

M LSA

COLLEGE OF LITERATURE, SCIENCE, AND THE ARTS
Fall 2011



IMPROBABLE!

ON THE COVER

Made from Scratch

WE CRAFTED THE CUSTOM LSA scratch-off lottery ticket on this issue's cover to illustrate improbability, since the actual odds of winning a lottery are around 18 million to one (depending on which state you play in). Multiple state lotteries have odds as high as 120 million to one.

If you've ever fantasized about winning the lottery and what you'd do with all those gobs of money, you're not alone. One in three people in the United States think that winning the lottery is the only way to become financially secure.

Improbably, one LSA alumnus has found success with scratch-offs, but not because he played them. Because he invented them.

John Koza ('64, '66, Ph.D. '73) co-invented the modern scratch-off ticket back in 1973. Koza had just earned a Ph.D. from U-M in computer science, and the company he was working for — providing scratch-off promotions for supermarkets and gas stations — filed for bankruptcy.

At that time, state lotteries were running raffle-type games. Koza and his business partner, Dan Bower, believed the public would rather win instantly. They founded Scientific Games Inc., which built the computer systems necessary to run this type of lottery, and then they went state by state trying to sell their new system. Once the state of Massachusetts gave it a try in 1974, their sales tripled. All the state lotteries in existence at that time eventually signed on and started running instant-win games.

For *LSA Magazine*, the scratch-off ticket became a sure sign that improbability is everywhere when we went hunting for alumni and friends who'd actually won the lottery. We were searching when, unprompted, Randy Taylor — whom we featured in the last issue of the magazine — reached out and told us he had some recent success with a scratch-off ticket. Statistics show that nearly half of all lottery winners blow their money within five years. Taylor, in contrast, socked his into a savings account after he bought some new furniture for his modest apartment.

IMPROBABLE HISTORY

Lotteries have been a part of American history for almost 400 years. England's King James sanctioned a lottery in 1612 that helped send settlers to Jamestown, Virginia. In 1776, the Continental Congress authorized a lottery to help offset the high cost of the Revolutionary War.



HEY YOU! YES, YOU! FEELING LUCKY?

Participate in our survey (it's easy, only 8 little questions) and **WE WILL ENTER YOU IN A SWEEPSTAKES FOR AN iTunes GIFT CARD AND AWESOME U-M GEAR.**

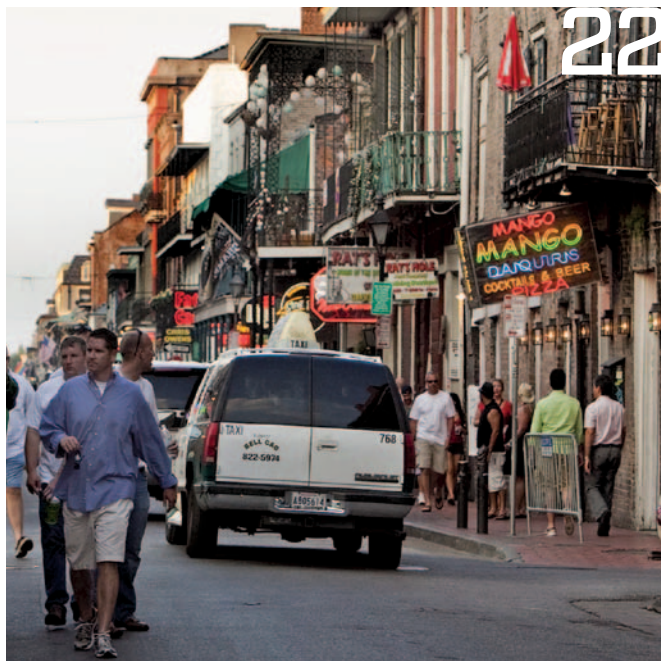
We promise the odds of winning are much better than 120 million to one. Look for the survey stapled into the middle of this issue or take the survey online: www.lsa.umich.edu/alumni/magazine/survey



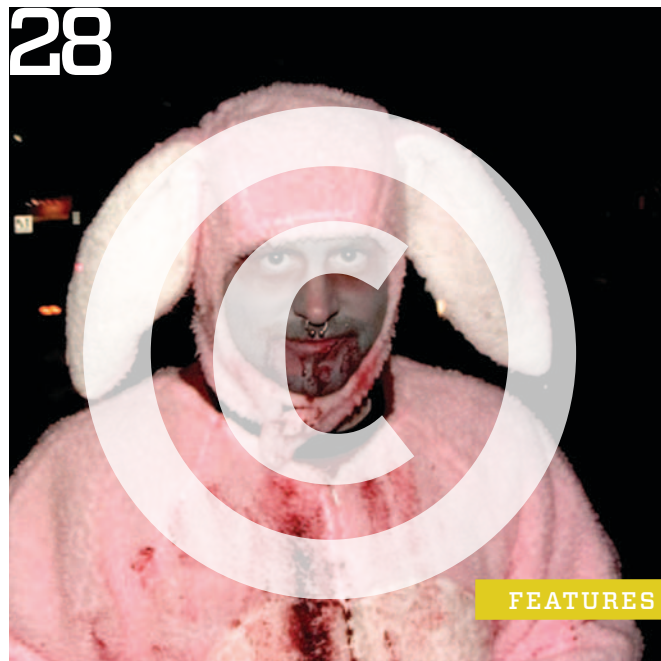
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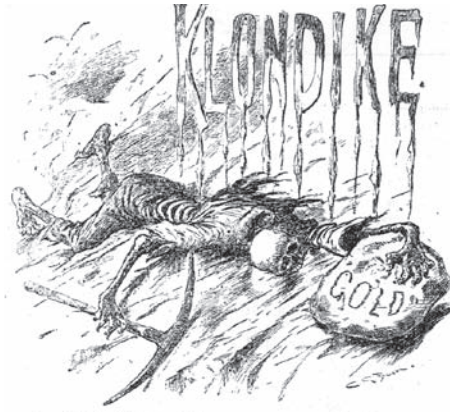
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From the *New York Herald*.

[July 24, 1897.]

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The Language of a New, Uncertain World

IF YOU HAVE BEEN THROUGH “GLOBALIZATION”

training in business or the military recently, you have doubtless heard of the “VUCA” world: one that is Volatile, Uncertain, Complex, and Ambiguous.

This concept, which emerged from military planning, is based on the claim that the world of “stark choices,” conveniently divided into solid political and economic blocs — such as the idea of the “Free, Communist, and Third Worlds” — is gone forever. In the VUCA view, we live now in a much more complicated place, a world with new threats and opportunities.

How do we best prepare our students for this world?

One way is by offering more than 1,000 courses per semester covering the widest possible range of human thought, history, and behavior, and by requiring that our students study the main varieties of these thoughts through language, distribution, race or ethnicity, and concentration requirements.

Let’s take a look at how one of our requirements works in this way.

The College of LSA has one of the highest language requirements in the nation: Each LSA student must demonstrate — either through placement exam or course work — fourth-semester competence in a language other than English.

Some of our students, as well as our alumni, love this requirement; some alumni remember it with a feeling akin to post-traumatic stress syndrome. But

here’s an important fact about it: The majority of LSA students who “test out” of the requirement in one language go on to take other language courses. One of our students recently graduated having taken 18 language classes in Spanish, Chinese, Japanese, and Hebrew.

But this requirement is not only deeply embedded in our academic culture, it is also ground zero for preparing our students to deal with the VUCA world. As the requirement’s mission statement declares:

LSA’s language requirement seeks to prepare students for a world that has been profoundly transformed by the forces of globalization. Language shapes how we understand and how we negotiate our world; learning a second language provides both a deep awareness of differences (linguistic and cultural) and the means to bridge them. Informed respect for other cultures, tolerance, cosmopolitanism, self-awareness, and flexibility are hallmarks of a liberal arts education, and the study of foreign languages fosters precisely these capacities.

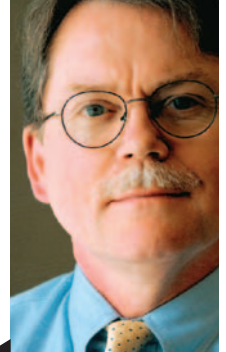
In order to help our students fulfill this requirement, the College typically offers courses in more than 60 languages each year. Currently the top 15 languages in the College by enrollment are Spanish, French, German, Chinese, Italian, Japanese, Latin, Arabic, Hebrew, Greek, Russian, Hindi, Ojibwe, Korean, and Portuguese. In recent years some of the fastest-growing enrollments have been occurring in Chinese and Arabic.

In keeping with the principles behind the requirement, these language classes focus not only on reading and speaking, but also on the geography, cultures, and histories of the worlds defined by these language users.

The global citizens our country so desperately needs begin their preparation for the VUCA world right here: in the cosmopolitan understanding generated by studying the differing vocabularies and common humanity revealed by the world’s languages.

Terrence J. McDonald

Arthur F. Thurnau Professor,
Professor of History, and Dean



INSIDE LSA



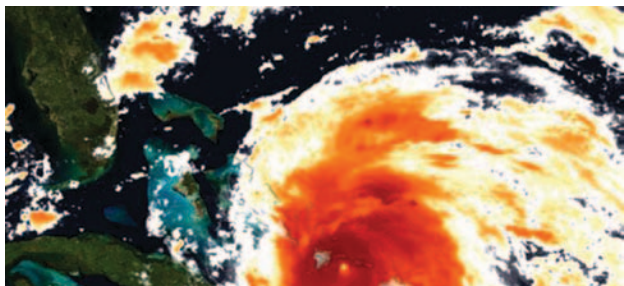
MORE CONTENT ONLINE

Visit *LSA Magazine's* online complement, the Wire, for weekly web exclusives plus in-depth magazine-related content.

www.lsa.umich.edu/alumni/wire



Wherever this symbol appears in the magazine, you can find expanded content on the Wire website.



WHEN EARTH ATTACKS

Professor Eric Hetland weighs in on the recent rash of hurricanes, earthquakes, and floods. Are natural disasters occurring more frequently, or is it business as usual for Mother Earth?



ALBUM COVERS THAT ROCK

The crew of the student-run WCBN-FM showcases 10 of the craziest album covers in their vast collection.



THE MARGINS OF VENICE

Watch emeritus professor Ralph Williams lecture on the isolation and identity of those on the margins of society in Shakespearean Venice.



WASTELAND VACATION

See more of Andrew Peters' haunting photos from Chernobyl, Ukraine (p. 61), in an online slideshow.



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Plus!



Read past issues of *LSA Magazine*:

www.lsa.umich.edu/alumni/magazine

Crime and Punishment Issue

[Your quality] content was overshadowed by random trivia, clutter and fluff, surrounded by clever graphics. Your college graduate readers can handle something a bit more in depth than that!

Arthur Meyer Boyd ('69)

I was pleasantly surprised by your Spring 2011 issue and the gritty topics it tackled. I found myself getting angry when reading about the water situation in Detroit; humbled when reading about the struggles of recent prison parolees; and saddened by the horrifying fates bestowed upon battered women who fight back. Kudos.

Angela Sienko ('95)

Your choice to designate certain pages of the *LSA Magazine* to popular interest articles is an affront to the liberal arts. Is it of roller derby fishnets and vacuous fashion advice I sing when I intone the lines "leaders and best?" Or has "leaders and best" somehow transmogrified into "trivial and shallow?"

Walter Butzu ('92)

Don't Let the Fishnets Fool You

I was thrilled to see the article on women's roller derby and the U-M alumnae that play the sport. For the last year I have been playing roller derby on the Ann Arbor Derby Dimes, a fledgling team drawing skaters from the Ann Arbor and Ypsilanti area. Like the women mentioned in the article, our team has skaters from all sorts of backgrounds and careers, including teachers, social workers, stay-at-home moms, media specialists, librarians, writers, and the list goes on. Thanks for the representation!

