

a&smagazine



ECHOES OF THE PAST: HOW TWO WRITERS
TRANSFORMED A DEPARTMENT PAGE 22



Washington University in St. Louis

CONTENTS SPRING 2013

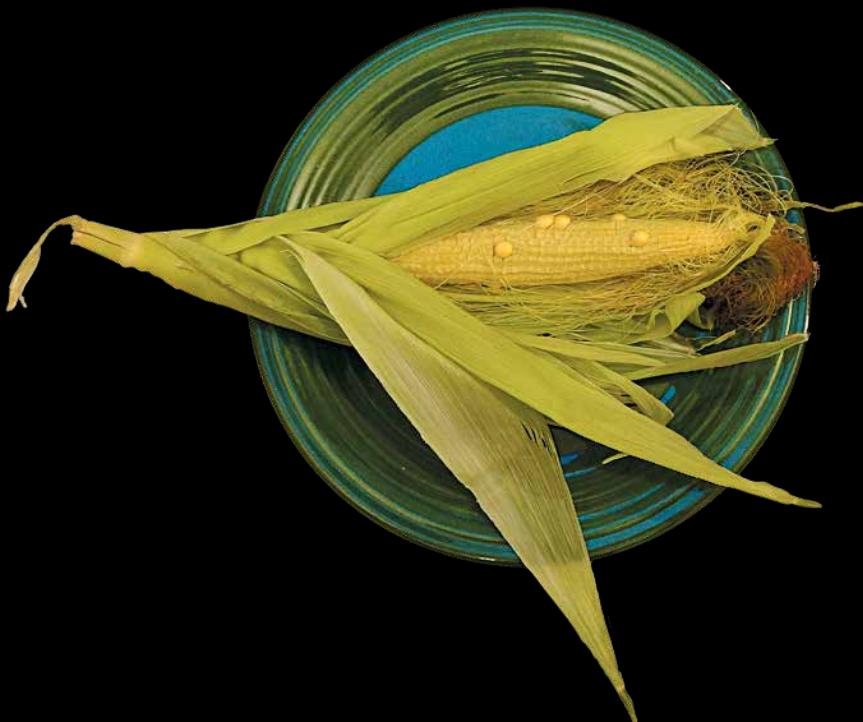


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A&S Magazine is published by the Office of the Dean of the Faculty of Arts & Sciences.

magazine.artsci.wustl.edu

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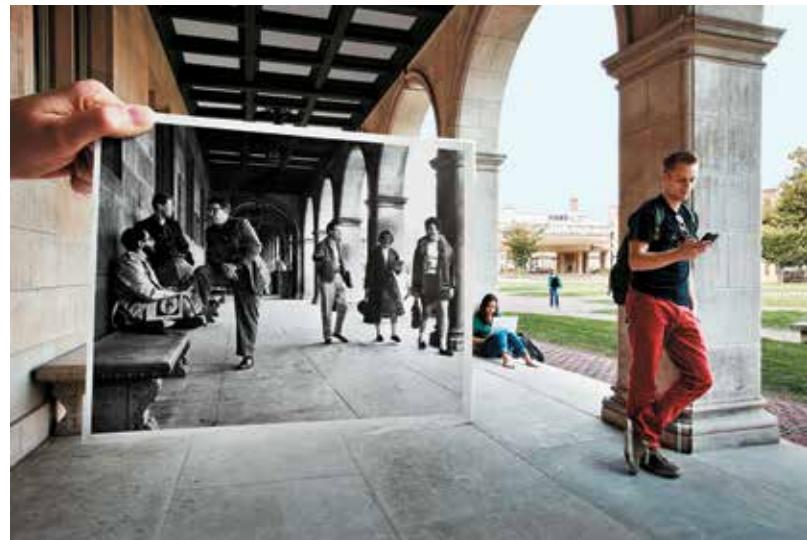
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Design: Studio Blue, Chicago

Special thanks to the WUSTL Office of Public Affairs, including the staffs of the University News Service, Photographic Services, Marketing & Design, and the Record.

Contributing Photographers:
Inside front cover: NASA/JPL-Caltech, Robert E. Gillespie (Flickr: tigertrout62bob); 1: Shanti Parikh, The Mona Van Duyn and Jarvis Thurston Papers, Alex Wild; 2: Jay Fram; 4: Kait Mauro; 5: Sean Garcia; 6: Flickr: anotherlunch.com; 6–7: Clay McBride; 7: NASA/JPL, NASA/GSFC/Arizona State University; 8: Ryan Murphy; 9: Dorothea Lange (Library of Congress); 10–11: Hossam el-Hamalawy; 12: Loren Zemlicka. *Over Fields of Fruitless Corn*. September 6, 2012; 14: Monash University; 16: Jay Fram; 18–19: Sean Garcia; 20: Paul Sableman/stexploer.com (Flickr: pasa47); 21: Thomas Crone (Flickr: Akita*314); 22–27: The Mona Van Duyn and Jarvis Thurston Papers, Washington University Libraries, Department of Special Collections; 28–31: Images courtesy Alex Wild; 32–33: Dansaem (Chloe) Jeon; 34: Prateek Kumar; 35: Emma Hine; 36: Roger Wollstadt (Flickr: roger4336), NASA/JPL-Caltech; 37: NASA/JPL-Caltech/MSSS.



THEN AND NOW (I)

Photographer Jay Fram

Date September 24, 2012

Featured Historic photograph from Photographic Services Collection, University Archives, Washington University in St. Louis.

In late September, A&S organized a photoshoot with the idea of contrasting the past and the contemporary campus. We loved the idea of representing all the vibrant young people who have walked these same paths over the years in one image.

Jay prepared meticulously for the shots, lining up the current perspective with the older picture. We had to move relatively swiftly, as the old photographs had a tendency to wilt in the warm autumn air. University archivist Sonya Rooney was on site to handle and safeguard these historic documents and appears in the role of “thumb.”

This particular composition contrasts today’s gadget-heavy individualists with the gregarious debaters of the past. It captures, among other things, how the avenues of communication and debate have changed. All we know of the older photo is what is written on the back: “Ridgley Arcade, 1960, Hatchet.” It appeared on p. 101 of *The Hatchet* from that year.

The identities of students both then and now are unknown, but we extend our thanks to all.

“You can master the conceptual knowledge of time – the past, the present, and the future – without any ability to remember specific events in your past.”

HOLD THAT THOUGHT

a podcast series from ARTS & SCIENCES
www.thought.artsci.wustl.edu

FIRST WORDS

**Barbara Schaal, Dean of the Faculty of Arts & Sciences and
Mary-Dell Chilton Distinguished Professor**



Education University of Illinois, Chicago,
B.S. in Biology; Yale University, Ph.D. in
Population Biology

Family Husband, Joe, and two adult children

Birthplace Berlin; immigrated to Chicago
at age 3

Pets Dog: Tom, an active Border Collie rescue;
Cat: Hillary, a senior APA kitty

Dear Friends,

As I complete my first months as your new Dean, I am delighted to have the opportunity to send you this issue of *A&S Magazine*. It is always a privilege to highlight our outstanding students, faculty, and programs.

Of course, our challenge is to elevate Arts & Sciences to even greater heights in the months and years ahead. Fundamental to this effort is sustaining excellence in scholarship and seeking new learning opportunities across all areas: the humanities, social sciences, and natural sciences. But as we move forward together, we should also be mindful of how our scholarship and programs will ultimately be grounded in social reality. How can we make a difference in the global community? How can we bring our diverse disciplines to bear on issues that matter? Some of my own experiences suggest this is achievable and illustrate the importance of the disciplines within Arts & Sciences.

Several years ago I was appointed to an advisory group on science and technology that includes diverse academic scientists, as well as economists, engineers, and industrial leaders. One recent project led to a report on the economic and social imperative of establishing reasonable measures to protect our environmental capital.

Environmental capital takes many forms – our plants, animals, and microbes; our air and water quality; our public and private lands; and the ecosystem service derived from them. This capital constitutes a significant asset for our nation's economy and has been a major factor in the rise of the U.S. as a nation. The ability for our leaders to understand and deal with environmental capital has immense consequences for the future of our nation.

As a plant biologist and geneticist, I view conservation of natural resources as a topic particularly close to my academic discipline. But clearly, more robust insights can be gained

when broader expertise across disciplines is brought together. Our report highlighted crucial connections that are sometimes overlooked: the vital contributions of environmental capital to our nation's well-being and to our economy through medicine, agriculture, and the physical environment, and from our citizens' desire to experience nature. And, at a time when our nation faces economic challenges, one of the pervasive themes of the report was the significant economic benefits that can be attained by protecting our environmental capital.

My experiences have repeatedly reminded me of the importance of interdisciplinary approaches. It is often more difficult to find the answers we seek if we only examine an issue through one lens, if we only employ one set of principles or theories.

In our nation and in our world, we are facing unprecedented challenges. Now, more than ever, we need passionate, knowledgeable individuals to tackle subjects such as public health, economics, government, climate change, and the ethical questions that face us as a society and as individuals. These challenges require collaboration and expertise across disciplines if we are to find working solutions. Within Arts & Sciences, we demonstrate that range of excellence, enthusiasm, and understanding in our outstanding faculty, and we seek to promote these qualities in our students as they become tomorrow's leaders.

As we move ahead, I look forward to sharing many wonderful examples of achievement and innovation from Arts & Sciences. And I invite each of you to share your stories with us as well.

Sincerely,

A handwritten signature in black ink that reads "Barbara Schaal". The signature is fluid and cursive, with "Barbara" on the top line and "Schaal" on the bottom line.

**"I like to think of Burns as a sort of poet, in some measure, the
filmmaker version of Walt Whitman."** – Gerald Early on documentary
filmmaker Ken Burns, p. 9

A wide-angle photograph of a university quad. In the foreground, many students are sitting or lying on the green grass. In the middle ground, a large, diverse crowd is gathered near a modern building with a glass-enclosed entrance. The background features a large, historic brick building with multiple gables and a chimney. The sky is clear and blue.

around the quad

HUMANITIES AND THE PUBLIC GOOD

What is the state of the humanities? How are they taught, what do they teach us, and how do they serve the public good? In September, cultural leaders gathered at the Missouri History Museum in Forest Park to discuss "The Importance of the Humanities and Social Sciences for Public Life." The meeting – convened by [Gerald Early](#), professor of English and Merle Kling Professor of Modern Letters – was the third in a series of regional forums presented by the Commission on the Humanities and Social Sciences, an organization created by the American Academy of Arts and Sciences following a bipartisan call from members of the U.S. Senate and House of Representatives. "An educated citizenry is the wellspring of a strong democracy," says Leslie C. Berlowitz, academy president. "From that citizenry, our leaders emerge. This forum provides an opportunity to focus on how we can ensure that Americans develop the skills and competencies required for full engagement in the international community."



REMEMBERING MCLEOD

McLeod's Way, a new landscaped gathering place on the South 40 that honors [James E. "Jim" McLeod](#), beloved dean of the College of Arts & Sciences and vice chancellor for students, was dedicated at a ceremony at Graham Chapel on September 15. Recognized as one of the university's most effective leaders, McLeod spearheaded many successful undergraduate efforts, including developing a residential college approach to dormitory living; strengthening the undergraduate advising system; establishing and building the John B. Ervin Scholars Program; and helping initiate and shape the expanded study-abroad program. He died in 2011 after a two-year battle with cancer.

IDEAS INTO ACTION

In April, Washington University hosted the 6th annual Clinton Global Initiative University (CGI U) at the Danforth Campus. The CGI U conference gathers students, youth organizations, experts, and celebrities together to discuss pressing global issues. This year's attendees tackled topics such as education, environment and climate change, peace and human rights, poverty alleviation, and public health. Featured presenters included Bill Clinton, Chelsea Clinton, political satirist Stephen Colbert, Nobel Prize winner Muhammad Yunus, Twitter founder Jack Dorsey, and Khan Academy founder Salman Khan. Of the 200 WUSTL graduates and undergraduates who participated, nearly half were from Arts & Sciences. Participants included A&S senior Jeremy Pivor, see p. 6, as well as the student science advocacy group ProSPER, which was launched by two WUSTL doctoral students after attending CGI U in Washington, D.C. on a civic engagement grant from the Gephardt Institute for Public Service.

14
Rhodes
Scholarship
finalists

2

Fulbright
Scholarship
recipients

HOLD THAT THOUGHT

Did you forget to bring your lunch to work this morning? In the podcast "Prospective Memory and the Forgotten Lunch," **Mark McDaniel**, professor of psychology, describes his research into the type of memory we use every day to carry out tasks like taking medication, attending meetings, and bringing lunch to work. The podcast was aired online as part of *Hold That Thought*, a new weekly series hosted by Arts & Sciences. *Hold That Thought* illuminates scholarly research and explores interdisciplinary topics like Memory using diverse, multimedia approaches. The fall season featured faculty from a range of disciplines, including philosophy, biology, and anthropology. *Hold That Thought* podcasts are available on iTunes, on Stitcher, and at thought.artsci.wustl.edu.



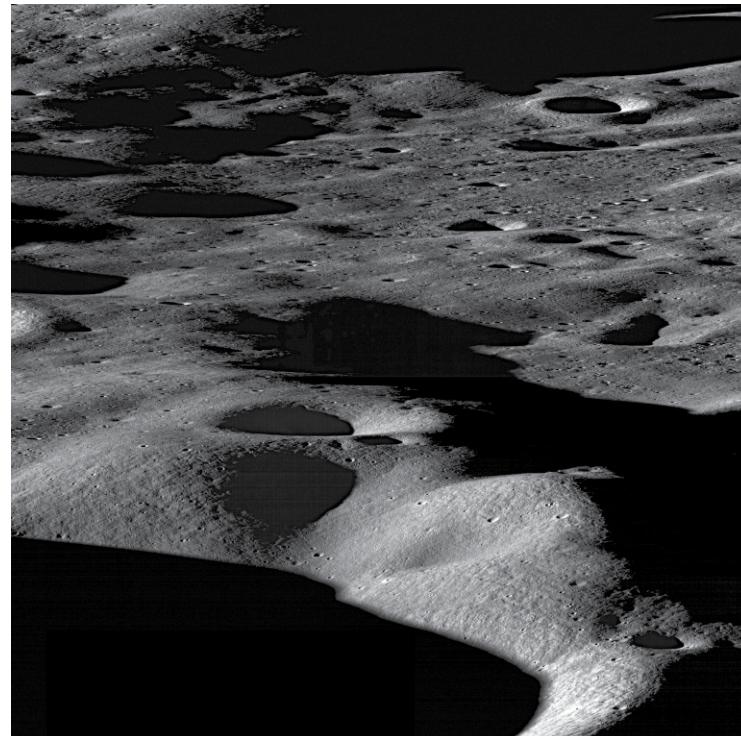
STUDENT SUCCESS

Seniors **Madeleine Daapp** and **Jeremy Pivor** have been named two of the 212 finalists for the Rhodes Scholarship out of more than 1,700 applicants. Daapp, an economics and mathematics major, and Pivor, an environmental biology major with a minor in public health, also have both previously won the prestigious Udall Scholarship. WUSTL was again among the top producers of students accepted to the U.S. Fulbright Program; 14 recipients accepted the award out of a record 62 applicants. Awardees include **Parisa Bastani**, who is exploring gender issues in Egypt and surveying Egyptians about the 2011 revolution, and **Viraj Doshi**, who is examining a program to increase civic involvement among young people in Colombia.





