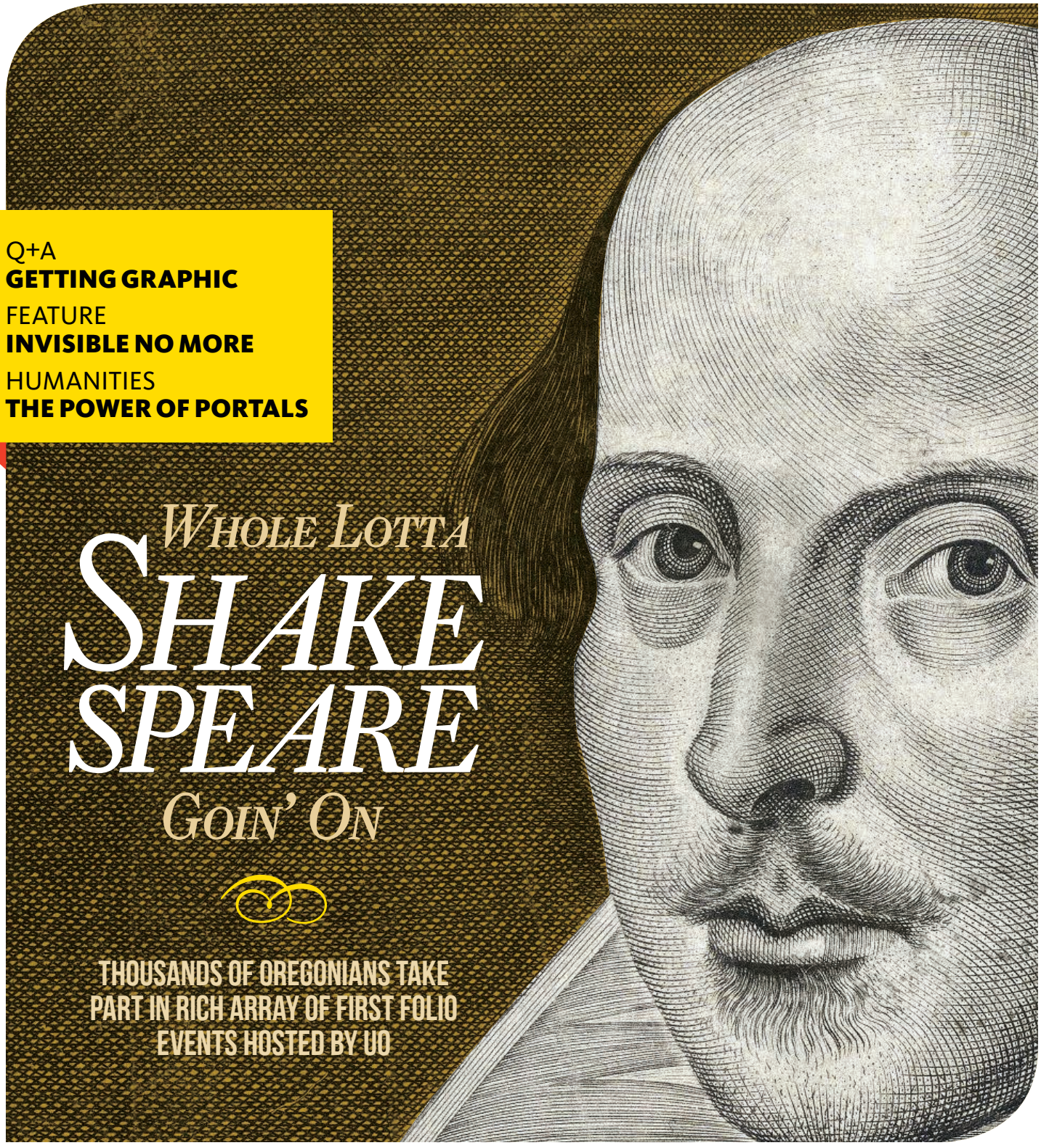
CASCADE

SPRING 2016

UNIVERSITY OF OREGON COLLEGE OF ARTS + SCIENCES



Whole Lotta Shake Speare Goin' On

THOUSANDS OF OREGONIANS TAKE PART IN RICH ARRAY OF FIRST FOLIO EVENTS HOSTED BY UO

EXCELLENCE, ACCESS, EXPERIENCE

WHAT THE PRESIDENT'S VISION MEANS FOR CAS

Thousands of Ducks had scarcely arrived last September when incoming President Michael Schill outlined his top priorities to faculty and staff: excellence, access, experience.

The president has since launched a sweeping effort to raise the bar of academic excellence by boosting tenure-related faculty and research; to improve access and affordability for those who want to come to the University of Oregon; and to ensure that students receive a rich academic experience inside and outside the classroom.

What does this mean for the College of Arts and Sciences?

There are two major components to a renewed commitment to academic and research excellence in CAS.

First, we must provide more resources for our outstanding faculty. It's no secret that our faculty receive less research support than comparable universities—and yet they've done more than one could ever expect with the resources they have. Given the long-term history of declining state funding and the need to direct tuition to student access and success, philanthropy must be the source for new faculty support. Don't be surprised if I visit you soon!

Second, the simple fact is that most of our PhD-granting departments are comparatively small. Growing the size of the research faculty is crucial—the president has committed to hiring 80 to 100 additional faculty.

Given that the college grants approximately two-thirds of all undergraduate degrees and three-quarters of the PhDs, many of those new faculty will be in CAS. In keeping with trends in enrollment and the president's research priorities, many of those new faculty will be in the natural sciences. However, I am equally dedicated to strong programs in our humanities and social sciences.

This growth comes at a cost. In recent months, I reduced the number of administrative staff and purely instructional faculty—also known as non-tenure track faculty—to open up resources to hire tenure-track faculty and support more PhD students.

We will also face significant resource challenges in creating new lab space and support for our additional science faculty. But growth in research faculty will elevate the profile of the university and enhance our support of economic growth and innovation across Oregon and the country.

To meet the president's vision of improving student access and success, we must ensure that more students graduate within four years. This reduces costs and debt and helps students launch into careers earlier in life.

To this end, CAS is putting tremendous effort into the College and Careers Building. Scheduled to open in 2018, this building will bring together faculty, academic advisers and colleagues who specialize in career trajectories. It's one-stop-shopping for students to align academic interests with career opportunities.

By targeting student success in this way, we believe their time to degree will be substantially shorter and, therefore, more affordable.

The new building, or Tykeson Hall, will also be key to the third component of the president's vision—student experience—by catering to the community within it. It will be a modern-day homeroom for students, with places to study quietly, engage in a forum-style group discussion or relax with friends after a day of classes.

Time and time again, our alumni tell us that their fondest memories are rooted in the loveliness of this campus, the community that is formed here and the caring faculty they encountered. Tykeson Hall will begin a new chapter in the UO student experience, and we'll extend it even further by seizing opportunities to improve our other facilities as well.

In short, the president's vision translates to broad changes in the college—changes that will preserve what is best about Oregon, while advancing our stature as a premiere American university.

W. Andrew Marcus is Interim Tykeson Dean of Arts and Sciences. He is a professor of geography and proud parent of two UO graduates and three current UO students, all in the arts and sciences.

KELLY JAMES

W. ANDREW MARCUS, INTERIM DEAN

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Q+A

GETTING GRAPHIC

Course in video game design is gateway to jobs with tech leaders

INTERVIEW BY MATT COOPER

THE LIST OF COMPANIES that have hired Hank Childs' students includes the biggest names in technology: Intel, Amazon, Google.

That's no surprise given Childs is a big-data expert—his students learn high-performance computing in tech-heavy classes on programming and data visualization. But Childs is also having success placing students who take his course on the more creative side of computer and information science: Introduction to Computer Graphics.

As taught by Childs (right), the course is basically about making video games. Students have created billiards contests with moving pool balls; self-styled versions of the classic competition Connect Four; even a simulation of airplane flight, from the pilot's vantage point and complete with exploding targets.

What's a video game got to do with landing a job? Plenty.

Building a video game from scratch is just a means to an end, says Childs, an associate professor. Along the way, students are immersed in complementary halves of a comprehensive education in computer science—the theory, which is about how to solve problems, and the programming, which is the use of a language that tells a computer what to do.

"Computer scientists deal with the theoretical pieces and computer programmers are expert at developing software," Childs said. "Both are really important."

Q Computer graphics seems like the course to take if you want to work at an animation studio like Pixar. But Intel?

HANK CHILDS: The reason I tell seniors they should take this class is not because I think it's critical they learn computer graphics. It's because the projects and practical programming skills they will develop will benefit them once they graduate.

When most people take a graphics course, they use a graphics card or GPU—a GPU is a graphic processing unit, a special piece of hardware that allows your computer to do graphics. My students effectively create their own version of a GPU by writing thousands of lines of code. It takes weeks.

That's the secret of the class: When they're done, they can tell people what they've done and computer scientists will say, "That's really impressive, you developed difficult and practical software and combined it with a lot of theoretical computer science."

Q So how does this class on graphics work?

HC: The first five weeks, everyone works on the same project—we build a graphics system in software from the ground up, by writing code. The next two weeks, we learn how to do graphics the conventional way, using GPUs. The last three to four weeks, students create their own computer graphics projects—they can do whatever they want.

I lecture on computer science theory and they use that in their programs. But the students spend most of their time working on practical programming issues.

Q What's the role of local gaming companies in all this?

HC: We bring them in to judge the final projects. It's a chance for the students to show off what they've done and make connections in the industry. Some of the final projects are video games, so that's a natural match with our judges.

One company that helps judge is Pipeworks. Their participation has directly resulted in two of my students getting recruited by the company. When I did this class in spring 2013, Brad Syrie was immediately hired by Pipeworks. He did a first-person shooter from the perspective of paper airplanes, and the company was very impressed. At Pipeworks, he has worked on a game for the *Godzilla* movie. Last year, another student—Sean Fowler—

HANK CHILDS PHOTO BY MATT COOPER / *GODZILLA UNLEASHED*, PIPEWORKS

did a great project on billiard balls bouncing around the table. Pipeworks hired him, too.

The students who are getting jobs at Pipeworks are getting them because they know the graphics. But I have another student who went to Amazon—Jason Kranz. He told me that he spent his entire day interviewing there talking about our projects. And at Amazon, he's not using graphics at all.

Game programming gets students excited, and it's a great connection to local industry. This year, we introduced a new class devoted entirely to game programming [taught by instructor Eric Wills]. Between my graphics class and that class, students can be very marketable when they graduate.

Q How has your career in both industry and academia prepared you to mentor students?

HC: I think it makes me a little different. After I graduated with my bachelor's degree, I got a job. I didn't come back to get my doctorate until later.

I took a job at Lawrence Livermore National Laboratory, and I gained a lot of experience developing and managing software. One project that we delivered was a tool for big-data visualization—it's available to the public and it's been downloaded hundreds of thousands of times and is in use around the world.

When I was an undergraduate, the classes that helped me the most were the ones where I had to do big programming projects. I could have gotten a degree without as much programming, but that's the piece that allowed me to soar in the job I took. Now that I'm on the other side as a teacher, I want to make sure that I'm giving students not just the theory but also the real-world programming skills. When you have both, that's when employers really get excited.

Q What skills do students develop in a class on computer graphics?

HC: They're writing lots of code—they're using a programming language called C++, which is one of the harder languages to use. When I talk to industry people, they say, "Well, if you know one language, that's a great one to know because it's hard." You know the saying about "making it in New York"? If you can learn C++, you can learn any language.

Also, of course, they're learning graphics skills. The people who are going on to video game companies are doing graphics jobs. You could also work in movies. And they can also do data visualization—that's presenting data in pictures or graphics, which is my area of research.

Q It sounds like students are essentially learning software development.

HC: Exactly. When you first learn computer programming, you write programs that are one hundred lines of code, at most. But in industry, you work on programs that could be millions of lines of code. With our projects, students start developing the practices that software professionals use to allow their programs to "scale," to handle bigger and bigger tasks.

Students also learn debugging. Once you have thousands of lines of coding, you can't go through it line by line to figure out why it crashed. You have to write a program to figure out what's going on. It's like the scientific method: You generate a theory, you perform an experiment and you see what happens when you make this change or that.

I WANT TO GIVE STUDENTS NOT JUST THE THEORY BUT THE PROGRAMMING SKILLS. THAT'S WHEN EMPLOYERS REALLY GET EXCITED.

Q Is it fair to say students also learn project management?

HC: Yes. When students do a five-week project, that's a great skill and it's something many haven't experienced before. Not everything can be done the night before—you can't just stay up late and drink a lot of coffee and get it done.

For that five weeks, where they're creating their own graphic system by writing code, it's a five-week sprint. You have to plan ahead. It's time management, it's organizational skills. It's the perfect thing that tells an employer, "They can handle this stuff."

