

# FIAT LUX



## WE SHOULD DIGITIZE EVERYTHING!

Bancroft director emeritus Charles Faulhaber says we should help scholars access materials at any time, from anywhere. This is just one way the Library connects people with knowledge, information and tools to better the world.

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# WHY INFORMATION LITERACY MATTERS



PHOTO BY BRITTANY HOSEA-SMALL



*University Librarian Jeffrey MacKie-Mason discussed the fake news issue on a panel with several distinguished public figures. You can find the story (and the full video) at <https://goo.gl/3Q3Hyy>*

Where to begin? My head is spinning. The day after his inauguration, our new president gave his first speech — to the CIA, an agency dedicated to ferreting out facts — containing multiple falsehoods. During his first press briefing, spokesman Sean Spicer echoed some of the falsehoods.

The next day, Kellyanne Conway, counselor to the president, said on national TV that Trump and Spicer were presenting “alternative facts.”

I’m not picking on the president as a partisan political gesture. Rather, I think this behavior — coming from the “leader of the free world” — is an alarming example of the information literacy crisis we face. Truth is not a matter of convenience, or preference. And not caring about the truth is a grave threat to an economically advanced, militarily powerful and democratic society.

We believe that everyone should

be information literate: able to find relevant information, evaluate its quality and reliability, and know how to use it to better their lives and the world around them. We believe that ensuring all people have these capabilities is a critical responsibility of our education system, from preschool through university.

The University Library has just released its new five-year strategic plan (<https://goo.gl/5fQfRe>). One strategy to which we commit ourselves is to “empower all students to develop information fluency, digital literacy and research skills.”

We are passionate about helping Berkeley prepare future generations with the ability to navigate an increasingly complex information environment — not least, but not only, to care about truth and how to evaluate it. If you care, too, please join us on this mission. ☀

# FAKE NEWS, OR JUST A JOKE?

STUDENT BUILDS CLASSIFIER IN DATA LAB

Savanah Frisk was looking into fake news before fake news became a thing. A recent project by the Berkeley senior illustrates the potential in emerging fields of digital research. Frisk's analysis was completed for an innovative new course in which students analyzed data from news, films, TV and social media, combining traditional and newer research methods.

Data librarian Harrison Dekker worked closely with the course, presenting several classes and consulting with students, including Savanah, in the Library's Data Lab. He was also part of a campus-wide initiative to strengthen data science education. "Working with datasets and computational analysis can sound high-tech, but I see it as simply the latest iteration in what librarians have always done," Dekker says. "We provide access to knowledge, and the skills to evaluate it. So, as the importance of the digital world expands, the Library's role in supporting learning is expanding as well."

Frisk's goal was to build a classifier for left wing, right wing, and satirical web articles. As she says, "Many viewers turn to satire like *Saturday Night Live* and *The Colbert Report* to provide real information about the world. While we look at satire and expect it to be based on the truth, we may expect fake news to be satirical when it isn't. There's a real need to clearly categorize these two things, both of which are based on hyperbole." A technique known as machine learning, used for classification and prediction, was key to Frisk's methodology.

"It's been really fun to see this topic grow from a theoretical thing into something they're talking about in the media," Frisk continues. "Facebook and Google have recently acknowledged that we need a tool to sort through these fake news stories."



PHOTO BY CADE JOHNSON

Frisk, who grew up on Kauai, is majoring in cognitive science, with a concentration in computational modelling. She credits a high school teacher, and his requirement that freshman participate in the science fair, for inspiring her love for the field. "After my first project won me a trip to the state science fair, I started learning statistical analysis on my own to expand the research," Frisk said.