Images of the lunar surface acquired from NASA's Galileo and Lunar Reconnaissance Orbiter missions.



A GIANT SMASHUP

JAZZ WITH WYNTON

In October, the music department's 560 Music Center hosted a workshop in which the East St. Louis High School Jazz Band rubbed shoulders with some of the best jazz musicians in the country. Three members of the famed Jazz at Lincoln Center Orchestra (JLCO) led the workshop, and students later had the chance to rehearse and perform with the full orchestra and its leader, legendary trumpeter Wynton Marsalis. A&S jazz players and staff were invited to attend the exclusive performance. The following day Marsalis, the JLCO, and the St. Louis Symphony performed Marsalis's 2010 composition "Swing Symphony" (Symphony No. 3) at Powell Hall.

Left: Wynton Marsalis

Frédéric Moynier, associate professor of earth and planetary sciences, has found evidence supporting the giant impact theory, which hypothesizes that the moon was created when a giant Mars-sized body collided with the early Earth. Moynier and his team found that lunar rocks contain a tiny excess of a heavier variant of the element zinc. Scientists have been looking for this type of evidence – an example of isotopic fractionation – since the 1970s, when moon rocks were found to have fewer moderately volatile elements (including sodium, potassium, zinc, and lead) than other types of rocks. The creation of the moon through a large-scale collision would explain this lack of volatiles, but on its own this data could not prove the theory. Moynier's data, which appeared in the October 18 issue of *Nature*, provides additional evidence.

LADY K'ABEL, WARRIOR QUEEN

Archaeologists in Guatemala have discovered the tomb of Lady K'abel, a seventh-century ruler considered one of the great queens of Classic Maya civilization. The expedition, led by anthropology professor [David Freidel](#), uncovered the queen's burial tomb in the royal Maya city of El Perú-Waka' in northwestern Petén, Guatemala. According to Freidel, the discovery offers a rare situation in which Maya archaeological and historical records converge. The tomb contained ceramic vessels, jade and shell artifacts, and a white alabaster jar carved with the image of an aged woman and four hieroglyphs. The carvings, along with other evidence, indicate that the tomb is that of K'abel.

ELECTION THEATRICS

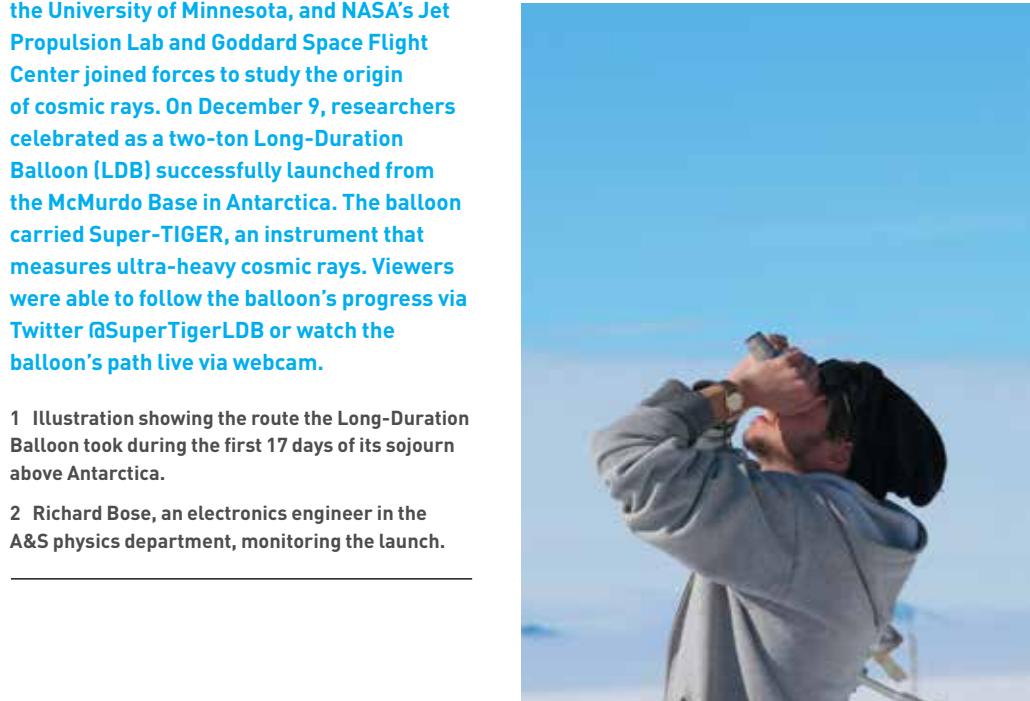
Professors [Wayne Fields](#) (English), [Steven Fazzari](#) (economics), [David T. Konig](#) (history/law), and [William J. Whitaker](#) (drama) met in the fall to explore the "politics, issues, and theatrics" of the 2012 presidential election. Fields, a nationally known expert on rhetoric and American political argument, served as moderator. The panelists brought together a range of expertise: Fazzari is an expert on the financial determinants of investment and R&D spending by U.S. firms; Konig researches the role of law in shaping the history of the American people; and Whitaker has led lectures analyzing political debating technique, stage presence, and platform performance. The event was offered as part of the Arts & Sciences Connections Series.

A VIEW FROM ABOVE

Principal Investigator Robert Binns (physics), the California Institute of Technology, the University of Minnesota, and NASA's Jet Propulsion Lab and Goddard Space Flight Center joined forces to study the origin of cosmic rays. On December 9, researchers celebrated as a two-ton Long-Duration Balloon (LDB) successfully launched from the McMurdo Base in Antarctica. The balloon carried Super-TIGER, an instrument that measures ultra-heavy cosmic rays. Viewers were able to follow the balloon's progress via Twitter [@SuperTigerLDB](#) or watch the balloon's path live via webcam.

1 Illustration showing the route the Long-Duration Balloon took during the first 17 days of its sojourn above Antarctica.

2 Richard Bose, an electronics engineer in the A&S physics department, monitoring the launch.



A MEMORY FOR FACES

Faculty, staff, and students from Arts & Sciences and Engineering have developed an online experiment that will allow participants to see how their individual scores on a face-name memory test compare with those of other test takers. In the test, participants are invited to perform a simple memory task in which they connect names to faces. The test is part of a growing “crowdsourcing” trend in science, which harnesses the Internet to gather massive amounts of research data while allowing study participants to learn a little something about themselves. By placing the test online, researchers are hoping to gather a wealth of information from a diverse sampling of the human population. Members of the research team include [Henry “Roddy” Roediger](#) and [Kathleen B. McDermott](#), professors of psychology, [Mary Pyc](#), a postdoctoral research associate in psychology, and [Todd Sproull](#), a lecturer in computer science. To take part, visit the test website at [experiments.wustl.edu](#).

Good with names and faces?

Have 10 minutes?

Discover your
“Face-Name
Memory IQ.”

NOBEL LAUREATE DIES AT 103

Rita Levi-Montalcini, a renowned neurobiologist who completed most of her research at Washington University between 1947 and 1977, died in Rome on December 30, 2012. Invited to WUSTL after World War II, Levi-Montalcini performed research that led to the discovery of chemical mechanisms used by the human body for cell growth and nerve networks. Her findings allowed for the study of how these mechanisms can fail and lead to dementia, cancer, and other diseases. She was awarded the Nobel Prize in Physiology or Medicine in 1986. Levi-Montalcini, who overcame a number of personal and political challenges to pursue her groundbreaking research, described her years at WUSTL as “the happiest and most productive years of my life.”



THE WALT WHITMAN OF AMERICAN FILM

Documentary filmmaker Ken Burns arrived on campus in November to receive the 2012 International Humanities Medal, presented by the Center for the Humanities. The medal is awarded biennially in honor of a person whose contributions to scholarship, journalism, literature, or the arts have made a permanent impact on U.S. society. Burns accepted the award two

days before his most recent film, *The Dust Bowl*, aired on PBS stations. [Gerald Early](#), who directs the Center for the Humanities and has collaborated with Burns on multiple projects, connects the filmmaker to a long tradition of American voices, saying “I like to think of Burns as a sort of poet, in some measure, the filmmaker version of Walt Whitman with his broad American canvas, the sweeping pile-on of images.”

Dust Bowl farm north of Dalhart, Texas.

Q&A A CITY CONSUMED

Nancy Reynolds on urban commerce, the Cairo fire, and the politics of decolonization in Egypt



Egyptian journalist Hossam el-Hamalawy captured this photograph, depicting fire in the Cairo neighborhood of Abbassiya, while documenting clashes between protestors and the Egyptian army in May 2012.

In January of 1952, fire raged through downtown Cairo. Hundreds of stores and a number of lives were lost. These acts of arson targeted symbols of British colonialism, such as Barclay's Bank, the Cicurel and Salon Vert department stores, and the majestic Rivoli Cinema, but the downtown devastation cut deep into the heart of Cairo city life and revealed the complexity of Egyptian identity under British colonial rule. It is still debated which political groups were responsible for what became known as the Cairo Fire, but the flames of early 1952 directly link to the dramatic overthrow of Egyptian president Husni Mubarak in 2011. The '52 regime, which ousted the British-supported Egyptian monarchy after the Cairo Fire, included Mubarak's presidential predecessor.

Nancy Reynolds, associate professor of history, has been fascinated with Egypt since first traveling there as an undergraduate for a research project that allowed her to pore over primary documents and talk to a member of the Egyptian parliament. Her research on the Cairo Fire maps the intersection between politics, urban space, commerce, and cultural identity. Her book, *A City Consumed: Urban Commerce, the Cairo Fire, and the Politics of Decolonization in Egypt*, was released in 2012.

Why is the Cairo Fire so interesting?

Urban fires for me are really interesting because they can involve questions about why certain buildings are targeted and certain buildings are not. In this fire, the built environment after the fire showed a clear pattern of attack. The fire was largely targeting the British, but it also had a very important effect on commercial properties. Eight of the city's big department stores, most of which weren't owned by British subjects, were burned essentially to the ground. And there was a surprising reaction considering the really deep anger at British colonialism and the deep frustration with the Egyptian monarchy. Many Egyptians began to mourn this loss of the city center and talk about the Cairo Fire as a national suicide. My project was then to understand what was important about the ways in which commodities were being used and commercial space was being organized that made people feel connected to it, even though it was on the surface identified with foreigners.

You write about shoes in your book. Why?

Shoes become an important metaphor for criticizing the end of the colonial regime. Western-style shoes that lace up were a big shift from Egyptian shoes that were not cut to fit on one foot or the other and that people took off when entering buildings. As European-style shoes became cheap enough for a lot of urban residents to use by the 1940s, there was concern about how this new pattern of shoe wearing was changing social relations and the way that people used urban space. There was a certain fear that lower-class people

would become able to move into spaces that they hadn't been able to enter before, or sort of pass as socially from a higher grouping than they really were. This new mobility particularly threatened colonial and local elites, especially landowners.

With so much tension between Egypt and Britain, was there a push for Egyptian-made goods?

It's complicated. Big buy-local campaigns flourished in Egypt in the 1920s and 1930s. Cotton growers especially wanted to develop local mechanized industries to weave cotton textiles, and several nationalist factories began production. At this time, people in India were using coarse homespun textiles as a political tool against British colonialism, and Egyptians began to think about developing locally produced cotton textiles as a similar kind of strategy. But the complexity is that Egyptian cotton was really suited for making very fine, very expensive textiles. By this time lower-class consumption really depended on cheaper, coarse fabric that was coming out of England. So the Egyptian elites were faced with a very complicated problem about how to market silky, very fine textiles made with Egyptian cotton to the peasants in Egypt. One of the important parts of my project was to show how cotton was not a unifier or political vehicle for nationalism in the same way in Egypt that it was in India.

What connections do you see with the political situation in Egypt today?

The fire is very much the prequel to the regime that comes to power that's eventually overthrown in 2011, but there's a broader story too about cities and city space. When I was just in Cairo in October,

again shopping space seemed to be a really important area to contest political power. In the fall, the new Islamist regime under Morsi had just decided that Egyptians were being unproductive as citizens because they were staying up too late at night and shopping. Unlike St. Louis, Cairo is a city that goes all night, and commerce – not just restaurants, but shopping – is an important part of the nightlife. When the Islamist regime decided that shops would be closed at 10 o'clock at night, there was a huge uproar. The Muslim Brotherhood doesn't always speak clearly about its goals, so people were trying to figure out if they could read something into this closing down of urban space to find out about the real politics of the new regime. There was some concern that this was an effort to restrict women's ability to work, because if you have to shop during the day someone has to be home to do that.

Also, because Mubarak's state shut down public protests in city streets, commodities became a focus of political activists trying to mobilize opposition groups in the decade before the uprising. Boycotts of foreign fast-food companies and various product campaigns, especially around cola, were important tactics in this struggle and eventually became a basis for the political action of 2011.

Overall, then, the biggest link in these uprisings for me has been about urban space. The area that burned in the Cairo Fire abuts Tahrir Square, which has been the epicenter of the Egyptian uprising, and I see continuity in the way that Egyptians have battled to reclaim access to public space. In many ways, Tahrir Square has become the symbol for revolution in a lot of places in the Arab world. As a historian, I don't want to be too presentist – they were different moments and different contexts – but in some ways, people relate to urban space and struggle to gain access to it now in much the same way as they did in 1952.



DROUGHT IN THE MIDWEST

The summer of 2012 marked one of the most severe droughts in Missouri history. As of July 17, all 114 counties in the state were declared primary natural disaster areas. In Missouri and Illinois, farmers abandoned dry, devastated cornfields. Many animals were slaughtered due to lack of water and fodder. According to the Palmer Drought Severity Index (PDSI), St. Louis entered 2013 still hovering in the moderate to severe drought categories. In addition to raising concerns for the fate of 2013 crops, the drought's persistence prompts questions about the future of climate change and the long-term consequences for one of the nation's major shipping routes.

The drought has affected business interests from agriculture and cattle raising to shipping. For months, low water levels caused threats of a shipping shutdown on the Mississippi River, the world's largest navigable inland waterway. If water levels had approached a depth of nine feet – the minimum necessary for tugboats to clear the bottom – the Mississippi would have been closed to navigation between St. Louis and Cairo, Illinois. To avert the problem, the Army

Corps of Engineers cleared bedrock from a channel on a section of the river about 100 miles south of St. Louis.

Though a shipping crisis was averted in 2012, doubts linger about what nature has in store for upcoming summers. As the Dust Bowl demonstrated, cycles of drought can recur year after year, having drastic and unforeseeable effects on a region already vulnerable to the effects of climate shifts. With extreme drought in some areas and increased rainfall in others, river cycles and flow can be dramatically altered in ways that affect crop harvests, cattle rearing, and trade routes.

A&S asked faculty experts to weigh in on the short- and long-term effects of drought in the Midwest.

Dry cornfield in September 2012. Map courtesy of the National Drought Mitigation Center at the University of Nebraska-Lincoln.

Robert Criss, professor of earth and planetary sciences

Overreacting on the Mississippi?