Whole Lotta Shakespeare Goin' On

THOUSANDS OF OREGONIANS TAKE PART IN RICH ARRAY OF FIRST FOLIO EVENTS HOSTED BY UO

BY LISA RALEIGH

IN THE OPENING scene of *King Lear*, the king grandly announces that he will divide his kingdom among his three daughters. But how he divides it will depend on which one loves him most.

The two eldest daughters rush to outdo each other with over-the-top declarations of adoration. But when the king turns to Cordelia (the youngest, his favorite), she refuses to play along.

The king is astonished and offended. Taken aback, he warns that her lack of cooperation may "mar her fortunes." In other words, if she doesn't make nice, she may get nothing when he parcels out all of Britain to his girls.

But does the king say that Cordelia's *words* will cause him to disinherit her? Or does he more pointedly say that *Cordelia herself* is the problem?

It depends which version of William Shakespeare you're reading.

A recent performance at Eugene's Hult Center for the Performing Arts centered on two variations of the famous playwright's *King Lear*: a "quarto" version (a transcript from an actual performance that took place in Shakespeare's lifetime), and the official "folio" version (published after his death as part of an authoritative collection).

This one-time performance was not a production of *King Lear*, but a play *about* that famous play—and about the differences in how it could be performed.

The staging was simple: Five actors sat on chairs on the stage. In front of them were music stands on which they set their play scripts. There were no other props, no scenery, no costumes.

The actors were members of the renowned Oregon Shakespeare Festival company, and they were *playing actors* who were beginning a "table read" of *Lear*—in other words, their first run-through of the script together.

This play-within-a-play, entitled *Sweetly Writ*, was created and performed by the OSF in collaboration with the UO to demonstrate intriguing variations in Shakespeare's work over time. The actors followed a script mainly aligned with the *Lear* published in the "First Folio"—a collected volume of Shakespeare's plays that established him as a literary master.

But they also consulted an earlier quarto for reference. Line by line, the two versions varied in places by just a word or phrase, but sometimes entire sections were completely revised, omitted or added.

Lear can be portrayed as wistful, tyrannical, deranged or self-righteous; the other characters can be similarly nuanced. Which words will create the right mood for this particular performance, the right dynamic between the characters?

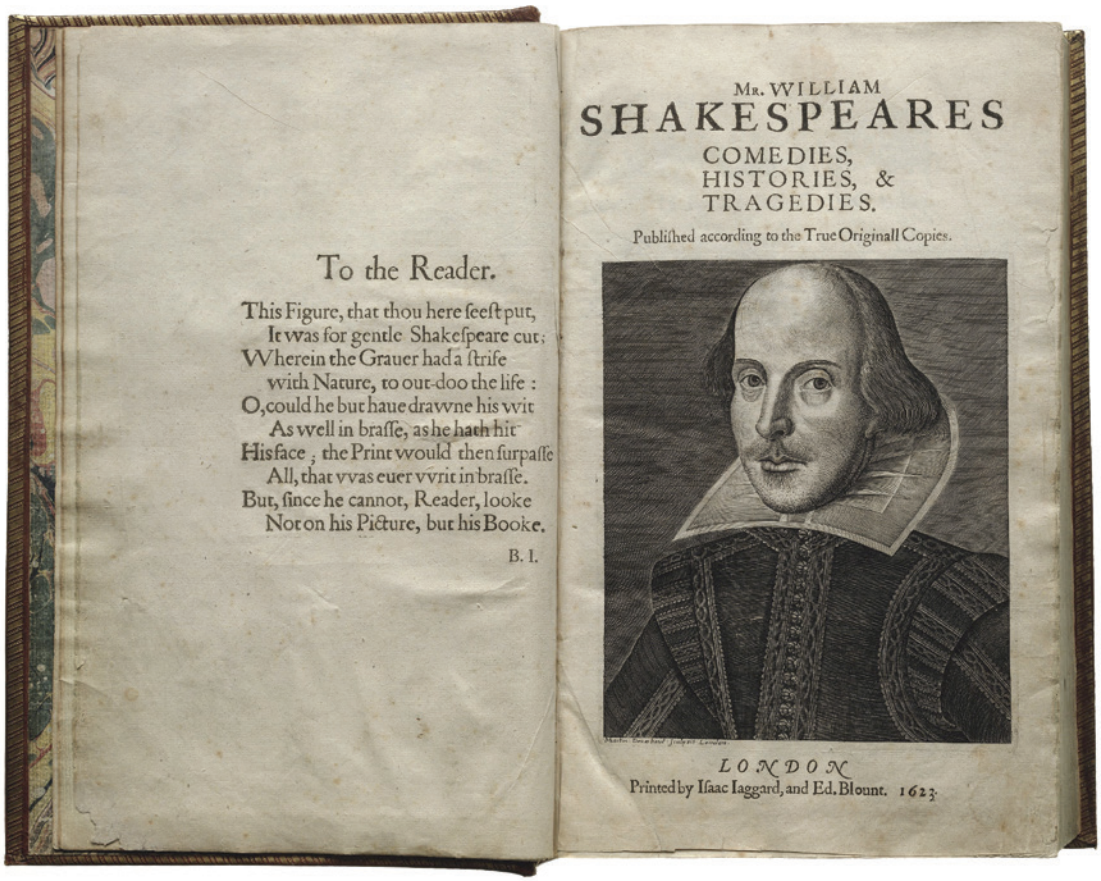
The actors discussed the line in question. The quarto version reads as follows:

> How, how, Cordelia? Mend your speech a little,
> Lest it may mar your fortunes*

But they decided on the folio version, which varies by a single word and more ominously pins the blame on Cordelia herself:

> How, how, Cordelia? Mend your speech a little,
> Lest you may mar your fortunes*

** emphasis added*



SHAKESPEARE FIRST FOLIO, 1623. FOLGER SHAKESPEARE LIBRARY

Shakespeare's First Folio is on a national tour throughout 2016—and the UO was selected as the only Oregon site for an historic First Folio exhibition.

THIS YEAR marks the 400th anniversary of Shakespeare's death. To celebrate the bard's vast influence on our language and culture, the Folger Shakespeare Library launched a competition to choose a single location in each state to host a commemorative exhibit featuring Shakespeare's First Folio.

The First Folio—formally titled *Mr. William Shakespeares Comedies, Histories, & Tragedies*—is a milestone book, representing the first published collection of 36 of Shakespeare's plays. An estimated 750 copies were originally printed; 233 are known to exist, and the Folger Library possesses 82 of them.

Of the 36 plays in the First Folio, 18 had never been printed before, including *As You Like It, Macbeth, The Taming of the Shrew* and *The Tempest*. Without this publication, these works might have been lost to history. And without the collection to spur lasting interest in Shakespeare, many more of the plays—until then, printed in flimsier editions called quartos—might have disappeared as well. Because of this landmark book, all have become a part of our literary heritage.

The Folger Library, based in Washington, DC, has sent 18 of its copies on a cross-country tour throughout 2016. Among the first stops: the University of Oregon. The UO was selected as the sole Oregon site thanks to a remarkable collaboration among several units on the UO campus and also the Oregon Shakespeare Festival.

"That we won out over other sites in Oregon—especially Portland—is remarkable," said Karen Ford, associate dean for humanities in the UO College of Arts and Sciences. "Our selection speaks to our commitment to making humanities relevant and communicating their value."

The Book That Gave Us Shakespeare

Throughout January, the First Folio was on display at the UO's Jordan Schnitzer Museum of Art. Complementing this exhibition, the university hosted a wide-ranging series of Shakespeare-related events on and off campus—from scholarly talks to guided tours of exhibits to the OSF performance that delved deep into the subtleties of how Shakespeare's words are brought to life onstage.

At the heart of it all was a touring copy of the First Folio, housed in a protective case and opened to the famous "to be or not to be" soliloquy in *Hamlet* (see photo, next page). Thousands of visitors to the museum—schoolchildren, scholars, fans of literature and theater, from the merely curious to the truly enamored—streamed through to have a peek at the legendary text and learn more about Shakespeare's singular legacy.

The First Folio was not published during Shakespeare's lifetime. Two of his fellow actors (and shareholders in his acting company) took it upon themselves to assemble a collection of his works in 1623, seven years after his death.

This was a radical act. A folio was an expensive book that signified prestige; it was usually reserved for Bibles and classical texts or important works of history, law and theology—not for "made up" imaginings, like scripts for plays.

At the time, dramatic works were considered morally suspect because they were seen to be "promulgating lies," said Lara Bovilsky, associate professor of English.

First Folio: By the Numbers

5
WEIGHT, IN POUNDS

36
NUMBER OF PLAYS IT CONTAINS

982
NUMBER OF PAGES

7
NUMBER OF YEARS AFTER SHAKESPEARE'S DEATH THAT IT WAS PUBLISHED (1623)

750
ESTIMATED NUMBER OF COPIES ORIGINALLY PRINTED

233
NUMBER KNOWN TO BE IN EXISTENCE TODAY

82
NUMBER HELD BY THE FOLGER SHAKESPEARE LIBRARY

18
NUMBER OF FOLGER COPIES ON TOUR IN 2016

UO Exhibition & Events

1
NUMBER OF LOCATIONS IN OREGON SELECTED FOR FIRST FOLIO EXHIBIT

2
NUMBER OF COSTUMES FLOWN FROM MOSCOW TO BE WORN AT GALA BY UO THEATER ARTS STUDENTS

281
TOTAL ATTENDANCE AT THREE PUBLIC TALKS BY UO PROFESSORS

410
NUMBER OF PEOPLE WHO TOOK GUIDED TOURS OF THE EXHIBITS WITH ASSOCIATE PROFESSOR LARA BOVILSKY

1,000-PLUS
NUMBER OF K–12 STUDENTS WHO TOOK A TOUR OF THE EXHIBITION LED BY MUSEUM DOCENTS

576
NUMBER IN ATTENDANCE AT GALA PERFORMANCE BY OREGON SHAKESPEARE FESTIVAL (INCLUDING 100-PLUS STUDENTS WHO ATTENDED THE DRESS REHEARSAL)

8,900
TOTAL ATTENDANCE AT CAMPUS EVENTS, INCLUDING MUSEUM ADMISSIONS, ACADEMIC AND K–12 TOURS AND PUBLIC TALKS

JONATHAN B. SMITH, JSMA

The Folger Library had stringent security and climate requirements for the First Folio tour, and the UO's Jordan Schnitzer Museum of Art was able to meet them. Thousands of visitors streamed through the museum to have a peek at the brooding ruminations of Hamlet.

Theater's sketchy reputation was exacerbated by the actors themselves, whose performances defied class distinctions; on stage, they wore costumes representing the upper class and pretended to be kings and queens. Theater performances were further seen as dubious diversions because they distracted apprentices and servants from their work.

All in all, "theater's marginal status as a place of idleness, crime and false representations—seen as sinful lies—meant that plays were deemed unsuitable for publication," said Bovilsky. "They were considered unworthy."

But this began to shift when playwright Ben Jonson dared to publish his own works in folio form (see sidebar, "The Very First Folio"), provoking scorn for presuming to equate his imaginative scribblings with "loftier" forms of writing.

The Wonder of Will

Bovilsky shared her Renaissance-era expertise at two public talks that were part of the suite of UO-hosted First Folio events. But this was only a small part of her role in the extravaganza.

Bovilsky was the mastermind behind the successful Folger proposal. She not only wrote the proposal, but also wrangled the partnerships, emceed a gala performance, led guided tours for 400 people and curated two companion exhibits of materials from the UO Libraries Special Collections and University Archives that allowed visitors to learn more about the history of Shakespeare's achievements.

"Lara's leadership was exceptional," said Jill Hartz, executive director of the museum. "Her knowledge of and passion for Shakespeare were contagious."

The UO won out over other Oregon institutions as the host location because its proposal was driven by compelling and creative partnerships, and because the museum could meet the stringent security and climate requirements of the tour. Together, the on- and off-campus partners created dozens of opportunities for the wider community to participate—addressing the Folger Library's desire to see a significant level of public engagement.

On the UO campus, the main collaborators were the museum, the UO Libraries Special Collections and University Archives, the Oregon Humanities Center and the Department of English. External partnerships included the Eugene Public Library, the City of Eugene's Hult Center for the Performing Arts and, of course, the Oregon Shakespeare Festival.

"The swirl of events and the bustle of people orbiting the First Folio installation created a living, contemporary instance of Shakespeare's magic," said Ford.

Among the main attractions:

The Exhibition. To successfully compete for the privilege of hosting the First Folio, the UO had to guarantee the right kind of physical environment—and the Jordan

Schnitzer Museum of Art was exactly the ticket. Thanks to the museum's experience in exhibiting timeless treasures, the First Folio was front and center in a secure and spacious installation from early January to early February.

Attendance reached nearly 9,000, which included museum admissions, academic and K–12 tours and other public programs. Informational panels provided by the Folger Library surrounded the magnificent book, which was encased in glass and opened to the brooding ruminations of *Hamlet*.