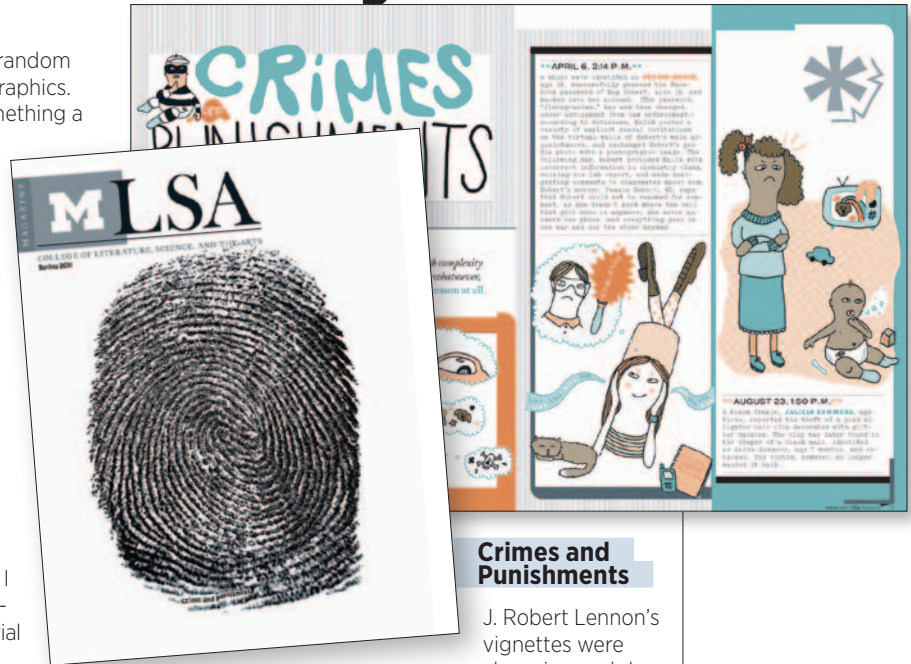
Evelyn Miska Krieger, a.k.a. Eva Fury ('00, M.A. '03)

Top 10 Michigan Athletes

Your selection of Top 10 Michigan Athletes was excellent, and I was fortunate to watch most of them perform, from Tom Harmon to Charles Woodson. However, it is hard to ignore Elroy Hirsch, whom I knew as a Marine when were in [the] V-12 [program] together. Winning four letters in four sports in our year is a feat that, to my knowledge, has never been repeated.

Clayton H. Gordon ('46, M.D. '50)

Writer Richard Rothschild responds: Hirsch's career was magnificent but unfortunately limited due to WWII. He is a member of the U-M Hall of Honor, but, he never made All-American at Michigan and the other athletes on the list did, often more than once. That certainly doesn't diminish his accomplishments, but it did keep him out of the top 10.



Crimes and Punishments

J. Robert Lennon's vignettes were charming and de-

lightful. But I worry about how they might affect my granddaughter, age 15, if she were to read them. Her dad is white European and her mom is Phillipina; so Aurora is somewhere in between. She could never fit into Lennon's black-or-white universe.

Robert M. Fitch (Ph.D. '54)

Name That Infamous Alumnus

I was dismayed to see Dr. Hawley Crippen featured as an "Infamous Alumnus." In 2007, researchers at Michigan State University demonstrated that the remains supposedly found in Dr. Crippen's cellar could not have been those of his wife Cora, for whose alleged murder Dr. Crippen was executed. Perhaps Dr. Crippen should instead have been featured in the article "Burden of Proof," which highlighted work done to overthrow wrongful convictions.

Katherine (Evans) Durden ('97, J.D. '99)

My maternal grandfather, Dr. Harold Stacey Hulbert, provided key psychiatric testimony for the Loeb/Leopold defense team. Hal, as he was known to the family, received both his undergraduate and medical degrees from U-M and went on to dedicate his career to the early study of criminal psychology.

Alan Marble ('75)

Most popular letter-generating article:
Letters about our "Crime and Punishment" issue, writ large, far outweighed letters regarding any single article.

TALK TO US

We invite your feedback on *LSA Magazine* content or on topics related to the College. Letters for publication may be edited for style, length, and clarity.

Email: lsamagazine@umich.edu

Or write to:

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48109-1382

5

The number of graduates and affiliates from the Department of Anthropology who have received MacArthur Fellowships (also known as Genius Awards) since 1987. They include: Shannon Lee Dawdy (2010), Erik Mueggler (2002), Ruth Behar (1988), Henry Wright (1993) and Richard Wrangham (1987).

2

The number of new MacArthur Fellows this year in the College of LSA. Hats off to professors Tiya Miles and Melanie Sanford.



Train Your Brain

Researchers in the Department of Psychology found that children who participate in mental drills to increase memory also can boost their abilities to solve problems and reason.

39,570

The number of first-year applications U-M received for the 2011-12 academic year.



Mighty Detroit

Aaron Singer ('04) and Robbie Biederman started the on-line t-shirt company Mighty Detroit to celebrate and nourish their Midwestern roots — literally. A portion of their proceeds goes toward the nonprofit Greening of Detroit and other local charities.

#@* \$!

Anger can motivate some people to vote and participate in politics in ways they might ordinarily not, according to a recent study conducted by U-M researchers. “We normally think people with a lot of resources and political skills are the ones who participate, but many citizens in this category regularly abstain from politics. Furthermore, many citizens with few resources can be mobilized if they experience strong anger,” explains Nicholas Valentino, the study’s lead author and a professor of communication studies and political science.

@tonymark01

Walked past a guy in Golden Gate Park wearing a Michigan jacket and shared a #GoBlue with him.

@RealShelby91

Only at U of M would someone graffiti DNA coding on buildings :) lol #michigan difference



Follow the College of LSA on Twitter @UMichLSA



Spinning Right Round

Research conducted by Physics Professor Michael Longo and a team of five undergraduates provides new insights about the shape of the Big Bang. By cataloging the rotation direction of spiral galaxies photographed in the Sloan Digital Sky Survey, they uncovered an excess of counter-clockwise rotating spirals in the part of the sky toward the north pole of the Milky Way. The effect extended beyond 600 million light years away. “These results are extremely important because they appear to contradict the almost universally accepted notion that on sufficiently large scales the universe is isotropic, with no special direction,” says Longo.

“I wasn’t alone!
In fact,
maybe we
were all
secretly on
the same
boat.”

JOANNA GODDARD ('01)
DISCUSSES RELATING TO OTHER MOTHERS WHO ARE TRYING TO BALANCE WORK AND MOTHERHOOD ON HER BLOG, **A CUP OF JO.**





The Not-So-Secret Garden

With support from LSA's Program in the Environment (PitE) and the Graham Environmental Sustainability Institute, U-M's Recreational Sports Outdoor Adventures program has created a garden adjacent to Elbel Field. Program participants have grown herbs, tomatoes, habanero peppers, onions, and more.

LSA Magazine at a glance

First issue, 1973:
12-page black-and-white publication

Fall, 2011:
64 full-color pages, reaching a total audience of 180,000



“Come on, dude, I’m exhausted and Tyra Banks

says the most important item in your makeup bag is a good night’s sleep.”

THE CHARACTER RAJ ON AN EPISODE OF *THE BIG BANG THEORY*, A TV SERIES DIRECTED BY **MARK CENDROWSKI ('81)**



GLOBAL GOOD

Fabric bangles from Pakistan, floral totes from India, and woven earrings from Rwanda are just a few of the hand-made creations sold by Global Goods Partners. Cofounded and codirected by Catherine Lieber Shimony ('81), the nonprofit sells fair-trade products online that are produced by women in marginalized communities in Asia, Africa, and the Americas. The sales income helps women gain economic independence and provide for their families.



\$116
MILLION

The amount approved by the Board of Regents to renovate East Quad, which was constructed in 1940.



26%

The energy reduction percentage LSA saw in 2010, compared to 2009. Last year, LSA avoided \$3.6 million in energy costs from the previous year and decreased steam usage by 35 percent. That's enough to power, heat, and cool 2,048 average U.S. households for a year. The reduction in carbon emissions is equivalent to taking 2,472 cars off of the nation's roads.

LOCATION, LOCATION, LOCATION

The origins of several stories in this issue and on the Wire:

- | | |
|-------------|---------------|
| New Orleans | Prypiat |
| Chile | Los Angeles |
| Detroit | New York City |
| Aamjiwnaang | Chicago |
| Portland | El Salvador |
| Anchorage | Pakistan |
| Rwanda | India |



Survivor.

YOU CAN HELP.

After his dad passed away from lung cancer during his junior year of high school, Dan Keith wasn't sure if he'd be able to attend college. His mom assured him that they would find a way to make it work. But she was battling stage four cancer, which had metastasized.

CONSIDER THE FUTURE.

Today, Dan is a junior at U-M looking ahead to law school, thanks to scholarship support from alumni. "Receiving a scholarship provided my mom one of the last sighs of relief that she could have before she died," he says. "It offered peace of mind in a time of uncertainty."

TAKE ACTION.

Give a gift today to help Dan and countless U-M students like him make the Michigan Difference.

Move forward.
Give back.

EVERY GIFT MAKES A DIFFERENCE.

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Black Swans and Butterflies

IN HIS BOOK *THE BLACK SWAN* (Random House, 2007), author Nassim Nicholas Taleb argues that almost every major scientific breakthrough, major historical occurrence, and significant artistic accomplishment is a "black swan," that is, an unpredictable but high-impact event. He cites the Internet, the September 11 attacks, and even World War I as black swans.

A key component to Taleb's argument is that after an outlier event, people rationalize the event's existence and formulate plausible explanations, as if it could have been predicted. In this way, he says, the impact of black swans is diminished. Rather than society working to protect itself from negative black swans or capitalizing on positive black swans, people are, in some ways, more comfortable ignoring black swans altogether.

These simplistic rationalizations may be a naïve attempt at self-preservation, the societal equivalent of ostriches sticking their heads in the proverbial sand. Statistically unlikely scenarios — from the rise of social media to the negligible chance one's fridge will see its contents arranged the exact same way ever again — create uncertainty.

And uncertainty is often uncomfortable. To avoid such discomfort, we may instinctively seek to control events or explain them through destiny, religion, or intellectualism. But the unpredictable is undeniable: On the same day a black swan might again transform the world, you might hesitate at a green light, saving yourself from a terrible car accident. Perhaps we're all just butterflies, beating our wings to create different kinds of hurricanes.



On a Cold Chilean Mountaintop

From an isolated location in the northwest corner of Chile, LSA Physics Professor Tim McKay is part of a team of scientists working to craft a veritable Rand McNally of the heavens. They are using the things that can be seen — stars, planets, supernovae — to map the things that can't be seen — dark matter, expansion, and the mysterious dark energy. If done right, mapping could transform our understanding of the universe. McKay explains how.

by *Karl Leif Bates*



As Danish astronomer Tycho Brahe compiled a map of heavenly objects from his observatory near Copenhagen, the sudden appearance of a bright new star in November 1572 gave him a shocking idea.



increasingly challenging theories try to make sense of it all. The universe is not only way bigger than Tycho could have imagined, it's much more active and diverse.

LSA Physics Professor Tim McKay is one of many modern astronomers still using supernovae and a host of other celestial beacons to map the universe. Objects that emit light, things like galaxies and the stars that make them up, are the keys to cosmic mapping. But observing

them often reveals features of the universe that can't even be seen, like cosmic expansion, dark matter, and dark energy.

Mapping the universe by charting visible galaxies is different from mapping the Earth for one inescapable reason: The universe is really big. Even the nearest galaxies are so far away that the light they emit takes millions, or even billions, of years to get to us. When we look at distant galaxies, we see them not as they are now, but as they were long ago, when the light left them. Short-lived supernovae are long gone by the time we see them. The more distant a galaxy is, the deeper in the past we see it.

Mapmakers of the universe are also historians. And mapping the light from ever more distant galaxies led to the first great discovery of modern cosmology: the expanding universe.

He compared the brilliant object's position relative to other landmarks in his meticulously assembled catalog and, as the exploding star faded, Tycho concluded that it had to be a lot farther away than the moon and the fast-moving planets.

If Tycho's measurements of this supernova were to be believed, then the heavens were not fixed in place as everyone then believed and the universe might be a really big place. The model was broken and the maps were going to have to be redrawn.

Indeed they have been, pretty much continuously, as ever more powerful telescopes and cameras come on line and



Expansion and Mapping

In the 1920s, American astronomer Edwin Hubble — for whom the famous telescope is named — combined his measurements of distances to galaxies with astronomer Vesto Slipher's measurements of galaxy spectra or the colors of light they shone. He found a remarkable connection: As galaxies became more distant, their colors became redder. This red-shift was caused by the lightwaves themselves literally being stretched as the universe expands.