The year 2012 was the warmest ever for the lower 48 states and was the 15th driest on record. Low water conditions persisted for a protracted interval on the Mississippi River, impeding barge traffic. Aggressive measures undertaken in response included dredging, rock blasting, and releases of huge volumes of reservoir water. Numerous news stories cast the river levels as being almost record breaking, yet as recently as 2003 the river reached lower stages than any attained last year. Should drought continue into

next summer, some of these emergency actions will be regretted. Anticipated effects of climate change include predictions that flooding and drought will both become more common in the future. Such changes bode poorly for the barge industry, which expects that boats that are too large for the river should safely move under practically all conditions.

Roger Beachy, professor of biology

Food prices and the future of farming

The impacts of the drought of 2012 will be felt in the agriculture economy and in consumer prices for at least 12–18 months. In addition, the high temperatures of 2012 likely suppressed reproduction of some animals. It is

likely that prices for animal-based products will bear most of the responsibility for a 3–4 percent increase in consumer food costs in 2013. Extreme heat and drought conditions such as those experienced in 2012 are expected to occur with increasing frequency in a warming world, and there is general concern that the U.S. is not well prepared.

While it is true that there are some benefits to agriculture with a warming climate and higher levels of the greenhouse gas carbon dioxide, the extreme conditions that were experienced this year portend a different agriculture system in the future than is known today. Changes will require

significant investments in resources and human capital, from the research community to the producers, in order to adapt to the changes in climate that are anticipated in this century and beyond.

Gayle Fritz, professor of anthropology

Looking to the past

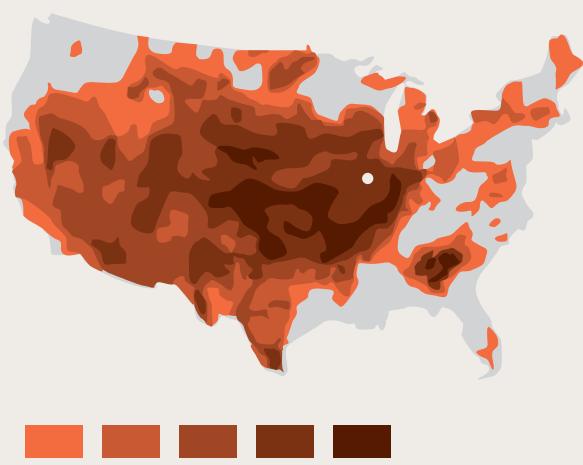
A drought as severe as the one we experienced last summer would have had serious negative consequences for pre-Colonial, indigenous farmers, including those who lived near Cahokia Mounds between 1000 and 1400 CE. However, the impact of such a drought was likely not as terrible as we might think. First, the food production system was biologically diverse and included native crops that had been

domesticated and grown for hundreds or in some cases thousands of years in eastern North America before maize (Indian corn) was introduced. We now know that these native crops were not discarded when maize production was intensified at about 850 CE, but were grown, processed, stored, and consumed in increasingly larger amounts along with maize. This "agrodiversity" made the system less risk-prone and more resilient than if maize had been monocropped the way it is today, in part because none of the native crops were as vulnerable as is maize to lack of rainfall during July and August.

DROUGHT SEVERITY

The Palmer Drought Severity Index (PDSI) considers factors such as temperature, precipitation, evaporation, and soil runoff to categorize a drought's severity on a scale from D0 (abnormally dry) to D4 (exceptional drought).

Drought severity on August 16, 2012



70%
of corn and soybean growing areas with reduced crop yield

65%
of region's cattle with reduced value

**3%
TO
4%**
anticipated 2013 increase in consumer food costs

DROUGHT FACTS

Predicted average corn yield

141 bushels/acre

Actual 2012 corn yield

75 bushels/acre



***Going Online A conversation with Bob Wiltenburg,
Dean of University College, on the promise and challenges
of online education***

ISSUES IN HIGHER EDUCATION

Online education permeates conversations about the future of higher education. In November, Washington University announced its leadership role in *Semester Online*, a new model for online education that will be offered by a consortium of ten prominent universities beginning in the fall of 2013. "Massive open online courses," known as MOOCs, have enrolled more

than 150,000 students in a single course; the *New York Times* dubbed 2012 "The Year of the MOOC." As Dean of University College in Arts & Sciences, which has offered online courses for several years, Bob Wiltenburg has seen how online education works on the ground and how it has evolved over the decades. He talked with A&S in January.

What works?

Writing

In many online courses, students interact with the professor and with one another primarily through the written word. According to Wiltenburg, this aspect of online education makes for a surprisingly rich learning environment.

"As we all know, writing is one of the most powerful ways to learn a subject, to really get deeply into it. The fact that you can't hide behind that loud person in the first row – instead every student has to engage with the material at the same level or in much the same way – that's been a powerful thing."

For this reason, humanities courses often do well online. "For several years now we've had a class taught in modern American poetry, and it works beautifully. The fact that you are continually in a writing conversation with your fellow students and instructor – it's as if you almost have a daily class. So I think for any class in which that kind of engagement with the written word is important, online turns out to be a very powerful tool."

Organizing written discussions can require a level of forethought slightly different than the type of planning needed to facilitate an in-person seminar. As a result, Wiltenburg has noticed that for many faculty members, the process of teaching online "improves and clarifies their regular teaching as well."

Hybrid courses

Academic programs that include online components need not exist solely online. One successful example is the hybrid Master's of Science in Biology for Science Teachers offered through University College. Developed by biology professor and current Dean of Arts & Sciences Barbara Schaal, with support from the National Science Foundation, the program includes two three-week residencies on campus in addition to online coursework. The format allows current high school and middle school teachers from across the country to earn an M.S. in two years. From the program's outset, "faculty were very pleased that they got to know the students personally."

What are the challenges?

Access and engagement

According to Wiltenburg, "the thing that does not change online is that real education depends on personal contact and personal engagement." Without personal contact, some formats of online education run the risk of contributing to the very problem that they hope to help solve.

Publications such as *Inside Higher Ed* have praised MOOCs for their potential to expand educational access to students who, because of scheduling or financial constraints, have previously been left out of the system. But, as Wiltenburg notes, "there is a danger that if we don't use online properly we could diverge into a society of even greater educational haves and have-nots, in which people who can afford it will still have the first-rate residential experience you get at a place like Washington University." As for those without resources, they will be left asking, "Will I have much personal interaction with anybody? No, but I'll try to get as much as I can of the crumbs from the table."

The community experience

Newer forms of online education, including *Semester Online*, attempt to build community by replicating a seminar experience through real-time video. Wiltenburg believes that these efforts are a step forward but will never replace the traditional university setting. "The residential experience is never going away – at least I hope not! It's so powerful. So much of what you learn doesn't have to do with your courses. It has to do with the community you're a part of and the experiences you have outside of classes as well as in. That's not going to be easy to reproduce online."

What's next?

University College

University College is in the process of developing online coursework for one of its most rigorous existing programs, the Master's in International Affairs. In the near-term, online classes will be a convenience for students. Going forward, Wiltenburg sees exciting possibilities for collaboration without borders.

"Let's say you want to teach a course in Latin American politics, well alright. You're sitting here in St. Louis, and you've got a friend and colleague in Peru. You could be co-teachers for a class. Why not? This opens up lots of interesting possibilities in terms of shared experiences and shared resources for both faculty and students ... the technology is different for different types of online education, but you can always find ways to make an engaging educational experience. It can be as excellent, I think, as in person."

In 2009, photographer Jay Fram (see p. 2) worked with young volunteers to create a series of portraits for Covenant House Missouri in St. Louis. The photoshoot, carried out in collaboration with the advocacy group Do1Thing, was part of a national campaign to raise awareness about homeless teens. "Crack my heart and spill it" is a song lyric from the band Josephine Collective.



LOVE, RISK, AND HIV

By Samantha M. Shapiro
Medical anthropologist
Shanti Parikh's research has important implications for at-risk youth, both locally and halfway around the world.

One grey Monday morning in January, Shanti Parikh, associate professor of anthropology, headed out the back door of her family's limestone and brick town house in the Shaw neighborhood with her youngest son Julian on her hip, security blanket in tow. She dropped Julian at university daycare and then headed to the edge of North St. Louis to meet Freida Rees, the outreach director for Covenant House Missouri, a homeless shelter for young people.

Every day Rees makes a circuit around the city, stopping at tent encampments, soup kitchens, and abandoned buildings – she calls them “vacos” – looking for young faces in need of help. Rees hands out stickers with contact information for Covenant House, cereal bars, or pairs of shoes; usually she brings 2–3 kids back to her center’s crisis floor each week.

Washington University was on winter break, so Parikh was devoting the day to research on youth homelessness for an organization called Doorways Interfaith AIDS Housing and Services, which provides housing for HIV positive St. Louisans. Parikh first worked with Doorways when the group asked her to speak about her research on AIDS in Uganda during an advocacy breakfast with Missouri policymakers and elected officials.

Parikh became further involved with Doorways at the request of longtime CEO Lynne

Cooper, who recently passed away after a struggle with pancreatic cancer. As part of her legacy project, Cooper asked that Parikh turn an anthropologist’s eye to her own city in order to write a white paper investigating gaps in services for homeless youth. Was this population experiencing mental illness? Were they HIV positive or at risk? What age range, exactly, should be targeted? A previous shelter for youth with AIDS, Dream House, had failed because kids who stayed there felt stigmatized; what would be the most effective way to create a new space?

Parikh, wearing Pumas, jeans, and a raspberry colored sweater, hopped into the outreach van with Rees. They drove past brick row houses, some cheerful and tidy with Christmas lights still up, some empty and boarded up. An old mattress, a bottle of water, and a bag of clothes leaned against a wall outside one – “signs of life, that’s what we call that,” Rees told Parikh.

Rees turned onto the main road and drove past a chop suey joint and Family Dollar store. As they approached a rundown motel called Ebony, Rees slowed down. “I want to see if our sticker is still on the phone pole,” she explained. “This is an hourly motel,” she told Parikh.

“Transactional sex?” Parikh asked, and Rees nodded.

“Do you do any prevention work with your kids on that?” Parikh asked.

Over two and a half years in Uganda, Parikh collected more than 300 letters and interviewed the authors or the recipients.

The two headed downtown, stopping at the pastor Larry Rice's drop-in soup kitchen, where Rees spoke with the attendants and inquired after a young woman she had seen last week. The next stop was an area near the river, just north of the Arch. Rees took Parikh on a tour of the crawl spaces and crevices between solid, beautiful brick warehouses, the ruins of St. Louis's industrial past. She showed her an expanse of yellowed grass near an abandoned graffiti-covered freight depot where the city had demolished an enormous tent city six months ago. "There were all different camps – one for veterans, one for younger people – and folks were really living off the land, cooking with fires and building stuff out of tree trunks," Rees told Parikh. Parikh got out of the car and surveyed the area. She photographed a city notice, stapled to an electrical pole, that outlined what dates each encampment would be removed.

"Do you think tearing it down was a good thing?" she asked Rees.

REGULATING ROMANCE

Parikh is a medical anthropologist. She studies issues that might come under the domain of public health, but she approaches them from a very different angle. Rather than carrying out a population survey to quantify pre-selected behaviors – smoking or condom use, for instance – medical anthropologists start with local narratives around health and disease, undertaking what they call ethnographic research. So Parikh's research always starts very small – with an individual's story – and ultimately aims to show how very particular hopes, disappointments, and yearnings often reflect something much broader.

In part, medical anthropology analyzes "structural violence," or the way social and economic structures can limit access to choices, networks, and services. "We try to get

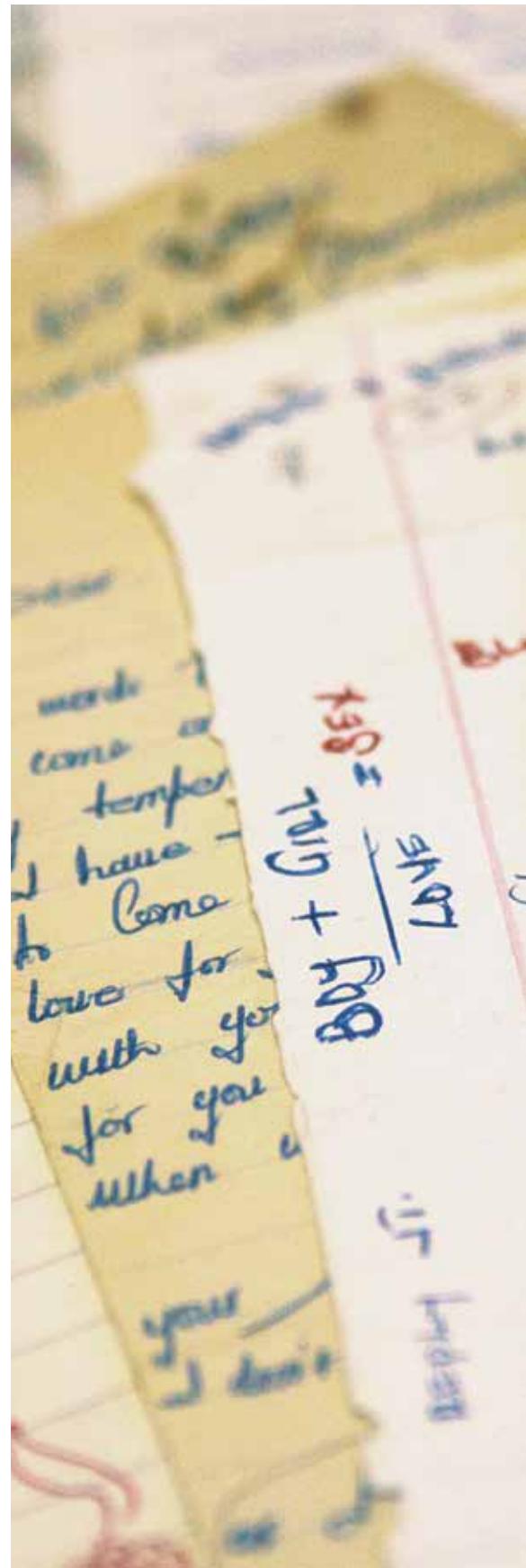
away from the idea of individuals at fault, making irrational decisions. People make decisions based on the situation that they are in, so we study the processes and forces that shape those decisions," Parikh explained.

Parikh's main body of research looks at efforts in Uganda to regulate sexuality in order to prevent unintended pregnancy, HIV, STDs, and other negative sexual outcomes. Her forthcoming book, *Regulating Romance: Youth Sexuality, Moral Anxiety, and Love Letters in Uganda's Time of AIDS*, is based on ten years of research. Uganda is widely considered a success story in its HIV prevention efforts, some of which focused on promoting abstinence and marital fidelity. The latter was the focus of a four-year National Institutes of Health grant and Parikh's first book, *The Secret: Love, Marriage, and HIV*, co-authored with four collaborators. This research produced a deeper picture of what these intervention efforts really looked like on the ground.

In the late 1990s, when Parikh began her dissertation research in Uganda, she conducted interviews with elders and adults to learn more about premarital romance and sexuality in the past. But she didn't get very far with adolescents. Teen dating was culturally forbidden, so kids did not want to admit what they were doing, thinking, or dreaming about to Parikh. "I would ask questions, and they would giggle or get bashful. Part of the problem was that they saw me as an adult, and part of the problem was that they were in the middle of experiencing it, so it was difficult to articulate."