A companion display of materials on loan from UO Libraries Special Collections demonstrated the depth of the holdings in the UO's own library: a copy of Ben Jonson's first folio; second and fourth editions of Shakespeare's folio; and several engravings of Shakespeare-themed illustrations. Bovilsky curated these items and wrote the accompanying narrative that explained their significance.

"We are fortunate that, as a research university, we were able to contextualize the First Folio with related works from our university libraries," said Hartz.

Time's Pencil. This was a big reveal for UO Libraries Special Collections—an opportunity to showcase a wide range of Shakespeare-related gems preserved for posterity in its holdings. Special Collections loaned historic folio editions of Shakespeare's and Ben Jonson's works to the museum exhibition and opened its archives to Bovilsky, who curated a separate exhibition in the library called *Time's Pencil*. (The title comes from a Shakespeare sonnet that dwells on the ways that time changes a person.)

This exhibition explored the influences that shaped Shakespeare as a schoolboy and budding writer, and how his works were understood, interpreted, rewritten, restored and performed over the centuries.

For instance, the first display case showed classics such as Ovid's *Metamorphoses* that were central to Shakespeare's early education. Another showed historic works from which Shakespeare freely "borrowed" (an accepted practice at the time); Plutarch's *The Life of Julius Caesar*, for example, was a source that Shakespeare obviously

The Very First Folio

BEN JONSON'S "PROVOCATION"

When the playwright Ben Jonson dared to publish a collection of his own works in a hefty volume called a folio, some viewed it as pretentious, if not way out of bounds.

It was 1616, the year William Shakespeare died. King James ruled England, the plague was still a threat and theater was considered lowbrow entertainment—disreputable, vulgar, immoral. Venturing into the hurly-burly of South London to attend a theater performance was to risk disease and exposure to criminals.

At the time, the notion of collecting dramatic works into folio form was, well, "a bit of a provocation," said UO professor Ben Saunders, during a public lecture that was part of the UO's celebration of Shakespeare's First Folio.

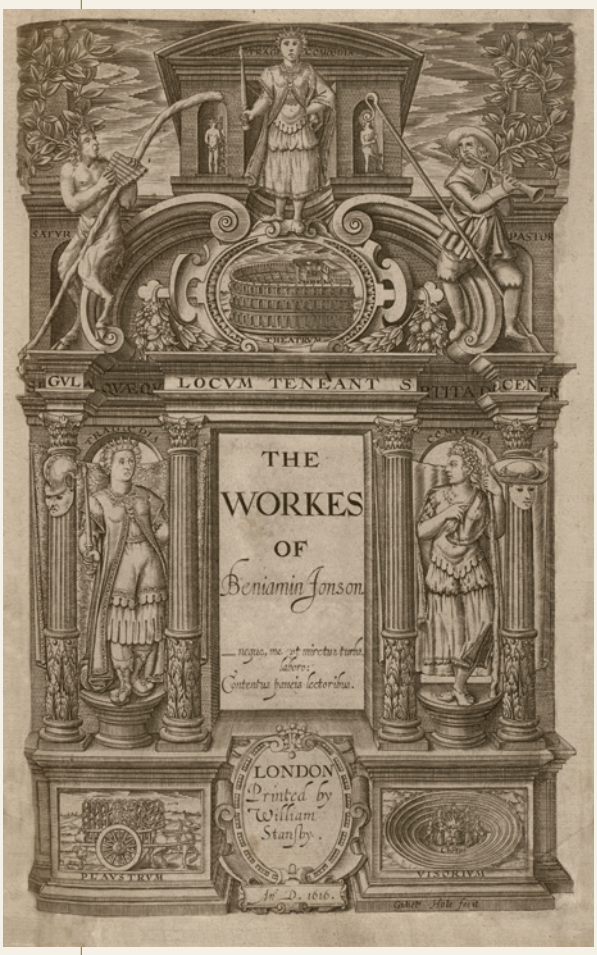
Folios were beautiful, ornate, formalized printings of the highest forms of literate expression—typically the classics in their original Greek and Latin, and the works of esteemed theologians and historians.

The dissonance of printing plays in a folio volume would be analogous, says Saunders, to collecting the best creations of one of today's comic book authors and binding them in an ostentatious tome, more suited to the collected works of canonical authors taught in literature classes. (Not coincidentally, Saunders is director of the UO's comics and cartoon studies program, which elevates the study of comics to serious scholarly inquiry.)

But the audacious Jonson was undeterred, determined that the literati take his writing seriously. Despite his status as a lowly scribe, his bold vision to self-publish *The Workes of Benjamin Jonson*—which included plays, lyric poetry and "court entertainments"—proved a pivotal milestone in legitimizing drama as an art form.

Jonson's cause was advanced significantly by the publication of Shakespeare's First Folio seven years later. With the passage of time, both dramatists ultimately earned the legitimacy that Jonson sought.

Jonson is now recognized as striking the first blow for the importance of theater as literature—and for pioneering the concept that the author is the definitive source of a play's official text. —LR



SPECIAL COLLECTIONS AND UNIVERSITY ARCHIVES, UNIVERSITY OF OREGON LIBRARIES

Deep in the holdings of UO Libraries Special Collections is a copy of the very first folio, published by Ben Jonson (see frontispiece above). The UO copy has bookplates from two baronets—Sir Francis Skipwith, who lived in 1705-78 (his bookplate is undated), and Sir Peyton d'Estoteville Skipwith (birth and death dates unknown, but he was a baronet from 1857 to 1891), whose bookplate is dated 1889. How and when the book was donated to the UO is unknown.

mined for his own play about the ill-fated Roman emperor.

Other display cases showed how—to suit the tastes of later audiences—some of Shakespeare's tragedies were rewritten to end on happier notes (e.g., Cordelia marrying her beau at the end of *Lear*, rather than perishing with her father). Also on display: other creative riffs on Shakespeare, including illustrated children's books based on his plays, revisionist recastings of secondary characters (e.g., Caliban from *The Tempest* portrayed as a Caribbean native subjected to colonial enslavement) and speculative fiction about Shakespeare's love life (e.g., Oscar Wilde's *The Portrait of Mr. W. H.*).

The accompanying narrative was again the work of Bovilsky. This exhibit ran for an additional month, through the end of March, and drew an estimated 1,000 visitors.

Sweetly Writ. Another compelling factor in the UO's selection as the state's First Folio site was the collaboration with the Oregon Shakespeare Festival. The renowned theater company, which draws visitors from all over the world to its home in southern Oregon, sent five actors, a director, a dramaturg and a stage manager to Eugene to produce *Sweetly Writ*, an inventive play-within-a-play created especially for the occasion. Its purpose was to demonstrate how Shakespeare's works evolved (see sidebar, "Side by Side: Quarto v. Folio").

Performing to a packed house at the Hult Center (the performance space was donated by the City of Eugene), the actors assembled onstage and worked through a theme-setting portion of Act I, Scene I, in a line-by-line manner, weighing quarto versus folio language. The sections under discussion were displayed on a large screen for the benefit of the audience.

Once they had made their choices, the only costuming came out—a robe and crown for the king—and the actors performed the scene using the lines selected from the two versions. The actors and the dramaturg then took questions from the audience.

"It was an amazing event for people who love Shakespeare," said Ford, who noted that the audience was so raptly attuned to the subtle nuances between quarto and folio that there were "hundreds of people gasping about semicolons."

On display at the First Folio gala were two costumes originally designed for a Shakespeare-themed play, Love Will Shake, *written and directed by John Schmor, head of the UO theater arts department. The androgynous design (half breeches, half skirt) was devised by Sandy Bonds, professor emerita, to depict male and female versions of the play's main character, William Shakespeare. Bonds has received international acclaim for her costuming for this play, most recently at a competitive showcase in Moscow. These costumes were flown from Moscow back to Eugene for the gala, where they were worn by two theater arts students who circulated at the reception. After the event, the costumes were flown back to Moscow and will soon be exhibited in Beijing. For the full story on Bonds' costumes, visit the Online Extras section at cascade.uoregon.edu.*

The performance was followed by a gala reception with Renaissance-era music and refreshments. Two Shakespeare-themed costumes, designed for a 2012 UO production, were flown back from an international exhibition in Moscow for the event (see photo).

Other activities included a public lecture by English professor Ben Saunders, a performance of scenes from Shakespeare by UO theater arts students, a workshop for teachers and a screening of the film *Shakespeare Behind Bars*, with a public talk by the film's director, Curt Tofteland.

"Shakespeare lived briefly, centuries ago, far from Eugene," said Ford, reflecting on the entirety of these events. "But even now, centuries later, the First Folio has ignited our interest, excitement, curiosity, delight, discovery and creativity."

Side by Side: Quarto v. Folio

"To be or not to be"—that was the selection.

The thousands of visitors who came through the Jordan Schnitzer Museum of Art to view the First Folio exhibition were able to view the page on which these famous words appear in Shakespeare's *Hamlet*. The folio was turned to page 269 of the Tragedies section, where Hamlet's brooding soliloquy is immortalized.

Below, a side-by-side comparison shows the classic speech as it appeared in an earlier version, called the First Quarto (which many scholars consider a sort of bootleg transcript of an actual performance), and the First Folio version, which was preserved by Shakespeare's colleagues.

But even though the First Quarto differs substantially from the most familiar version of the play, contemporary theater companies might consult it or other quarto versions to gain deeper insight into the characters and plot. They may even choose to use language from the quarto version, if it better suits their interpretation. In fact, some famous speeches from *Hamlet* occur only in the quartos, not the First Folio.

To illustrate the potential for vast differences between quarto and folio versions, the highlighted text shows phrases that are essentially the same. The rest of the text diverges. —LR

First Quarto (1603)

To be, or not to be, I there's the point,
To Die, to sleep, is that all? Aye all:
No, to sleep, to dream, aye marry there it goes,
For in that dream of death, when we awake,
And borne before an everlasting Judge,
From whence no passenger ever returned,
The undiscovered country, at whose sight
The happy smile, and the accursed damn'd.
But for this, the joyful hope of this,
Who'd bear the scorns and flattery of the world,
Scorned by the right rich, the rich cursed of the poor?
The widow being oppressed, the orphan wrong'd,
The taste of hunger, or a tyrants reign,
And thousand more calamities besides,
To grunt and sweat under this weary life,
When that he may his full Quietus make,
With a bare bodkin, who would this endure,
But for a hope of something after death?
Which puzzles the brain, and doth confound the sense,
Which makes us rather bear those evils we have,
Than fly to others that we know not of.
Aye that, O this conscience makes cowards of us all,
Lady in thy orizons, be all my sins remembered.

Sir Laurence Olivier as Hamlet

UNIVERSAL STUDIOS

First Folio (1623)

To be, or not to be, that is the question:
Whether 'tis Nobler in the mind to suffer
The Slings and Arrows of outrageous Fortune,
Or to take Arms against a Sea of troubles,
And by opposing end them: to die, to sleep
No more; and by a sleep, to say we end
The Heart-ache, and the thousand Natural shocks
That Flesh is heir to? 'Tis a consummation
Devoutly to be wished. To die, to sleep,
To sleep, perchance to Dream; aye, there's the rub,
For in that sleep of death, what dreams may come,
When we have shuffled off this mortal coil,
Must give us pause. There's the respect
That makes Calamity of so long life:
For who would bear the Whips and Scorns of time,
The Oppressor's wrong, the poor man's Contumely,
The pangs of disprized Love, the Law's delay,
The insolence of Office, and the Spurns
That patient merit of the unworthy takes,
When he himself might his Quietus make
With a bare Bodkin? Who would these Fardels bear,
To grunt and sweat under a weary life,
But that the dread of something after death,
The undiscovered Country, from whose bourn
No Traveller returns, Puzzles the will,
And makes us rather bear those ills we have,
Than fly to others that we know not of.
Thus Conscience does make Cowards of us all,
And thus the Native hue of Resolution
Is sicklied o'er, with the pale cast of Thought,
And enterprises of great pith and moment,
With this regard their Currents turn away,
And lose the name of Action. Soft you now,
The fair Ophelia? Nymph, in thy Orisons
Be all my sins remembered.

Setting the Stage

It all began with alumnus Robert Lee, PhD '66 (English), and his wife, Gloria. Their vision for supporting Shakespeare teaching and scholarship at the UO laid the foundation for the university to bring Shakespeare's First Folio to campus.

The Lees had the foresight years ago to advance the status of Shakespeare studies at Oregon. In 2005, they established an estate gift that will eventually create an endowed faculty chair in Shakespeare studies.

Strengthening their commitment to this vision, Gloria Lee also established a separate fund in 2012 to provide immediate support for undergraduate Shakespeare studies.

