. What makes the present time so exciting is that there are a series of experiments to test new theories, sometimes as quickly as within a few years of being proposed. This in turn stimulates theorists to make creative adjustments and develop new ideas. We are one of the best groups in the world in having a truly broad array of experimentalists who work side-by-side with the theorists. Our experimental effort itself is incredibly diverse as it targets the elusive—and hypothetical—dark matter particle, as well as signals ranging from the hot plasma of the early universe to the first generation of galaxies and supernovae.

Q: What are some Center-related research areas that hold the most potential for a breakthrough?

Jain: Our theorists and observers are pursuing the mystery of the accelerating universe. Center members have proposed some of the most innovative ideas on how gravity may act differently on cosmic scales to cause the expansion of the universe to accelerate. At the same time our experimental effort is looking for signatures of dark energy or gravity, using galaxies, clusters and supernovae. A breakthrough could come from finding any kind of deviation from the simplest explanation—that pure vacuum energy is driving the accelerated expansion. Another kind of breakthrough in cosmology could come from discovering novel properties of dark matter, either directly through lab experiments or through observations of lensing and galaxy clusters.

—BC
One-hundred and fifty years ago, the U.S. went to war with itself. Four years and more than 620,000 American deaths later, a new nation emerged from the rubble. In the following pages, School of Arts Sciences faculty from a variety of disciplines discuss the Civil War’s profound social, cultural and political legacy.
In looking at the various ways that African American writers have sought to engage their feelings regarding the Civil War, one finds almost no instances in which the Union’s victory over the Confederates is portrayed as a cause for celebration. One of the few, during a moment in Ernest J. Gaines’ *The Autobiography of Miss Jane Pittman*, occurs when a group of slaves responds to their master’s simple statement, “Y’all free,” with singing and clapping. But the merriment gives way to a sobering truth after their former owner declares: “You free and don’t belong to me no more. Got to fight your own battle best you can.”

In the 21st century, these words have a prophetic cast. They move beyond the definition of freedom as self-ownership to insist on something far more fundamental and profound—the issue of belonging. If freed people no longer had to ponder belonging as a matter of to whom, they were forced to wrangle with the question of where. In a moment when there are those who question the legitimacy of our President’s birth records, and who in turn question his very right to call himself an American, we might turn to my former teacher Michael S. Harper and the foreword to his poetry collection *Song: I Want a Witness*, which reads: “Where there is no history, there is no metaphor; / a blind nation in storm / mauls its own harbors; / sperm whale, Indian, black / belted in these ruins.”

If the Civil War constitutes an instance of national self-mutilation, what is worse, Harper insists, is the amnesia that follows. For it is those instances where we opt to forget rather than confront the wounds we have inflicted on ourselves—wounds that are intimately tied to the act of (e)racing human bodies from recorded history—that gives the War sustenance, blocking our way to closure.

—*Herman Beavers, Associate Professor of English*

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**History**

Americans have a curious relation to the Civil War. On the one hand, a great many are riveted by the event and especially drawn to the military aspects of its conduct. On the other hand, most recognize that the war was an immensely destructive event and a sobering example of what can happen when institutions established to resolve political conflict peaceably in the end fail us. The war thus appears as both a gripping and tragic episode in American history—one that might have been better avoided.

But as we commemorate the Civil War’s sesquicentennial, it is worth contemplating what the country might have looked like if the major issues provoking the war were settled through formal political means, or if the war itself ended in anything less than an unconditional Union victory. Slavery, at best, would have been abolished gradually over a period of 30 to 50 years (that is what happened in the northern states). There would have been no 13th Amendment abolishing slavery without compensation to owners (it was hard enough to get this through Congress at the time). There would have been no 14th Amendment establishing a national citizenship for the first time and overriding the infamous Dred Scott decision of 1857 (it wasn’t even contemplated until early 1866). There would have been no 15th Amendment, which put the words “the right to vote” in the Constitution and prohibited its restriction on grounds of “race, color, or previous condition of servitude” (the general practice in almost all of the states). And slaveholders would have remained a powerful force in American society and politics. It’s an ugly picture. The Civil War mattered.