One afternoon, Parikh found her research assistant in the corner of her office intently crafting a love letter to his girlfriend. Parikh asked if she could read it and was struck by the intensity of the language: "he had never mentioned he had a girlfriend, but this letter was so full of romance, pain, and desperation."

Soon after, while conducting interviews at a primary school, Parikh asked the headmaster





if love-letter writing was widespread and if she could collect letters from his students. He turned around and pulled a yellow binder off a shelf in his office that was full of confiscated love letters; the headmaster sometimes had the authors read their notes aloud at morning assembly as punishment.

That yellow binder was Parikh's first source material on contemporary youth intimacy. She pored over the letters for 24 hours and realized this was where she should focus her research. Over two and a half years in Uganda, she collected more than 300 letters and interviewed the authors or the recipients.

She keeps the letters in her office in McMillan Hall, divided into volumes for boys and girls. Bearing return addresses from 'Kiribaki Secondary School, Iganga' and 'Buwenge Taxi Drivers Association,' they are written in slanted script, often crammed onto loose-leaf paper or ornamented with hearts and "dedications" – a list of songs ranging from "Omwana Wo'muzungu" by Ugandan singer Paul Kafeero to "Eternal Flame" by the Bangles. Although the local language is Busoga, all the letters are penned in a stilted, slightly off-kilter English: "Your shining face attracts and affects my feelings and make me even mix up my chemical wrongly," one high school boy proclaims earnestly. The kids write in English partly to sound sophisticated and partly because they are not supposed to be dating at all. "English gives them license to subvert kinship structures and locally-appropriate ways of doing relationships," Parikh explained.

The letters follow a formula: boys tell girls they like them, and often the girls respond with a defense, asking, for instance, for five reasons she should date the boy. There is a back-and-forth, and the girl's hesitancy often relates to how the relationship will affect her reputation. [In Uganda, as everywhere, teens now text, but Parikh says they still maintain this similar formula.]

One finding from the love letters is that in some ways, the regulations on teen sexuality

HIV ON THE RISE

After declining in the 1990s, HIV rates in Uganda are back on the rise (World Health Organization).

Percentage of HIV-infected population:

in Uganda

in the United States

5%

4%

3%

2%

1%

0%

2001

2006

2011

Parikh's preliminary research proposal investigates how unwed motherhood may be the unintended consequence of government policies in criminal justice, public housing, and welfare.



simply drove adolescent romantic behavior underground and further from adult scrutiny, as well as advice. Parikh said that the insights derived from the letters also offer public health campaigns the opportunity to incorporate young people's own ideas of risk into their HIV prevention strategies.

"You see in the letters that girls' more immediate concerns are what I call 'social risk,' such as risk of her reputation being ruined by a boy or by the physical signs of pregnancy, more so than the 'medical risk' of being infected with HIV, which could take up to ten years to manifest. So you start from where they are. Girls are worried about being seen as being weak and easy, and boys are worried about being seen as rejected and not being able to get a girl."

One of Parikh's most startling findings about the reality of Uganda's HIV prevention policies emerged from her research on laws meant to protect young girls from sugar daddies and pedophiles.

In the 1990s, studies found that girls were at a much greater risk of contracting HIV than men, because older men were having sex with younger girls who they believed to be HIV negative. So feminist activists in Uganda fought to increase the age of consent from 14 to 18 and to increase the maximum punishment to death by hanging. As a result of an aggressive awareness campaign, statutory rape (called "defilement" in Uganda) cases began to be brought to trial in large numbers. Parikh was the first person to compile court data, and what she found was that the average age of men convicted was 21.5 – significantly

younger than the age of the sugar daddies whose behavior prompted the law's creation.

"The law was actually being used to regulate relationships of young people," Parikh explained.

Parikh received a Fulbright New Century Scholar fellowship to conduct further anthropological research on the age of consent. She found that the statutory rape cases were brought by fathers who were upset that their daughters were in relationships without going through proper channels. They were worried their daughters would embarrass them or that they would lose out on bridewealth if their daughter contracted her own marriage.

"The approach of medical anthropology is, instead of saying the law is being misunderstood, to acknowledge that the law is being used to respond to what the community perceives is the problem, and that's that female sexuality is no longer controlled by patriarchal kin groups," Parikh said.

After Parikh spoke about her findings, a collaboration between the Ugandan Association of Women Lawyers (FIDA) and Save the Children-Denmark, a non-governmental organization, set about introducing initiatives and revisions so that the law could be used for its original intent, rather than to prosecute teen relationships.

COLLECTING DATA ON THE EDGE OF NORTH ST. LOUIS

In the chapel of Covenant House, a cozy room with blue striped carpets, crosses on the walls,

and bean bag chairs, Parikh sits in on a life skills class facilitated by Rees and her coworker Shona Heard, the life skills coordinator. The point of the class is to give residents a sense of the resources available to them and also to draw them out and get them into conversation.

Parikh isn't looking for any specific information; she just wants to see what the young women talk about and how they talk about it.

Heard starts off by asking the girls to go around the room and share one service or item that they can access at Covenant House. It's immediately clear which girls have just arrived. The ones who have been settled for a while answer brightly in complete sentences.

Jennifer* – who, though only 19, has lived on her own for three years – jumps in first, speaking enthusiastically about the GED program and an anger management class she takes. Sherry, 21, talks about the hygiene kits available at the shelter and how a hairstylist comes periodically to give the girls free haircuts. "I am blessed to be here!" she says.

But the girls who have been at Covenant House for less than a week are too flustered to get more than a word or two out. Michelle, 17, slender in skinny jeans and fur-lined boots, is perched on her chair nervously, sucking her thumb at times and sinking her head into the hood of her pink sweatshirt. When Heard asks her to name a resource available at Covenant House, she freezes and looks like she may cry.

"You can pass while you think about it," Heard says gently.

*Names have been changed.



Zahira, wearing baggy grey jeans and a green tee shirt, has also just arrived and clutches a pair of headphones in her lap like a security blanket. When it's her turn, she quickly says, "it's really nice here," but cannot name a resource. She looks lost. "We can come back to you," Heard says breezily.

After every girl has spoken, Parikh introduces herself and explains the project Doorways is embarking on. "We want to find out from you all about your housing needs so when we develop a center we will know what you need. So, if it's alright, can you share when you first had your current housing needs?"

Zahira says flatly, "I lived in a motel for almost six months – I left because my mother didn't understand that I was schizophrenic and bipolar. She didn't understand that, so she kicked me out."

"She thought you were just acting out?" Parikh says, nodding.

"Then I tried to commit suicide two weeks ago –"

"Was that your first time?" Parikh asked.

"No. The lady caught me at the hotel and I got sent to the Dulles psych ward and the person who helps you find a place to go –"

"The case manager," Heard offers.

"She suggested I come here."

Parikh moves on to Michelle, who blurts out "I was going from house to house and I wore out my welcome and didn't have any more houses to go to. One night I knocked on my aunt's door because I needed somewhere to go at night. I could see they were in there in the living room on the couch and they just weren't opening the door. I knew they didn't want me there."

Parikh listened and took notes. She asked, "What led you to go from house to house?"

"Mom went to jail," Michelle stammered. "And my Dad had been locked up five years."

Parikh wants to know what services the girls think are missing. Sherry volunteers that she has a three year old daughter, but at 21 she has aged out of housing options for teen mothers.

"Does your daughter visit you here?"

Sherry shakes her head sadly.

"She is coming to the Christmas party but that's it for now. No guests are allowed on the floor."

Parikh's research for Doorways is a small side project, but this research will help build a foundation for her next large-scale academic effort. This new project will focus on North St. Louis, where in certain zip codes as many as 90% of children are born to unwed mothers. Parikh's preliminary research proposal investigates how unwed motherhood may be the unintended consequence of government policies in criminal justice, public housing, and welfare. Historically, for example, public housing policy in St. Louis incentivized couples not to get married or cohabit – a woman could only apply for an apartment in the infamous Pruitt-Igoe complex if she guaranteed that the father of her children would not live there. This rule was enforced with inspections.

Parikh said her work on youth homelessness will inevitably contribute to her research on North St. Louis.

"Seeing what happens to young people at this very vulnerable age – when they're no longer seen as needing protection by the government, since they are mostly over 18, but they also

don't have access to jobs or resources so they sort of fall through the system – it will definitely inform the North St. Louis work," she said.

The girls file out of the room one by one to get a TB shot and come back patting the injection site with cotton balls. Jennifer tells Parikh, "We need more testing. Not just TB, but AIDS, syphilis, chlamydia. We should all know what STDs we have. You can get things anywhere. Once I wasn't paying attention and I stepped on a needle and it went through my shoe."

The informal exchange goes on for a long time. Sometimes Parikh leans back and listens to the conversations Rees and Heard facilitate, and less often, she leans in to ask questions. The girls share harrowing stories of being molested by a parent on PCP or hitchhiking to Nebraska and back, but they also enthuse about simple enjoyments – volunteering at a nursing home or the possibility of moving to a more independent section of Covenant House with a later curfew.

Embedded in the sometimes chaotic torrent of stories is data for Parikh's white paper and information for her next major academic research project. She sees each story like a DNA molecule, a small cell expressing the code of vast systems and networks that contain them.

Samantha M. Shapiro (LA97 English Literature) is a contributing writer for the *New York Times Magazine*.

MONA AND JARVIS

By Rosalind Early
**How Jarvis Thurston and
Mona Van Duyn transformed
a department and forged a
vibrant community of world-
class writers**

In 1968 – years before he was Washington University in St. Louis’s Lynne Cooper Harvey Distinguished Professor of English, American Literature, and American Culture Studies – Wayne Fields was finishing his dissertation at the University of Chicago. He’d been invited to interview with Jarvis Thurston, an English professor at Washington University. “I’d never heard of the school before,” Fields admitted.

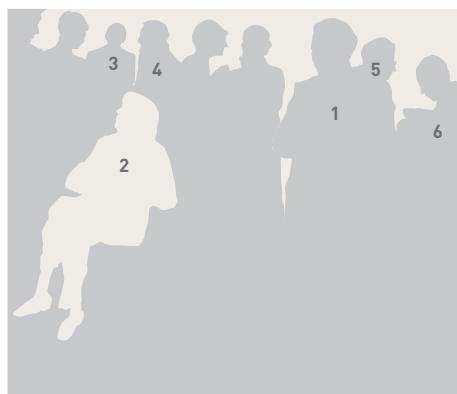
After being offered the job, Fields visited St. Louis and stayed with Thurston and his wife, poet Mona Van Duyn. “It was a terrific evening,” Fields says. The couple recounted the time they crossed state lines to elope, only to discover there was a weeklong waiting period. “They came back and didn’t tell their friends that they hadn’t planned it quite right,” Fields recalls, laughing. “I hadn’t decided until that evening that I wanted to take the job.”

This was how Jarvis Thurston and Mona Van Duyn transformed the English department,

over drinks and cigarettes and memorable conversation. When the couple arrived in 1950, the Hilltop Campus (now Danforth) was a streetcar college, and the English department was “full of old men,” says Naomi Lebowitz, former Hortense and Tobias Lewin Professor in the Humanities and professor emeritus of English and comparative literature.

By the time Thurston retired more than 30 years later, the university was home to a nationally known circle of writers that included novelist William Gass, short story writer Stanley Elkin, essayist Wayne Fields, and poets Donald Finkel, John Morris, Howard Nemerov, and Constance Urdang.

With the help of Van Duyn, Thurston hired them all. “[Thurston] really made it into a modern department,” says Lebowitz. “It’s because of him, his recruiting, that the English department came into being.”



Joan Elkin, *Jarvis Thurston and His Circle*, 1993.

The painting depicts one of the famous interdisciplinary get-togethers the couple initiated.

The who's who:

- 1 Jarvis Thurston
- 2 Mona Van Duyn
- 3 painter Arthur Osver
- 4 poet Donald Finkel
- 5 novelist Stanley Elkin
- 6 literary critic Richard Stang

A COURTY COWBOY AND A QUEENLY COMMONER

Thurston was born in Huntsville, Utah, in 1914, and grew up in the “wild west,” says Lebowitz, his longtime friend. “One day he came home from school and there was a note on the door [from his parents]: ‘Jarvis we’ve moved. Bring the horses.’”

Thurston looked the part of the plainsman, with a large, lumpy nose and gentle mien. He was a carpenter, self-reliant and quietly competent. For most of his twenties, he taught high school and junior college in Ogden, Utah. But “modern literature was his love,” says Richard Ruland, an English professor whom Thurston hired. “It

was who he was.” So, Thurston enrolled at the University of Iowa to pursue a doctorate.

There he met Mona Van Duyn. Seven years his junior, Van Duyn was from Eldora, Iowa, where, as she once told the *Washington Post*, she was “the tallest female in the town and, for all I knew, in the world.” She was thin with short dark hair and a long face. At age 5 she began writing poetry.

The two eloped in 1943. Three years later, they joined the English department faculty at the University of Louisville, where they started *Perspective: A Quarterly of Literature*, a journal dedicated to modern literature. They published early works from prominent writers including John Gardner, Anthony Hecht, Raymond Carver, and John Irving.

Because of university rules against nepotism, however, Van Duyn was fired. The couple moved to St. Louis to teach at Washington University, but married couples were not allowed to teach in the same department. Instead, Van Duyn taught at University College at night and wrote during the day.

She was called a “domestic poet” (a term she hated) because she wrote about marriage, love, and daily life – or, as she put it, “the wintry work of living, our flawed art.” Van Duyn only published nine slim volumes, but she won many of poetry’s most prestigious awards, including the National Book Award and the Ruth Lilly Poetry Prize. At 70 she won a Pulitzer Prize, and a year later she became the first female poet laureate of the United States.

Van Duyn also helped Thurston edit *Perspective*, which ran until 1975. “After we’d been here a few years, the then head of the department, Guy Cardwell, said to Jarvis, ‘Well you edit a little magazine, would you just pick me out the best,

| | | | | | | | | | | | | | |
|------|--|------|-----------------|------|--|------|---|------|---------------------------------------|------|--|------|---|
| 1942 | Van Duyn completes her BA at the Iowa State Teachers College | 1943 | The couple weds | 1946 | Thurston earns his PhD at the University of Iowa, and both Thurston and Van Duyn take teaching positions at the University of Louisville in Kentucky | 1947 | Thurston and Van Duyn first publish <i>Perspective: A Quarterly of Literature</i> | 1950 | Thurston and Van Duyn arrive at WUSTL | 1959 | Van Duyn publishes her first book of poetry, <i>Valentines to the Wide World</i> | 1960 | Constance Urdang, Don Finkel, and Stanley Elkin join the English department |
|------|--|------|-----------------|------|--|------|---|------|---------------------------------------|------|--|------|---|



most talented poet to teach poetry here?" Van Duyn recalled in a 2003 interview. "And Jarvis and I talked it over and picked Don Finkel."

It was 1960 when Finkel arrived with his wife, the poet Constance Urdang. He proved such a success that Cardwell again asked Thurston to pick a professor, this time a prose writer. Thurston chose Stanley Elkin.

In 1969 Richard Ruland succeeded Thurston as chairman and remembers telling another professor, Dick Stang, that the department was "really very good." Stang, thinking Ruland might be taking credit, barked, "Well, Jarvis built this department!"