This endowment—the Kingsley Weatherhead Undergraduate Shakespeare Fund—provides approximately $10,000 per year, which the English department uses to bring speakers to campus, fund trips to the Oregon Shakespeare Festival in Ashland and offer prizes for an annual undergraduate essay contest.

Weatherhead, who passed away in 2011, was not a Shakespeare scholar, but a modernist. However, when he learned that the Lees wished to name a fund after him, he told them the most important thing for students, now and in the future, is to read Shakespeare.

"The effect of Gloria's gift has been to generate ideas and energy around Shakespeare studies on the UO campus," said Karen Ford, associate dean for humanities.

"It has created a community of faculty that put the UO in a prime position to compete for the First Folio," she added. "Ten years ago, this would not have happened." —LR

A 1928 photograph of Rafael Landrove and his family represented the U.S. ideal of middle-class stability. But for the Landroves, economic progress was more an aspiration than a reality.

INVISIBLE NO MORE

HISTORIAN JULIE WEISE GIVES A FACE TO MEXICAN IMMIGRANTS WHO HELPED BUILD THE SOUTH

BY MATT COOPER

On a summer day in 2004, Julie Weise strode up to an aged stone building in Mexico City that housed the archives of the secretary of foreign relations for Mexico. She had a simple question: How long have Mexicans been in the Deep South—states like Georgia, the Carolinas, Louisiana?

Then a first-year doctoral student in history at Yale, Weise was formulating a topic that could become her dissertation.

Fresh on her mind was the fact that California Gov. Arnold Schwarzenegger had recently repealed a measure that would have allowed undocumented immigrants to apply for driver's licenses. Yet in the South, long toiling

IMAGES COURTESY OF JULIE WEISE, *CORAZÓN DE DIXIE*

Weise found that Mexicans had been in the South since the 1920s. This flew in the face of everything that historians knew about this movement.

under a history of racial oppression, North Carolina and other states had been allowing such immigrants to obtain driver's licenses for years.

"I said, 'Wait a second—all this political Latino power and progressive policies (in California) and we can't get this done, but there are these southern states that are doing it?'" Weise said. "That really intrigued me."

With this apparent contradiction in mind, Weise set about a possible examination of the Mexican experience in the South.

In the foreign secretary's archive, she could review records that showed how Mexican federal officials had been helping nationals migrating to the United States. How long, she wondered, had those nationals been going to the South?

Weise expected to find her answer in the 1970s. The Latino population in the South exploded from 1990 to

CLOCKWISE FROM TOP LEFT: *Mexican and black cotton pickers inside a plantation store in the Mississippi Delta in 1939; Robert Canedo's service in World War II was representative of a generation that embraced Americanism in the hope that the country would embrace Mexican Americans; an image from 1949 of a Mexican man who picked cotton in Arkansas.*

Finding descendants was basic, shoe-leather detective work. Armed with lists of names, Weise worked the phone book.

A snapshot from the Marín family album depicting their journey north from Florida in the 1970s.

2000, with their numbers doubling to 4.9 million; the 1970s, Weise speculated, would have been a logical period for the arrival of the first Mexicans and the establishing of roots that would precede the bigger wave.

She began flipping through the card catalog, starting with the consulate's office in New Orleans. "I looked under 'N' for 'New Orleans'—'were there any Mexicans there in the past?'" Weise said. "My question was as simple as that: 'Were they there?'"

Were they ever. With seemingly every three-by-five-inch index card she flipped, Weise unearthed bits and pieces from the lives of a people who were adjusting to the ins and outs of a new country, as evidenced by the need for assistance from their home government: migrant protection complaints, farmworker issues, criminal cases, repatriation files—even questions about proper education for children and appropriate burial grounds for the dead.

In record after record, Weise found evidence of Mexicans living in Mississippi, Arkansas and other states across the South. Day after day, week after week, she pulled hundreds of documents and other records and snapped a photo of each with a digital camera. It was a treasure trove.

But for Weise, the true breakthrough was discovering when this migration began—the cases dated to the 1920s and 1930s. This flew in the face of everything that Weise knew—that *any* historian knew—about how long Mexicans had been in the South. Indeed, the Latino explosion in the 1990s was treated by journalists, scholars and others as if it had started from nothing.

It instantly dawned on Weise: The scope of her project would start not in the 1970s, but at the *beginning*—1910, the onset of the Mexican Revolution, which radically transformed one nation and forced untold numbers of its citizens to flee north.

"I definitely remember the day I pulled a little index card, 'Mexicans buried in the black cemetery of Clarksdale, Mississippi,' and it was in the 1920s," Weise said. "And I just said to myself, 'Whoa. No one has written about this.'"

HEART OF DIXIE

Now Weise herself has written about it. *Corazón de Dixie: Mexicanos in the U.S. South since 1910*, which took her 11 years and was published in 2015, is the first book to comprehensively document the history of Mexicans and Mexican Americans in the South, dating back to 1910.

The book recounts Mexicans' migrations to New Orleans, Mississippi, Arkansas, Georgia and North Carolina. It follows them as they navigated the Jim Crow system, worked the cotton fields, appealed for help to the Mexican government and embraced their own version of suburban living in the twentieth century. The Organization of American Historians has awarded Weise the Merle Curti Award, calling *Corazón de Dixie* the year's best book in American social history.

The book—Weise's first—recognizes a people whose history has been neglected in official U.S. archives, not to mention classroom textbooks. *Corazón de Dixie* chronicles the contributions that Mexicans and Mexican Americans made to the South, their efforts to advance and their treatment at the hands of the region's established groups—whites and blacks.

"The knowledge that there is a longer history around struggle for (Latino) rights is something that teachers and advocates want to communicate to young Latinos in the South so they feel less alien in that region," said Weise, now an assistant professor of history at the UO. "It's really hard to feel you don't belong somewhere and you don't have a history somewhere."

The book has struck a chord, making Weise a hot ticket in the South—since the release of *Corazón de Dixie* last fall, she has been interviewed by public radio in North Carolina and Georgia, presented talks in Charleston and Charlotte and heard from advocates, educators and scholars who want to teach the book in schools and universities.

Erik Valera, a Latino community advocate in North Carolina, heard an interview with Weise on public radio and immediately reached out to her in an email. One of the chapters in *Corazón* covers the 1942 bracero farm labor agreement that allowed millions of Mexican men to come to the United States on short-term labor contracts; Valera's grandfather worked in the program and the book reminded Valera of his grandmother's efforts to win compensation owed to the family.

"(The bracero program) is an important part of history that can't be forgotten," Valera said. "I told Julie, 'These stories need to be put out, they need to be made accessible.' In the same way I feel connected to the bracero program, Latino youths need to know they are not paving new ground, they are continuing a legacy."

Robert Canedo first acquired his US citizenship after World War II, but had enjoyed most of its benefits for decades—benefits not enjoyed by those New Orleans citizens who were African American. Though his skin was dark and his mother was a poor widow raising a family on the proceeds of her sister's boarding house, in 1930 young Robert attended kindergarten with white children. . . . By the time he enlisted in the army, Canedo had already fallen in love with his future wife, a U.S.-born white woman named Hazel. —Corazón de Dixie

WORKING THE PHONE BOOK

Part of what gives *Corazón de Dixie* resonance is that Weise has populated it with intimate snippets from individual lives. The book is more than a cold recitation of the facts of Mexicans' long-standing presence in the South; through Mexican and U.S. records research, interviews and family photographs, Weise paints vivid portraits of the lives of the first Mexicans in the region, detailing their expectations, strategies and dreams.

Much of the book is based on interviews that Weise conducted with descendants of those first Mexican families. Finding them was basic, shoe-leather detective work: Armed with lists of names procured from the genealogy website ancestry.com, Weise worked the phone book.

"You call and say, 'Hello, I'm a historian doing research on Mexican immigration to New Orleans, are you a descendant of Francisco Cervantes, who lived in New Orleans in the '20s and '30s?'" Weise said. "Either they hang up on you or they say 'no' or they say 'yes.' I wanted anything they knew—anything they had that I could scan, anything to bring more understanding of what these people's lives had been like."

Though his brother Constancio had found a measure of economic stability in San Antonio, Rafael Landrove's failure to do so parallels the declining fortunes of most Mexicans in South Texas during the 1920s.... By 1924, Landrove was traveling to work in the rapidly expanding cotton industry of East Central Texas, and there he wed Martha Perry (or possibly Pérez), a Tejana from the East Texas town of Nacogdoches. Within three years, the couple had moved yet again, to Lake Cormorant at the far northern end of the Mississippi Delta. —Corazón de Dixie

B. B. KING COUNTRY

Many of the people Weise contacted were only too happy to do what they could to help her reclaim a history largely overlooked.

She developed the story of Rafael Landrove, for example, while she was doing research in a Mississippi Delta library. A Mexican American man with a passion for history had taped interviews with his grandparents and contributed them to the repository.

Once contacted by Weise, this man—a Mississippian and member of the area's Enriquez family—provided a photo of Landrove, who had been a friend of his own ancestors.

The man also took two days off from work to drive Weise through the Delta region and describe his family's life in Mississippi (out of respect for the man's privacy, Weise declined to provide his full name). The two traveled rural roads to tiny, economically depressed towns—"B. B. King country," Weise called it, and quoting another historian, added, "'the most Southern place on Earth.'"

Behind closed doors, Weise found, many of those families had maintained a strong Mexican cultural life even while hiding it from the outside world so that they might join white society. The man's grandmother showed Weise the place in the house where the family once hosted the Mexican bands from Texas that inspired dancing in every room.

"It seemed important to him to figure out how to grapple with this history somehow," Weise said. "I think he understood why others wanted to run away from it. But I think he was also in pain about that because he felt connected to that history and he hated the fact that friends and relatives were running from it."

Claude Kennedy, an African American man, recalled how Mexicans' superior access to public space only stoked his indignation at the Jim Crow system. "They could go to the movies with whites, where black people still had to go upstairs," Kennedy said. "That was something that black people could not understand." He remembered his mother, a schoolteacher, explaining to him why Mexicans were not subject to the painful discrimination of Jim Crow. "Their government would not allow them to be treated that way," he recalled. —Corazón de Dixie

BONDING AT THE BARBER SHOP

Weise's attempt to paint a richer portrait of the Mexican experience in the South was not of importance to Mexicans and Mexican Americans alone—African Americans also had memories to share on the history of Mexican immigration. Weise gleaned rich anecdotes from interviews with people such as Claude Kennedy, of the Arkansas Delta.

As Mexicans moved into the South, Mexican officials repeatedly intervened on their behalf to try to address clashes over discrimination, farmworker compensation, education and other rights. For Kennedy, it was a bitter experience, indeed, to compare Mexico's support of its citizens abroad with his own government's enforcement of racial segregation.

He held nothing against the immigrants, though. Kennedy, in fact, related an experience to Weise that illustrated his empathy: He was about to get his hair cut one day at a black barber shop when a Mexican man walked in; the man spoke no English but was able to communicate that he had been a barber in Mexico—he hoped just to cut someone's hair, no money involved. Kennedy agreed.

"I asked Mr. Kennedy, 'How did he do?' and he said, 'Well, he made it a bit longer than I would have liked,'" Weise said. "But it was a very interesting moment, with this black man saying to this Mexican man, 'I know what it's like to be treated like you are so much less than you are, so I'll give you this opportunity to recover that part of yourself.'"

Maggie Mackenzie was a Mississippi-born white woman alone in her thirties with six children to support. She married Frank Torres, a Texas-born Mexican American man nine years her junior. While marrying a black man in the 1920s would have brought banishment or even death to an impoverished white woman in the Delta, marrying a Mexican American man apparently was more acceptable. Having grown up in Texas, Frank Torres knew well the benefits of marrying "up" in the racial hierarchy, which may have motivated him to do so despite Maggie's more advanced age and the financial burden of supporting her six children. —Corazón de Dixie

"GRANDDAD'S FROM TEXAS"

Weise's calls were not always welcome.

Many of the first Mexican families, especially those in Mississippi, moved up in the world by assimilating—they married white people and sent their children to white schools, once they had won the right to do so. They deliberately avoided public discussions of their ethnic heritage, Weise wrote in *Corazón*, which was "the cost for their admission to the Mississippi Delta's white middle class."

That reluctance to reveal "the family secret" endures.

"They just didn't want to talk about it," Weise said, recalling some people's reactions to her. "They'd have darker skin and Hispanic surnames, but they'll say, 'Granddad's from Texas,' and that's the end of that."

The move by Mexicans in the South to join white society or move quickly to another region effectively "erased" their historical footprints. But there are other reasons their history went unnoticed for so long.

Historians usually start their work with government archives. But local, state and federal officials in the U.S. had relatively little interaction with the emerging Mexican community prior to the bracero farm labor agreement in 1942.

There were, in fact, plenty of secondary records—newspaper stories, school records, police reports, baptism registrations, the papers and photographs that families passed down from one generation to the next. But nobody asked the question, Weise said—including historians.