Hubble saw increasing wavelengths coming from the distant galaxies as if they were moving away, in any direction he looked. Their light was being stretched out, and the more remote the galaxy, the larger the stretching. In other words, the universe appeared to be expanding.

By mapping galaxy distances and spectra carefully, Hubble came up with a

speed for universal expansion, called the Hubble constant. And that bit of mapping, in turn, led to the theoretical notion of a “Big Bang” from which all energy and matter arose. Albert Einstein's theory of General Relativity provides a plausible explanation for all of these observations.

Decades of subsequent research extended Hubble's observations enormously, mapping galaxies 50 times more distant than he could, and further confirming his initial conclusion: The universe has been expanding for a long time.

In 2010, Nick Risinger embarked on a different kind of mapping project. Without the aid of high-tech equipment and only his retired father to assist him, Risinger's ambitious goal was to photograph an image of the entire night sky. One year later, Risinger had logged more than 60,000 miles and had snapped more than 37,400 exposures to stitch together this stunning image. The Photopic Sky Survey is described on Risinger's website as a project that “portrays a world far beyond the one beneath our feet and reveals our familiar Milky Way with unfamiliar clarity. When we look upon this image, we are in fact peering back in time, as much of the light—having traveled such vast distances—predates civilization itself.” To learn more, visit skysurvey.org.

The Evidence of Things Unseen

But mapping galaxies also has revealed some things that can't be seen. In 1933, Hubble's California colleague, Fritz Zwicky, measured the positions and motions of hundreds of galaxies in a dense cluster of galaxies called Coma more than 300 million light years away. To his surprise, he found them moving very fast relative to one another, faster than their gravity would allow without the cluster flinging itself apart.

Zwicky thought the cluster would need a lot more mass than it apparently had to stay stable. He postulated the presence of some unseen heft, now called “dark matter,” to account for the missing mass. But



to solve the problem, the cluster needed perhaps 10 parts of dark matter to every part of luminous matter.

An enormous amount of work by sky mappers since then has confirmed the influence — if not the actual appearance — of this invisible dark matter on galaxy formation and motions. The current understanding is that each visible galaxy is surrounded by a much larger, and much more massive, “halo” of dark matter.

“We don’t know exactly what dark matter is, but we do see its effect everywhere we look,” McKay says. Dark matter now seems to be everywhere there is ordinary matter, and nowhere that there isn’t.

Dark matter today seems less mysterious than it did, thanks in part to a massive collaborative mapping project in the 1990s called the Sloan Digital Sky Survey (SDSS), of which McKay was a key part. Using a 2.5-meter telescope with a 120-megapixel camera in New Mexico, SDSS was capable of imaging 1.5 square degrees of sky at a time, about eight times the area of an average full moon. In all, it mapped about a third of the dome of space.

Hubble and Einstein were holding up just fine under this scrutiny until 1998, when two teams of astronomers measuring Hubble’s expansion history came to a startling conclusion: The universe isn’t just expanding — it’s apparently speeding up. By examining very distant supernovae, they were measuring the expansion rate billions of years in the past, and they found that the rate then was slower than it is now. Hubble’s constant wasn’t.

Acceleration is a shocking idea. If anything, cosmic expansion was expected to slow, as all the matter in the universe

exerted gravitational pull. For Einstein’s general relativity to still work, there has to be some other unseen force pushing the cosmos apart harder than it’s being pulled together. Or it could be that Einstein is wrong and we need an entirely new theory.

“Watching this happen in the astronomy community was an interesting sociological experiment,” says McKay. “When do you decide to believe something crazy?”

But dozens of new observations looking deeper in space and further back in time have confirmed acceleration. Astronomers have taken to calling the mystery “dark energy,” and now they want to find it.

With its giant team of scientists, the Sloan project marked the beginning of a new era in mapping the universe: the age of collective big-science projects. “SDSS laid the groundwork for doing collective mapping,” McKay says. No longer would lone scientists like Hubble or Zwicky be sufficient to map the heavens. There’s simply too much data and too many faint but important signals for a single human mind to grasp, McKay says.

Sometime early next year, McKay and hundreds of his colleagues will take the lens cap off a bigger-better “mapper” on a mountaintop in Chile and begin the Dark Energy Survey (DES), an attempt to find this secret force accelerating the cosmic expansion. They have built a new refrigerator-sized 570 megapixel digital camera, called DECam, to use on the four-meter telescope at the Cerro Tololo

Inter-American Observatory. DECam will be capable of imaging three square degrees of sky at a time — deeper, wider, and further back in time. Key parts of the \$35 million camera were designed and built at U-M (see p. 15).

The simple act of mapping — seeing what’s there and charting it — has always led to new insights about the universe. The way we’re seeing things now, McKay says, is that only about four percent of the universe is ordinary matter: planets, stars, random bits of rock and ice. Another 26 percent is dark matter, which can’t be seen directly, but behaves in a predictable fashion and exerts its influence on any light that streams past on its way to our telescopes.

But those two kinds of matter only account for 30 percent of what it takes to explain today’s map of the universe. For Einstein’s general relativity to hold its spot at the table, there has to be another 70 percent of something, the dark energy, working opposite the gravitational force of light and dark matter to create the acceleration that seems to be happening.

The Dark Energy Survey, mapping the universe from a cold Chilean mountaintop, won’t be able to take a picture of dark matter or dark energy directly. But by making a more extensive, detailed, and precise map, and watching carefully for galaxy clusters, supernovae and other subtle features, astronomers hope to get that much closer to understanding where we are and where we’re headed. That’s what maps are for.

Karl Leif Bates is a science writer and a former U-M Knight-Wallace Journalism Fellow.



The Telescope That Blue Built

LSA RESEARCHERS HELPED CONSTRUCT A NEW, POWERFUL TELESCOPE THAT COULD SHED LIGHT ON THE MYSTERIES OF DARK ENERGY

“To measure the effect of dark energy, you need to look at a lot of galaxies,” says Gregory Tarlé, an LSA professor of physics. And to look at a lot of galaxies, you need a big telescope. Enter the Dark Energy Camera, or DECam, the powerful four-meter, wide-field survey telescope that will go on line in early 2012 to help astronomers take stock of the sky, specifically to study dark energy through a project called the Dark Energy Survey (DES).

LSA had a role in designing and building parts of this giant machine, which

will be housed at the Cerro Tololo Inter-American Observatory (CTIO) in Chile.

“We helped build a filter changer for the camera that will move five different filters into the optical path,” says Tarlé. “These will provide data to measure red shift, a key to understanding dark energy.”

Because the telescope is so massive, the filter changer is roughly “the size of a door,” says Tarlé. An enormous changer will move the filters in and out of the camera to create the right exposures. The five filters, each as big as a manhole cover, and the instrument shutter were originally specified by Michael Schubnell, a research scientist in the Department of Physics.

The telescope’s optical lenses (pictured above) were designed on campus by Rebecca Bernstein, now an associate professor of astronomy and astrophysics at the University of California Santa Cruz.

All the parts for DECam, including those from U-M and from astrophysics laboratories around the globe, have been integrated together at the Fermi National Accelerator Laboratory in Illinois and are awaiting transport to CTIO. The goal is to have DECam providing data by April 2012.

A campus DES team consisting of three graduate students, three full-time postdoctoral students, one research scientist, and six faculty will begin looking at the DECam data as soon as it becomes available. They will share and analyze information with each other and with researchers at other institutions in much the same collaborative way the telescope itself was constructed. “Once we do any analysis, the goal is to make it completely available to other researchers,” says Tarlé.





The Creaking Steamship That Launched Widespread Cholera Hysteria That Waylaid Michigan's Boy Governor in the Woods and Eventually Led to the Founding of the University of Michigan

WHEN TRUTH IS STRANGER THAN FICTION, AS IT IS IN THIS TALE, THE RESULT IS THE FIRST DESIGN FOR U-M. **HOLD ON TO YOUR TOP HATS FOR THIS SERIES OF IMPROBABLE EVENTS.**

by *Fritz Swanson*

The *Henry Clay*,

a side-wheel steamer that was already old in 1832, creaked into the port of Detroit and discharged a ship's hold of infantrymen from Virginia. The troops were garrisoned in Detroit as reserves in case Black Hawk's Native American rebellion over in Wisconsin wasn't successfully quashed. That afternoon, the soldiers mingled with civilians at General Lewis Cass' traditional Fourth of July barbecue.

By evening, an Army doctor diagnosed two men on the *Henry Clay* with Asiatic cholera. The doctor immediately ran away, hiding in a local hotel. Panic took hold of the ship, then the city, and then the territory, in short order.

As the July heat set in, black and bloated corpses were laid out in a dockside warehouse. All around the territory, fear had taken charge in place of government. The villages around the city erected blockades and posted armed sentries, in an effort to defend against cholera. But the primary consequence of this self-interested defense was that the roads needed to bring food and supplies to the city, and to fight the disease, were cut off. As the fragile reach of the territorial government collapsed, the acting governor of the Territory of Michigan realized he needed to ride out into the wilderness and reestablish order so that the epidemic could be fought successfully.

His name was Stevens T. Mason. He was just 20 years old.

And so, with his top hat jammed on his head, the long-legged young man in a flapping black cloak rode from town to town, commanding residents to burn down their barricades and assist their fellow citizens. Though he was arrested, shot at, and wrestled to the ground by panicked villagers, he calmed the local authorities, who in turn restored order to their towns and re-opened the roads from Niles to Jacksonburgh, and then on through Ann Arbor and into Detroit.

It was on this wild ride that Mason went lost beyond Marshall and wandered in the woods until he stumbled upon a rustic cabin. He was taken in by the Reverend Mr. John D. Pierce, who was then caring for his cholera-stricken wife, Millicent (Estabrook) Pierce. Mason discovered that Pierce (along with his friend Isaac E. Crary) had been developing ideas for a state-wide public education system based on the Prussian model. It was just the sort of system Mason had been imagining when he gave his first speech as acting governor, impressing upon listeners the importance of



free public schooling.

Millicent Pierce died that night, and in the morning, the Reverend Pierce and Mason rode back to Detroit to minister to the sick. The epidemic subsided, and far fewer people had died than many had feared. Much of this can be attributed to Mason, who had brought order to the territory.

Soon, Mason would bring order to state-funded public education as well.

Religion, Morality, and Knowledge

The University of Michigan may have been loosely formed in 1817, but it took the work of Mason to turn those flimsy paper dreams into a brick reality.

In those days, all of the major universities in America were privately endowed and religiously sectarian. Even the few “public” universities, such as the University of Virginia, were not really creatures of the state, but instead gifts set up by a few wealthy men for the children of their class. Likewise, almost no primary or secondary schools were open to the public, and Mason was afraid that private academies would take hold in Michigan, as they had in his native Virginia.

After 1832, however, Mason’s educational plans had to take a backseat to other Michigan matters, including a war with Ohio over Toledo. The city — plus a

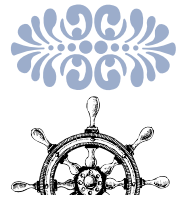
468-square-mile strip of land along the Michigan-Ohio border — was lost as Mason pushed for statehood, but the mineral-rich Upper Peninsula was Michigan’s consolation prize. For the trouble of the war, President Andrew Jackson fired Mason, but when statehood was achieved in 1837, the citizens of Michigan all remembered the many things their Boy Governor had done and returned Mason to his offices in Detroit as Michigan’s first state governor.

This brought Mason to the apex of his career. It was from this vantage, and with the well-earned goodwill of the young state’s citizenry, that the 26-year-old embarked on an ambitious plan of internal improvements, including the creation of the University of Michigan.

Mason reconnected with Pierce and Cray, and wrote their educational ideas into the state constitution. Mason appointed Pierce the state’s first superintendent of public instruction, the first such office in America.