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|--|---|--|---|---|---|--|
| 1964 Van Duyn joins an advisory committee for WUSTL's Rare Books Department (now Special Collections) | 1966 Thurston becomes department chair, a position he holds until 1969 | 1968 Thurston hires Wayne Fields, and Van Duyn wins the Hart Crane Memorial Prize | 1969 Howard Nemerov and William Gass join the English department | 1970 Van Duyn wins the Bollingen Prize | 1971 Van Duyn wins the National Book Award for Poetry for <i>To See, To Take</i> | 1975 Thurston and Van Duyn stop printing <i>Perspective</i> |
|--|---|--|---|---|---|--|



I have been "hooked" on reading poetry for 43 years, a habit probably reinforced, rather than discouraged, by the custom in small-town mid-west, of having pupils stay after school and learn a poem as punishment for misdemeanors. In teaching since 1943 I estimate that I have helped, or hindered, the writing of a poem by at least 1,000 people. During the over 25 years I have co-edited a magazine I guess that I have reacted to poems by six or seven thousand people. This includes only the amateurs, in all senses of that beautiful word, not all those who went on to publish books. These years taught me ^{quietly but constantly} that poetry has been a ~~continuously~~^{continuously} flourishing art, though only recently has there been an accompanying renaissance in its publication. It has gone from being somewhat obscure, ~~and~~^{and}, to being democratized and powerful--through the responsiveness of publishers. And I am profoundly glad this is so, though I sometimes exclaim in dismay, "There are just too many good poets in this world!"

This award honors the use of language. Poetry honors the formed use of language particularly, being concerned with both its sound and its meaning, and a poet spends his life's best efforts in shaping these into a patterned experience which will combine an awareness of earlier patterning with the unique resonance of his own voice. He tries to do so in such a way that the experience may be shared with other people. This effort assumes a caring about other human beings, caring which is a form of love.

On a travel grant I had an opportunity to use a number of public facilities. I noticed there, more frequently than the obscenities, the predominance of a heart, quickly scratched or painstakingly carved, with the initials of lover and loved one inside it. Here is the poem:

On March 4, 1971, Mona
Van Duyn accepted the
National Book Award for
Poetry. Her acceptance
speech, excerpted here,
is housed within the
Washington University
Libraries Department of
Special Collections.

WRITERS AND ACADEMICIANS LEARNING AND WORKING SIDE BY SIDE

Thurston and Van Duyn also loved hosting parties and building camaraderie. Lebowitz remembers regularly bursting into the department coffee room with new literary insights she'd gained while teaching. "The whole town was there," she says. "We would just have the best discussions you ever heard in your life." Stanley Elkin even wrote a radio play about it, titled *The Coffee Room*.

In 1969, when Fannie Hurst left nearly \$1 million to the university to start the Hurst professorship, Thurston and Van Duyn invited writers from their wide circle of friends as visiting professors, including poets James Merrill and James Dickey.

The visiting writers prompted even more socializing. William Gass, professor emeritus in philosophy and David May Distinguished University Professor in the Humanities, remembers how John Gardner, a former student of Thurston who would go on to write the classic novel *Grendel*, would often drive in for parties. "He and I drank up a storm and would argue in the kitchen [about writing]," Gass says.

Van Duyn and Thurston preferred quiet corners. Van Duyn suffered from depression and could be difficult to get to know. "There was a harder edge to her," says Fields. "I think I know Mona better through her poetry than I did from visiting."

The variety of talent within the English department could largely be credited to Thurston. "He represented to whoever was chair the ideal of having faculty who were respected academically, and who were creative writers as well," says professor emeritus Dan Shea, who also served as English department chairman. For Shea, Thurston's most important accomplishment was helping to build the creative writing program. The program, which began in 1977, required creative writing students to take literature courses. The current MFA program ranks 9th in the country.

Van Duyn's contributions to the Modern Literature Collection at Olin Library provided an additional legacy to the university. She convinced friends, including poet May Swenson, to donate their manuscripts. Thurston and Van Duyn also left the library their own papers – everything from cat photos to Van Duyn's Pulitzer Prize.

"Jarvis is so close to me that I can't think of him as another person," Van Duyn told the *St. Louis Post-Dispatch* in 1971. They were married 61 years, until Van Duyn died in 2004. Thurston died four years later.

"A courtly cowboy and a queenly commoner," Shea wrote of them in 1993. "They gave us what they were. It's ours to celebrate and worry over now."

Rosalind Early (LA 2003, English and Germanic Languages and Literatures) is an assistant editor at *St. Louis Magazine*.

All images are located within the *Mona Van Duyn and Jarvis Thurston Papers, Washington University Libraries, Department of Special Collections*. To learn more, see *Mona & Jarvis: A Story in Manuscripts*, featured in the Fall 2008 edition of *Off the Shelf* and available on our website.

1977
The creative writing program is established
1982
Thurston retires

1985

Van Duyn is named chancellor of the American Academy of Poets

1989

Van Duyn wins the Ruth Lilly Poetry Prize

1991

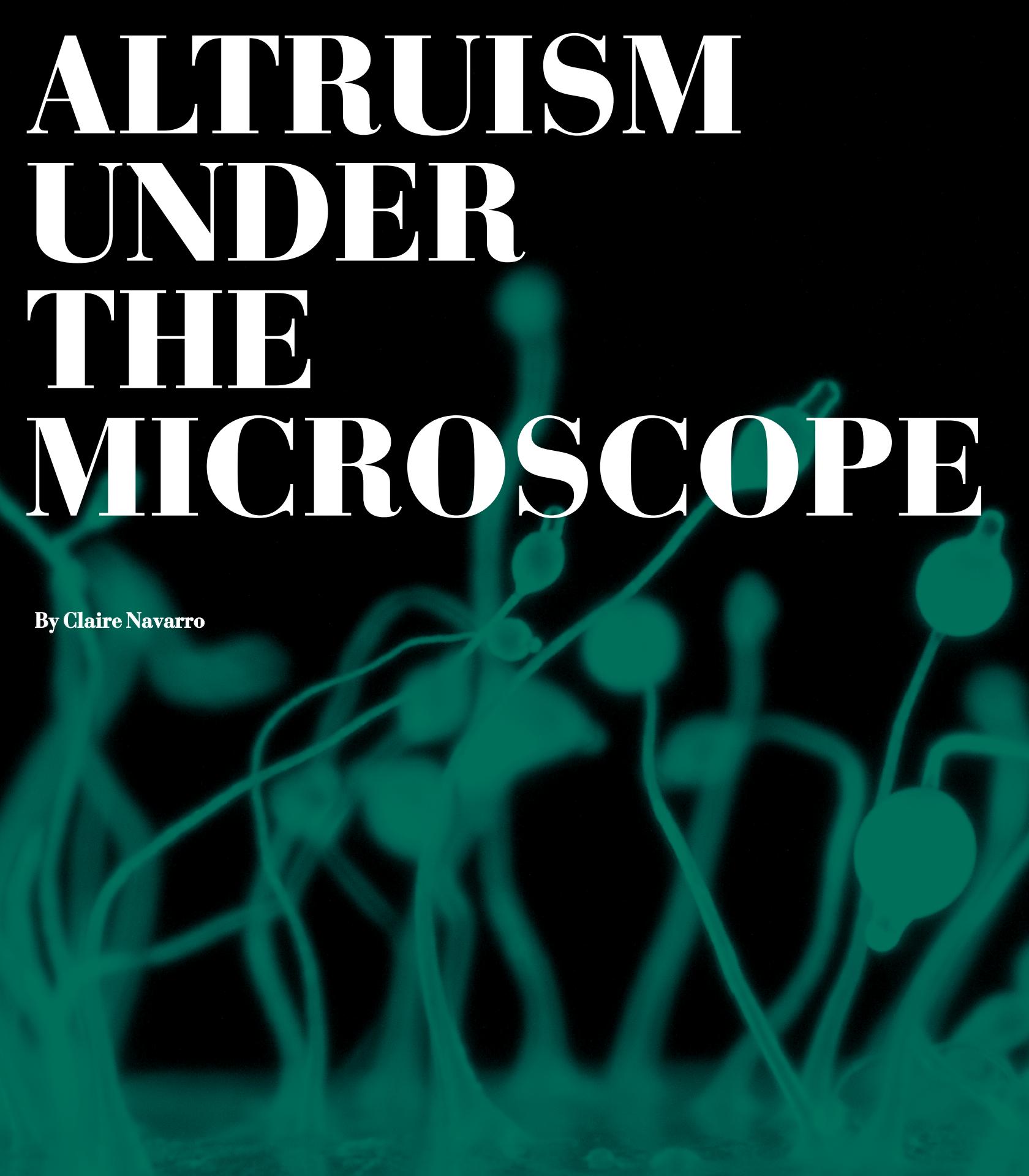
Van Duyn wins the Pulitzer Prize for *Near Changes*

1993

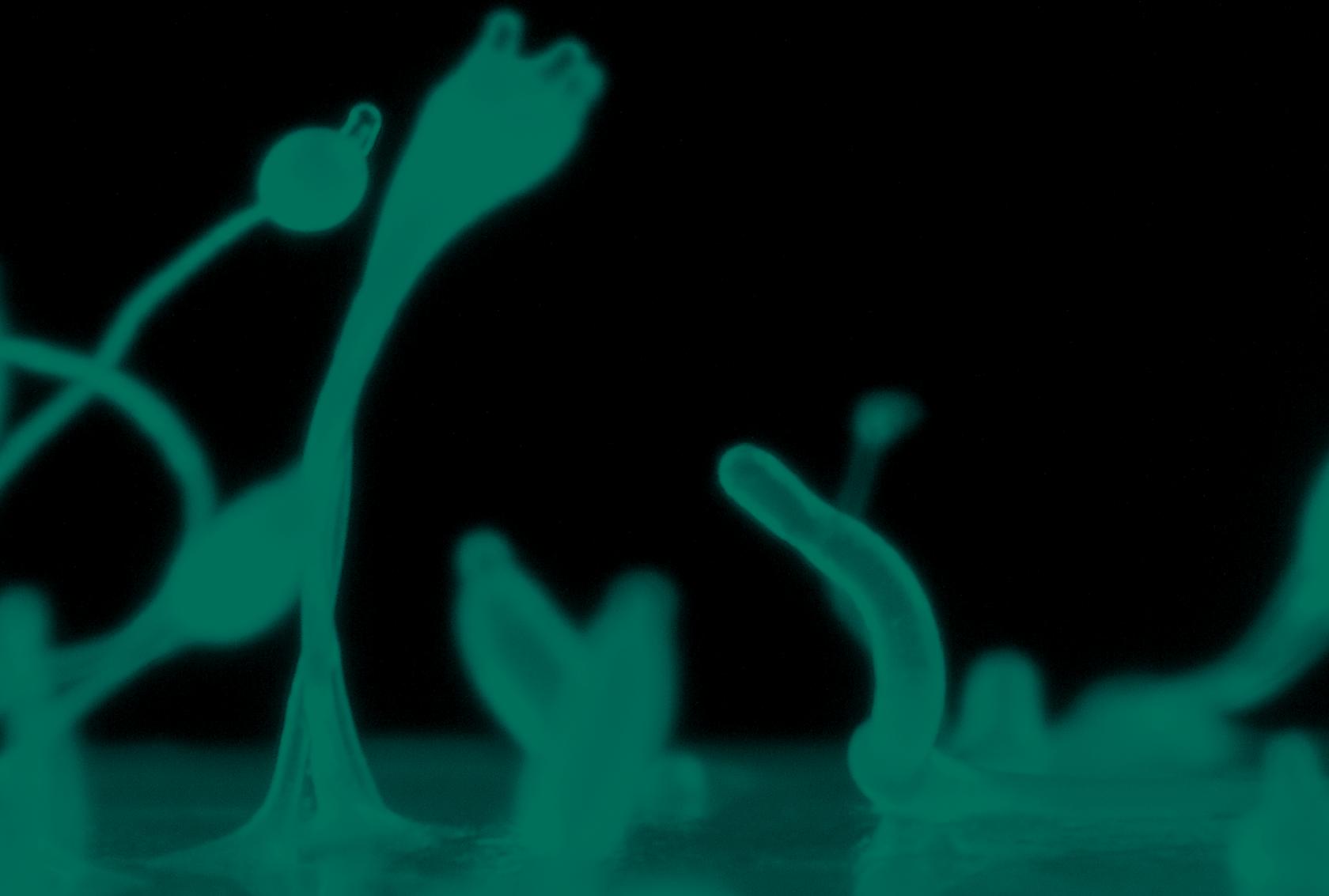
WUSTL unveils portraits of Van Duyn and Thurston, which are now located in the Special Collections Reading Room



ALTRUISM UNDER THE MICROSCOPE



By Claire Navarro



Professors David Queller and Joan Strassmann study the evolutionary biology of "social amoebae." These single-celled organisms display surprisingly complex behaviors, including cooperation, competition, and even altruism.

What exactly is altruism? By definition, altruists behave selflessly in the interest of others. The ability to set aside all self-interest may seem like a distinctly human phenomenon, wrapped up more with ideas of morality or philosophy than biology. Yet David Queller, the Spencer T. Olin Professor of Biology, and Joan Strassmann,

professor of biology, study the presence and function of altruism even at the microscopic level of single-celled amoebae.

According to Strassmann and Queller, altruism is one of a suite of behaviors that have evolved in *Dictyostelium discoideum*. The altruistic actions of these single-celled creatures are dramatic; when threatened by starvation, large numbers of amoebae will die so others have a better chance at survival.

The sacrificial behavior of *D. discoideum* prompts a range of evolutionary conundrums. How do genes responsible for altruism get passed on from generation to generation, if the amoebae that carry that gene die for the benefit of others? How do 'cheater genes' – genes that make an amoeba more likely to survive than sacrifice itself – not rampantly spread through natural selection? Queller and Strassmann have spent years investigating these and related questions.

SOCIAL AMOEBAE

Though scientists refer to *D. discoideum* as ‘social amoebae,’ like many organisms, their social behaviors only emerge in times of need. The majority of their lives, these amoebae are “just sort of like what people think of as amoebae,” Queller explains. They consume bacteria in the soil, and when they get big enough, they divide into two. The two clones then go their separate, bacteria-eating ways. But when an amoeba exhausts its nearby supply of food, the hungry cell emits chemical signals to others in the surrounding area. In essence, the signal says: “Hey, I’m starving, let’s get together,” according to Queller.

The amoebae answer this distress call by aggregating to form a group referred to as a ‘slug.’ The millimeter-long slug, which might include some ten to a hundred thousand individual cells, makes its way toward the surface of the soil as if it were a single organism. There the slug begins its transformation into a ‘fruiting body.’

About twenty percent of the total group produces stiff cellulose, together creating a minuscule stalk rising out of the dirt – killing themselves in the process. The surviving amoebae then slide up through the hollow stalk, forming a round translucent globule at the top. There they undertake their own transformation into spores and wait to be transferred to a new home, perhaps by a passing insect, or the splash of a raindrop.

In order to give the majority of the group a chance to move on to greener (or at least more bacteria-rich) pastures, the amoebae within the stalk perform what appears to be the ultimate evolutionary sacrifice – dying so that others might live.