"We thought of this region as 'black and white,'" she said. "It didn't fit into our ideas about what the South is and where Latino history takes place."

NEEDLE IN A HAYSTACK

The building in Mexico City that housed the foreign relations archive when

REPORTER, SPEECHWRITER, EDUCATOR

JULIE WEISE HAS LONG BEEN FASCINATED BY THE LATINO EXPERIENCE

In 1994, California voters overwhelmingly passed Proposition 187, prohibiting undocumented immigrants from using nonemergency health care, public education and other state services.

Activists in California and across the country erupted in protest. Latino groups and local governments outside the state threatened boycotts. Carlos Salinas de Gortari, then president of Mexico, decried the law as xenophobic.

But at Julie Weise's private and mostly white high school in Los Angeles, "there was nothing going on," she said. In those classrooms—and in classrooms across the country—educators continued to teach racial and ethnic conflict in the United States as a story of blacks and whites, only.

That bothered Weise. She became, as she put it, "really curious about what the hell was going on" with the response of her city, and her country, to Latino immigrants.

Proposition 187 was eventually found unconstitutional and overturned, but by then Weise had already become fascinated with the Latino experience in America. That interest eventually propelled Weise to graduate school and jobs on both sides of the border—including a stint with the Mexican government—during which she has repeatedly fought for awareness and protection of immigrant rights.

Weise got hooked on the history of Mexican Americans during a transformative class while she was an undergraduate at Yale. She knew that whatever career awaited her it would require fluency in Spanish, so after graduating in 2000 she moved to Mexico and started taking language classes while looking for work.

Weise eventually landed a job with an English-language newspaper in Mexico City. As a reporter, she enjoyed access to officials in the administration of Vicente Fox, the country's first opposition president in 71 years. It wasn't long before the 22-year-old Weise was offered—and promptly accepted—a position as a speechwriter for a cabinet-level adviser in the Office of the President for Mexicans Living Abroad.

After two years with the administration, Weise returned to Los Angeles, where she held jobs as a translator, paralegal, project manager and policy researcher at immigration-related agencies.

She also continued to work with the Mexican government. Weise helped the administration launch an information service at the Mexican consul in Los Angeles: Ventanilla de Salud—"window of health" in Spanish—is a walk-up counter that provides information on Latino health topics, counseling and referrals to health services available in local communities.

Ultimately, Weise decided that her future lay in academia. After receiving a doctorate in history from Yale, Weise taught at California State University and Santa Monica Community College before joining the University of Oregon as an assistant professor of history in 2013.

Today, Weise's research and instruction focus on themes of identity, citizenship, migration and race around the world. In other words, she's teaching a side of racial and ethnic conflict in the United States that had been denied to her as a student.

"It's completely shocking how little there was on Latinos in the high school and college curriculum (when I was a student)," Weise said. "It's still that way."

—MC

Weise began her research was a stately former convent with vaulted ceilings and sunlit windows. Weise felt her spirits lift every morning as she walked across an open courtyard and through the convent's massive wooden doors to begin her work.

Her investigation was pure needle-in-a-haystack: She planned to sift through piles of records from both countries—first in Mexico, then in the U.S.—in the hope of finding at least a few that might give some sort of clue as to when Mexicans began arriving in the South.

Fortune was on her side. Weise chose to start in Mexico, and that made all the difference.

As a graduate student with no experience as a historian, Weise was reluctant to start her research in the U.S., which would have required learning to navigate the National Archives and Records Administration, a sprawling Washington, D.C.–based agency with more than 10 billion records.

Had Weise started her research in the states, the job would have been almost impossible because there were no overarching government files on this emerging community. There were only secondary records—school attendance reports or newspaper clippings, for example—in which Mexicans and Mexican Americans were mentioned in passing. She wouldn't have known where to look or what to look for.

"Archives on the U.S. side were not organized in such a way (for the South)," Weise said. "There was no 'M' for Mexican."

"THIS IS A REAL PERSON"

Weise's book is distinguished by her ample use of vintage photographs provided by friends and descendants of the first Mexican families in the South.

"I feel like you have to work with what you've got when you work with people who aren't the main subjects of archival collections," Weise said. For Mexicans in the U.S. South, often that meant a family photograph.

"These stories need to be made accessible. Latino youths need to know they are continuing a legacy."

But Weise had worked for two years in Mexican President Vicente Fox's administration as a speechwriter and researcher. She understood how that federal bureaucracy worked, and she felt comfortable in it.

Weise knew, for example, that Mexico had stationed a consul in New Orleans since the nineteenth century to facilitate maritime trade between the two nations.

Thus, by searching the foreign secretary's records under "New Orleans," Weise quickly learned of scores of cases involving Mexicans in that city and across the South. That meant that Weise, upon returning to the U.S., would know which cities to review for records, and also what types of documents there might be. By starting in Mexico, in essence, she learned where to look later, in a haystack of U.S. documents, for the "needles" that would help her answer her question.

An examination of one such photograph exemplifies how a historian can use a resource such as the genealogy website ancestry.com to breathe life into a snapshot from the past.

In *Corazón de Dixie*, Weise includes an image of Rafael Landrove provided by Enriquez, the Mississippian who had taken her to visit his grandmother. The photograph, a posed portrait from 1928, shows Landrove, his wife, Martha, and their baby.

For a fee, Weise was able to pull information from ancestry.com about the family, their professions, their neighbors and even their movements from state to state. With that in hand, Weise takes readers "into" the photograph, to the underlying story: a family attempting to recreate the middle-class ideal of an economically independent husband, a nonworking domestic wife and a baby who will inherit the wealth and privilege bestowed by her parents.

Martha is photographed in a fur coat and pearl necklace, for example—but Weise knew from the records that those items only suggested a wealth that the couple did not actually possess. They are shown sitting on a bench, but it was one that didn't fit in with their sharecroppers' cabins in the northern Mississippi Delta, Weise wrote.

The image exaggerates the qualities of economic progress and privilege, Weise concluded, "depicting an aspiration more than a reality."

She even used the website to confirm that the photograph is, in fact, Landrove. Because ancestry.com includes naturalization records, Weise was able to review a category in those records for "distinctive marks"—for Landrove, the record listed that a finger was "foreshortened." In the photograph, part of the first finger on his right hand appears to be missing.

For Weise, there was deep satisfaction in using the photograph to put a human face on a people who had long been nearly invisible to history.

"With him, that was just a moment of, 'this is a real person,'" Weise said. "These were people."

FANTASY BECOMES REALITY

The initial response to *Corazón de Dixie* has exceeded Weise's expectations.

There are the media interviews and speaking engagements. Weise's peers keep sending pictures of classrooms at universities where they are now teaching the book—the University of Alabama, the University of Texas at San Antonio.

Nor is the book's popularity bound by academia. A museum and an economic think tank in North Carolina have both been in touch about ways to publicize the histories that Weise tells in *Corazón de Dixie*.

After giving 11 years of her life to this effort, Weise acknowledges that there came a moment, as she was correcting footnotes, that she "nurtured the fantasy" that *Corazón de Dixie* would become something more than just a research book collecting dust on a shelf.

"It's just been so wonderfully rewarding to see that people care," Weise said. "And since the book just came out, I hope this reaction is only just beginning."

THE FRENCH CONNECTION

Online tool lets language students talk across continents

SOME 5,458 MILES, NINE HOURS AND TWO languages separate Eugene, Oregon, and Lyon, France.

But when college kids from these cities connect to each other, it's a snap finding common ground for a chat: movies and music.

That was UO French student Emma Schumacher's experience. Last fall, thanks to a computer and the Internet, she practiced her French with a native speaker on the other side of the Atlantic Ocean.

"It was cool to see how someone my age from France would actually speak and how the flow and structure of their sentences would go," Schumacher said. "I found out we have a few things in common, which was cool considering she lives on the other side of the world."

Social media and other forms of online communication have made language and cultural exchange easier than ever. The UO's Yamada Language Center has helped lead the way for more than a decade, by offering a tool that enables students around the world to talk with one another.

> "MY STUDENTS CHOSE TO REACH OUT TO THE STUDENTS IN FRANCE TO EXPRESS THEIR CONCERN AND SOLIDARITY."

ANVILL—A National Virtual Language Lab—is a suite of Web-based tools that teachers use to present language lessons. Students can tap into it to discuss topics in groups, through video, audio or text. It's free to any language teacher at a nonprofit educational institution, anywhere.

One of the more popular services is LiveChat, which allows students who speak different languages—and, quite often, live in different countries—to meet in real time, using video or audio to communicate with one another.

"ANVILL is the language lab of the modern era," said Jeff Magoto, director of the language center. "This makes it easy for teachers who want to partner, and it's more effective when it's a class to a class. You really start to care about the people there."

French instructor Melanie Williams has repeatedly teamed up with Stéphanie Meunier, an English professor at Université Lumière Lyon 2, a UO exchange partner in Lyon. Williams' students, who are learning French, talked three times last fall with Meunier's students, who are learning English.

"Students must record a message in English and in French," Williams said. "The students in Lyon do the same, and this way, each student is the expert and also the student, in relationship to their partner."

Although the students are required to practice language and grammar lessons, they're free to come up with their own conversational topics. The mass shootings late last year in Paris and southern Oregon prompted heartfelt exchanges about current events and the political climate in each country.

"This connection encourages students to be more curious of another culture and to realize that learning French has true communicative purpose, even if they cannot travel to study in Lyon," Williams said. "My students chose to reach out to the students in France to express their concern and solidarity—it was a moment to check in and to hear about their partners' perspectives and experiences."

Those international bonds tend to continue after the class is over. Students frequently exchange social media and contact information to stay in touch or even plan a trip to each other's country.

Said Magoto: "It's basically pen pals of the 21st century, except now they're communicating via video and online."

–NB

PORTALS MAY LEAD CHARACTERS TO JUSTICE AND REDEMPTION OR CAUSE EMOTIONAL TURMOIL AND CONFUSION.

THE POWER OF PORTALS

DO WE LOSE OURSELVES BY IMMERSING TOO DEEPLY IN A DIGITAL REALITY?

In the futuristic 2013 film *Her*, the character Theodore falls in love with his computer.

Named Samantha, this device is such an advanced feat of artificial intelligence—think Siri on steroids—that except for the lack of a body, it is virtually human. Samantha engages Theodore in intimate discussions and exudes a powerful warmth and charisma that leave him obsessed.

He's not alone, either. The backdrop of the movie is one in which people move about with little or no interaction, their telltale earpieces indicating that they are instead talking remotely to their hard drives. They are all totally immersed in a digital reality—while still technically rooted in the real world.

This mingling of the digital and the real in *Her* is the focus of a recent paper by Dorothee Ostmeier, a professor of German and folklore. She sees the film as a modern revision of a classic literary device known as a "portal."

Portals are doorways that connect two or more realities and allow heroes to move from one to another.

Imagine the rabbit hole in *Alice in Wonderland* (above), the wardrobe in *The Chronicles of Narnia* or the train stations in *Harry Potter*. Portals may lead characters to justice and redemption or cause emotional turmoil and confusion. But they always provide passages for psychological, spiritual and physical transformation, Ostmeier says.

Ostmeier's interest in portals began when she was inspired by a mentor to examine 18th- and 19th-century fairy tales as she studied German literature. Studying a foreign literature is, of course, intertwined with the study of language, and that led Ostmeier directly to the concept of portals.

Language is "the means through which we transfer all meaning," Ostmeier said. "Language is a portal, too."

In writing about *Her*, Ostmeier focuses on portals as offering layers of utopian promise, but also foretelling changes that we cannot predict.

"In this digital age," she said, "portals have never been more relevant because we're surrounded by them constantly."

From immersive video games to our daily obsessions with email and texting, human beings today are constantly subjected to computer screens that serve as portals to alternative digital realities. Understanding the power of portals—from 18th-century fairy tales through modern cinema—might help us maintain a sense of self, Ostmeier argues.

"When it's possible to live spontaneously in different realities and different identities, studying portals really forces you to be sensitive to your relationship with reality," she said. "And even, in the case of digital realities, if you're playing or being played."

That's the question at the center of *Her*.

Samantha (Scarlett Johansson) is the portal to a digital relationship that at first appears to serve Theodore (Joaquin Phoenix) as an antidote to his loneliness. But Samantha also uses Theodore as a portal to learn about human emotions and consciousness. Eventually, she connects with other digital entities and they abandon Theodore and everyone else and evolve beyond human comprehension.

The screen that was once a portal to a vibrant new world goes blank.

"He thought he was controlling it, but in fact it was controlling him," Ostmeier said. "It really questions the idea of human superiority to artificial intelligence, as he's left behind to return to his traditional relationships."

—MD

Pathway to Pixar

CINEMA STUDIES ALUMS LAND OPPORTUNITIES WITH THE ANIMATION GIANT

MAURA TURNER was a freshman when alumnus Greg Snyder spoke to her cinema studies class about his job with Pixar.