—*Steven Hahn, Roy F. and Jeannette P. Nichols Professor of History*
Politics

The Civil War represents both the greatest failure of the American constitutional system in our history and the occasion for its greatest transformations. There was much that the framers of the original Constitution did not resolve and left to the future operation of the system. The unsolved issues included the balance of power between nation and state; slavery; and, related to slavery, the issue of who was a citizen of the new republic. That it took as cataclysmic a conflict as the Civil War—rather than constitutional processes of republican self-governance—to resolve these issues was clearly a failure of the system.

The passage of the 13th Amendment abolishing involuntary servitude, however, was a resolute victory. This transformation emphatically ended any debate over whether legal slavery was compatible with the republic. The subsequent passage of the 14th and 15th Amendments embraced a vision of national citizenship that includes all regardless of race and put the national government into a more commanding position in the structure of American federalism.

This is what the post-war Amendments do on their face—but not always in practice. In the wake of the Civil War, many in the North lost the will to continue what would have had to be coercive efforts by the national government to ensure these rights were protected for all. The abandonment of Reconstruction led to Jim Crow laws and a new kind of second-class citizenship for African Americans and other minorities. The civil rights movement and other forces, however, impelled these Amendments’ revival and enforcement by the national courts and Congress. These developments led also to an acceptance that the national government has more extensive responsibilities to enforce rights and provide for the general welfare than was understood before the Civil War.

But anyone who has followed recent American politics knows that the championing of strong national governmental powers and inclusive citizenship is again under assault. The legacy of the Civil War’s constitutional transformations remains contested and still incomplete.

—Rogers M. Smith, Christopher H. Browne Distinguished Professor of Political Science
Religion

During the period prior to the Civil War, a lot of people believe the end of the world is going to come. Post Civil War—after this apocalyptic war—both Southerners and Northerners reshape their views about the role of religion. Both groups begin to ask how religion can free them from the ills of the world. Some believe religion can resolve social ills and focus on temperance and suffrage movements; others believe in divine healing and holiness.

For African Americans in particular, churches and religious organizations become the locus of life in a community prevented from being cohesive because of slavery. There is a proliferation of men becoming pastors because there aren’t many other positions open to African American men. Churches also become central to the rapid rise of literacy among African Americans because missionaries become involved the effort, and also because learning to read the Bible is an important spiritual discipline.

After the Civil War, the religious world for African Americans grows exponentially because it’s not just about worship; it’s about building communities, becoming a part of society, and embracing opportunities African Americans had previously been kept from.

—Anthea Butler, Associate Professor of Religious Studies

Warfare

Imagine a wartime president whose idea of how the United States should fight a war fundamentally differs from that of his leading generals. I’m talking about Abraham Lincoln, a president with little to no military experience, who has to face down a series of Union generals with extensive military backgrounds. The problem is, Lincoln’s generals are thinking about how to defeat the individual armies of the South while Lincoln is fighting a war to reunify the country. Lincoln realizes that winning individual battles is not nearly as important as mobilizing the Union’s enormous industrial and population advantages to take and hold the entire South once again.

Lincoln eventually finds a general in Ulysses S. Grant who shares his vision for how to fight the war, but first he has to deal with George McClellan—maybe the most infamous general to attend the University of Pennsylvania. McClellan, whom Lincoln had appointed to lead the Army of the Potomac, has a fundamentally different vision of how to fight the war than Lincoln. He also politically opposes the president. At one point, when the Cabinet finally demands that McClellan reveal his plans to win the war, he refuses to do so unless directly ordered by the president. This sounds preposterous today in part because of what happened afterwards—Lincoln ends up firing McClellan for that and his general lack of aggression in pursuing the armies of the South.

We now know that Lincoln’s vision of the war was correct. Given that wars are inherently political, it is not a bad thing that our political system makes the president Commander-in-Chief. The definitive assertion of authority by Lincoln over McClellan and the Army set the tone for all subsequent uses of military power and civil–military relations in our history. It is one reason why, since the U.S. Civil War, there has only been one even partially serious challenge by a military officer to our civilian government—General MacArthur in the Korean War. Thus, in addition to everything else, the Civil War is where modern American civil–military relations began.