Frisk sees the Library as a "very welcoming and interestingly alive place." Along with her favorite haunts of Moffitt and Morrison, one standout experience is a visit to the Bancroft in a recent history of information class. "We got to see cuneiform tablets, and handwritten codices on vellum," she said. "It was incredible to see the actual, centuries-old objects through which people used to communicate with each other." 🌞



# SETTING OUR TREASURES FREE



*Charles Faulhaber thinks we should digitize everything. Really, everything. The former Bancroft director's work on medieval Spanish literature has been transformed by Europe's digitization of historical documents. "I have been an enormous beneficiary of their work," Faulhaber says. "These invaluable materials exist only in Spain, but digitization means that scholars everywhere can make use of them. It's the best thing since sliced bread." But what does digitization really mean for users of the Library? Over the next four pages, we share three stories about unique digitization projects at Berkeley and the Library's role as a leader and a guide. We hope these stories illuminate the possibilities — now and into the future, as access and preservation solutions become increasingly key to student success.*

## TURNING PICTURES INTO SOUND

Olivia Dill '14 says it's "a bit of magic" every time the picture created from an early 1900s wax cylinder turns into an audio file of a Native American song, story or ceremony. Dill, who graduated in physics and art history, is working on an unprecedented project to convert wax cylinder recordings into digital files, thus preserving elements of a cultural heritage that would otherwise be lost.

An "only in Berkeley" story, the endeavor joins the early field recording efforts of famed Berkeley anthropologist Alfred Kroeber with cutting-edge optical scanning technology invented by Lawrence Berkeley Laboratory physicist Carl Haber. Together with the University Library and



PHOTO BY ALEJANDRO SERRANO



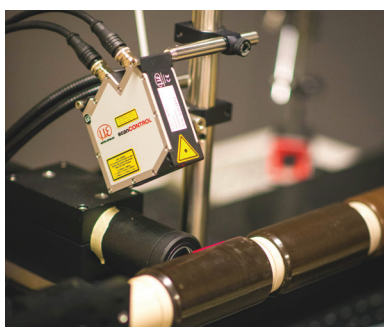
Berkeley's strong linguistics department, the project gives current and future scholars access to a rich collection of historical sound recordings.

The 2,713 field recordings gathered between 1900 and 1940 by UC anthropologists under the direction of Kroeber feature Native Californians speaking, singing, and sharing histories in a variety of languages, some of which are lost or seldom spoken. The recordings were etched on wax cylinders that have been housed at the Phoebe A. Hearst Museum of Anthropology on campus.

While invaluable to contemporary linguists, historians, and Native American community members, the information was very difficult to access due to the fragility of the decaying wax cylinders and other issues.

Haber's technology creates and analyzes high-resolution 3D maps of the cylinders, converting them into new audio files that preserve the material for posterity. Haber has used this technique to rescue historical recordings all over the country. In 2013, he was awarded a MacArthur "Genius Grant" for the project.

Sitting on the 2nd floor of Moffitt Library, Dill maintains and operates the workstation that puts Haber's method into



PHOTOS BY ALEJANDRO SERRANO

*Olivia Dill, at left, helps process wax cylinder sound recordings, above, which are scanned and made available to scholars.*

#### **ABOUT PROJECT IRENE**

Project IRENE at UC Berkeley is a collaborative effort, funded by grants from the National Endowment for the Humanities and the National Science Foundation. Team members come from the UC Berkeley Linguistics Department, the University Library, the Phoebe A. Hearst Museum of Anthropology, and the particle physics division at Lawrence Berkeley National Laboratory. To learn more, visit [exhibits.lib.berkeley.edu/project-irene](http://exhibits.lib.berkeley.edu/project-irene)

action. Every day, three to eight cylinders are scanned and pictures are converted to sound. Delicate and cracked cylinders are protected with custom fixtures and preservation-friendly solutions, many of which Dill helped to develop as the project progressed.

Dill's versatility in working in both technical and humanities arenas makes her the ideal person to handle the day-to-day process. She helped design the mass digitization workflow for the project and developed and updated much of the acquisition code and interface.

Scholars and community members are engaging with the collection through the California Language Archive (CLA), which facilitates restricted access to sound recordings, including the audio files from the Moffitt Library lab. UCB linguistics professor Andrew Garrett is the driving force behind CLA.

The songs, stories and ceremonies range from the festive to the somber: what happens to the soul after death, girls' adolescence, songs about medicine, acorn dances, sweathouses, and love. "The range and gravity of the topics," Dill says, "helps me understand the preciousness of the recordings." 🌞



## ‘EACH BOOK IS ITS OWN GAME’

From the correspondence of John Muir to Southeast Asian sacred texts, the University Library’s unique collections are reaching audiences far beyond campus through an expanding digitization program.