Now they're colleagues.

Turner, a 2014 graduate, is among a select group of Ducks who have recently capitalized on internships organized through cinema studies to land promising jobs in film and TV production.

How are they doing it? Through connections, preparation and—most of all—passion for the work.

At Pixar, Turner joins Snyder, '92 (communications and film), a film editor with credits that include *Monsters, Inc.*, *Ratatouille*, *Toy Story 3* and *Monsters University*.

Meanwhile, senior Leslie Seder just landed a production internship at Pixar after spending a year on a cruise ship filming, editing and producing a daily TV show.

"The UO cinema studies program is nascent, but it shows a lot of promise," Snyder said. "Everyone there is very enthusiastic and really committed to the craft, and loves filmmaking. There's a lot of amazing energy there."

Snyder is an excellent connection for Ducks interested in the film and media industry where, according to program Director Michael Aronson, who you know can be as important as what you know.

Cinema studies prepares students for opportunities with studios such as Pixar by combining career development and advising with the curriculum. Students can work with a staffer devoted to internship and career coordination while they take courses in prepping for jobs after graduation.

Some Pixar interns meet one-on-one with animators, others delve into computer graphics software. No two days look the same.

"If students want to major in cinema stud-

EDUCATION INNOVATION

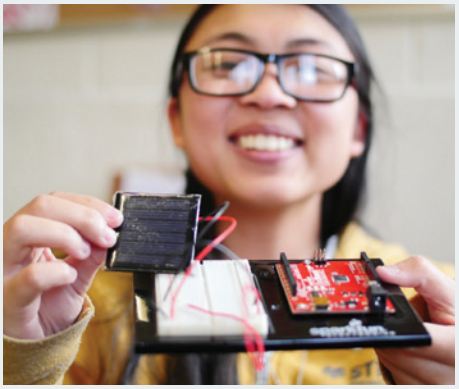
ALUMNUS PUTS PHILOSOPHY OF PRAGMATISM TO WORK IN THE SCHOOLS

Nathan Pai Schmitt has always believed in the power of education to improve society.

His only concern? Improving it fast enough.

Schmitt wasn't satisfied with the traditional model—there's more to education, he argued, than homework, tests and lectures. Students need opportunities to solve real problems, today, and learn real skills—technology, design, engineering, manufacturing.

Now the 2011 philosophy graduate is at the helm of an educational experiment with a mission as admirable as it is ambitious: solving the world's grand challenges.



HACKSCHOOL

Students at HackSchool are addressing societal needs by building devices such as this low-cost solar-charging phone case.

Schmitt has cofounded a pilot program in Denver for students who want to make things that improve quality of life, especially for low-income families, people with disabilities and other disadvantaged groups.

HackSchool provides 30 to 35 high school-age students with hands-on technical training to turn their dreams into real projects: science diagrams that the visually impaired can "see"; electronics that can be built on a shoestring budget; software that will enable people with physical handicaps to use the latest 3-D design technology.

The philosophy of the school echoes the philosophy that is near and dear to Schmitt's heart: The true purpose of education is to enable people to create real

ies," Aronson said, "we have to show parents that they have a pathway to success."

The program's emphasis on networking is helping to pave that pathway.

Jackie Penn, '14, worked hard to make connections while in Ireland for a "summer abroad" program that led to an internship at Ripple World Pictures in Dublin, where she read scripts and did research for a new Irish TV series. Cinema studies graduates have also interned on the series *Portlandia* and found jobs with established TV studios and independent production companies.

Senior Brad Burke, owner of a production company, cited another advantage to the program: Unlike students at many other university film programs, UO students own the work they create.

"This has helped with every feature I've written," said Burke, who has three films in production. "It's allowed me to take short films made at the UO and go to festivals with them. It allowed us to take ownership of our own work, and that gives us a huge advantage."

Turner, meanwhile, credits her opportunity with Pixar in part to the nuts-and-bolts training she received in cinema studies about how to get a job—writing a strong cover letter and résumé, practicing an interview, crafting an "elevator pitch" on her strengths.

Pixar internships cover a range of experiences and no two days will look the same. Some interns meet one-on-one with animators, others delve into computer graphics software.

During her internship, Turner joined the production desk of a feature film. She worked closely with both the producer and director, assisting with needs across various departments. She saw how the pieces come together to make an animated film.

Her energy for the work clearly left an impression, opening doors for a permanent job. Turner is now a production assistant, working side-by-side with Snyder on a film project.

"People at Pixar are passionate about their work, and that's what they look for," Turner said. "I think they liked seeing I was passionate about production."

—AT

things that make the world better.

In academic circles, it's called pragmatism. Developed around 1870, this philosophical movement is based on the belief that the function of thought is not to describe, represent or mirror reality, but to be a tool for problem-solving and action. One should act on ideas, testing them in human experiences.

"I'm interested in what it looks like to use philosophy as a powerful engine to make real-world change," Schmitt said.

He credits philosophy professor Colin Koopman for his transformation. Brought up in a Montessori education that prioritized independence and freedom, Schmitt developed strong analytical-thinking skills. In philosophy classes, he excelled with abstract, complex material.

But Koopman had a different question. "He was the first professor who basically said, 'OK, that's nice that you're really good at all this analytical stuff—what can you actually make with it, in the world?'" Schmitt said. "I realized it's not good enough to be able to 'out-analyze' people. You have to use that to make things."

His career path never wavered. Schmitt knew that he wanted to work in education, but he wanted to develop a new approach—an educational model based on his philosophical training, based on *doing*, in which students directly improve the world around them through their projects.

After joining STRIVE preparatory schools in Denver to teach English and social justice, Schmitt started HackSchool with a friend to serve students who had complained about the lack of training for their passion—engineering. They launched the afterschool program as a practical education in technical skills, relying on volunteer teachers and existing infrastructure; they sought crowdfunding support for supplies and promptly shattered their goal, raising $40,000 in less than two months.

The program serves a low-income area, and stories—such as that of a Latina student named Anahi—have resonated with the public.

A freshman learning English as a second language, she is designing a "smartcane" for the blind that builds on emerging technology. The device incorporates sensors that read and transmit data wirelessly to headphones, giving the wearer real-time information about the environment—street names, businesses and directions, for example.

Anahi built a prototype from scratch, teaching herself the necessary computer coding and circuitry. She won a school contest, then traveled with Schmitt and another student in April to a larger competition in Indianapolis. Schmitt also arranged a side trip to the White House.

"That's not an average outcome for a student in her situation," Schmitt said. "Her goal is to alleviate a very specific form of suffering in society through her project. And it serves the dual role of preparing her for her own future."

—MC

HOW TO FIGHT A BULLY

SOCIETY TO BLAME FOR MISBEHAVIOR BY HIGH SCHOOL BOYS, SOCIOLOGIST FINDS

We all know the archetype: the schoolyard tough whom the other kids fear. The classroom cutup quick to wound another student with a derogatory remark. The bully who builds himself up by tearing others down.

But bullying is about more than simply picking on people, sociologist C. J. Pascoe says. So the remedies are more involved than just condemning the conduct.

This is the era of the bully. According to one report, up to 70 percent of young people experience bullying. The White House hosts an anti-bullying webpage, superstars run anti-bullying foundations and schools prominently display anti-bullying policies on their websites.

But Pascoe says it's ineffective to view bullying as simply the actions of a particular person targeting another who is weaker. Rather, she believes the behavior is rooted in the inequalities that societies create—and then teach to the next generation.

In recent research, Pascoe argues that kids don't bully simply because they're misbehaving. They bully because they're recreating the adult world and all its warts—discrimination, sexism and racism, for example.

"The things people get bullied for—their body sizes, their race, not expressing their gender correctly—these aren't just random differences," Pascoe said. "These are social inequities that adults support in law, policy and social institutions, whether that be the criminalization of young men of color, Title IX violations or antifat bias in the medical field."

In her 2011 book *Dude, You're a Fag*, Pascoe chronicled how high school boys use homophobic slurs. After more than a year of observing teenagers, she arrived at a counter-intuitive conclusion: Boys were bullied with gender-based epithets regardless of their sexual orientation.

> BULLIES RECREATE THE ADULT WORLD AND ALL ITS WARTS—DISCRIMINATION, INEQUALITY, SEXISM AND RACISM.

"The insults are usually levied because boys are not acting manly enough. They're showing too many emotions, they can't use a wrench correctly, or even if they're too smiley," Pascoe said. "All the boys are victims."

It represents a shift in homophobia, she says, as boys are targeted not only for being gay, but also for failing to act as society expects them to.

Pascoe calls for a shift in how we look at bullying, to place social forces, institutionalized inequality and cultural norms at the center of the discussion.

If we can learn to see bullying as an "illness" that kids contract from simply breathing the air of our social discourse, Pascoe believes educators can more effectively address hostile school environments. Children need robust social sciences lessons from kindergarten through high school to properly assess culture, media and the unconscious education they're absorbing from society, Pascoe says.

Consider the "Genderbread Person." This character—a teaching tool based on the Gingerbread Man—conveys information about sex, gender identity and interpersonal attraction. After a Eugene, Oregon, teacher came under fire for using this classroom material, Pascoe wrote a guest column in the local newspaper defending it as a way to combat bullying.

"It's vital," Pascoe said, "that young people start having discussions about gender."

Pascoe is also laudatory of restorative justice programs that bring the bullies and bullied together to talk about the conflict and how they can each take responsibility for a resolution.

She's less impressed with what she calls "prepackaged anti-bullying programs" in which students vow not to bully.

Said Pascoe: "Those are about as effective as virginity pledges."

—MD

TAXING PROBLEM

Oregon's unstable school funding shows up in falling grades

Imagine you're planning a big dinner party. You'll have money to work with, but there's a catch: You won't know *how much* money until after your dinner has begun.

Would you gamble, ordering lavish meals for each guest? Or keep it cheap, to avoid possibly ending up in the red? Maybe, if it turns out you'll be flush with cash, you can rush to add an additional course or two?

This scenario is not unfamiliar to Oregon's public school administrators, who are trapped in a state of perpetual fiscal uncertainty. They don't control most of their funding—it comes from the state legislature and the amount changes frequently. So administrators can't plan with any certainty what they'll have to spend on their guests—that is, Oregon's school-age children.

This is more than simply a nuisance for everyone concerned. The inability to plan funding hurts student performance.

So say Matthew Davis '14 and Andrea Vedder '15. The economics alumni found that math scores for Oregon eighth graders can drop by as much as 5 percent due to unstable funding that disrupts planning.

Their research began as an honors thesis and grew into an academic paper that was published earlier this year in the *Journal of Education Finance*.

Property taxes used to provide most of the funding for schools. This changed in the 1990s, when Oregon voters approved measures that kept property taxes down and severely limited the portion of property-tax revenues that could go toward schools.

These limits on local funding put the state on the hook for the bulk of school support. But fits and starts in the economy and other factors mean that the state's budget picture is volatile, to say the least. That makes it difficult for lawmakers to guarantee the funding that will go to school administrators, especially over the long term.

Working with Joe Stone, a professor emeritus, Davis and Vedder initially found a correlation between low math test scores and communities whose school-tax revenues had been severely cut due to the measures. Stone challenged them to find out why.

Districts work with year-to-year budgets. But the legislature uses two-year budgets, which include the money that goes to schools.

So Davis and Vedder looked at both years of the state budget cycle, individually.

They found that during the first year, districts generally didn't know how much funding they would receive from the state until the school year was well underway.

Talk about uncertainty: In one example, an urban school district reassigned hundreds of teachers outside their subject areas to make a meager budget work—but later learned that the budget would be better than expected.

Worse, Davis and Vedder found that the inability to plan ahead is most damaging to districts that are already cash-strapped. Those districts have less of their own property-tax money as a fallback when money from the state drops.

> ONE SCHOOL DISTRICT REASSIGNED HUNDREDS OF TEACHERS—THEN LEARNED THE BUDGET WOULD BE BETTER THAN EXPECTED.

For Davis and Vedder, it was a surprise to discover just how big a role planning plays in student performance. "I always assumed that a lack of money caused problems," Davis said. "But it was fascinating to discover the impact it had on planning."

Even more surprising for Stone was that two undergraduates had been able to wade through the Oregon tax system to reveal this phenomenon.

"How could you pull out this one thing from something that can barely be explained?" he asked. "I was stunned."

—KA

View From Above

GEOGRAPHY TEAM HITS THE WATER WITH NASA SATELLITE MAPPING PROJECT

HOW MUCH DO WE really know about the world's water and how it ebbs and flows?

Not a lot, it turns out.

These days, it's easy to assume everything on Earth has already been thoroughly charted. Google Earth has mapped the planet's most remote spots and smartphones give us turn-by-turn directions to just about anywhere we want to go.