—Michael Horowitz, Assistant Professor of Political Science
What do we think about when we hear the term "mail-order bride?" Perhaps a scene from the Old West—a woman decked in petticoats, descending from a dusty stagecoach to meet her unfamiliar, pioneer groom. Or, in a more contemporary context, relationships tainted with the stigma of sexism and exploitation. But Anne-Marie D’Aoust, who graduated this May with a Ph.D. in political science, observed that to the United States government, mail-order marriages are more than just a fringe aberration on modern ideas about romance and love—they’re an issue of national security.

Yet despite a growing global trend of legislation surrounding mail-order marriage—and marriage migration in general—D’Aoust found that the subject was relatively untouched in political science research. The numbers, she insists, suggest that political scientists should pay attention. As of 2010, marriage migration accounted for 28 percent of all legal migration flow to the United States, compared with labor migration, which constitutes about 12 percent.

D’Aoust is addressing this gap in knowledge by exploring why mail-order marriage has been framed as a security concern in the U.S. and how it crystallizes the political complexities inherent in managing marriage migration. “Her research breaks ground,” says R. Jean Brownlee Endowed Term Professor of Political Science Nancy Hirschmann, “because, among other things, it takes on marriage from a macro perspective, particularly its role in state power and the shaping of political societies.”

Hirschmann and Anne Norton, Edmund J. and Louise W. Kahn Term Professor of Political Science, advised D’Aoust’s dissertation—a comparative study of how international marriage migration processes are approached in the United States and Germany. These countries are two of the largest Western markets for mail-order bride services and both also constitute major marriage-migrant destinations. D’Aoust’s findings are based on interviews with NGO activists and immigration officers in Washington D.C.; Kiev, Ukraine; and Berlin, as well as textual analyses of marriage migration laws.

Her first goal was simply to define “mail-order bride.” Mail-order marriage, D’Aoust discovered, comprises a wide range of practices, from selling email addresses of interested women to orchestrating “romance tours,” which take groups of men to other countries to meet...
prospective brides. “It’s not even clear that it makes sense to use the phrases ‘mail-order bride’ or ‘mail-order marriage’ to encompass these practices,” she says. But she favors them over less fraught ones—like “marriage broker”—in order to understand how their social and cultural baggage influences political attitudes.

D’Aoust found that the U.S. government singles out mail-order brides as a specific category among marriage migrants because of fears of marriage fraud (getting married solely for immigration purposes), human trafficking and domestic violence. In 2006, for example, the U.S. enacted the International Marriage Brokers Regulation Act (IMBRA). This law requires immigration officers to ask all prospective brides if they met through a marriage broker and to provide them with pamphlets about domestic violence, trafficking and marriage fraud before they contact prospective husbands.

In Germany, by contrast, “forced marriage”—a practice the government associates first and foremost with Turkish communities in the country—rather than mail-order marriage has been framed as a security concern. Political discourse comparing mail-order marriage to forced marriage decided the former to be a legitimate and voluntary type of marriage that does not threaten the polity. D’Aoust believes that German concerns about marriage migrants stem from anxieties about the integration of Turkish immigrants. U.S. concern, however, stems from the perceived lack of agency of mail-order brides.

“Mail-order brides,” she says, “are seen as coming to the country only because they’re poor or because they want to secure a visa or have no other options.”

“Love, rather than being a ‘private’ emotion experienced—or not—acts as an important organizing principle at the border.”

D’Aoust describes the U.S.’s approach to managing this concern as one of “risk management.” Laws like IMBRA, for instance, attempt to educate women so they can better manage the potential risks of being a mail-order bride. Beyond this, immigration officials have been put in the position of assessing the quality of international marriages.

“Love,” D’Aoust explains, “rather than being a ‘private’ emotion experienced—or not—acts as an important organizing principle at the border.”