While collaboration with Google Books and HathiTrust have enabled the digitization of half of the Library’s general collections, only a fraction of our vast special collections are currently accessible online.

The rare books collection at the Environmental Design Library contains over 5,000 treasures in the fields of architecture and landscape architecture, many of which are fragile and hard to find. Although the physical collection is open only to scholars by appointment, a project now underway is opening the doors to these rare books for anyone, anywhere.

As Associate University Librarian Erik Mitchell explains, “Each digitization project we work on advances preservation and access — two themes central to the Library’s DNA. Digitized images and texts support an expanded research model, in which scholars are using new computer-based methods of discovery and learning.” 🌞



*Clockwise from top: Working with rare materials like these, “each book is its own game,” explains Tim Pinault, manager of digital projects; student Jordan DePasquale ’20 scans The First Book of Architecture; the imaging team ensures that every scan accurately reflects the real books.*

### SUPPORT DIGITIZATION

Visit [give.berkeley.edu/library](http://give.berkeley.edu/library)

Email [give@berkeley.edu](mailto:give@berkeley.edu)

Or, call 510-642-9377





## LOOKING AT OLD DATA IN A NEW WAY

Zachary Bleemer spent four months writing algorithms to teach a computer to read the UC registers, which date back to 1893. By converting text into a dataset, the Berkeley



grad student unleashed the tools of computational analysis on over

2.5 million observations of UC students and alumni, faculty, courses, and more.

Bleemer intends to make fresh discoveries on UC Berkeley's contribution to the state in the early 20th century. To do this, he mines a vast treasure trove of digitized books available through public sites such as HathiTrust, which currently offers almost 15 million books. As part of a vast and expanding digitization project, the Library currently uploads about a hundred books to HathiTrust each month. But the information alone isn't enough; scholars today must also employ new tools to exploit the potential of digitized materials.

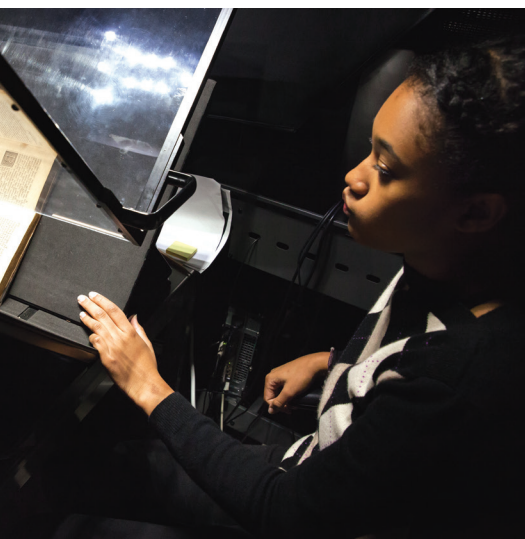
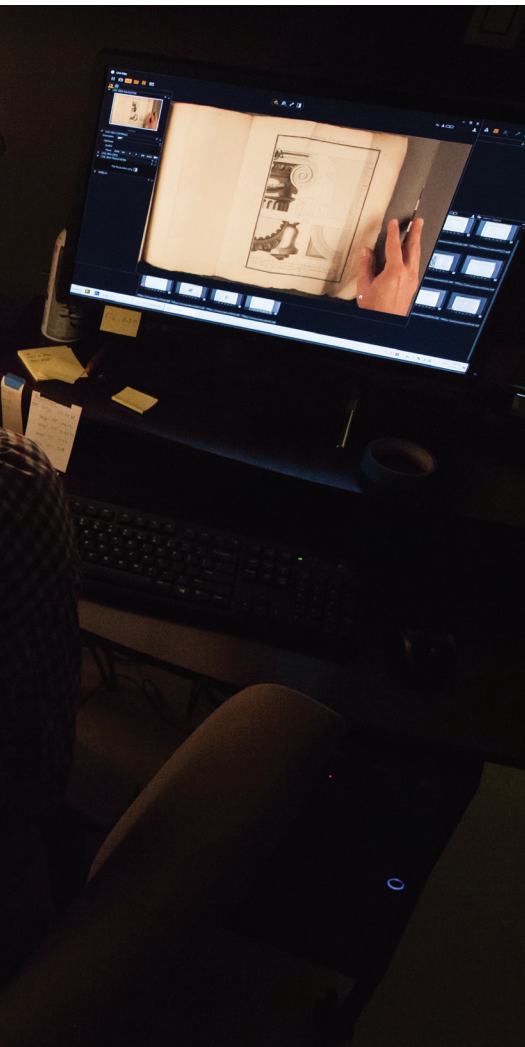
Drawing on hundreds of registers and directories of 20th century California society, Bleemer's study shows that UC was by far the largest supplier of high school teachers in the