THE ROLE OF RELATEDNESS

The idea of relatedness is important to understanding cooperation and altruism in social amoebae, because unlike within a multicellular organism like a human being, the cells that aggregate to form a slug and fruiting body can carry different genes. As Strassmann notes, “You are made up of a whole bunch of cells all cooperating to allow you to survive and reproduce. You don’t have a lot of conflict within your body because the cells are all genetically identical. Your liver isn’t fighting to get into your gonads; it’s trying to be the best liver that your drinking habits will let it be.”

It makes evolutionary sense for an amoeba to cooperate with – and even sacrifice itself for – a clonemate or a relative, because clonemates or relatives share genes and will presumably live on to spread those genes. But with genetic difference arises the possibility for competition and cheating.

In order to better understand the role of relatedness in the social behaviors of *D. discoideum*, Strassmann and Queller collected fruiting bodies from the wild. At the time, this was an unusual and innovative move in a scientific community that focuses nearly exclusively on a single established lab strain. After successfully finding the minuscule spores and stalks in a forest in Virginia – something that Strassmann recalls being told “would be impossible to do” – the team discovered that fruiting bodies in nature have a very high level of relatedness, higher than full sisters. This led them back to the lab to figure out how, and why.

Among their most exciting finds in this area, Queller and Strassmann discovered that even unicellular organisms have methods of recognizing their kin. “It’s not a perfect system by any means, but it’s part of the answer,



Top images: Fruiting bodies of *Dictyostelium discoideum*.
Bottom image: Professor Joan Strassmann with one of her amoeba cultures.

“Any time you cooperate with others there are costs that need to be controlled, but there are also benefits. And that’s why it all happens.”



and it's very cool to think that amoebae can discriminate levels of kinship at all,” Queller explains.

When possible, these social amoebae tend to stick with their own. But there are some advantages to grouping with genetically different cells. For example, it's better to form a large slug by joining with non-relatives than to form a smaller slug with kin alone. “It's good to be in a bigger aggregation because a bigger slug can move farther and make a taller stalk,” according to Strassmann.

Over generations, genes mutate, and Queller and Strassmann have found that some genetic mutations increase an amoeba's chance of survival in a mixed grouping. When allowed to evolve under low-relatedness conditions in the lab, the mutants with so-called ‘cheater genes’ spread through natural selection. These cells take advantage of patterns that in part determine which amoebae in a slug will behave altruistically and which will live on as spore.

One such pattern concerns placement within a slug. The front section of the slug differentiates as stalk, so finding ways to slip to the back of the group increases an amoeba's chance for survival. Those that first send starvation signals to the group also survive. “Our interpretation of that, though we need additional evidence, is that the first ones to start into the process are turning on their competitive strategies first – whatever genes are good at making them possible cheaters or resisting against other possible cheaters. They're getting a head start in the process,” Queller notes.

High relatedness is one method of controlling potential cheaters, but Queller and Strassmann theorize about other strategies as well. For example, a single gene can be responsible for more than one trait. In one experiment, Queller and Strassmann reduced amoebae's ability to adhere together by knocking out the gene *csaA*. In the lab, these were the cheaters that avoided sticking

to the front of a slug and becoming stalk. But in nature, cells without *csaA* lose their ability aggregate at all. Rather than gaming the system, they end up left out of it entirely.

THE BIG MESSAGE

Strassmann and Queller are reluctant to transfer any lessons from single-celled amoebae to the messy, cultural world of human behavior. But Queller recognizes at least an analogous relationship between the interactions of altruists and cheaters in the very different lives of *D. discoideum* and humans.

“When you do something cooperative, whether it's altruism or just two individuals coming together and producing some public good, that good they're producing is something that might be exploited by somebody else that's not really part of the game,” Queller explains. “And if the only difference is that you benefit but the altruist pays the cost, the ones who are not paying the cost are going to do better and spread through natural selection.”

Yet despite these possibilities for cheating the system, evolution has determined that cooperative behaviors live on in the world of *D. discoideum*. Social amoebae continue to eat bacteria, divide into more amoebae, and, in some cases, die so that others may do the same. In the infinitely larger and more complex human world, a similar balance between competition and cooperation plays out on an individual and global scale.

“That's one of our big messages,” Strassmann notes. “Any time you cooperate with others there are costs that need to be controlled, but there are also benefits. And that's why it all happens.”

In addition to her editorial role, Claire Navarro produces and hosts the A&S podcast series *Hold That Thought*.

Senior Photo



Lunar New Year Festival

Dansaem (Chloe) Jeon
LA 2013 Economics
Winner of the 2013 A&S
senior photo competition

The Lunar New Year Festival is one of the biggest culture shows on campus, and I have participated every year since I was a freshman. Because this was my last festival, I wanted to capture the experience backstage. By placing my camera at the very back of the Edison Theatre, I captured the dancers, staff, and, moreover, the atmosphere, which beautifully connected all their efforts. Perhaps college life has always been like this: we are eager to color our lives every moment, and it ends up becoming a collage that consists of everyone's backgrounds and interests.



STUDENT SPOTLIGHT

Undergraduate research



Prateek Kumar

Philosophy-Neuroscience-Psychology
and Anthropology

Music therapy, as a discipline, is a “Western” phenomenon. But many cultures around the world use music for healing and have done so for centuries (even millennia). India is one country rich in musical heritage; however, traditional Indian music and healing practices have been viewed as primarily of musical and anthropological interest, rather than medical interest. The goal of my two-year project is to describe the variety of musical healing practices in India, point out what Western music therapists can learn from India (particular areas for further research), and offer suggestions for the next steps for the music therapy profession in India. I spent six weeks of my summer traveling around India, interviewing musicians, music healers, therapists, physicians, and others involved with music and healing. The practitioners are diverse and unconnected, so one of my hopes is that my survey will initiate collaboration and encourage development of music therapy in India.

Each year, hundreds of Washington University undergraduates move beyond the classroom and into labs, libraries, excavation sites, and cities across the U.S. and around the globe. After identifying a research focus, each student must secure a faculty mentor and apply for funding. The process can be involved, but the opportunity to undertake serious research offers these enterprising students a competitive edge when pursuing

employment or applying to professional or graduate schools. Students also have the opportunity to present their findings at the Undergraduate Research Symposium, organized each semester by the Office of Undergraduate Research. A&S invited members of the class of 2013 to share their work.

BY THE NUMBERS

200+

students participated in the Fall Undergraduate Research Symposium

For more information, visit the Office of Undergraduate Research at ur.wustl.edu.

49

students received Summer Undergraduate Research Awards

150+

students received funding from affiliated programs

Emma Hine

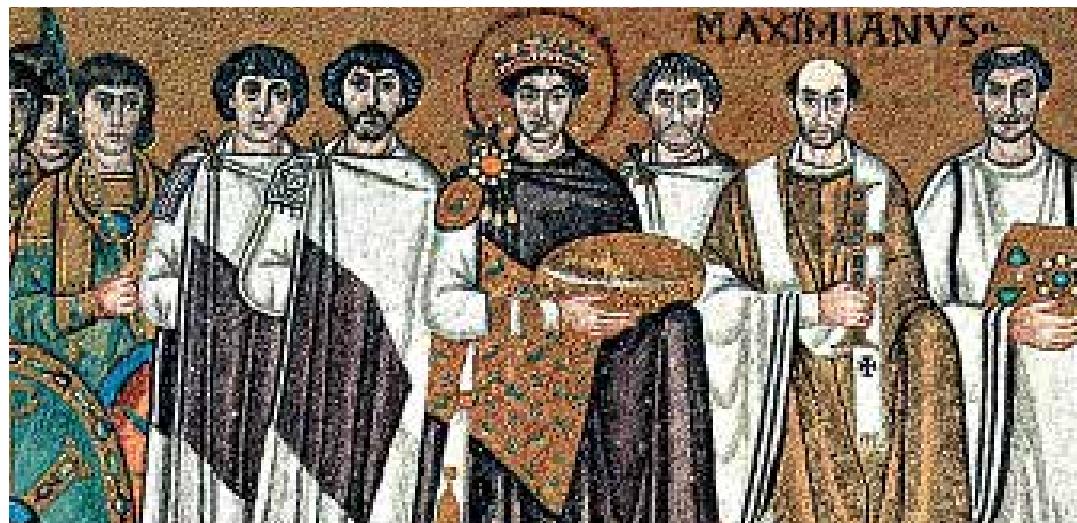
English Literature

I spent several weeks in London looking at the experience of the individual in the urban crowd in the novels of Virginia Woolf and Iris Murdoch. I spent my time researching books in the British Library and exploring the city itself to gain insight into the descriptive choices both authors make. My work focuses on their use of the Thames, traffic, and other urban currents to portray the sensations of drowning or staying afloat in the chaotic metropolis.



Elena Gittleman**Art History**

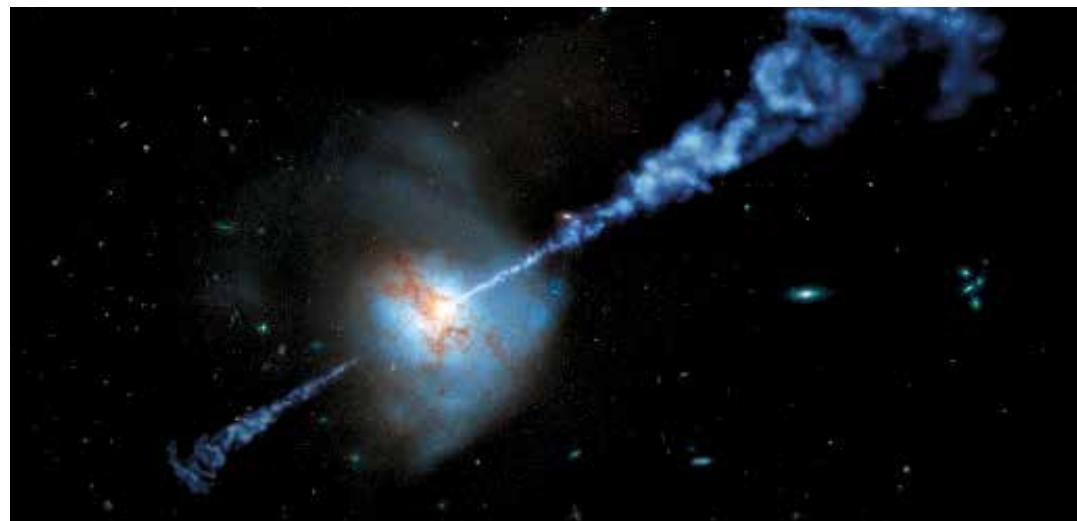
I traveled to Ravenna, Italy to complete research on the complex relationship of the Byzantine Emperor Justinian and his expansion of the Byzantine Empire to include the old lands of the Roman Empire, particularly Italy. The Basilica of San Vitale in Ravenna, my primary research site, houses some of the most exquisite 6th century mosaics that remain today. These mosaics encapsulate the Imperial victories and hopes of Emperor Justinian, as well as the social, political, and religious ideals of the 6th century, but above all they exemplify, with power and beauty, Justinian as Emperor and Image.

**Re-I Chin****Biology**

I investigated the molecular mechanism of repairing double-strand breaks (DSBs), one of the most severe forms of DNA damage. DSBs are capable of causing severe genomic instability and can lead to cancer if unpaired or repaired inappropriately. I focused on understanding the regulation of Exonuclease 1, a major protein in the DSB repair, in sites of DNA damage.

Jordan Raisher**Physics**

I spent the past two years updating the Antipodal Transient Observatory, which is based in southern Arizona. This work primarily focused on computational image processing and optical astronomy. This involved several months of observing the Active Galactic Nuclei (the regions surrounding the black holes at the center of galaxies).



A photograph of the Curiosity rover on the surface of Mars. The rover is positioned in the center-right of the frame, facing towards the left. It has a complex mechanical structure with various cameras, sensors, and instruments attached. The background shows the reddish-brown, rocky terrain of Mars under a hazy, orange sky.

in recognition

On August 6, 2012, Raymond Arvidson, the James S. McDonnell Distinguished University Professor, and graduate student Abigail Fraeman joined nearly 300 planetary scientists at the Jet Propulsion Laboratory in Pasadena for “Seven Minutes of Terror” as the rover Curiosity executed a *Mission Impossible*-style landing on Mars. Arvidson, who is a participating scientist on the Curiosity mission, is using the rover to study Martian soils.

SELECTED ACHIEVEMENTS & HONORS

Anthropology

Peter Benson was awarded the James Mooney Award from the Southern Anthropological Society for his book *Tobacco Capitalism: Growers, Migrant Workers, and the Changing Face of a Global Industry*.

Gayle Fritz received the 2013 Award for Excellence in Archaeological Analysis from the Society for American Archaeology.

Carolyn Sargent received the 2012 Ellen Basker Memorial Prize from the Society for Medical Anthropology for her book *Reproduction, Globalization, and the State: New Theoretical and Ethnographic Perspectives*.

Bradley Stoner was elected president of the American Sexually Transmitted Disease Association.

Biology

Robert Blankenship was named a fellow of the American Academy of Microbiology.

Sarah C. R. Elgin was elected to the board of directors of the Genetics Society of America.

Kathryn Miller was selected as a Vision and Change Leadership Fellow by the Partnership for Undergraduate Life Sciences Education (PULSE).

Barbara Schaal was named a United States science envoy by the Secretary of State, Hillary Rodham Clinton. Schaal also received the 2011–12 American Institute of Biological Sciences' Distinguished Scientist Award.

Alan Templeton was elected to the American Academy of Arts and Sciences.

Classics

Robert Lamberton was named a fellow of the Institute for Advanced Study at the Hebrew University of Jerusalem.

Earth and Planetary Sciences

Katharina Lodders was elected a fellow of the Meteoritical Society.

Philip Skemer was elected vice chair of the Mineral and Rock Physics focus group of the American Geophysical Union.

Doug Wiens was appointed a Merle A. Tuve Senior Fellow by the Carnegie Institute for Science in Washington, D.C.

Education

Carol Camp Yeakey was elected a fellow of the American Educational Research Association.

History

Daniel Bornstein won the Historical Society of St. Louis County's 2012 William Barnaby Faherty S. J. Award for his contributions to religious and cultural history. Bornstein was also elected vice president of the American Catholic Historical Association.

Peter Kastor was awarded the History of Science Society's Margaret W. Rossiter History of Women in Science Prize.

Mathematics

Steven Krantz, Richard Rochberg, and Guido Weiss were elected fellows of the American Mathematical Society.

Music

Paul Steinbeck won the Steve Larson Award for Jazz Scholarship from the Society for Music Theory's Jazz Interest Group.

Psychology

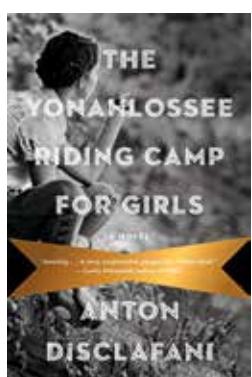
Joshua Jackson won the J. S. Tanaka Award from the Association for Research in Personality.

Larry Jacoby received the Association for Psychological Science's highest recognition, the William James Lifetime Achievement Award.

Romance Languages and Literatures

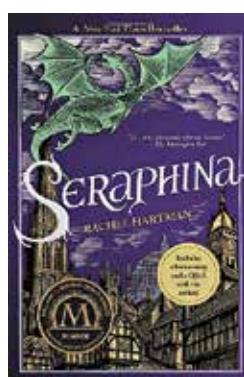
Rebecca Messbarger won the James L. Clifford Prize from the American Society for Eighteenth-Century Studies for the best article about eighteenth-century culture.