But challenges abound in efforts to determine whether a relationship is “real.” One is the systematization of new forms of discrimination. A U.S. citizen’s marriage to a woman from the Philippines or the Ukraine—countries from where many mail-order brides come—bears a higher burden of proof than one to a man from France. Additionally, conceptions of love and marriage from some migrants’ cultures might not correspond to Western notions of romantic love. If they are unable to perform what’s expected of them as part of a “believable” couple, their mobility could be restrained.

Another challenge lies in holding international marriages to a different standard than domestic ones—encouraged for practical as well as emotional reasons. “Two American citizens getting married for tax or insurance benefits is seen as compatible with being in love,” D’Aoust says. “But if you are a poor Filipina, getting married and moving to America becomes suspicious for immigration officers if you gain material advantages in doing so. But this doesn’t mean you can’t love your husband.”

Funded by an 18-month postdoctoral fellowship from the Social Sciences and Human Research Council of Canada, D’Aoust is now going to turn her dissertation into a book that looks at the “securitization” of marriage migrants in a variety of countries. She’ll continue to investigate her main hypothesis that marriage migration is increasing and is being framed as a security problem because European and American labor markets have become closed off. Ultimately she hopes her research inspires more comprehensive discussion about the political role of marriage.

“Issues like same-sex marriage spur debates about whether marriage should be disentangled from the state altogether,” she says. “But these debates usually don’t account for the fact that marriage is central to regulating entry as an immigrant and gives rights to migrants. Since marriage migration is only increasing, we need to talk about it.”
Jairo Moreno Examines the Impact of Cultural Expectations on Latin American Musicians
Some of Jairo Moreno’s past experiences as a professional bassist seem far removed from his work as a professor. “I played for drug dealers in Upper Manhattan, and I played at Avery Fisher Hall [at Lincoln Center],” recalls the Associate Professor of Music. “I played in Rome for 10,000 people on a live broadcast.” Yet in his current research, Moreno’s years as a practitioner are coming face-to-face with his theoretical approach to understanding music-making.

“I was part of a chain of production and consumption of music, and I tend not to idealize music because of that,” he says. “I really take exception to scholarship that, with minimal encounters with music-making, just takes it as a thing in itself. That’s when I pull my card and say, I’m so sorry, the world is actually a lot more complex than that.”

Moreno came to the U.S. from Colombia in the early 1980s to study jazz at the University of North Texas. By 1986, he was working as a professional bass player in New York’s Latin music and jazz scenes. During his graduate studies at Yale in the 1990s, he played and recorded with musicians such as jazz tenor saxophonist David Sanchez and Latin and jazz percussionist Ray Barretto, with whom he toured internationally and recorded five Grammy-nominated albums.

For Moreno and other Latin American immigrants, making music in New York meant working with other so-called minority groups: U.S.-born Latinos and African Americans. He observed first-hand the tensions and negotiations between musicians from these different groups; the way they self-identified as well as identified—and even stereotyped—each other.

“The United States makes certain demands of these minorities on music-making,” he says. “For instance, that music should be always of ‘the people’ or of an ethnicity or a race.”

Moreno, who gave up playing bass several years ago, has been reexamining these interactions through an academic lens since he joined the Penn faculty in 2009 as a music theorist. His project, titled *Syncopated Modernities: Musical Latin Americanisms in the U.S., 1978-2008*, seeks to challenge the relationship between the production of music and the production of identity and to point out patterns of cultural transmission between northern and southern hemispheres. “I insist upon rendering music-making as a historically dynamic phenomenon,” he says.

For his book, which is part ethnography, part cultural studies and part political history, Moreno is interviewing Latin American musicians—including old friends.
he used to play jazz with in New York City clubs and concert halls—about their experiences of coming to the U.S., entering the East Coast jazz scene and having to reconsider their identity. Traditionalists might say it has little to do with music theory at all, but Moreno delights in challenging expectations.