Water, though, remains elusive. Sure, we can find every river, lake, reservoir and wetland on a map, but we still can't see how much water is in them and how this changes over time. We just don't have the crucial information that could help farmers plan crops, allow scientists to see how warmer temperatures are shrinking lakes and enable communities to prepare for flooding.

But soon our knowledge of the world's water will increase by an order of magnitude.

In 2020, NASA and the space agencies of Canada, France and the United Kingdom will begin using equipment in space to tell us much more about this resource covering most of our planet. Under a project called Surface Water Ocean Topography or SWOT, the agencies will launch a satellite for the collection of valuable information about the world's lakes, rivers, wetlands and oceans.

Roughly the size of a Prius, the satellite will orbit 550 miles above Earth. Powered by supersized solar panels on either side, it will need just 100 minutes to complete each circuit of the globe.

Three radar "eyes"—one on the main body and the other two on wing-like arms—will bounce radio waves off Earth, measuring the length of time it takes those signals to travel down and back. With this information, researchers can calculate water heights to within a few centimeters, creating a comprehensive and ever-changing picture of the planet's surface waters.

"It will be like making an extremely high-resolution map every two or three weeks," geography professor Mark Fonstad said.

Launching a first-of-its-kind technology into space takes years of preparation, and that's where Fonstad and his team of undergraduate and graduate students come in. They're working with the US Geological Survey to test and tweak the SWOT technology before it's operational.

During two days in spring 2015, Fonstad and his students paddled the Willamette River between Eugene and Corvallis in a green-and-yellow cataraft and a handful of kayaks. Onboard, they had sonar and some of the world's most

MADAM PRESIDENT

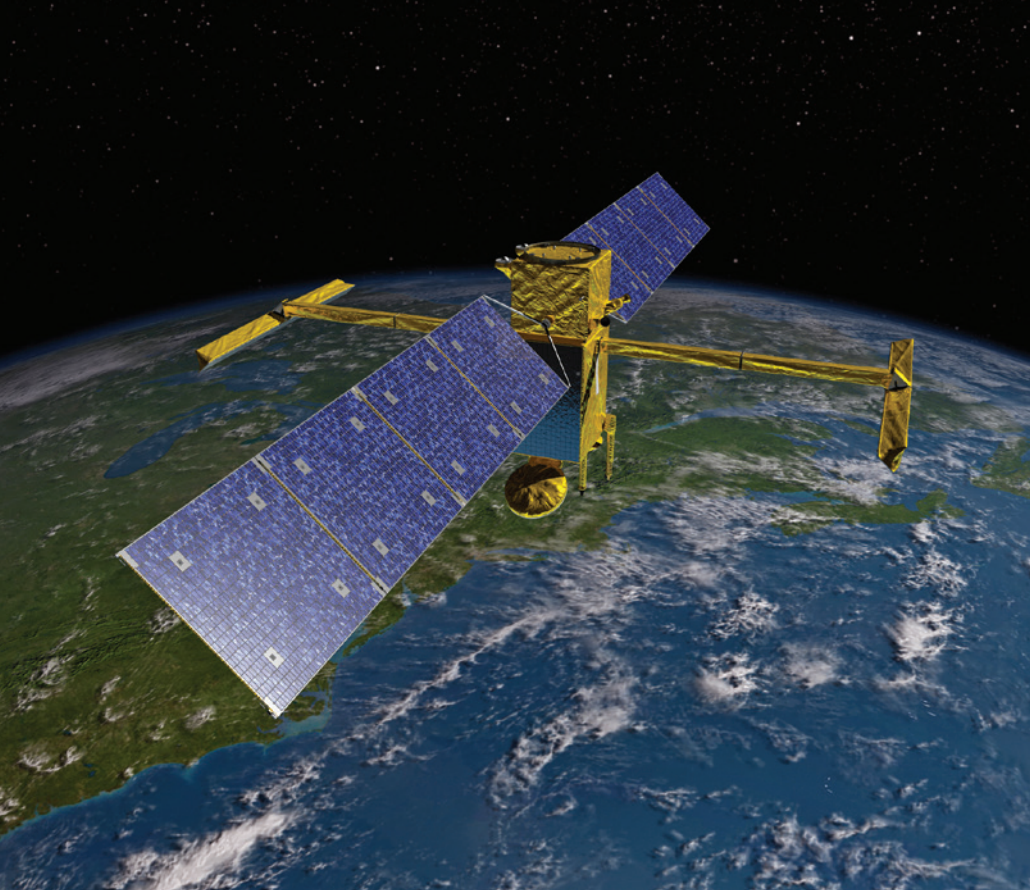
Pacific Islands' first woman president is GSS alum

Ducks with an undergraduate degree in general social sciences have gone on to become bankers, nurses, attorneys and psychotherapists.

Now you can add president of the Marshall Islands to that list.

In January, Hilda Heine, '74, became that country's first woman president—and, for that matter, the first woman president of any Pacific Islands nation.

Heine was elected after the previous president—a Portland State University alumnus—was ousted following a no-confidence vote of parliament. Heine, one of just three women in this governing body, had been the country's education minister.



A satellite the size of a Prius will orbit 550 miles above Earth, circling the globe in 100 minutes; below, UO geographers paddled the Willamette River, recording water height to calibrate the NASA equipment.

Researchers will be able to calculate water heights to within a few centimeters—from outer space.

precise mapping equipment, which allowed them to collect real-time measurements of water heights in precise locations all over the river.

Meanwhile, high above them they caught occasional glimpses of a NASA airplane flying the same route, and using the same SWOT technology that the satellite will carry to collect data about bodies of water.

Comparing on-the-water data with readings from the SWOT radar, researchers can calibrate the satellite equipment. They can also fine-tune the calculations that convert raw data into information about how much water is currently in a river or stream, how fast it is flowing and where it is in relation to flood levels, for example.

Ultimately, that kind of highly detailed information will be shared with people and nations everywhere.

Said Fonstad: "One of the biggest challenges in water resource management is uncertainty—not having knowledge about how much water is where at a given time."

—KA

It's not hard to imagine how busy Heine's calendar has become, and she was unable to make time for an interview. But filmmaker Jack Neidenthal, who ran unsuccessfully for the post in a previous election, told ABC News that Heine is smart, well-educated and politically savvy.

"She's a very impressive person when you sit with her in a meeting," said Neidenthal, a dual citizen of the U.S. and the Marshall Islands. "She's a very deep thinker about almost any issue that comes upon her."

Heine has amassed impressive academic and political achievements in the four decades since she left Oregon.

She received a master of education in curriculum and instruction from the University of Hawaii at Manoa in 1975 and a doctorate in education leadership from the University of Southern California in 2004. She has been a high school teacher and counselor, and she formerly served as president of the College of the Marshall Islands.

Heine has worked with the Pacific Islands Climate Change Education Partnership since 2009. The Marshall Islands (population 57,000) is made up of about 1,000 volcanic islands spread over 29 coral reefs between Hawaii and the Philippines. Most of the islands are less than six feet above sea level and are threatened by rising water.

As an advocate for women's advancement, Heine in 2000 founded Women United Together Marshall Islands, a women's rights group. She is also a member of the Pacific Women's Parliamentary Partnerships, which supports women in parliament with training.

According to the Pacific Women in Politics website, Heine's focus as president is integrity in national leadership, job creation, training, improved housing, a fairer tax system and family support.

Said Neidenthal to ABC News: "I just think we are in great hands."

—AT

Good Vibrations

UO PHYSICISTS KEY TO GROUNDBREAKING DISCOVERY OF GRAVITATIONAL WAVES

IT'S BEEN CALLED ONE OF the biggest breakthroughs in physics in 100 years. And it happened because UO scientist Robert Schofield decided, at 4 a.m. last Sept. 14, to get some sleep.

Schofield was in a space observatory in Louisiana, working on what had been an abiding passion for physicists for decades: trying to prove the existence of "gravitational waves." The theory, predicted by Albert Einstein a century ago, was that these energy ripples move across the cosmos, causing space and time to expand and contract.

No one had ever detected a gravitational wave. But on that fateful morning, Schofield and scientist Anamaria Effler opted to end a long night's work; instead of making another test of the instrument designed to detect a gravitational wave, they set it up for observation and left.

Fifty-one minutes later, it happened: The system detected a gravitational wave that had been produced by the collision of two black holes a billion light-years away.

Physicists announced the discovery earlier this year, sending waves of another sort—shock and excitement—throughout the scientific community and beyond. The proof of gravitational waves validated a fundamental tenet of Einstein's theory of relativity and triggered speculation that a Nobel Prize is on the way.

A BILLION-TRILLION SUNS

Details surrounding the discovery are simply staggering.

Consider, for example, the instruments that "heard" this gravitational wave: The Laser Interferometer Gravitational Wave Observatory where Schofield was working, and another like it in Washington state, has L-shaped antennas with arms that each stretch 2.5 miles across the land. Their sensitivity to vibration is such that they have to filter out readings from water going over a dam 18 miles away.

Before impact, the black holes were circling each other at 250 times per second. The power surge that erupted from their collision had the energy of a billion-trillion suns—that power was 50 times greater than the output of all the stars in the universe. This surge moved across space at the speed of light.

THE COLLISION OF THE BLACK HOLES CREATED A POWER SURGE 50 TIMES GREATER THAN THE OUTPUT OF ALL THE STARS IN THE UNIVERSE.

And yet, the gravitational wave was so weak by the time it reached the observatories that it was captured as a vibration measuring just a fraction of the width of a proton.

That's where Schofield and a team of UO physicists come in. Their job was to make sure that the passing "bump" had indeed been a gravitational wave, and not something else.

The observatory's antennas are basically a system of mirrors that are suspended—perfectly still—within a chamber. By running constant beams of laser light between the mirrors, scientists can see whether a passing vibration jostles the mirrors even slightly—that throws the beams out of alignment, and that's something that scientists can measure to determine the size and nature of the disruption.

The chambers enclose the mirrors in a vacuum, free from disturbances in the air that can affect measurements. But they still register vibrations triggered by earthquakes, trucks on a highway, lightning strikes and more.

In this project funded by the National Science Foundation and involving 1,000 scientists around the world, the UO is a founding member that monitors the environment for events that could trick the observatory's instruments. This is done using a variety of specialized sensors that have been installed at the two sites under Schofield's direction.

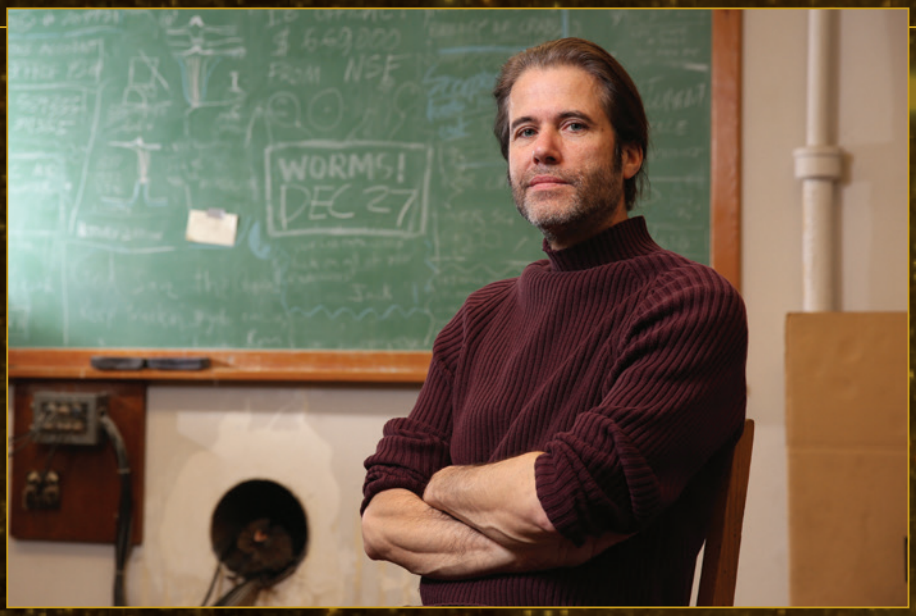
WHEN LIGHTNING STRIKES

Schofield—an expert at filtering out interference—is the project's "go-to guy" for ruling out false positives, said Ray Frey, physics department head and leader of the UO team.

After the vibration was detected, scientists set about eliminating other possible causes.

In fact, at about the same time as the gravitational wave's arrival, a massive lightning burst occurred over Burkina Faso in Africa. Some worried that the resulting electromagnetic wave, rather than a gravitational wave from deep space, had been recorded.

But Schofield has spent more than 15 years learning how lightning strikes



At 4 a.m., UO physicist Robert Schofield (right) set the instruments up for observation and left to get some sleep; the space observatory in Louisiana (middle) has L-shaped antennas with arms that stretch 2.5 miles across the land; Ray Frey, physics department head (bottom), said that when the discovery was made, "we had our jaws on the ground for a while."

affect the observatories' antennas. He determined that the strike—and 59 others around the world that happened in the second of the gravitational wave's passing—was too small to be the culprit. Schofield went even further, tracking 11 strikes later in the year that were bigger and much closer to the antennas, and none of them registered as gravitational waves.