Mason and Pierce then went about setting up the first statewide, religiously neutral, free-to-the-public, universal education system in the United States. There would be public academies in every county that all fed into a system of state colleges, with those subordinate to a single public university. To finance the system, one section (640 acres) of land in every township in the state had to be set aside, bringing to fruition the portion of the Northwest Ordinance of 1787 (now carved on the pediment of Angell Hall) that reads, “Religion, morality and knowledge, being necessary

After 1832, however, Mason’s educational plans had to take a backseat to other Michigan matters, including a war with Ohio over Toledo.



1832

The *Henry Clay* docks in Detroit carrying infantrymen infected with cholera.

Widespread cholera panic results in blockades around villages surrounding Detroit.

Michigan’s appointed Boy Governor, Stevens T. Mason, rides out to quell panic and loosen blockades. He gets lost in woods outside Marshall.

Boy Governor rescued by John D. Pierce, discusses the idea of a state-wide public education system.

1835

Michigan declares war with Ohio.

1836

Ohio wins Toledo. Boy Governor is fired by President Andrew Jackson.



1837

Michigan achieves statehood. Mason is back as Boy Governor, this time elected by the people.

40 acres in Ann Arbor is purchased as a site for the future University.

The Panic of 1837 results in a nation-wide economic depression.





1838

The first U-M professor, Asa Gray, is hired and sent to Europe to purchase books.



1839

Mr. Pat Kelly squats University land and farms corn on it.

Michigan legislature passes a law to sell University land. Boy Governor vetoes it.

Upon his return from Europe with books and botanical samples, Asa Gray is fired.

1840

Falling out of favor with the public, Boy Governor does not seek reelection.

Newly elected Governor Woodbridge sells undeveloped University land for \$1.25 per acre.

1842

Lacking any alternate plan for the meager remnants of University buildings, the state okays the opening of the University.

1843

Former Boy Governor dies at age 31.



to good government and the happiness of mankind, schools and means of education shall be forever encouraged.”

Four professorships were established at the annual salary of between \$1,200 and \$2,200. Mason and the regents had botanist Asa Gray, the first professor, travel to Europe with \$5,000 in gold for the purchase of books. A 40-acre portion of the Rumsey-Nowland farm of Ann Arbor was purchased as a site for the future university. Mason’s original University campus was set at the western edge of the farm (land now occupied by Angell Hall), a modest pair of four-story brick buildings, a northern structure known as “The Main Building” (the first home of LSA), and a southern structure known as “South College.”

Fear Over Logic

Unfortunately, Mason’s dreams for Michigan ran up against the reality of a financial panic sparked by a real estate bubble.

While the causes of the Panic of 1837, and the depression that followed, are the subject of heated debate, one theory places blame squarely with President Andrew Jackson.

Jackson, who had long distrusted frontier real estate schemers, demanded that all land transactions use gold and silver. He also paid off the national debt for the first (and only) time, and closed down the United States Bank in 1833. But with the radical departure of the federal government from the banking

system, coupled with weak banking regulations and a new necessity for precious metals, people hoarded gold and silver, and the value of paper currency (which was being produced by unregulated “wildcat” banks that no longer had the backing of U.S. federal bonds) collapsed.

As with the cholera epidemic, fear triumphed over logic. And again, the old homesteaders turned away from government and looked after their own interests in order to survive.

In the face of the financial chaos, there had been little time to discover, let alone survey, the state lands set aside to finance Mason’s University program. When the land was finally investigated, squatters occupied most of it, and those squatters were voters.

A squatter even occupied the 40-acre parcel in Ann Arbor, where the Main Building was being prepared for the future University. Mr. Pat Kelly had taken possession of the land and farmed it all the way through construction. No one had asked him to leave, and so he farmed what is now the Diag, while the half-completed edifice of LSA’s future home towered serenely over his fields of corn.

Mason and Pierce’s plan, which had been passed into law, called for the public school lands to be sold for \$15 per acre, which the squatters had to buy from the government. But once the panic had set in, the Michigan legislature passed a law advancing a price their constituents, the squatters, deemed fair: \$1.25 per acre. Mason vetoed the bill, and passed another that set the rate at \$12, but the damage was done. The homesteaders who, in 1832, were grateful for a strong government that could protect them from cholera as

A squatter even occupied the 40-acre parcel in Ann Arbor, where the Main Building was being prepared for the future University. Mr. Pat Kelly had taken possession of the land and farmed it all the way through construction. No one had asked him to leave, and so he farmed what is now the Diag, while the half-completed edifice of LSA’s future home towered serenely over his fields of corn.

it whipped across the territory were, five years later, not interested in paying for their stolen public land. The public finally turned against Mason.

Everyone agreed that solid infrastructure and a fully financed public education system were a communal good, but no one wanted to pay for any of it.

In 1840, Mason did not seek re-election.

One Ending, One Beginning

Governor Mason's political nemesis William Woodbridge ascended to the governorship and set about overturning as many of Mason's decisions as he could. He sold the public lands for \$1.25 per acre, netting the University a meager endowment. When Asa Gray came back from Europe with his massive collection of books and botanical samples, Woodbridge fired him. (Gray went on to become one of history's greatest botanists and a friend of Charles Darwin, and he secured the U.S. publication of *On the Origin of Species* — all from his office at Harvard.) Finally, Woodbridge cut the salary of the state superintendent so drastically that the Reverend Pierce was forced to return to the ministry.

Woodbridge himself left for a Senate seat a year later, in 1842, and one of his successors, Governor John S. Barry, said of the meager campus where Pat Kelly had farmed, "Well, we've got the buildings... I don't think they're good for anything else, so we might as well declare the University open."

And so began the University of Michigan, one of the greatest universities in the world.

Mason died of pneumonia shortly thereafter, in January 1843, while studying for the bar exam in the state of New York. He was 31 years old.

The Main Building, the northern of Mason's two campus buildings, was given the name Mason Hall. Angell Hall grew up around it. The original Mason Hall was demolished, but a new building that bears his name stands there today, its moniker a mystery to most of the students who pass through its halls.

Fritz Swanson teaches in LSA's Department of English Language and Literature and is the founder of Poor Mojo's Almanac(k).

Sources: Peckham, Howard. *The Making of the University of Michigan: 1817-1992* (University of Michigan Press, 1967). Sagendorph, Kent. *Stevens Thomson Mason: Misunderstood Patriot* (Dutton 1947) and *Michigan: The Story of the University* (Dutton, 1948).



Tragic Sidebar

THE FOUR PORTRAITS OF STEVENS T. MASON

Governor Mason's large full-length oil portrait hangs in the office of the director of the Bentley Historical Library. A rapturous public donated large sums to pay artist Alvin Smith to paint the portrait, but at the same time they refused to pay sufficient salaries for positions like secretary of state or attorney general. The public lauded Mason as their hero, but denied him the resources to govern effectively. The painting itself seems intertwined with his undoing.

His other portraits don't fare so well either.

An English illustrator drew Mason's second portrait while the Boy Governor was being shaved at a barber. The artist later would sell the portrait as a true-to-life sketch of the poet Lord Byron. Today, the Michigan state archives owns the portrait.

Kerry Chartkoff, chair of the Michigan Save the Flags committee, tells the tale of the third portrait. In 1911 a bundle of "rags" was discovered in the basement of the Capitol. Inside was Michigan's first flag, lost since the Civil War. Chartkoff attributes the painted flag to artist Alvin Smith. "On one side was a full-length portrait of Governor Mason himself. On the other was a portrait of General Hugh Brady, various other designs, and the coat-of-arms of the new state."

In 1912 the flag disappeared. The only remaining evidence of the flag was a photograph, taken in 1911 by Mason's first biographer, Lawton Hemans. The photograph was discovered when Mr. Hemans' home (in Mason, Michigan) was purchased by historian Loren Shattuck. Mr. Shattuck asked the Hemans family if they knew anything else about the house, and they sent him Hemans' photograph of the flag, along with many other pieces of Mason memorabilia.

Finally there is Mason's statue in Capitol Park in Detroit, which presides over his grave. Mason's sister brought his body to Detroit in 1905, but in 1955 the grave was moved to make way for a bus stop.

When the park was renovated in 2010, the grave was missing. The remains were finally found, by chance, four days later.

Sources: *The Detroit News*. www.nighttraintodetroit.com. www.michigan.org.





Remaking the Big Easy

**New ideas. New people.
New businesses.**

Post-Katrina New Orleans is experiencing a fresh wave of entrepreneurs and out-of-the-box thinkers — several of them LSA graduates — who are helping re-envision just about every aspect of the city. But even smart, passionate people can and do disagree about the way forward, proving that six years after the storm, there are no easy answers in the Big Easy.

by **Colleen Newvine Tebeau**

Kurt Weigle ('88, M.U.P. '90) lives in a high-rise building whose rooftop offers sprawling views of central New Orleans, from the soaring skyline of the central business district to the Mississippi River that made the city a shipping hub in its heyday.

It gives Weigle, president and CEO of the Downtown Development District, the perfect vantage point for bragging up investments in New Orleans. For example, work is under way on high-end housing and hotel sites nearby while the newly opened New Orleans BioInnovation Center — with 66,000 square feet of wet-lab, office, and conference space — aims to help commercialize life science products from Louisiana State University, Tulane, and Xavier.

In addition to pointing out individual projects, Weigle describes the Downtown Development District plan that hinges on tax credits for digital media businesses and a new medical complex to establish the city as a research hub. It aims to supplement the long-dominant industries in New Orleans — hospitality, shipping, oil and gas — with new kinds of jobs.

But as the sun sets and neon lights begin to glow, reminders of catastrophe hover. Six years have passed since Hurricane Katrina made landfall in August 2005, followed by the catastrophic failure of the city's levees, flooding much of the city and turning Katrina into the costliest natural disaster in American history.

Charity Hospital has been shuttered since Katrina devastated the city, and battles still wage over plans for how to fill the city's need for medical service. The historic Saenger Theater's post-Katrina restoration stalled because of financing snags, but construction has resumed with plans to open in 2012.

New Orleans faced significant challenges before Katrina, from high murder rates to low-performing schools. In some ways, Katrina exacerbated existing problems, destroying homes and businesses, stretching remaining resources thin. Yet *Forbes* magazine this spring heralded "The Katrina Effect," which describes the city's recent influx of college-educated adults and growth in jobs, perhaps the silver lining to the storm.

Some LSA graduates like Weigle hope not just to restore what was lost to Katrina but to use the opportunity to rethink and



reinvent New Orleans. That's difficult not just because of the interconnectedness of complex issues — employment, education, crime, and poverty, for example — but because passionate, informed people often disagree on the right way forward.

Brad Pitt, the Ninth Ward, and the Calm Before Another Storm

Steve Ragan ('89) is part of an effort to rebuild the city's Lower Ninth Ward — the decimated, largely black neighborhood seen in many of Katrina's most heart-breaking images.

Ragan is director of development and government relations for Make It Right, colloquially known as the Brad Pitt houses. Pitt fell in love with New Orleans while filming *Interview with the Vampire* in 1994, and combined that love with a lifelong interest in architecture to establish the Make It Right Foundation, which replaces homes lost to Katrina.

LEED is an internationally recognized green building certification system developed by the U.S. Green Building Council, and platinum is the highest LEED rating level.

Make It Right has finished 75 houses out of the 150 it committed to building in the shadow of the failed levee. Instead of marshaling an army of volunteers to put up loads of homes, like Habitat for Humanity might, Ragan says, "What we think we can do is bring a different model of home construction."

With tankless water heaters, dual-flush toilets, wireless light controls, solar power, and pervious concrete driveways, Ragan said the project is helping teach local builders environmentally friendly skills. Make It Right uses local labor as much as possible, and aims to use a variety of crews to spread the benefit.

"New Orleans has developed a reputation for building green," Ragan says. "A lot of the technologies we're using, we're the first in the market doing it."

Walking through the construction site, where many lots still sit empty and overgrown, Ragan talks about the challenges Make It Right had to overcome, such as the difficulty of getting a clear title for destroyed homes that had been handed down for generations with no paperwork.

Building anything in New Orleans takes a certain amount of bravery, perhaps especially in the Lower Ninth, where the levee break washed away the neighborhood with the highest percentage of home ownership in the city. When the Mississippi River flooded this spring, talk in New Orleans turned to concern about whether the repaired levees would hold, a possibility Make It Right folded into its design plans.