Only recently has it been in vogue for music theorists to link music and musical interpretation to cultural history, says Jeffrey Kallberg, Professor of Music and Associate Dean for Arts and Letters. Latin American music is also a relative newcomer to music theory, which has traditionally been concerned with Western art music. The academy, Moreno explains, was much more interested in relationships between the West and the East. "The North/South American axis—which is so evident in continental American history, society, culture, economics and politics—hasn't been a central concern," he says.

While Moreno approaches the research as an outsider, he cannot deny his insider status. "My experience as a professional musician is fundamental to this process," he says. "I mean, the main claim, this idea that there are tensions, is my own. Clearly, it's informed by my own experience." However, he's reticent to claim too much insider authority. "I'm very theoretically driven, and I think that begins to temper at least some of my own personal claims on the story."

Moreno's past as a musician contributed to what he calls his "anti-identitarian" approach to understanding music, culture and even academia. "I'm very resistant to claiming identity," he says. "Can we think outside identity? Must it be the fundamental force by which one goes about teaching, learning, making music, listening to music, et cetera?" For him, identity—like music—is also historically evolving, and he's concerned with the ways it saddles individuals with expectations.

He's trying to understand the cultural expectations that professional Latin American musicians have encountered—what identity they should assume, what kind of music they should play, with whom they should play. "Immigrant musicians, not only because they're professional musicians, but because they are people who come with different histories, come to the United States and have to negotiate a set of new contingencies or demands that are placed upon music-making," he says.

Moreno's story begins in the late 1970s, when South American, Puerto Rican and Cuban musicians who immigrated to the U.S. were reproducing music from their homeland—but with a new twist—then sending it back across the equator. This transmission of music becomes increasingly complicated over the next three decades.

Take Panamanian singer Rubén Blades, who serves sort of as a backbone for Moreno's book. Blades came to the U.S. in the 1970s and realized that even though South Americans were consuming a huge amount of U.S.-produced Latin music, people in the U.S. didn't really know anything about South American culture or history. "How is it possible for any social group, in this case Latinos in the 1970s, to speak so powerfully to an entire continent and know nothing about it?" Moreno asks.

Blades sought to teach the U.S. through his music, but then, in the 1980s, he began singing about the military dictatorships and disappearances in Latin America. "He begins to have a relationship to the south that he didn't have in the '70s when he was trying to 'educate' the Latino people about Latin America," Moreno says. "Now he's trying to sing from the north about what's going on in the south because the south, in a sense, cannot really sing about those things."

Moreno, practicing what he calls "kangaroo history," goes on to highlight key moments and figures from the last 30 years. His final chapter is about international Colombian pop sensation Shakira, who Moreno says is fundamentally an American production but also represents "the possibility that Latin America is now as part of the world as any other place in the world." He asks: Why is she popular on a scale that a Latin American musician—particularly a female Latin American musician—could not have achieved even a decade before?

In between early Blades and Shakira are the 1990s, a key period for Moreno. When he left Colombia in 1982,
Moreno couldn’t get a string for an instrument or find an album to buy there. But by the 1990s, Latin America had become a huge consumer of U.S. music and was also producing more of its own. Latin American teenagers were listening to music from the north and learning jazz. So when they came to New York and found that the Latin music scene was too rigid and conservative, they went straight to the jazz scene—they didn’t have to pay their dues. As Moreno explains: “My generation, you had to play a lot of Latin music, and then you played some jazz. This generation came straight to jazz. They’ve just been absorbing everything. There is no music that is not available anymore. So they simply begin to experiment.”

Younger musicians have also been more reticent to claim intrinsic knowledge about music from their country of origin. “Instead the attitude is, I come from Puerto Rico and because of that I must study the music of Puerto Rico,” Moreno explains. “There’s a compulsion to investigate who you are, and there’s no sense of ownership at all.”

When does history hold musicians back or pen them in? When do long-time ideas about what kind of music they should play and with whom stifle musical innovation?