In a final report that allowed scientists to move forward with this momentous announcement, Schofield found no signal interference from anywhere on Earth.

The breakthrough creates new inroads in astrophysics and astronomy—scientists now have proven technology not just for viewing outer space, but listening to it.

The discovery illustrates "why we need to keep doing basic research," Frey said. "It opens up a new way of looking at the universe. We're really just looking forward to walking through that door and seeing what's on the other side. This is just the start."

Schofield called the find a victory for experimental physics and the kind of resource-heavy breakthrough that will be increasingly difficult to repeat without adequate federal funding.

He was awed that a collision in a very distant galaxy could cause detectable motions on Earth. But as for whether he regretted not being on hand at that instant when the universe reached out and touched us, Schofield was pragmatic.

"If I had been in the control room, I wouldn't have seen it. It lasted one-third of a second," he said. "I was glad to be at my motel. It was pretty late."

—MC

WHAT'S IN A TWEET?

NIH FUNDS TWO SCIENTISTS TO PROBE MENTAL HEALTH VIA SOCIAL MEDIA

AFTER A GUNMAN opened fire in a historic black church in Charleston, South Carolina, last year, killing nine people, thousands of tweets chronicled the tragedy and captured debate about it.

Within four days of the 2014 shooting death of Michael Brown by a police officer in Missouri, there were reportedly more than six million tweets with the hashtag for the city involved, #ferguson.

And within two days of the 2015 terrorist attack that took 12 lives at Parisian weekly *Charlie Hebdo*, the hashtag #JeSuisCharlie—"I am Charlie"—had been used 216,000 times, ABC News said.

When tragedy strikes, huge groups of people post hundreds of thousands of messages to Twitter and Facebook to vent, to engage, to act. That makes these digital sounding boards fertile ground for experts who want to study mental health.

After a trauma such as a mass shooting, the messages that someone posts to Twitter or Facebook often say something about them: their personality, what emotions they're experiencing, whether (or how) they're coping—perhaps even what actions they're contemplating.

Embedded in those messages are important indicators of mental health—that is, the status of one's emotional, psychological or social well-being. Experts can study those messages to advance understanding of mental health issues, not just for an individual but—given the reach of a platform such as Twitter—for an entire community or region.

The challenge is to determine how to interpret the records of behavior available on Twitter. Now two UO scientists will do just that.

They will monitor millions of Twitter accounts to study the effect of a specific kind of community trauma—mass shootings.

The National Institutes of Health is funding a project by psychology professor Sanjay Srivastava and Reza Rejaie, a professor in computer and information science, to develop an approach for large-scale mental health research on Twitter. The two intend to use those ubiquitous, 140-character tweets to draw inferences about users' personalities, emotions and potential clinical symptoms.

It might not be immediately obvious that analyzing tweets could improve public health, but the scientists believe there is enormous potential.

Srivastava studies how personality affects and is affected by the social environment. He said outcomes of the project could include information about how mental health indicators vary over time and between communities and regions; how major events such as disasters and mass shootings affect community mental health; and how social media might be

DOMINIQUE DUBUC

used for individual-level screening and diagnosis.

"There are mental health variables that are common experience—depression, anxiety, post-traumatic stress," Srivastava said. "We're interested in individuals but also, at a more collective level, communities. What kind of difficulties are they having, and can we use that to do better health research and policies?"

Srivastava and Rejaie have developed a three-step approach. First, they'll capture data from a large, representative sample of US Twitter users to determine what kinds of questions can be addressed.

Next, they'll recruit a group of Twitter users to complete standardized assessments of personality, emotion and clinical symptoms. That will enable them to determine which online behaviors are reliable indicators of one's particular psychological makeup.

Finally, they will monitor millions of Twitter accounts around the country for one year to study how one specific kind of community trauma—mass shootings—affects personality, emotion and mental health, both for individuals and large groups of people.

Rejaie, an expert with computer networks, has developed a technique to capture a representative sample of Twitter accounts from across the US, and collect their tweets. He will then run checks to ensure that the collected tweets include relevant messages—and aren't simply links to cat videos.

Next, he'll look for patterns within the messages, assigning values to specific words. Lastly, he'll translate the results into information that Srivastava can use to make observations.

"This is a big shift from traditional social science, where a psychologist goes to an individual and asks them specific, individual questions," Rejaie said. "This data is not meant for this purpose. You don't have the opportunity to ask for what you want. You try to answer questions from what you have collected."

—MC

LIFE, BY THE NUMBERS

NEW HIRE YASHAR AHMADIAN PUTS BIG DATA TO WORK FOR BIOLOGY

HISTORICALLY, BIOLOGY was all about classification—sorting creatures, great and small. But it is increasingly about how life works, and that involves tremendous amounts of data that need to be managed, analyzed and understood.

This is the burgeoning field of mathematical and theoretical biology—the use of mathematics to understand biological processes. It's an "explosive" growth area in science, says Hal Sadofsky, associate dean for natural sciences at the University of Oregon, and it's one in which the university is expanding its faculty.

The recent hiring of Yashar Ahmadian is a step in that direction.

Ahmadian, an assistant professor in biology and mathematics, blends the disciplines to explore how the brain works. He builds mathematical equations to test theories about biological functions. He also uses math to make massive amounts of complex data understandable.

His focus is neurons, the specialized nerve cells in the brain that transmit impulses. "We cannot understand the whole brain at once and we are quite far from that," Ahmadian said, "so we focus on local networks of neurons."

When a person looks at an object, such as a tree, there are all sorts of signals sent from neuron to neuron in the brain so it's understood that what is being seen is a tree.

Scientists have created mathematical models to simulate this on computers, with one critical shortcoming: While the simulated neurons pass information in one direction, real neurons pass information back and forth.

It is these connections that Ahmadian studies, and he uses mathematical models to help him. He's published papers on models that functioned like actual neurons in the primary visual cortex of the brain.

At the UO, Ahmadian is helping other researchers crunch the data that they have collected from mice, worms and other animals.

Animal data is often complex, making it a good candidate for an assist from mathematics. For example, Ahmadian helped psychology professor Mike Wehr and his colleagues understand a paradoxical aspect of the data they had acquired on a class of neurons that play an important role in processing auditory information in the brain.

"One of my goals," Ahmadian said, "is coming up with new methods that get around the complexity of the data."

Ahmadian is also creating a graduate-level course on theoretical neuroscience that is expected to start fall term 2016.

The field provides a better understanding of the relationship between the biological circuitry of nervous systems and their higher-level functions, including sensory perception, learning and memory, motor control and decision-making.

Ahmadian's students will be introduced to the latest theories that successfully describe these functions. The theories and models will be valuable even for those who don't plan to focus on mathematical biology or theoretical neuroscience.

"Students of biology and neurobiology in particular would certainly benefit from the course," Ahmadian said.

—DD

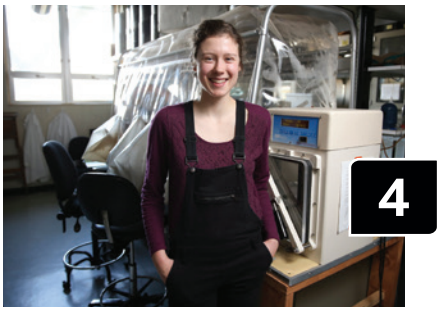
ONLINE EXTRAS

1) School of Thought. Prosthetic limbs. Robots. A rocket to Mars. Students dream big at HackSchool, a Denver pilot program cofounded by philosophy alumnus Nathan Pai Schmitt '11 (p. 18). He believes the true purpose of education is to enable people to create real things that make the world better. Meet tomorrow's engineers at **cascade.uoregon.edu**.

2) Fairy Tales, Fantasy and the Uncanny. Many Disney movies soften the edges of classic fairy tales by the Brothers Grimm. In this video, Dorothee Ostmeier (p. 17), a professor of German and folklore, describes the evolution of tales such as Cinderella from brutal beginnings to something more palatable to the family.

3) Science and Swing. Steve Perry is not just the leader of The Daddies, which led the 1990s' swing revival with rollicking numbers such as "Zoot Suit Riot." He's also an alumnus—visit **cascade.uoregon.edu** for the full story on this 2004 biology graduate and his generous support of the department.

4) Heavenly Gates. The Gates Cambridge Scholarship is one of the most prestigious postgraduate scholarships in the world—and senior Amelia Fitch is the first Duck to win it. In our online story and video, the biology-environmental science double major talks about the full ride she has earned to pursue a master's degree in Great Britain, courtesy of the Bill and Melinda Gates Foundation.



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Bread Culture

Bread is a staple food the world over. And for UO English professor Martha Bayless, it's also an award-winning research topic.

Bayless has been awarded a Collaborative Research Fellowship from the American Council of Learned Societies for her examination of bread and its cultural, sociological and economic impact on Anglo-Saxon England. The fellowship to Bayless and colleague Debby Banham of the University of Cambridge will fund up to $200,000 for the project.

Their work will eventually be part of a book, *Survival, Civilization, and Salvation: The Origins of Bread Culture in Early England*. It will cover both the day-to-day history and larger themes of early English bread culture, demonstrating the role of a staple foodstuff in social practice and moral meaning, Bayless said.

VISITING FILMMAKER

Portland's Neil Kopp is the first filmmaker in residence for the inaugural Harlan J. Strauss Visiting Filmmaker Endowment in Cinema Studies. His two-week university residency occurs during spring term. Activities include workshops, public conversations and mentoring students in a course on production.

Known for balancing good taste and logistical know-how, Kopp has been key in bringing to screens the work of talented independent filmmakers. He worked with director Kelly Reichardt on films including *Old Joy* (2006); with Gus Van Sant for *Paranoid Park* (2007); and with Jeremy Saulnier for *Green Room*, which premiered at the 2015 Cannes Film Festival.

The gift from Harlan Strauss, MA '70 and PhD '74 (both in political science), and his wife, Rima, "will provide life-changing opportunities for our students to spend high-quality time with the best and the brightest from across the industry," said Michael Aronson, program director.

LIFT TO LIFE SCIENCES

While Tim Boyle, '71, was earning his journalism degree at the University of Oregon, his aunt, Hildegard Lamfrom, was a member of the UO research teams making pioneering strides in the life sciences.

Now Boyle has ensured that university scientists will continue to excel.

The Columbia Sportswear CEO and his wife, Mary, recently made a $10 million gift that will endow funding for the UO's aquatic animal care facility, support the acquisition of advanced instruments and expand facilities for genomics research. It was the largest donation the UO has ever received to enhance the aquatic animal care facility, the bedrock of life sciences research.

"This investment in our future helps fuel our strategic effort to grow our research capabilities and supports the facilities, equipment and resources our faculty members and scientists need," UO President Michael Schill said. "We're incredibly grateful."

NEH FUNDS "VOICES OF THE VANQUISHED"

When Spanish professor Gina Herrmann began her research on Spanish Civil War-era women activists, she had a romanticized notion of what her research would reveal.

"When I started the project, I was interested in this ideal of these women. I saw them picking up rifles and going to the front lines . . . it was glamorous," Herrmann said. "I was very quickly disabused of this notion. The oral history I was collecting were stories of imprisonment, torture, the loss of comrades, destroyed families."

Tití (L) and Neus Catalá, two of the subjects of Gina Herrmann's research, after their liberation from the Nazi camp at Ravensbruck.

Within those narratives, Herrmann reveals how working-class Communist women managed traumatic and life-threatening experiences brought about by political resistance and forced exile.

The project recently earned Herrmann a fellowship from the National Endowment for the Humanities. It supports work for her forthcoming book, *Voices of the Vanquished: Spanish Republican Women in War and Prison*.

"I'm hoping that my project will be a case study that other scholars can read," Herrmann said. "It has relevance looking both back toward the '70s and also into the future as we face one of the largest refugee crises since World War II (in Syria)."

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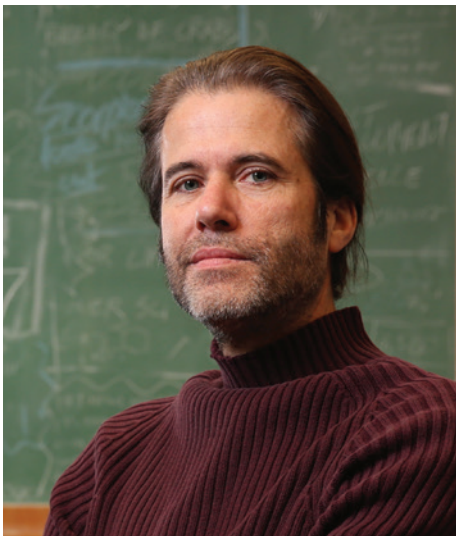

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