For example, Make It Right builds its homes a minimum of five feet off the ground, to



Rather than recreating the destroyed structures, Make It Right uses environmentally cutting-edge techniques, aiming to build affordable houses that also meet platinum Leadership in Energy and Environmental Design (LEED) standards.

allow for potential flooding. One house is actually designed to float.

Wil Jacobs (M.B.A. '96) appreciates the passion behind the project but disagrees with Make It Right's choice of location. As housing policy director for the Louisiana Recovery Authority, he saw that there weren't enough resources to rebuild everything Katrina destroyed, and he advocated for new housing in areas where infrastructure — schools and

roads, for example — would lure residents to return and private investment to follow.

“We can’t rebuild every neighborhood,” Jacobs says. The Ninth Ward was struggling before the storm, with lower home values than other parts of the city, and the destruction amplified its problems.

But Jacobs understands Pitt’s frustration with the slow pace of official programs, as billions of dollars are still waiting to be invested and many homeowners are still not in their homes, and he calls *Make It Right* a beachhead that can encourage recovery in the Lower Ninth.

Having worked in the private sector until the storm, Jacobs is also humbled by the complexity of the issues involved in redevelopment.

“What I’ve learned is nobody has all the answers,” he says, but if you look at a situation carefully and get as much input as possible, “nothing’s impossible.”

Jacobs is most excited about plans for a \$2 billion medical complex because of its potential for job creation, calling it “the biggest potential economic driver of a transformation.”

Weigle agrees. He understands some people’s objections to tearing down blocks of existing housing to make way for a new University Medical Center and Veterans Affairs Hospital, but believes the benefits are worth the tradeoff.

Same Issues, New Generation

Lolis Eric Elie, a former *New Orleans Times-Picayune* columnist who is now a story editor for HBO’s post-Katrina drama *Treme*, talked to experts for his column about what happens after disasters. They told him disasters like Katrina give people the chance to reimagine places, but, because people are fundamentally conservative, they tend to look backward instead of forward. Meanwhile, disasters give opportunists the chance to do what they’d wanted to do prior to the catastrophe.

Elie is dismayed by the eviction of poor New Orleanians from public housing and by widespread demolition in a historic city neighborhood to make way for what he calls “this hospital foolishness.” He feels both the evictions and demolitions are examples of the city’s increasing hostility toward the poor.

Elie describes New Orleans’ complex history with French, Spanish, and Haitian influences as adding up to food, music, architecture, and overall culture that feel very different from the rest of the United States, but “I think our political leadership wants New



(PREVIOUS PAGE, LEFT TO RIGHT)

Alumnus Kurt Weigle was part of an effort to transform New Orleans bus shelters into works of art through the Downtown Development District’s “Artification” project. Many of the shelters were repaired and improved prior to the artwork installation.

The historic Saenger Theater suffered immense water damage after Katrina. Restoration plans have been mired in red tape for years, though the theater is now slated to reopen for the 2012-2013 Broadway season.

This home is an example of the environmentally friendly, flood-resistant structures in New Orleans’ Lower Ninth Ward constructed by the Make it Right Foundation.

(THIS PAGE) **Many New Orleans historic homes** were razed post Katrina to make space for a new University Medical Center and Veterans Hospital. New Orleans residents like Lolis Eric Elie, story editor for HBO’s *Treme*, feel the demolitions showcase the city’s increasing hostility toward the poor.

A New Orleans native, Jacobs now works for the Louisiana Office of Community Development, which focuses on improving the quality of life of the state’s residents. While maintaining his focus on housing,

Orleans to be like every other city in America.”

“The city has been and continues to be at war with itself,” Elie adds.

“Housing has been one of the hot-button issues in modern America, especially low-income housing,” says Angela Dillard, the new director of Michigan’s Residential College and an LSA historian whose work focuses on civil rights and urban environments. “There’s nothing new about what we now call gentrification. These same issues come into play generation after generation.”

Dillard believes there are two frontiers of rethinking urban policy in America: New Orleans and Detroit. She notes that all urban areas have problems, but the complexity of New Orleans' challenges were immense even before the storm.

Dillard, professor of Afroamerican and African studies, describes the two cities as "real laboratories" for thinking differently about urban planning.

Dillard says struggling cities either can try to restore their greatness or radically reinvent themselves. She sees it as a dead end to return a manufacturing city like Detroit to what it once was, leaving reinvention as the only viable choice. A natural disaster like Katrina can focus attention, bring resources, and shake up apathy toward those challenges.

"It's the devastated areas where we allow the most experimentation," Dillard says.

"It's almost as if the slate was wiped clean for them," she says, "with an unimaginable human cost, of course."

Kate Schneiderman ('05) thinks the post-Katrina influx of newcomers has brought new energy and approaches to the city's challenges, while the shared trauma of surviving post-storm life reminded long-timers why they loved the place.

"It's definitely been a mindset shift," Schneiderman says. Undeterred by entrenched problems like crime, racism, and corruption, she sees people recognizing that New Orleans isn't alone in the systemic challenges of cities, and "instead of saying, 'we can't change that,' now it's 'how can we fix that?'"

As director of marketing with Idea Village, a business start-up accelerator, Schneiderman works with a mix of transplants and natives to help launch and grow their entrepreneurial ventures by providing business consulting, mentorship, networking connections, and access to capital.

The Idea Village spent the last decade connecting local entrepreneurs to local resources such as legal, accounting, finance, and marketing support, for example.

"It's an extremely supportive place," Schneiderman said. "We're too small at this point not to help each other out."

Inc. magazine profiled Idea Village's assistance to entrepreneurs in an article this spring headlined, "Why New Orleans Is the Coolest Start-up City in America." The 1,100 businesses Idea Village has helped since its founding in 2000 range from organic fast food chain Naked Pizza, to entertainment and travel business Iseatz, to Drop the Chalk, which makes software to help teachers manage classroom information.

Beyond Bourbon Street

In early 2011, a few dozen tech entrepreneurs road-tripped to the massive South by Southwest Interactive conference in Austin, Texas, to raise New Orleans' profile — including hosting a party sponsored by Weigle's Downtown Development District that featured New Orleans music.

But hosting a hot, sweaty dance party in Austin to bolster the city's image highlights one more balancing act city leaders face.

For many people, New Orleans conjures images of drunken revelers on Bourbon Street. "Our biggest challenge is moving beyond that characterization that dominates too many people's minds," Weigle says.

If people imagine New Orleans as one big *Girls Gone Wild* video, they might be

reluctant to bring a convention or a business investment to the city.

Noting that New Orleans' culture honors the fun of food, music, and parades, and the economy benefits from partying tourists, "I think the best way to describe it is we can do serious work without taking ourselves too seriously," Weigle says.

Dillard believes there are two frontiers of rethinking urban policy in America: New Orleans and Detroit. She notes that all urban areas have problems, but the complexity of New Orleans' challenges were immense even before the storm.

Playing host to multiple, perhaps even contradictory, ways of thinking is nothing new for New Orleans. As the birthplace of jazz, a musical form with roots in African, European, and Creole cultures, mixing various inspirations is New Orleans' creative tradition.

"Part of New Orleans' success has always been the cross pollination where all the influences here borrow from each other and it becomes impossible to trace the roots of where something started," Weigle says. "We're all dependent on one another for our success."

"I think the future of New Orleans rests on finding a way to reconcile and to nurture this combination of rich history and the incredible legacy that attracts so many people to New Orleans," Weigle says, "with a recognition that in life, you're either growing or you're shrinking. Even before the storm, New Orleans was fading and didn't realize it."

Now, Weigle says, with the infusion of newcomer energy and recommitment from natives, that's changing. "I could not be more optimistic about the future of the city."

Colleen Newvine Tebeau (M.B.A. '05) is a writer who lived in New Orleans for two months this spring. Her blog *Newvine Growing* is at newvinegrowing.wordpress.com.



It's Cool if I Use This, Right?

The “zombie bunny,” photographed by alumnus John Baird, has been hijacked and repurposed time and time again. The image is a symbol of the clamor over **copyright in the digital age**. Who owns what, and how does that ownership get enforced? Alumni and faculty on all sides of the issue weigh in.

by *Mary Jean Babic*



“I can see the looks in their eyes when I tell them this,” Kornfield says. “I say to them, how many of you think I don’t know what I’m talking about?”

Whenever Susan Kornfield ('74), an Ann Arbor intellectual property attorney and adjunct professor at U-M, speaks to a group about the area of law in which she practices, she asks her audience this question:

What’s the purpose of U.S. copyright law?

Kornfield kindly makes it multiple choice. Is the purpose of copyright to: **a)** reward authors for their creative effort; **b)** provide an economic incentive to write and publish; **c)** advance public learning; or **d)** provide legal remedies for infringement?

She has asked thousands of people this question. Statistically, they should get the right answer 25 percent of the time. “They get it right,” Kornfield says, “less than two percent of the time.”

The correct answer is — c) advance public learning.

But Kornfield is drawing straight from the U.S. Constitution. Article I, Section 8, Clause 8, known as the copyright clause, empowers Congress to “Promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.”

Fixed into the nation’s founding document at a time when player pianos and filmstrips didn’t exist, much less Google and mashups, copyright has always been a much-disputed tug of war between the rights of creators and the needs of the public. In the digital era, the tension and murkiness surrounding copyright have only intensified.

In 1998, Congress extended copyright terms to the life of the author plus 70 years for an individual work, and 120 years from creation for a corporate work or 95 years after publication, whichever is earlier. While this may be good for the heirs of Jay-Z or Stephen King or Walt Disney, it means far fewer works will fall into the public domain in our lifetimes. At the same time, technology has made it unthinkingly easy to violate copyright. Copying and pasting a photo onto your blog, emailing a song to your friend — these are daily activities of modern life, irresistible in their naturalness, yet they are often illegal, or at least prime fodder for lawsuits.

The truths, assumptions, and gray areas in between concerning copyright matter hugely because copyright affects more people than ever. U-M, the average consumer, and big corporations are all tied up in this issue.



Face the Music

Most people who infringe on copyright probably have no idea that that's what they're doing, says Jesse Walker ('91), managing editor at *Reason* magazine. Rather, they're just doing cool things online. Walker has written regularly on copyright since publishing an essay in 2000 titled "Copy Catfight: How intellectual property laws stifle popular culture," which decried "copyright maximalism." People, he wrote at the time, were using the new technology at their fingertips in innovative, highly personal ways — such as posting transcripts of *Buffy the Vampire Slayer* episodes online (which brought a scolding letter from 20th Century Fox) or posting a 15-minute silent compression of the first *Star Wars* film — and big media companies were only just noticing "this alternate universe of fans, parodists, and collagists."

More than a decade later, Walker says the most significant change is the thousands of lawsuits filed in the interim. Nobody argues that creators shouldn't benefit from their work, but life plus 70 easily could amount to more than a century before a work enters the public domain. "People should be able to create new things from the material that's around them in the culture," says Walker.

But must they use existing works? Can't they just come up with new stuff? Artists, Walker argues, have always built on what came before. "You listen to Bob Dylan's early records — he's borrowing lines from here, lines from there," Walker says. "Very rare is the case where somebody has some romantic genius and something springs out of their mind fully formed, without influences."

The collision of technology and copyright may have been most ruinous in the big-label record industry, now largely a thing of the past. Today, iTunes is the country's leading seller of music. The ease and lure of peer-to-peer file sharing persisted regardless of copious legal action the record industry took against copyright violators. The famous example, of course, is Napster, the music-sharing site that debuted in 1999. In 2001, a federal judge ordered it taken down because of copyright violations. (Today, Napster is owned by Best Buy and is a fee-based music subscription service.)

But that victorious battle did not win the war. The Recording Industry Association of America (RIAA) spent much of the mid-aughts in a litigious frenzy. In 2007, they filed lawsuits against individual students on campuses across the country, asking those who downloaded songs illegally to settle out of court for \$3,000. All told, the RIAA wracked up more than 30,000 lawsuits by 2008, but going after college kids and other private citizens did little to stem the industry's hemorrhaging bank accounts. In the decade since Napster appeared, music sales dropped nearly in half, to \$7.7 billion from \$14.6 billion, according to the RIAA.