In this new camp is alto saxophonist and composer Miguel Zenón, whom Moreno describes as “a kid from the toughest neighborhood in Puerto Rico.” The MacArthur Foundation declared that Zenón is “at once reestablishing the artistic, cultural and social tradition of jazz while creating an entirely new jazz language for the 21st century.” Zenón, who received a MacArthur “Genius Grant” in 2008 at age 31, has been exploring traditional Puerto Rican music and creating sounds that incorporate jazz and Puerto Rican plena folk music.

The counterpoint to Zenón’s work is Lincoln Center’s Afro Latin Jazz Orchestra, formed in 2002 and the subject of another of Moreno’s chapters. Instead of looking forward and innovating, Moreno says, this group primarily played music from the 1950s. This was the heyday of big-band Latin jazz, when crowds packed the Palladium Ballroom to hear acts like Tito Puente and Tito Rodriguez, but it was also a period characterized by racial discrimination as well as racial progress. Jazz, because it arose from African American culture, remains connected to a specific history, Moreno explains. “This history for African American communities and intellectuals is lived so vividly,” he says, “and you don’t give up your history because, if you let go of that, you’re just like the rest of us.”

Yet, Moreno wonders, “What is the burden of history in this case?” When does history hold musicians back or pen them in? When do long-time ideas about what kind of music they should play and with whom stifle musical innovation?

Moreno notes that despite these expectations, the knotty relationships between Latin American, Latino and African American musicians have sometimes produced grand results. “The music is incredibly potent, beautiful—all those things that we like to think about music,” Moreno says.

“But,” he adds, “I want to look at what made it possible.”
That the world will run out of oil—a finite resource formed millions of years ago by the compression of billions of tons of organic matter—is inevitable. But questions of when and what will replace it spark intense debate as well as dissembling, from Japan’s secrecy about its recent nuclear meltdown to conflicting accounts about the dangers of fracking, right here in Pennsylvania. Figuring out the solutions, urges Professor of Physics Ken Lande, will fall to coming generations of scientists and policymakers—including graduates of Penn.

“Replacing fossil-fuel energies,” he says, “will be the major problem in our students’ lives.”

In order to teach students the skills needed to contend with this challenge, Lande and Reese W. Flower Professor of Physics Gary Bernstein developed Physics 16, “Energy, Oil and Global Warming,” which they have alternately taught since it was first offered in 2006. In it, students learn quantitative skills to answer the fundamental questions driving the energy problem: How is energy made and used? Is it technically and economically viable to replace fossil fuels with other sources? How safe are these sources? Will reducing consumption alleviate looming energy crises?

The class is taken by science and non-science majors with a variety of academic interests and can partially fulfill the College’s Natural Science and Mathematics requirement. “We try to meet one of the most important goals of a science requirement,” Bernstein says, “which is to teach students that quantitative critical analysis can and should be used to see past the empty rhetoric of politicians and pundits and pursue real answers.”

Under Lande’s instruction this past semester, the class calculated everything from how many wind turbines need to be constructed to meet all U.S. energy needs (half a million) to how much uranium is in the ash the nation produces every year by burning coal (3,000 tons—more than is presently consumed annually in U.S. nuclear reactors). And despite its being cataloged as a physics class, Lande pushes students to draw their data from a variety disciplines, including finance, politics, economics and law.

“You have to base your assumptions on reasonable assessments of real-life circumstances,” says Araz Pinhas, C’14. “You’re not just given numbers out of context and asked to memorize an algorithm.”

In fact, real life often shaped the course’s trajectory this spring. Lande was teaching a section on nuclear reactors when the devastating earthquake and tsunami that hit Japan in March caused the meltdown of the Fukushima Daiichi nuclear plant. He modified his course schedule to incorporate discussion about errors in Fukushima’s construction, which include placing emergency generators in an easily flooded area and housing waste fuel elements right next to the reactor—also a feature of most U.S. nuclear plants.

Lande had to adapt his lessons on U.S. and European energy policy as well. In teaching the European Union’s long-term plan, which relies on placing solar collectors across North Africa, he revised his lecture to analyze how the plan might be affected by the recent spate of revolutions that spread across countries like Tunisia, Egypt and Libya. And two days after the class finished an exercise to devise an energy plan for U.S., the Department of Energy released its 2011 Strategic Plan.