Alumni Bookshelf *Anton DiSclafani, Rachel Hartman*



The Yonahlossee Riding Camp for Girls
by Anton DiSclafani, MFA Creative Writing 2006
Riverhead Books, forthcoming June 2013

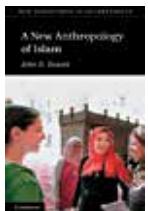
A lush, evocative debut novel of family secrets and girls'-school rituals, set in the 1930s South. Part scandalous love story, part heartbreakng family drama, *The Yonahlossee Riding Camp for Girls* is an immersive, transporting page-turner – a vivid, propulsive novel about sex, love, family, money, class, home, and horses, all set against the ominous threat of the Depression.



Seraphina
by Rachel Hartman, LA Comparative Literature 1994
Random House Books for Young Readers, 2012

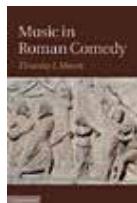
In her *New York Times* bestselling and Morris Award-winning debut, Rachel Hartman introduces fantasy and science-fiction readers of all ages to an alternative-medieval world filled with mathematical dragons. *Eragon* author Christopher Paolini calls them "some of the most interesting dragons I've read in fantasy."

SELECTED PUBLICATIONS



Anthropology

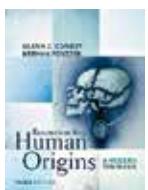
John Bowen, *A New Anthropology of Islam* (Cambridge University Press, 2012)



Timothy Moore, *Music in Roman Comedy* (Cambridge University Press, 2012)



Carol Camp Yeakey, editor, *Living on the Boundaries: Urban Marginality in National and International Contexts* (Emerald Group Publishing Limited, 2012)



Glenn Conroy, *Reconstructing Human Origins: A Modern Synthesis* (3rd ed.) (W.W. Norton & Company, 2012) (with Herman Pontzer)



— *Roman Theatre* (Cambridge University Press, 2012)



English
Robert Milder, *Hawthorne's Habitations: A Literary Life* (Oxford University Press, 2013)



Erik Trinkaus, editor, *Life and Death at the Peștera cu Oase: A Setting for Modern Human Emergence in Europe* (Oxford University Press, 2013) (with Silvius Constantin and João Zilhão)

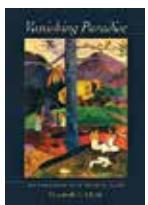


Earth and Planetary Sciences

Bruce Fegley, Jr., *Practical Chemical Thermodynamics for Geoscientists* (Academic Press/Elsevier, 2013)



Carl Phillips, *Silverchest* (Farrar, Straus and Giroux, 2013)



Art History

Elizabeth Childs, *Vanishing Paradise: Art and Exoticism in Colonial Tahiti* (University of California Press, 2013)



Economics

Steve Fazzari, co-editor, *After the Great Recession: The Struggle for Economic Recovery and Growth* (Cambridge University Press, 2013) (with Barry Cynamon and Mark Setterfield)



Stephanie Pippin, *The Messenger* (University of Iowa Press, 2013)



William Wallace, *Discovering Michelangelo: The Art Lover's Guide to Understanding Michelangelo's Masterpieces* (Rizzoli Publishing, 2012)



David Levine, *Is Behavioral Economics Doomed?: The Ordinary versus the Extraordinary* (Open Book Publishers, 2012)



Wolfram Schmidgen, *Exquisite Mixture: The Virtues of Impurity in Early Modern England* (University of Pennsylvania Press, 2012)



Robert Lamberton, *Proclus the Successor on Poetics and the Homeric Poems: Essays 5 and 6 of his Commentary on the Republic of Plato* (Society of Biblical Literature, 2013)



Keith Sawyer, *Explaining Creativity: The Science of Human Innovation* (2nd ed.) (Oxford University Press, 2012)

INFERNO

CANTO IV

English professor Mary Jo Bang's 2012 translation of *Inferno* was selected as a notable book by both the Academy of American Poets and the American Library Association.

A deafening clap of thunder
Undermined my sleep state, startling me awake
Like someone roughly shaken.

I stood up. Feeling rested, I looked around,
Searching for a landmark
And wondering where I'd woken.

The fact is, I found myself on the brink
Of a deep and melancholy chasm
Echoing with a roar of endless anguish.

It was so dark and deep and impenetrable that
I couldn't identify anything,
However intently I tried.

"Let us go then, you and I; I'll go first, you stay behind me,"
Said the poet, who was now ghost-white.
"That's how we'll descend into the unlit world below."

Seeing how pale he was, I said, "I'm worried.
Look at you! If you're this afraid,
Who'll take care of me when I blunder and stumble?"

He shook his head.
"It's pity on my face," he said,
"For the suffering souls below, not fear."

Let's begin, since we have a long way to go."
He stepped down and motioned me to follow;
That's how we entered the first circle of the black abyss.

Mary Jo Bang. Excerpt from "Canto IV," from *Inferno*. Translation copyright © 2012 by Mary Jo Bang. Illustrations copyright © 2012 by Henrik Drescher. Reprinted with the permission of Graywolf Press, Minneapolis, Minnesota, www.graywolfpress.org.



SELECTED PUBLICATIONS



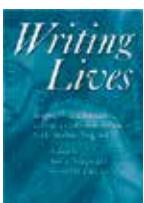
Daniel Shea, *The Patience of Pearl: Spiritualism and Authorship in the Writings of Pearl Curran* (University of Missouri Press, 2012)



Nancy Reynolds, *A City Consumed: Urban Commerce, the Cairo Fire, and the Politics of Decolonization in Egypt* (Stanford University Press, 2012)



Hugh Macdonald, *Music in 1853: the Biography of a Year* (Boydell Press, 2012)



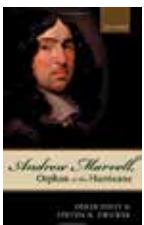
Steven Zwicker, *Writing Lives* (Oxford University Press, 2012) (with Kevin Sharpe)



Richard Walter, *Twisted Tango* (iUniverse, 2012)



Political Science
James Gibson, *Electing Judges: The Surprising Effects of Campaigning on Judicial Legitimacy* (University of Chicago Press, 2012)



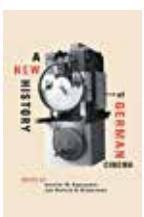
English and History
Derek Hirst and **Steven Zwicker**, *Andrew Marvell, Orphan of the Hurricane* (Oxford University Press, 2012)



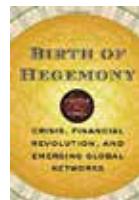
International and Area Studies
Andrew Sobel, *International Political Economy in Context: Individual Choices, Global Effects* (Congressional Quarterly Press, 2012)



Psychology
Stanley Finger, *The Animal Spirit Doctrine and the Origins of Neurophysiology* (Oxford University Press, 2012) (with C. Smith, Eugenio Frixione, and William Clower)



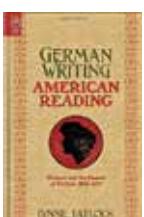
Germanic Languages and Literatures
Jennifer Kapczynski, editor, *A New History of German Cinema* (Camden House, 2012) (with Michael Richardson)



– *Birth of Hegemony: Crisis, Financial Revolution, and Emerging Global Networks* (University of Chicago Press, 2012)



Simine Vazire, editor, *Handbook of Self-Knowledge* (The Guilford Press, 2012) (with Timothy Wilson)



Lynne Tatlock, *German Writing, American Reading: Women and the Import of Fiction, 1866–1917* (Ohio State University Press, 2012)



Music
Todd Decker, *Show Boat: Performing Race in an American Musical* (Oxford University Press, 2012)



Romance Languages and Literatures
Ignacio Infante, *After Translation: The Transfer and Circulation of Modern Poetics Across the Atlantic* (Fordham University Press, 2013)



History
Shefali Chandra, *The Sexual Life of English: Languages of Caste and Desire in Colonial India* (Duke University Press, 2012)



Mabel Moraña and **Ignacio Prado**, editors, *El lenguaje de las emociones. Afecto y cultura en América Latina* (Iberoamericana/Vervuert, 2012)

DISTINGUISHED ALUMNI



Dean's Medalist 2013 **Marie Oetting**

Marie Oetting, Economics 1949

A stalwart volunteer for Arts & Sciences and a fixture on campus for over 60 years, Oetting has served on the A&S National Council, Alumni Board of Governors, Campaign Committee for Planned Giving, A&S Scholarship Initiative Committee, Eliot Society Membership Committee, and Danforth Circle Eliot Membership Committee. She is a Life Member of the Women's Society and a regular Chair of her reunions. This is the 24th year that she has funded the Marie and William J. Oetting Scholarship in Arts & Sciences. She has received a Founders Day Distinguished Alumni Award, an A&S Distinguished Alumni Award, and the Eliot Society's "Search"

Award. She has been a donor for 47 consecutive years. Other Washington University graduates in her family include her husband, William, his parents, and her son, Jim, who was one of the School of Engineering's first graduates in computer science in 1976. Add to that her circle of classmates, many other alumni in St. Louis, and a host of other members of the University community. It's not surprising when she says, "Washington University has always been a big part of my life. I think there's a family feeling here."

The Distinguished Alumni Awards honor Arts & Sciences graduates who exemplify the ideals of a liberal arts education, and in so doing, bring honor to the university through their lives, work, and service. A special Early Career Achievement Award

goes to a graduate of the College of Arts & Sciences who earned their degree 20 years ago or less. The Dean's Medal is awarded to someone whose dedication and support have been exceptional and whose leadership, advice, and inspiration have served to place Arts & Sciences at the forefront of

one of the world's premier institutions of higher learning. To see interviews with the recipients or to nominate someone for next year's awards, please visit our website.

James Burmeister

1961: Political Science
1963: MBA
1967: MA Psychology

Ann Johanson

1956: Physical Education

Nicole Kaplan

Early Career Achievement Award

1992: Economics

James E. Schiele

University College Honoree
1952: History
1985: Master of Liberal Arts
2011: MA American Culture Studies

Darrell Williams

1986: MA Economics
1991: PhD Economics

SELECTED EXTERNAL GRANTS & FELLOWSHIPS

Anthropology

David Brownman (with graduate student BrieAnna Langlie), \$27,127 from NSF for "Terraces, Warfare, and Climate Change: Late Intermediate Period Agricultural Risk Management Strategies Puno, Peru (A.D. 1100–1450)"

James M. Cheverud (with graduate student Jessica L. Joganic), \$19,216 from NSF for "Primate Cranial Morphology in a Comparative Context"

Richard J. Smith (with graduate student Joseph Orkin), \$19,960 from NSF for "Landscape Genetics of Gibbon and Leaf Monkeys in China"

Carolyn Sargent (with graduate student Alison Heller), \$13,212 from NSF for "Negotiating Destigmatization Processes among Women with Childbirth-Related Injuries"

Glenn Stone, \$224,209 from the Templeton Foundation for "GM Crops and Indigenous Management"

Biology

Robert E. Blankenship, \$30,000 from the U.S. Department of Energy for "The 16th International Congress on Photosynthesis"

Elizabeth Haswell, \$1,330,448 from NSF for "Career: The Function, Regulation and Molecular Identity of Mechanosensitive Ion Channels in *Arabidopsis*"

Erik Herzog, \$288,800 from NIH for "Neuronal Excitability in the Regulation of Circadian Rhythms" (with Jeanne Nerbonne in developmental biology)

Tiffany Knight, \$159,205 from NSF for "Evaluating the Mechanisms that result

in a relationship between phylogenetic distance and population dynamics in biological invasions"

Jonathan Myers, \$11,791 from NSF for "Collaborative Research: Diversity, Dominance & Disturbance in Species-Rich Pine Savanna Groundcover"

David Queller, \$740,000 from NSF for "Conflict and Constraint in Multicellular Life Cycles"

Chemistry

Regina Frey, \$285,000 from the Henry Luce Foundation for "Retention in STEM" (with Mark McDaniel in Psychology)

Peter P. Gaspar, \$466,000 from NSF for "Mechanistic Probes in Main Group Chemistry Employing Highly Reactive Species Containing Electron-Deficient Atoms"

Sophia Hayes, \$360,000 from NSF for "Exploiting Enhanced Polarization from Optically-Pumped NMR of Semiconductors"

\$600,000, part of a \$20 million grant to Oregon State University, from NSF Center for Chemical Innovation for research on the aqueous chemistry of inorganic nanoclusters and their transformation to solids

Joshua A. Maurer, \$100,000 from the American Chemistry Society Petroleum Research Fund for "A Macromolecular Synthon Approach to Defined Functional Group Arrays on the Nanoscale"

\$50,000 from the Children's Discovery Institute for "Buiding Tools for Regenerative Medicine to Specify and Pattern Pluripotent Neural Crest Cells"

Kevin Moeller, \$30,000 from NSF for research on the electrochemical

recycling of redox shuttles identified by examining the biological systems for lignin disassembly

\$450,000 from NSF for "Intramolecular Anodic Olefin Coupling Reactions"

\$10,000 from NSF for "Center for the Sustainable Use of Renewable Feedstocks"

Jay W. Ponder, \$258,000 from NSF for "Collaborative Research: Development and Application of the AMOEBA Polarizable Force Field"

Earth and Planetary Sciences

Raymond Arvidson, \$222,000 from John Hopkins University/ Jet Propulsion Laboratory for "CRISM for Earth Science Research and Education at Washington University in St. Louis"

Alumni Bookshelf *Jessica Lott, Qiu Xiaolong*

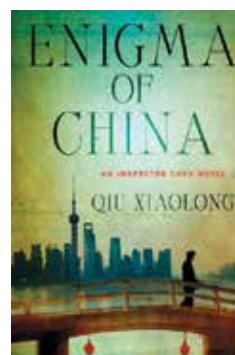


Jessica Lott

The Rest of Us

by Jessica Lott, MA English Literature 2001
Simon & Schuster, forthcoming July 2013

A smart literary debut, *The Rest of Us* is a New York City-based love story that explores the legacy of an affair between a young student and her older professor. As Brigid Pasulka, author of *A Long, Long Time Ago and Essentially True*, writes, "*The Rest of Us* deftly illuminates not only the loneliness of the city but also the struggles we all face in transplanting the fantasies of our youth into our adult realities."



Enigma of China: An Inspector Chen Novel
by Qiu Xiaolong, PhD Chinese and Contemporary Literature 1994

Minotaur Books, forthcoming June 2013

In the eighth book of the series, Chief Inspector Chen of the Shanghai Police Department is brought in by the Party to sign off on the death of Zhou Keng, the son of a major party member who apparently hanged himself after a number of his corrupt practices were exposed. The Party is anxious to have Zhou's death declared a suicide, but for Chief Inspector Chen, the facts don't quite add up.