Michael Perlstein ('60), a copyright attorney and current president of the Los Angeles Copyright Society, has represented

musicians, songwriters, publishers, and producers for more than 40 years. He's witnessed the monumental changes wrought by digital technology. While he points out that Napster caused "the widespread termination of employees of record labels and music publishing companies," it's also true, he says, that the major labels were too slow to adapt their business models to the changing culture. "They couldn't come to grips with the fact that peer-to-peer file sharing was decimating the industry," he says. "They tried hard to shut the door on that, and basically they couldn't."

Finally, it seems, they're catching on. One example is their cooperation with iTunes, which sells songs for about a buck a pop and pays record companies for every download. Music subscription services that pay labels and publishers for use of the music, such as Rhapsody and Spotify, are proliferating.

"Personally," Perlstein says, "I think the Copyright Act and technology are getting along better than they used to."

As far as the assertion that current copyright law stifles creativity, Perlstein doesn't buy it. He acknowledges that he's spent his career defending copyright owners, but, he says he's never met a garage rock band that didn't want to attract the attention of a music executive and become rich and famous. "I believe copyright protects creators, and that's a good thing."

Copyright and technology may be getting along better than they used to, but copyright and research is another area in which the law gets snarly, and it's playing out in a project near and dear to U-M: Google Books.



Books, Fair Use, and Orphans

In 2004, when Google announced its intent to scan the collections of the world's libraries and make them available online, the University of Michigan was one of the first institutions to sign on. Its Google-scanned works, in turn, are part of the HathiTrust, a congregation of digitized collections from 52 partners.

"The great promise of mass digitization is that somehow or other we will be able to use digital copies as our regular working copies," says Paul Courant, LSA professor of economics, U-M librarian, and dean of libraries. "And we are very, very far from fulfilling that promise."

The roadblock is how copyright law handles digital copies. Books published before 1923 are in the public domain, so no problem there. But it gets dicey for works published after that. Many are "orphans" whose copyright holders can't be found. Perhaps the owners died and left no estate instructions about the copyright. Perhaps the original publisher went out of business. Whatever the reason, after a diligent search there's simply

no one to ask for permission. And while libraries can lend physical copies of books under the doctrine of first sale provision of copyright law, they could not share a digital version for fear of copyright infringement.

“The digital version is being treated differently than the physical version, and that is the core of the problem,” Courant says.

For librarians — information sharers by training and temperament — having resources on hand that they are unable to make available feels like an abrogation of their public duty. Courant and others had hoped that a lawsuit settlement between Google and a coalition of authors and publishers would clear up the issue and permit large-scale sharing of copyrighted material.

In 2005, a group of authors and publishers, the Authors Guild and the Association of American Publishers, filed a class action, copyright infringement lawsuit against Google over its book-scanning effort. Eventually, Google reached a settlement in which it would pay \$125 million for the rights to display previews of books and would offer full digital versions for sale. The agreement included an opt-out measure; authors and publishers could withdraw their works from Google Books if they wished. The agreement also called for Google to display information on where to buy or borrow the physical book — if it was still in print — and created a book rights registry to pay authors and publishers. Under the settlement, Google would sell site licenses to universities, allowing students and faculty digital access to the collections of dozens of the world’s best academic libraries.

“It was very cool and very valuable to universities, a solution to the problem,” says Courant.

Except that a federal judge threw out the settlement, on grounds that the arrangement should be opt-in rather than opt-out.

U-M library officials huddled to decide their next move. Meanwhile, staff members embarked on a massive effort to identify all the orphans in the HathiTrust; it was valuable information to have, regardless of the legal outcome. In short time, however, the library elected to make orphans available to the campus community. It was the first institution to take such a step and to move out from the shadow of the orphan problem, which pervades the copyright world, not just the HathiTrust.

Courant is confident that sharing orphan works falls under fair use, which allows works to be used without permission for certain purposes, such as newsgathering, criticism, and parody. The move aligns with the copyright law’s intent to promote progress, he says. Releasing them does no economic harm to anyone, Courant insists, while holding them back severely restricts scholarship involving 20th-century works.

Given the nature of university libraries, many of these works are arcane, out-of-print academic books that have no commercial

value but strong research value.

The authors, even if they could be found, would almost certainly approve, Courant adds. “These works were written to be read, and we now have the means to increase the chances that they will be read,” he says.

Courant says he hears every day from people who unearth valuable, forgotten works from Google and HathiTrust searches. A history colleague learned about an archive in Europe she never knew existed but that was highly relevant to her work. The archive itself wasn’t digitized, but it was referenced in a 1902 book that was. “That’s the kind of thing that can happen,” he says.

The strangeness of copyright law, he says, is that it lumps the interests of Hollywood filmmakers and J.K. Rowling together with those of, say, an academic researcher of dam construction in the American southwest from 1876 to 1943. Academics make hardly any money from books and articles; they publish in order to secure jobs and get tenure. “I could make the argument that scholarly works should not be in copyright at all,” Courant says. Creative people might stop creating if anyone could come along and pirate their work; the stakes for them are high, so copyright is in their interest. “But academics get their rewards by publishing to advance their reputation and contribute to scholarship,” Courant says. “They don’t need copyright as an incentive to produce academic work.”

Congress has shown no inclination of ever reducing copyright terms, but Courant says he’d love to see a return to the original 14-year term, renewable once. “We’d be living in a much, much sweeter world.”

While the library presses on with its orphan strategy and record companies figure out how to share music in the digital age, regular citizens are caught in the copyright crossfire. One way they’re finding middle ground is through something called Creative Commons.



Featherbowling, Fair Use, and a Zombie Bunny

In 2001, a group of thinkers took stock of the current legal and social environment surrounding copyright and determined that there must be a way, within the law, to “help people voluntarily manage copyrights that seemed more appropriate to the digital age,” says Molly Van Houweling (’94), a Berkeley law professor. The result was Creative Commons, a nonprofit organization offering licenses that allow creators to retain copyright while permitting varying degrees of use. A “CC BY” license, for example, tells others that it’s okay to use, remix, or build upon a work, even commercially, as long as the creator is credited. It’s the most accommodating of Creative Commons’ six licenses. The most

restrictive is “CC BY-NC-ND,” which allows works to be shared with others but not changed in any way nor used commercially.

As Creative Commons’ first employee, Van Houweling helped draft the licenses; she remains on the board of directors. “We were just a little tiny startup nonprofit,” she says. “We didn’t do focus groups or marketing surveys.”

But the founders had a hunch that many copyright holders were frustrated by prevailing norms. They might *want* their works to be circulated, as well as have greater access to others’ creations. A reasonable middle ground between all-rights-reserved and outright theft could flourish, if given the infrastructure to so.

Today, hardly any conversation about copyright lasts very long before Creative Commons is mentioned. It’s become, it seems, a permanent part of the copyright landscape.

John Baird (’85 B.F.A.) doesn’t earn his living as a photographer, but as a tech-y, arty guy — he designs and builds furniture at his studio in Dexter,

Michigan, and is a lecturer in the School of Art and Design — he’s avid about making good photographs and was an early adherent of Flickr. At first, he used the Creative Commons license for no commercial use, no changes to the image.

“I was fine with that for a long time,” he says, but as his photography improved, he discovered he didn’t want his images used for just anything, especially not something commercial.

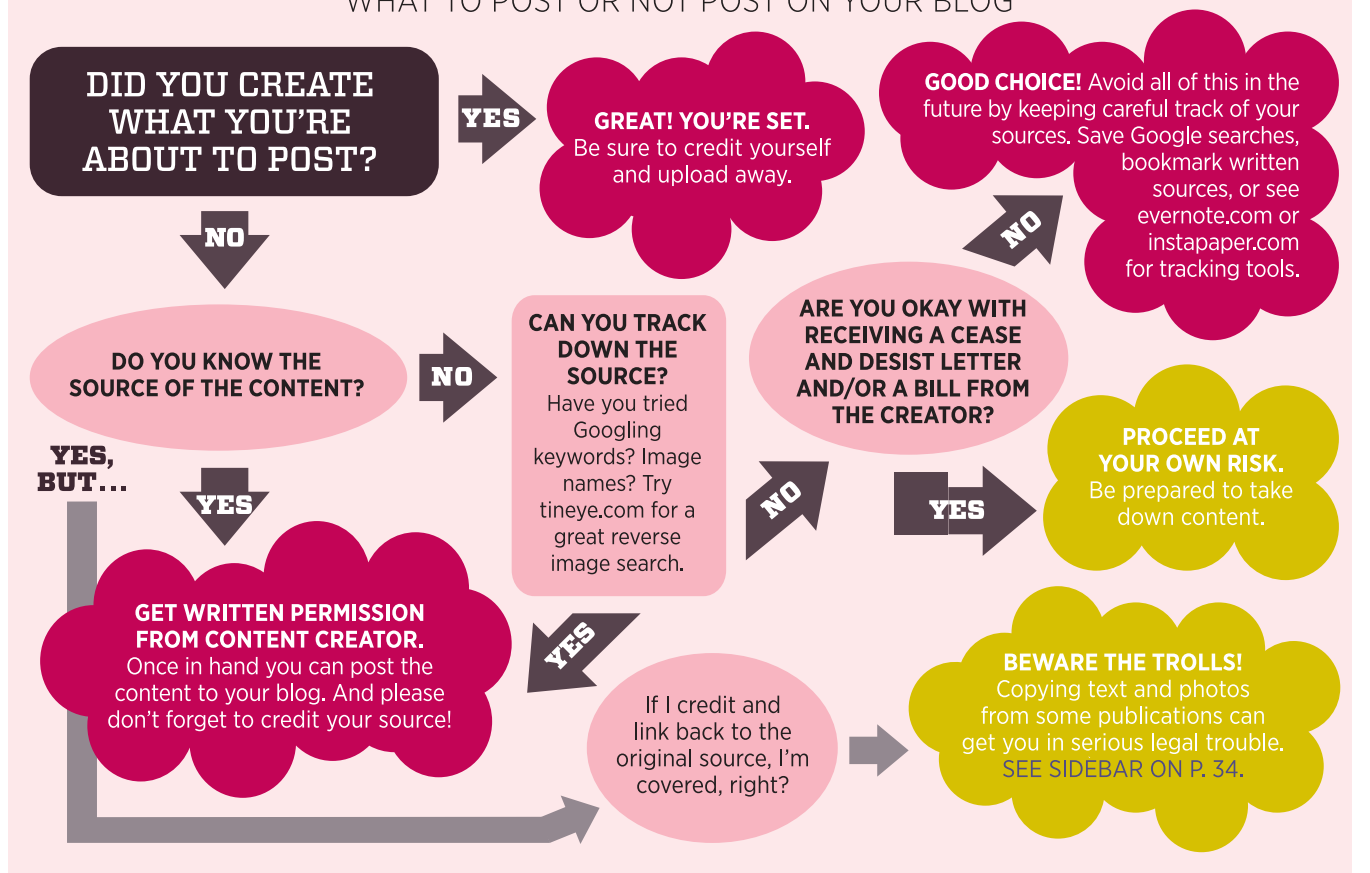
On several occasions, his photos have been swiped, even though he protects them with full, all-rights-reserved copyright.

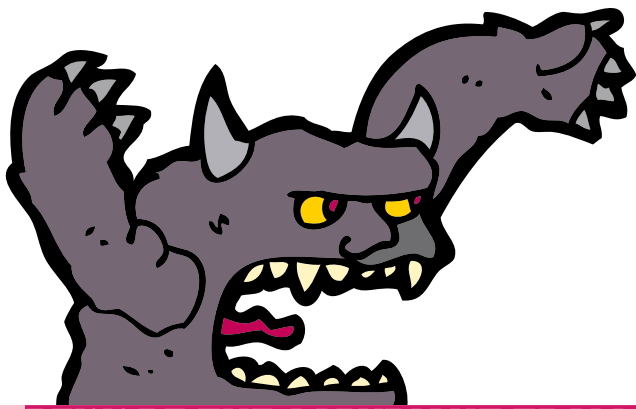
“I’m jaded in a way, because I perceive that some of my images have value,” Baird says. “I’m not putting stuff out there that I don’t care about. I think that’s a transition with a lot of Flickr users, because they become better photographers.”