“I really enjoyed comparing what we came up with to what the government came up with,” says Jasey Cardenas, C’14. “It was amazing to be able to use the tools we were learning in class to analyze events as they were happening in the world.”

—PR
Core Lessons

In her award-winning book, *Life Exposed: Biological Citizens After Chernobyl*, Edmund J. and Louise W. Kahn Term Professor of Anthropology Adriana Petryna comprehensively examined the problematic political, scientific and social circumstances that followed the Chernobyl nuclear disaster. Here, she discusses Chernobyl’s lessons for Japan’s embattled Fukushima reactors.

Q: When did you first begin researching nuclear incidents?

**Petryna:** My first book, *Life Exposed: Biological Citizens After Chernobyl*, probes the social consequences of the remedies applied in the wake of Chernobyl. Based on fieldwork among key scientific and political actors and exposed populations, the book illustrates how public health interventions altered the language of accountability in a new nation-state, contributing to the open-endedness of the crisis, which affected more than 3.5 million citizens in Ukraine alone. Many nuclear experts had written off another Chernobyl-like event—but there is more than one way to have a Chernobyl. Even a state-of-the-art nuclear reactor, if built on an earthquake fault line, is susceptible to a meltdown, especially if back-up power fails to supply electricity for core-cooling.

Q: How would you compare Japan’s post-incident disclosures to the Soviet Union’s?

**Petryna:** As an anthropologist, the angle of comparison has to do with the management of information and public well-being. Fukushima also resembled Chernobyl in terms of the downplaying of the extent of the accident or withholding of information. Questions remain about how large the evacuation zones should be or whether they should be expanded, and about the costly clean-up of contaminated lands. We are three months out from the disaster, and little is known about what is happening inside the reactor core and whether the strategy of cooling the reactors with water isn’t producing steam that might be exacerbating radiation emissions. These threats will persist indefinitely.

Q: What is your reaction to Japan’s monitoring of those exposed?

**Petryna:** Capturing initial moments and doses of exposure is crucial to any post-nuclear disaster epidemiological effort. With Chernobyl there is much that isn’t known about how radiation affected people because the initial moments during which it was crucial to obtain information were lost. It is unclear whether such monitoring is being conducted, and on what scale, in Japan. Because the half-life of many radioactive materials lasts for decades, protracted review of survivor health is also essential to compiling reliable datasets.

Q: What can Japan learn from Chernobyl about worker safety?

**Petryna:** About 600,000 workers were sent in to clean-up Chernobyl over a 15-year period. The workers, known as “liquidators,” entered contaminated zones for limited periods, but their exposures were very poorly monitored. Now, at Fukushima, the media has focused on the heroic Fukushima 50, a group of elite nuclear employees who remained at Fukushima I Nuclear Power Plant after others were evacuated. But how often are teams of brave 50 being replaced? And what of the largely hidden contract labor system comprised of poor temporary laborers who deal with the most dangerous work? Many pieces of this story resemble Chernobyl, and so many pieces of this story have yet to be unearthed.

Q: How does the concept of “biological citizenship” apply to the Fukushima disaster?

**Petryna:** The Fukushima disaster is now approaching the stage at which compensation issues for the workers of the plant and the 50,000 or so evacuated households will be central. This is the stage at which affected people need to be informed of their situation. I call this complex bureaucratic process by which a population attempts to secure a status as harmfully exposed and deserving of compensation “biological citizenship.” The social nature of scientific knowledge—how populations are brought into orders of scientific experimentation and what becomes of citizenship and ethics—makes all the difference in the provision of long-term care.

Q: Do you think the Fukushima incident will affect transparency in the future?

**Petryna:** Policy-makers have choices: they can either water down facts or they can be completely forthright about what is known and not known about a given situation. The better strategy, I believe, is to maintain trust because the reality is that people tend to panic more, not less, when they are kept out of the loop. It’s in Japan’s best interest to develop a comprehensive, long-term epidemiological program that will help educate the global scientific community. The trauma may not be immediately visible, and there may be different kinds of trauma that work through generations that we still have to understand.