SELECTED EXTERNAL GRANTS & FELLOWSHIPS

| | | | | |
|---|--|---|--|--|
| <p>Jeffrey G. Catalano, \$175,000 from NSF for "Early Career: Acquisition of a Powder X-ray Diffractometer"</p> <p>\$594,000 from the Department of Energy for "Dominant Mechanisms of Uranium-Phosphate Reactions in Subsurface Sediments"</p> | <p>Frédéric Moynier, \$360,000 from NASA for "High Precision Isotopic Measurements of FE, NI, CU, CR and ZN in Terrestrial and Extraterrestrial Materials"</p> <p>\$201,194 from NASA for "Nickel Isotope Fractionation as a Potential Biosignature for Methanogenic Archaea"</p> | <p>Matthew Kerr, \$28,030 from NSF for "Recent Advances in Hodge Theory: Period Domains, Algebraic Cycles, and Arithmetic"</p> <p>John Shareshian, \$284,208 from NSF for "Algebraic Enumerative and Topological Combinatorics"</p> | <p>Christine Floss, \$322,421 from NASA for "Identification and Analysis of Impact Craters from the Stardust Interstellar Collector Tray"</p> <p>\$300,000 from NASA for "Advancement of Microanalytical Techniques for the Characterization of Returned Sam"</p> <p>\$425,000 from NASA for "Meteoritic Nanodiamond Analysis by Atom-Probe Tomography"</p> | <p>Alex Meshik, \$901,860 from NASA for "Analyses and Interpretations of Noble Gases Delivered by Genesis and Stardust Missions"</p> <p>Alexander Seidel, \$300,000 from NSF for "Topologically Ordered Phases of Matter"</p> <p>Ralf Wessel, \$225,000 from the Whitehall Foundation Inc. for research on circuit mechanisms of distributed cortical visual processing</p> |
| <p>Jeffrey G. Catalano, David Fike, and Philip Skemer, \$2,071,491 from NASA for "MRI: Acquisition of SIMS Instrument" (with Christine Floss and Ernst Zinner in Physics)</p> | <p>Economics</p> | <p>Philosophy</p> | <p>Christine Floss and Ernst Zinner, \$2,071,491 from NASA for "MRI: Acquisition of SIMS Instrument" (with Jeffrey Catalano, David Fike, and Philip Skemer in Earth and Planetary Sciences)</p> | <p>Psychology</p> |
| <p>Bruce Fegley, Jr., \$41,000 from NASA for "Chemical Equilibrium Calculations of Atmospheric Chemistry and Condensate Clouds in Exoplanet Atmospheres"</p> | <p>David Levine, \$199,823 from NSF for "ICES: Small: Artificial Human Agents for Virtual Economies" (with Yixin Chen in Computer Science)</p> | <p>John Heil was awarded a National Endowment for the Humanities Summer Seminars and Institutes grant for "Metaphysics and Mind."</p> | <p>Frank Gyngard, \$263,365 from NASA for "Correlated Studies of Isotopes, Chronologies and Microstructures of Stardust SIC Grains"</p> | <p>Todd Braver, \$29,920 from Binational Science Foundation for "Intention-Based Reflexivity in Simple and Complex Novel Action Plans"</p> |
| <p>David Fike, \$280,456 from NSF for "Kinetics and Stable Isotopic Fractionation for Abiotic and Microbial Transformations of Elemental Sulfur at Seafloor Hydrothermal Environments"</p> <p>\$120,753 from NSF for "Tracking Chemical, Isotopic, and Molecular Signatures of Tightly Coupled Sulfur Cycling in Phototrophic and Chemosynthetic Microbial Ecosystems"</p> | <p>Robert A. Pollak, \$124,999 from the Alfred P. Sloan Foundation for "Labor Supply of Married Older Workers"</p> | <p>Physics</p> | <p>Kenneth Kelton, \$300,000 from NASA for "NASA Research under ESA-Based Investigations THERMOLAB and ICOPROSOL"</p> <p>\$405,000 from NSF for "Ordering and Phase Transitions in Supercooled Metallic Liquids and Glasses"</p> | <p>\$40,000 from NIA for "Mechanisms of Motivation, Cognition & Aging Interactions: Interdisciplinary Group Meetings"</p> |
| <p>Jessica Rosenfeld received the Charles A. Ryskamp Research Fellowship from the American Council of Learned Societies.</p> | <p>English</p> | <p>Mathematics</p> | <p>Thomas Bernatowicz, \$270,000 from NASA for "Coordinated Microanalytical Investigations of Carbonaceous Stardust"</p> <p>James Buckley, \$52,500 from NSF for "Collaborative Research: MRI Consortium: Development of a Novel Telescope for Very High-Energy Gamma-Ray Astrophysics"</p> | <p>Brian Carpenter, funding from the Council of Professional Geopsychology Training Program for "Graduates of Geopsychology Doctoral and Postdoctoral Programs: A Survey of Career Paths"</p> <p>Randall S. Larsen, \$376,200 from NIA for "Emotional Aging: Control Processes and Emotional Regulation in Everyday Life"</p> |

\$1,339,635 from NIGMS for "Training at the Interface of Psychology, Neuroscience, and Genetics"

Mark McDaniel, \$285,000 from the Henry Luce Foundation for "Retention in STEM" (with Regina Frey in Chemistry)

Kathleen McDermott, \$250,000 from DART Neuroscience LLC for "A Neuroimaging Investigation of Individual Differences in Long-Term Retention"

Thomas Oltmanns, \$39,137 from the McDonnell Center for Systems Neuroscience for "Personality, Aging and Cognitive Decline"

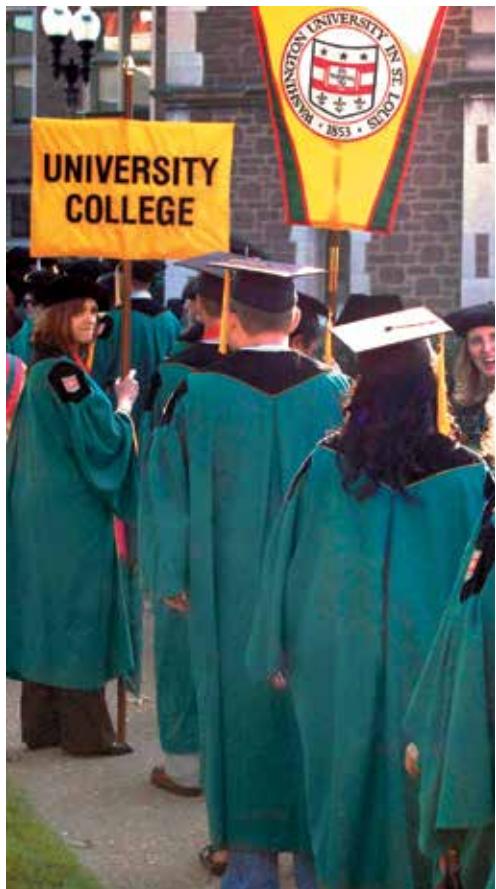
Mitchell S. Sommers, \$418,000 from NIA for "False Hearing in Young and Older Adults: A Metacognitive Perspective"

Jeffrey M. Zacks, \$418,000 from NIA for "Event Encoding in Navigation and Spatial Memory" (with Jesse Q. Sargent of Francis Marion University)

Romance Languages and Literatures

William Acree, Fellowship from the National Endowment for the Humanities for "The Creole Circus and the Making of a Theatergoing Public in Uruguay and Argentina, 1860–1910"

Joe Barcroft received the Fulbright-García Robles Award to research second language acquisition at the Autonomous National University of Mexico.



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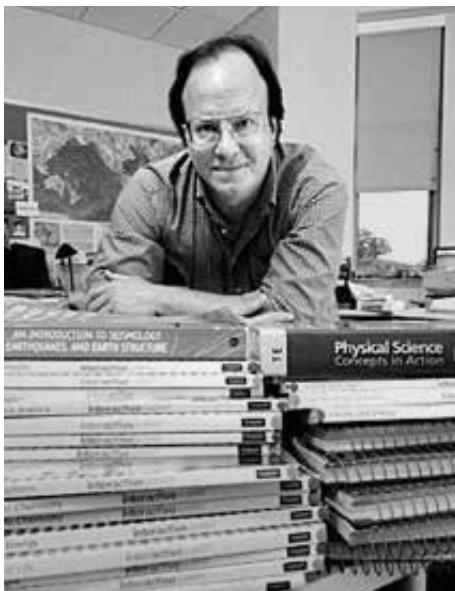
Bob Wiltenburg, Dean of University College

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LAST WORDS

Why America's kids need new standards for science education

By Michael Wysession



Michael Wysession, associate professor of earth and planetary sciences, is a member of the leadership team for the writing of the *Next Generation Science Standards* and has also served as the Earth and Space Science Design Team Leader for the National Research Council's "A Framework for K-12 Science Education," which informed the new standards.

You can find the NGSS recommendations at nextgenscience.org/next-generation-science-standards and Wysession's original, unabridged guest blog from *Scientific American* on our website.

What was the last grade you were in where you received any geoscience education? If you are like most Americans, it was in middle school. You might think that there is a sound reason why geology is usually taught in middle school, with little math involved, and not in high school. There isn't. Though we live in a thoroughly modern scientific world, our science education structure is now 120 years old.

Yes, back in 1893 a group of university professors called the "Committee of Ten," led by Harvard University president George Eliot, made a set of recommendations to try to standardize the education of incoming university students with the unfortunate recommendation that "physical geography" be taught in middle school. To be fair, geology wasn't much at that time; it was mostly a science of categorizing minerals, rocks, fossils, and the relative time sequence of the geologic record. Geologists had no idea why mountains formed or volcanoes erupted. The first seismic recording of an earthquake was made just 4 years earlier. Radioactivity was still a decade away.

However, some time between 1893 and now, the fields of earth and space science became a set of quantitative, complex, process-based, systems-oriented, and remarkably relevant scientific practices. Unfortunately, our educational system is still in the mode of teaching "physical geography" in middle school, so this change went largely unnoticed by most Americans, for whom middle school geology meant scratching some minerals and memorizing the geologic time scale.

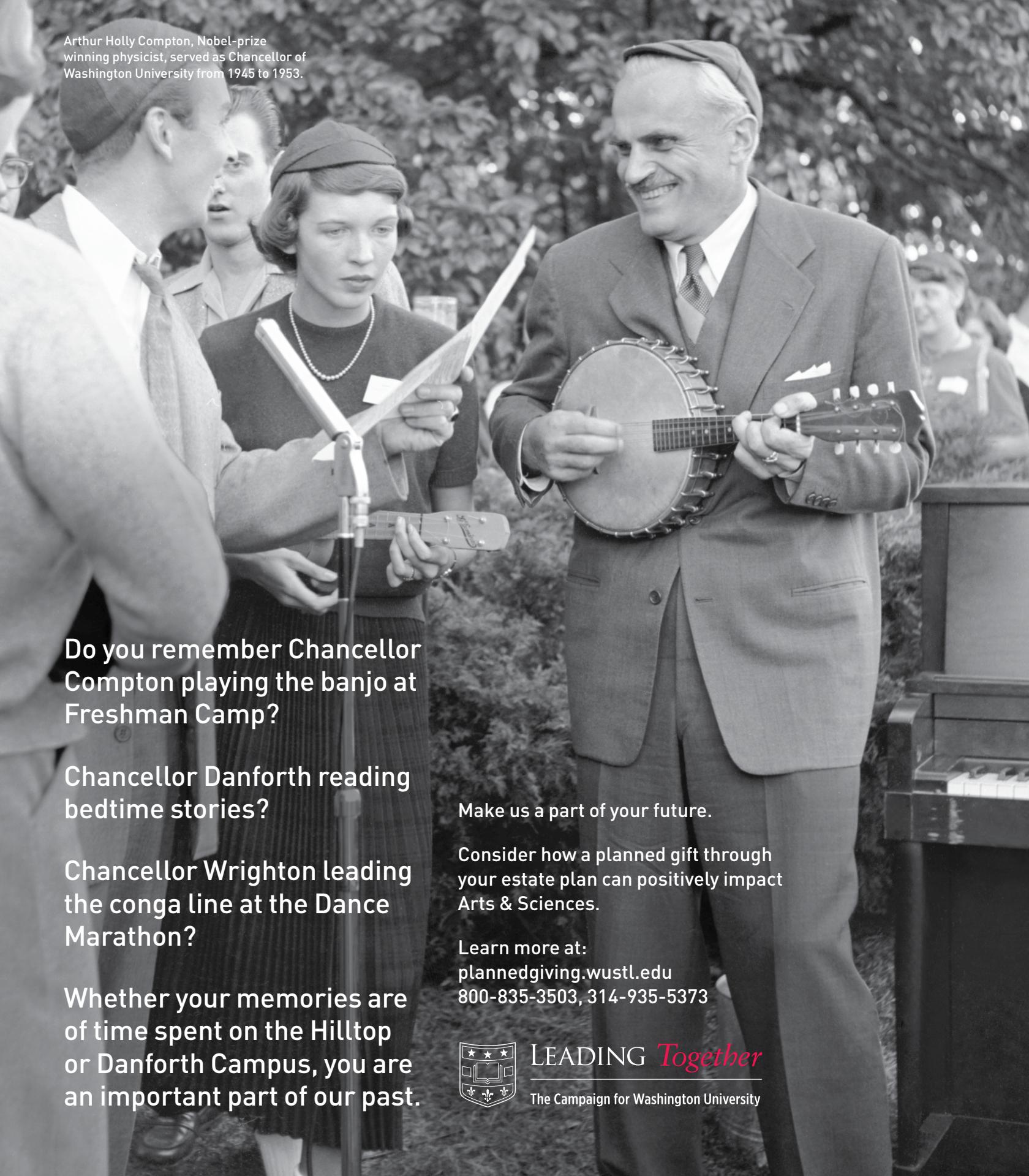
The result of this has been devastating.

We became a country with no coherent energy policy because so few people understand the complex issues surrounding both renewable and non-renewable energy sources. We have no national policies toward the limited resources of minerals, soil, and groundwater, as most people don't even realize these resources are limited. Humans have become the greatest

agent of geologic change on the planet, altering the land surface faster than any other geologic process, but most people have no idea of the impacts of their collective actions. Stopgap legislation like the Clean Air Acts and Clean Water Acts, though vitally important, don't begin to address the enormous impacts our activities are having on Earth's systems.

Climate change is not only a critically important topic, it is also one of the most complex topics in all of science, involving cycles within cycles that are a function of radiation physics, atmospheric chemistry, ocean circulation, Milankovitch cycles of solar system orbits, variations in solar output, volcanic eruptions, biosphere dynamics, human activities, and the many complex feedbacks among them. Not only is this topic unteachable at a middle school level, it needs to be taught following high school physics, chemistry, and biology. However, the result will hopefully be a public that not only ceases to deny the existence of climate change but embraces the topic because of both its relevance and its fascinating intricacies.

The voting citizenry needs to understand the complexity of these issues so they won't be duped by over-simplified slogans. Consumers need to understand the implications of their purchases. And everyone needs to know that Earth systems are more delicate than they might think and that the geologic record shows that conditions at Earth's surface can change in a hurry and often have. As President Abe Lincoln said, "The dogmas of the quiet past are inadequate for the stormy present.... As our case is new, so we must think anew, and act anew." The adoption by most states of the *Next Generation Science Standards* is an important step in that direction.



Arthur Holly Compton, Nobel-prize winning physicist, served as Chancellor of Washington University from 1945 to 1953.

Do you remember Chancellor Compton playing the banjo at Freshman Camp?

Chancellor Danforth reading bedtime stories?

Chancellor Wrighton leading the conga line at the Dance Marathon?

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