In December 2005, Baird attended a sort of Christmas-of-the-undead procession through downtown Ann Arbor and took a photo of a guy dressed

How to **Not Get Sued** In the Digital Age

WHAT TO POST OR NOT POST ON YOUR BLOG





BEWARE THE COPYRIGHT TROLLS

In 2010, a Nevada blogger named Michael Nelson posted eight sentences of a 30-sentence article from the *Las Vegas Review-Journal*. He cited the source. He linked to the article. And he got hit with a lawsuit. The company suing him, Righthaven LLC, claimed Nelson should have gotten permission first.

Righthaven is a “copyright enforcement” company that obtains copyrights to newspaper content in order to sue for infringement. As of July 2011 it had filed more than 270 lawsuits. Typically, it demands payment and shutdown of the site; usually, the startled bloggers settle out of court. In the blogosphere, Righthaven is reviled as a scare-mongering troll, but its services are apparently in high demand. It has agreements with media groups that represent more than 100 newspapers, including the *Los Angeles Daily News*, the *Denver Post*, and the *San Jose Mercury News*.

Nelson didn’t settle, and a federal judge agreed that his post was allowed under fair use, posing “little to no” harm to the *Review-Journal*. Still, fighting an unforeseen lawsuit is a hassle no blogger — professional or hobbyist — wants to deal with.

If not a lawsuit, a wrist-slap could come in the form of a Digital Millennium Copyright Act (DMCA) take-down notice. The DMCA holds online service providers (OSP) harmless for copyright violations on sites they host — the “safe harbor” provision — but requires them to remove the material upon notification. If bloggers feel the material is not infringing, they can file a “put back” motion with their OSP.

Bloggers can also invoke DMCA safe harbor protection themselves by designating an agent to receive infringement notices. Another suggestion is to install a browser plug-in that blocks content from Righthaven clients. Instructions for both are at righthavenvictims.blogspot.com.

Best is to simply avoid posting copyrighted material without permission, but that’s easier said than done. One user, “Christina,” who maintains a photo-heavy blog, recently expressed fatigue at the idea of securing permission for each photo and uncertainty about the necessity of permissions if she included proper attribution. She left this comment on the popular blog Design Sponge: **“Why is it that this law of copyright and fair use seems to have so many interpretations? How is a little person like me supposed to know who to listen to?”**

as a zombie bunny. “That picture has been stolen so many times that people don’t even know the original source anymore,” says Baird. “Some people are stealing from people who stole it.” The use is rarely commercial, so mostly he doesn’t mind.

What really infuriated him was finding a photo he took of the Cadieux Café — an emporium of Belgian food, beer, and feather-bowling (a Belgian pastime, akin to horseshoes) on Detroit’s east side — on the website of a Detroit TV station, accompanying a restaurant review. Even worse, he says, at the bottom of the page was a copyright symbol. The station, he fumed, copyrighted its own stuff while stealing his. “They should totally know better,” he says. He fired off an angry email, and a day or two later the image disappeared.

Among the Flickr crowd, Baird says, copyright is a hot topic. One photographer friend sends off an invoice, with no warning, if he sees one of his photos somewhere. Others favor a high degree of openness, but Baird is not in the “information should be free” camp. “A lot of people can’t afford to give stuff away for free,” he says. “That is such a spurious argument, for hipsters who don’t want to pay for anything to tell other people how to earn a living.” He refuses to take part in crowdsourcing — the use of amateurs’ photographs in newspapers or magazines, often for a token payment — because “then someone who makes a living as a news photographer has gotten screwed, and that’s in the evil category.”

Baird’s experience shows that it’s not only the legal departments of Google and Disney that get worked up about copyright. As Van Houweling points out, the same technology that makes everyone a potential copyright violator also makes everyone a potential copyright holder. But the Internet is here to stay, and copyright terms aren’t going to get any shorter. As with Creative Commons or U-M’s decision to make orphan works available, it seems that the way through the morass will arise from the very quality for which copyright exists: human ingenuity.

Mary Jean Babic is a freelance writer in Brooklyn, New York.

Editor’s note: Since we wrapped up this story, the Author’s Guild has filed an amended complaint to its lawsuit, and the University is reinvestigating its process for identifying orphan works.



READ MORE ABOUT THIS EVERGREEN TOPIC
www.lsa.umich.edu/alumni/wire

42.22° N, 83.75° W

From **unexpected research findings** to a **peek at the Clements Library**, our tour of campus starts here.



Could Baseball Affect Intelligence?

FACULTY MEMBER: **Richard E. Nisbett**, the Theodore M. Newcomb Distinguished University Professor of Psychology and research professor at U-M's Institute for Social Research.

FIELD OF RESEARCH: How laypeople reason and make inferences about the world.

CURRENT PATH OF RESEARCH: Questioning the findings that intelligence, as measured by IQ tests, is mostly a matter of heredity. It resulted in his book, *Intelligence and How to Get It*.

CATALYST: Nisbett was doing research on cultural differences in specific talents — banjo playing in the hollows of Kentucky, baseball playing in the Dominican Republic — when he started looking at the literature regarding intelligence. “It made no sense to me that intelligence would not be influenced by environment,” he says.

A NEW DEFINITION: “Intelligence is much broader than [what can be] tested by IQ. There’s creativity, pragmatic intelligence, specific skills correlated to intelligence. It’s just misleading to say IQ is how intelligent people are.”

RESEARCH SATISFACTION: The more he looked at the literature spearheaded by people such as Richard J. Herrnstein and Charles Murray in *The Bell Curve*, the more “the major tenets of their arguments were failing. I soon realized the full academic accounting on IQ was mistaken. I had hunches on that, but I wasn’t sure until I looked at the literature.” Further satisfaction came when six peers of Nisbett’s joined him in writing a journal article backing his findings. “That way,” Nisbett says with a laugh, “the IQ fundamentalists couldn’t say, ‘Well, it’s just that guy Nisbett.’”

When Research Goes Sideways

Often, faculty have a hunch about how their research projects will turn out. But sometimes their work can result in “who knew?” findings that intrigue, inspire, and surprise. Here are five researchers and their “huh!” moments.

by Dan Shine



A Slave in Old Salem

FACULTY MEMBER: **Tiya Miles**, a professor in LSA's Program in American Culture, Department of History, Department of Afroamerican and African Studies, Native American Studies Program, and Department of Women's Studies.

RESEARCH INTEREST: African American and Native American interrelated and comparative histories (especially 19th century); U.S. women's history; and African American and Native American women's literature.

A "PLEASANT" INTRODUCTION: Miles learned about Pleasant, a slave woman, while reading letters and diaries for research for her book, *Ties That Bind: The Story of an Afro-Cherokee Family in Slavery and Freedom*. While not the focus of the book, Miles was intrigued and inspired by the strong-willed, outspoken woman.

WHAT'S IN A NAME: Pleasant was bought by the Moravian church in Salem, North Carolina, and taken to the Moravian's mission among the Cherokees in Georgia in 1805. She was known for cussing at her missionary supervisors, criticizing the Moravian church, and feigning illness. "What I found most surprising was that Pleasant, who never chose to be there, outlasted all of the Moravians in the amount of time served at this mission." She died at age 80 in 1838, around the same time the Cherokees were relocated to Oklahoma and the mission was disbanded.

ON RESEARCH: "My research is story-driven. I connect Pleasant's story to the larger narrative of black women's shared experience during slavery."

FROM BEYOND THE GRAVE: Miles was in Winston-Salem in 2007 to give a talk about Pleasant at the church where Pleasant was buried. "We were all startled by this crashing sound right before my talk. Something on the wall, a picture, had fallen. We wondered if it was Pleasant making her presence known."

Is Hippopotamus a Word?

FACULTY MEMBER: **Julie Boland**, a psychology and linguistics professor.

FIELD OF RESEARCH: The basic cognitive processes that underlie word recognition and sentence comprehension.

FIRST, A LINGUISTIC LESSON: Boland says that when people learn grammar, the assumption is that they learn proper grammar, the "King's English," as it were.

A PRIMER ON "SYNTACTIC PRIMING": The priming paradigm goes like this: Someone is shown the word "hippopotamus" and asked if it is a word. When asked a second time, the person would answer affirmatively faster than the first time because a mental representation of the word has been activated. For sentences, if a speaker talks in passive sentences, the responder might be apt to reply in passive sentences as well. That is "priming."

WHICH LEADS TO BOLAND'S CURRENT RESEARCH: Using non-standard subject-verb agreement, she is studying whether it is possible to prime, or coax, ungrammatical sentences out of someone who doesn't speak that way. "I could might pick up some pizza later" or "I could could pick up some pizza later."

EARLY FINDINGS: It is possible to prime these supposedly ungrammatical constructions, suggesting that we "have" these non-standard variants in our mental grammar, along with some usage details (as in, "I wouldn't say that, but my redneck neighbor would"). That's intriguing, Boland says, because most syntacticians ignore this kind of variation. Further study is scheduled to start this fall, "and we'll find out if it's deeply interesting, or if it's just that people notice patterns on the fly," Boland says. "Either way it changes the way we think about our long-term grammatical knowledge."



Mom, Stop Texting and Drive!

FACULTY MEMBER: **Scott W. Campbell**, an associate professor and a Pohs Fellow of Telecommunications in LSA's Department of Communication Studies.

FIELD OF STUDY: Exploring the social implications of new media, with an emphasis on mobile telephony.

HIS "OMG" RESEARCH MOMENT: While interviewing teens for a national study on mobile communication with the Pew Internet & American Life Project, Campbell heard story after story from teens about their parents texting and driving. "They gave accounts of their parent eating with one hand, texting with the other, and having the steering wheel between the knees. I can't explain away that one — it's simply messed up," Campbell says. That led Pew to do another study, which showed 27 percent of adults texted while driving compared to 26 percent of teens, despite the fact that teens text far more often than adults.

ALL THUMBS: Campbell says he is a "moderate" texter, unless it's college football season. "I'm a huge texter on Saturdays in the fall. I text about what's going on in games, how my team (University of Nebraska) is doing."

IS HE PART OF THE 27 PERCENT? "I'm gonna invoke the Fifth," Campbell says with a grin. "My stock response is, 'Of course not, and nobody should.'"

ON RESEARCH: "The Pew study was more exploratory, with guided questions. Usually when I'm doing social science research I have hypotheses, or theoretically driven expectations. That is, I have reasons for expecting that I will find this or that. But surprises like this in exploratory research are fun to encounter too."

Muslims in the Media

FACULTY MEMBER: **Evelyn Alsultany**, an assistant professor in the Program in American Culture.

FIELD OF RESEARCH: The representations of Arab and Muslim identities in the U.S. media.

CURRENT RESEARCH PATH: Examining those representations after 9/11.

CATALYST: "After 9/11, I recall seeing photos of the 19 Arab Muslim hijackers repeatedly on the news and receiving e-mail alerts from Arab and Muslim American civil rights groups about a slew of hate crimes against Arab Americans, Muslim Americans, and Sikh Americans who were often mistaken for being Arab or Muslim. I wanted to examine how 'the enemy' would be portrayed during this time of national crisis."

SURPRISING FINDING: Alsultany says she assumed that Arabs and Muslims would be demonized by the media in order to push through legislation that would negatively impact Arabs and Muslims, such as the wars in Iraq and Afghanistan and the Patriot Act. "While I did find portrayals that demonized Arabs and Muslims, what surprised me was that at the same time I found an overwhelming quantity of sympathetic portrayals of Arabs and Muslims that would shift the focus of my book (due out fall 2012)."

A HAPPY ENDING? Not exactly. Alsultany's to-be-named book shows how positive portrayals of Arabs and Muslims on television and in advertising do the "ideological work" of projecting a post-race United States that has resolved its racial inequalities. But, "I argue that these seemingly positive representations of Arabs and Muslims have contributed to the formation of a new, subtle form of racism, one that projects anti-racism and multiculturalism while simultaneously producing [arguments] necessary to legitimize exclusionary policies and practices." ■

Strange Curation

Behind that door. Down those stairs. No matter where you look, unexpected items abound at the William L. Clements Library.

READ MORE ABOUT THESE AND OTHER UNUSUAL ITEMS
www.lsa.umich.edu/alumni/wire

COLLEGE

A CORNER DISPLAY CASE



Eyeglasses. Angelina Emily Grimké Weld (1805–1879) saw injustices all around her as she grew up in Charleston, S.C. The Clements has preserved the glasses of this American political activist, abolitionist, and supporter of the women's suffrage movement.