—BC
A LABOR OF LOVE

Medical journalist Randi Hutter Epstein, C’84, is fascinated with what she calls the “gray zone” of medicine—that place where answers aren’t black and white and doctors and patients must make decisions based on the best available information mixed with hunches and gut feelings. Obstetrics, she believes, is one such field and the subject of her recent book, *Get Me Out: A History of Childbirth from the Garden of Eden to the Sperm Bank*.

Epstein has long sought to combine her interests in science, history and writing. After majoring in the History and Sociology of Science at Penn, she completed an M.S. degree from the Graduate School of Journalism at Columbia University and an M.D. at Yale. Epstein is now an adjunct professor at Columbia and contributes to newspapers and magazines.

In *Get Me Out*, Epstein explores how advice about pregnancy and childbirth has changed over the centuries—from folk remedies and old wives’ tales to C-sections and fertility drugs.

Q: Why did you decide to write a book about the history of childbirth?

Epstein: When I started reporting about medicine, I became very interested in the philosophy of medicine. It seemed to me a study could prove one thing, but that didn’t necessarily change medical practice. I gathered anecdotes about all fields of medicine, but I was drawn to OB/GYN. I think because the patients aren’t sick, it makes the doctor-patient dynamic more complicated. When you are feeling good, you feel more empowered to tell a doctor that you want it done this way or that. When you feel awful, at some point you are more likely to just listen to what the doctor is telling you to do. Also, when it comes to childbirth, women are more likely to tell a doctor about the kind of birth experience they have always imagined, or the kind that their mother had. So it becomes this wonderful blend of science and culture.

Q: Is there anything that really surprised you when you began your research?

Epstein: I thought that driving ourselves crazy about pregnancy and childbirth was a modern invention. But we have an entire history of being bombarded with advice—oftentimes conflicting—and worrying about whether we are doing the right thing. One ancient guide book—written by monks of all people—toled young couples they had to have simultaneous orgasms in order to make a baby. Talk about pressure—if the wife didn’t pregnant, maybe the husband thought, “Oh my god, has she been faking it all along?”

Q: How have beliefs about using pain relief in childbirth evolved?

Epstein: For a long time, the dogma was that women ought to muster up the courage to give birth without pain relief. And that was even after pain drugs were used for surgery and dentistry. Somehow, pain in childbirth was considered a sort of hazing process for motherhood or the Christian way to give birth. In this country, it was actually a dentist that gave the first pain relief during childbirth. Henry Wadsworth Longfellow’s wife wanted it, and no doctor would give it to her, so she brought her dentist into the birthing room.

But even today, many women feel guilty if they use pain medicine. It’s incredible that for such a personal and intimate moment, we are all so judgmental of each other. I’ve spoken to women who have had epidurals, and they say they feel like they have to make excuses, as if they are not as valiant as their friends who had natural childbirth.

Q: We’ve gone through periods where most women are pushing for drugs and state-of-the-art medicine as well as times when most women want to eschew all modern technology. How would you describe the scene today?

Epstein: I think women today are polarized when it comes to childbirth choices. On one end, you have women who feel that becoming a mother—rather than getting the baby out—is the big deal, so they’re comfortable using every modern technology available. On the other end of the spectrum are women who feel the process of birth is something to be cherished. They do not want to be hooked up to all these machines and devices. But women nowadays also have more opportunities. If you want to do a home birth with a midwife, there are midwives that are connected to hospitals should things go wrong. And if you want the C-section with tummy tuck, that’s available too. —BC
As a high school student, Elliot Johnston, C’14, roamed the downtown of his native Buffalo, N.Y. looking to “reinvent” commonplace objects through the lens of his camera. The international relations major and photography minor was inspired to take this photo, titled “Symmetry,” when he glanced up at a polished metal statue and marveled at the sunlight radiating from behind it. “I love photography,” he says, “because so many people can photograph the same thing but see it in different ways.”

See more of Johnston’s photography at www.elliotjohnstonphotography.com.
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