state. It documents the rise in female college attendance after the arrival of the first female doctor or high school science teacher in a rural community — a “role model” effect.

“Analyzing this data sheds light on the long-term contribution of universities to California's impressive record of growth, economic mobility, and gender equality,” he says.

Bleemer's academic career testifies to his intellectual versatility. He came to his field of applied microeconomics and data science through the unusual path of philosophy and aesthetics, which he focused on during his undergraduate work at Amherst College. “I love being able to join my various interests — in statistics, economics and computational analysis — to better understand the world we live in,” Bleemer says.

Bleemer couldn't be happier with his work at Berkeley and the resources offered by the Library. “What I am happiest with at Berkeley,” Bleemer says, “is that every time I have a crazy idea, there's always an intellectual community who wants to hear my pitch, and has excellent feedback and support to offer.” ☀️

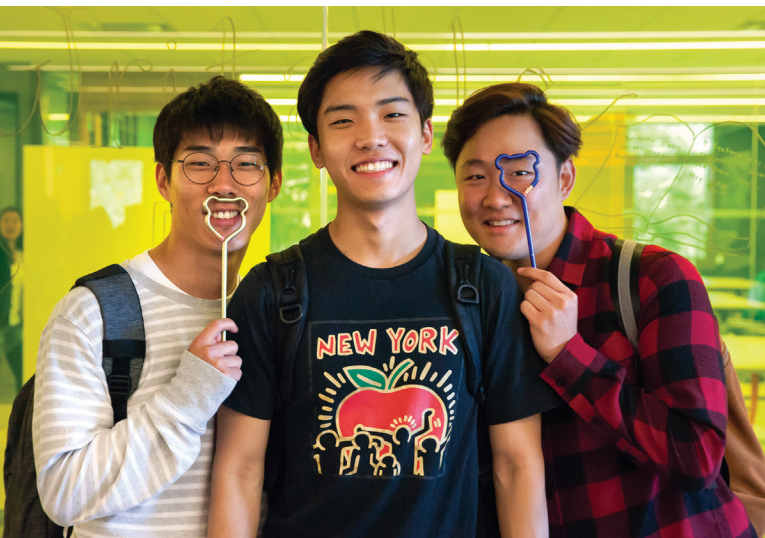


PHOTOS BY BRITTANY HOSEA-SMALL





*Writeable glass walls aid in collaboration and brainstorming. Here, Saamia Haqiq, a political science major, tries one out.*



*Students Youngwon Choi, Daniel Lim and Erin Choi pose in front of writeable glass walls, during the November 2 celebration of the new fourth and fifth floors.*



*Original student artwork adorns the new spaces. One artist commented, "I hope library users will get a creative kickstart from seeing my work."*



*Students have swarmed to the revitalized Moffitt, thrilled by the fresh*

## MOFFITT OPENS UP!

*Essay by sophomore Camryn Bell*

One of my favorite things about being a Berkeley student is the wide range of places to study — there's the old-fashioned, erudite feeling of the Morrison Reading Room, the lovely views from the East Asian Library, and many more. But, the renovated Moffitt Library, which opened in November 2016, offers something totally new on campus.

There are many small details that have made Moffitt a prime study spot — natural lighting, food-and-beverage-friendly policies for the typical caffeine-addicted student, ample electrical outlets (oftentimes difficult to come by!), and a multitude of comfortable seating options. However, the collaboratively-minded design of the space is one of the best parts of the library, and has made it one of the most unique places to study on campus.

I spent a large portion of the week before finals in Moffitt, mainly studying for a Data Science course which was focused on group-based review





look, long hours, and flexible, collaborative spaces.

and projects. It was incredibly beneficial to be able to utilize the open spaces where my classmates and I could talk over concepts and use the new transparent walls to write out problems, rather than be confined to the code on our screens. It was also convenient to have the option to move to the quieter fifth floor for more individualized study.

The renovation came just in time for midterms and finals preparation, and it was great to have somewhere centrally located to go to at any hour for late-night study sessions.

Overall, Moffitt has provided a space to meet the technological and practical needs of today's students, and I look forward to spending more time here in my next years at Cal! ☀️



*Sophomore Camryn Bell is studying history and political science, writes for the Daily Cal, and serves on the Student Library Advisory Council.*

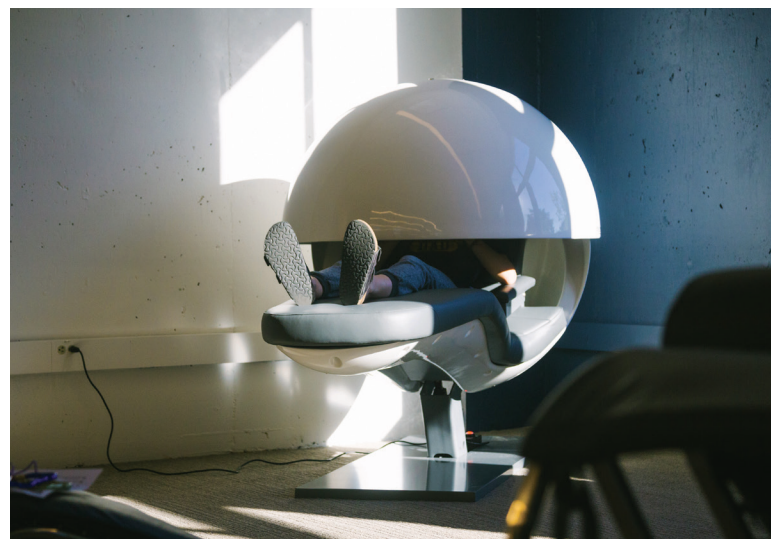
PHOTOS BY BRITTANY HOSEA-SMALL, ALEJANDRO SERRANO, AND TIFFANY ZHONG



*Library donor Bob Haas ('64) and Jeffrey MacKie-Mason are interviewed by communications intern Chadwick Bowlin.*



*Student groups offered demos of virtual reality, 3D printing and drones at the November 2 celebration. Here, junior Younus Al-Bojurni tries out virtual reality equipment.*



*A new Wellness Room with nap pods and lounge chairs is popular with students seeking a quick break.*





PHOTO BY BRITTANY HOSEA-SMALL

## CLASS OF '66 REUNION SETS A HIGH BAR

GROUP DOUBLES REUNION GIVING RECORD TO BENEFIT THE LIBRARY ENDOWMENT FUNDS

If school spirit were a glass of champagne, the Class of '66 would be among the most effervescent. This year's 50th reunion was especially spirited, as their gift to Berkeley — now totalling over \$18 million — has doubled the giving for any reunion class. The Library was their campaign priority.

90% of class members contributed to the 50th reunion goal. The high participation rate allowed the class campaign to exceed its original fundraising goals sixfold. The Class of '66 endowment is among the largest of the Library's 275 endowments, which total over \$134 million in value.

The connection to the Library is heartfelt among these alumni. As Marily Howekamp puts it, "The Class of '66 recognizes the Library as truly the heart of the campus. By supporting the Library, we're helping all faculty and students

— and the world even, since the Library's strong online presence allows for global access."

In the past half century, the Library has seen many changes. When the Class of '66 were students, Moffitt Library did not exist, books were found via card catalog, and the stacks were closed to most undergraduates. About three million volumes were available, whereas today's count tops 12 million (plus a vast array of online databases, journals and other materials).

Despite the many expansions in collections, programs and services, the Library's core value remains the same. Brian Schaefer remembers that "approaching the grand facade of Doe, and entering into the peace and quiet inside, meant that you really wanted to study and apply yourself. The Library was, and is, the perfect place." ☀️



## STANFORDS' GIFT HELPS CONNECT & INSPIRE STUDENTS

Janet Stanford describes the Library as the core of the University. Since graduating from Berkeley in 1959, Stanford and her husband, Alan, have given generously to the Library. Although, Janet is quick to confess that as a student here “I didn’t spend as much time in the Library as I should have!”

Janet loved books from an early age, and was inspired by the reading programs at the Pasadena Public Library. “You’d mark on a map of the world books you had read about that area,” she said. “Being very competitive, I read as many as I could, so that I could get ahead of the other kids.”

Janet has come to appreciate the transformation in how today’s students use libraries. When she first heard about plans to renovate Moffitt into a 21st century space, she called up her grandson at his college and asked if the plans represented his ideal library — focused on collaboration and technology. “Absolutely,” he told her. “That’s exactly what we need these days.”

Janet also serves on the board for the Mark Twain Luncheon Club. ☀

FIAT LUX, or LET THERE BE LIGHT, is the motto of the University of California. The *Fiat Lux* newsletter of the University Library is published quarterly by the Library Communications Office, University of California, Berkeley.

Your feedback and suggestions are warmly invited.  
You can reach us at [librarycommunications@berkeley.edu](mailto:librarycommunications@berkeley.edu)

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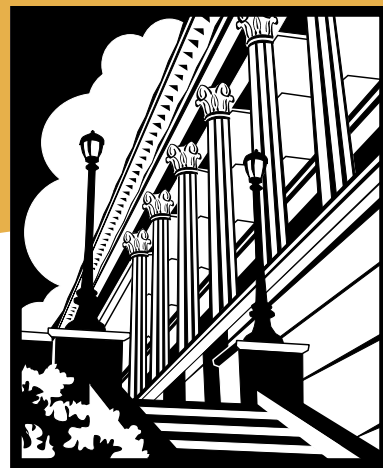
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## AT THE LIBRARY

LIBRARY EVENTS, EXHIBITS & HOURS can be found at [lib.berkeley.edu](http://lib.berkeley.edu)  
ALL ARE FREE AND OPEN TO THE PUBLIC.



### **DESIGNS AT A DISTANCE**

THE ENVIRONMENTAL DESIGN ARCHIVES  
210 WURSTER HALL  
THROUGH MAY 19, 2017

This exhibit features design and planning projects on six continents by architects based in the San Francisco Bay Area. Projects in India, Costa Rica, Bangladesh, Israel, France, Singapore, Australia, the West Indies, Japan, Spain, Lebanon, and Mexico are represented. Work by architects, landscape architects, and planners such as Julia Morgan, Tommy Church, and Garrett Eckbo are featured.

### **GUERRA CIVIL @ 80**

THE BANCROFT LIBRARY  
2ND FLOOR CORRIDOR BETWEEN DOE AND BANCROFT  
THROUGH JULY 1, 2017

A visual and textual display marking the 80th anniversary of the beginning of the Spanish Civil War, featuring photographs, posters, books, pamphlets, and other ephemera from the collections of The Bancroft Library.

### **BEYOND TINTIN AND SUPERMAN: THE DIVERSITY OF GLOBAL COMICS**

BERNICE LAYNE BROWN GALLERY, DOE LIBRARY  
THROUGH APRIL 23, 2017

This exhibit showcases comics and graphic novels from a dizzying array of countries, including Egypt, Poland, South Africa, Israel, the Czech Republic, South Africa, Colombia, and Japan. While treating societal issues generated by censorship, race relations, political agendas and gender biases, the comics also provide great enjoyment through their striking imagery and cultural diversity. On display are the DC Comics 1987 classic, *Watchmen*, as well as graphic novels and comics covering atomic bomb survivors, young Yemeni women forced into marriage, a collection created in response to the January 2015 terrorist attack on the French satirical weekly magazine *Charlie Hebdo*, and love in a Japanese boys' boarding school, among many others.