IN A DISPLAY CASE



A hair wreath. Not just any 19th-century family hair wreath, this one includes the hair of Dr. Norton S. Townshend — one of the founders of Ohio State University.

IN THE BASEMENT

A print of ... America? Created by Japanese artist Utagawa Hiroshige II (1826–1869), this fanciful version of America looks more like the Netherlands.





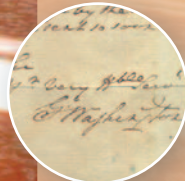
IN THE BALCONY



The lost log book of Christopher Columbus.

Only it's not. This forgery, *My Secrete Log Boke*, purports to be the book Columbus threw overboard on February 12, 1493, which “mysteriously” surfaced 400 years later — in English.

THROUGH THESE DOORS INTO THE RARE BOOK ROOM

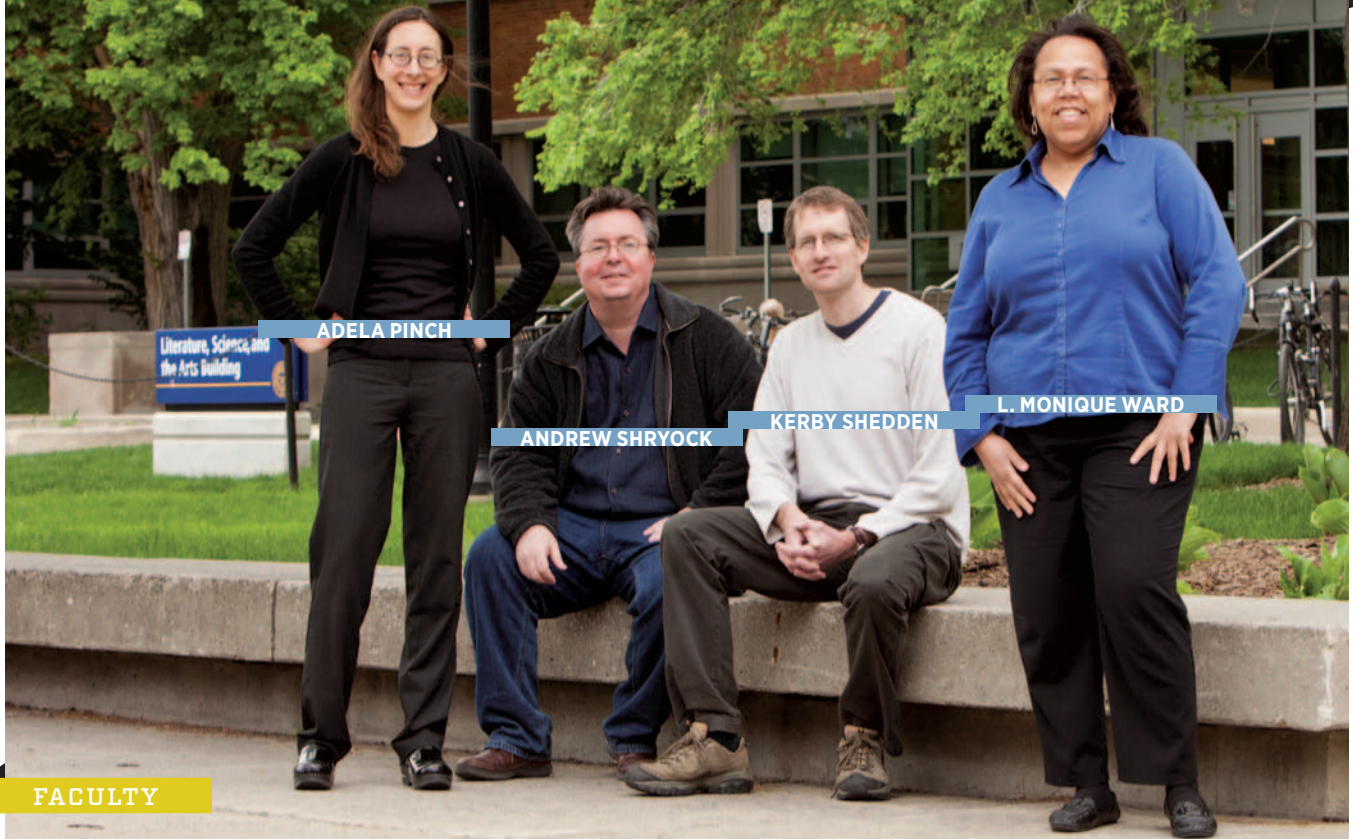


A letter from George Washington: May 29, 1781.

Intercepted by the British, this letter was to George Washington's dentist, asking for cleaning utensils for his false teeth.



A letter with invisible ink. American scientist Benjamin Thompson, a British spy during the Revolution, penned this letter on May 6, 1775, but included a secret message written with a mixture of ferrous sulfate and water — revealed only by placing the paper over flame.



ADELA PINCH

ANDREW SHRYOCK

KERBY SHEDDEN

L. MONIQUE WARD

FACULTY

Eyes on the Prize

The **John Dewey Prize** is awarded to LSA professors who are committed to “scholarly productivity” as well as the “engagement and care” of students, according to the prize description. To these professors, every student in every desk matters, even inside a packed lecture hall. Here’s a look at who they are and what they teach.

Andrew Shryock

Department of Anthropology

MOST POPULAR UNDERGRAD COURSE: Introduction to Anthropology

FROM THE SYLLABUS: This course will introduce you to the comparative study of the human species. We will explore how humans have evolved, the physical variations that mark our populations today, and the complex array of societies and cultures we have created.

Laura Olsen (Not Pictured)

Department of Molecular, Cellular and Developmental Biology

MOST POPULAR UNDERGRAD COURSE: Introductory Biology

FROM THE SYLLABUS: This is one of the first courses in biology for students majoring in the life sciences. The topics covered include molecular and cellular biology, biochemistry, development, and physiology.

L. Monique Ward

Department of Psychology

MOST POPULAR UNDERGRAD COURSE: Developmental Psychology

FROM THE SYLLABUS: This course examines the physical, cognitive, social, and emotional growth of children, adolescents, and adults, and the various factors (e.g., genetics, parenting, peer groups, schooling, and the media) that influence development.

Adela Pinch

Department of English Language and Literature

MOST POPULAR UNDERGRAD COURSE: Jane Austen

FROM THE SYLLABUS: This course provides an in-depth study of all six masterpieces of fiction by one of the most popular English-language novelists of all time.

Kerby Shedden

Department of Statistics

MOST POPULAR UNDERGRAD COURSE: Introduction to Quantitative Research Methods

FROM THE SYLLABUS: This course introduces methods for planning, executing, and evaluating research studies based on experiments and observational datasets. We focus on both study design and interpretation of results. ■

From a **vineyard in Oregon** to **Ontario's chemical valley**, the worldwide LSA impact starts now.

ALUMNI

Dirt Matters

Ronni Lacroute cofounded the Willakenzie Estate in Oregon with a deep respect for the local soil, the local people, and the years-old winemaking processes of the French. The result is a certified sustainable vineyard and winery crafting some of the most delicious bottles on the market.

by Lara Zielin

ON THE TWISTING, ROLLING BACK ROADS

of Oregon's wine country, vineyard signs pop up with predictable regularity. Arrows point the way. Tasting room hours are posted. Logos glint in the sporadic sunshine. The sign for the Willakenzie Estate is no different. And, after an ascent up a steep hill, nothing about the winery itself looks much different from all of the surrounding estates, either — at least at first blush.

But if you pause for a moment on the wide concrete deck overlooking the hills and vines, little anomalies come into view. Solar panels. Native plants. Clusters of trees among the grapes. Wild flowers in the vine rows.

“Our intent was to start a vineyard but keep this land, which was virginal and very healthy, as intact as we could,” says Ronni Lacroute (M.A. '67) from inside Willakenzie's spacious new tasting room.

Once a 420-acre cattle ranch, Willakenzie still keeps livestock in pastures, and almost all the original trees are still on the land. “The trees governed the shape of the vineyard versus the other way

around,” Ronni says. “We left the natural water drainage system intact. We didn't change the landscape simply so it would be more profitable.”

Ronni's commitment to crafting excellent wine with total respect for the land is reflected in the name: Willakenzie is the silty, loamy soil of this place, and Ronni knows everything stems from — and returns to — that very dirt. “Wine is something you create from scratch. You start with bare soil. It will come to express the place where it grew, the wine maker,

whether it was treated with gentleness or harshness. The only way to do it right is to commit to expressing quality at every step of the way.”

So far, the formula is working. In 2008, Willakenzie was named one of the top 100 wineries in the world by *Wine and Spirits* magazine. The pinot varietals in which they specialize — pinot noir, pinot blanc, and pinot gris, for example — are continually ranked by *Wine Spectator* and other industry publications as some of the best available.

It makes sense that someone who says she enjoyed getting her hands dirty from an early age would know how to bring



To promote the health of its famous soil, Willakenzie Estate founders Bernard Lacroute (left) and Ronni Lacroute (below) use composts and cover crops, as well as organic fertilizers and fungicides, rather than synthetic chemicals. The labor-intensive, sustainable viticulture requires a dedicated year-round vineyard crew, each of whom is paid a living wage with benefits.

Approximately 70 percent of Willakenzie's carefully tended dirt yields pinot noir grapes. The remaining acreage is divided between pinot gris, pinot blanc, gamay noir, pinot meunier and a small amount of chardonnay.



forth the best from the soil. Ronni says her grandparents had extensive gardens when she was young. “Most of the vegetables on our table were the ones we grew.” Ronni continued the practice when she was older, serving hand-tended produce at meals.

The connections she made with her food translated seamlessly to wine when, after studying French and traveling abroad, Ronni says she “married a Burgundian.” Her now ex-husband, Bernard Lacroute (M.S.E. '67), grew up in Burgundy, France, in a family that used centuries-old techniques to make a small quantity of their own wine. “I became one of those people who just had to know everything about wine,” she says.

These days, such an interest is nothing new. But back in the early 1980s, Ronni was doing it before wine festivals, tastings, and waiters trained in oenology were commonplace.

In 1991, Ronni and Bernard took an Oregon vacation and were struck by how similar the land was to that of Burgundy, France. When they saw an ad for the Willakenzie land a few weeks later, they immediately bought it.

For the initial planting, they purchased 20 acres worth of grapevines and tended them carefully. They quickly transitioned to organic methods of grape growing as

they added vineyard blocks to reach a total of 125 acres.

By 1995, Willakenzie had its first crop. But rather than sell the grapes “to disappear into someone else’s hands,” Ronni and Bernard decided to build a winery.

They dug the winery into a hillside in the classic Burgundian style and made the whole thing gravity fed. The natural process brings the grapes from the top level down into the fermenters, then from the fermentation level down into the barrels in the cellar. Most other wineries, in contrast, use pumps to move wine on one level, which can damage a wine’s color, aromas, and flavor.

Around the same time, Ronni dove into coursework at the University of California, Davis to learn more about the winemaking business. She took extension classes in viticulture, wine tasting, accounting for vineyards, and winemaking. “I needed the basic vocabulary and information that would allow me to hire the right people for the winery and talk to them knowledgeably,” she says.

Using her newfound expertise, Ronni hired a team of experienced workers and

To sample the varietals, guests of Willakenzie can utilize its spacious tasting room or they may attend wine club functions, wine seminars, or special food and wine pairing events.

paid them a living wage with benefits, a practice she continues today. Beyond human power there is also solar power: solar panels provide 45 percent of the estate’s energy. Most of the remaining energy use is offset by wind credits.

Willakenzie also hosts an eight-acre, rain- and spring-fed irrigation reservoir to feed a drip irrigation system that helps establish young vines. Ronni says Willakenzie developed a carbon dioxide recycling system that takes CO₂ from the white wine fermentation process (it’s a natural byproduct) and uses it to seal open top red wine tanks.

“It takes a huge amount of work,” Ronni acknowledges, “but it’s fun work. If it weren’t fun, it wouldn’t make sense to do it.”

Since Willakenzie began, there has been an influx of new wineries in the Yamhill Valley of Oregon, and one might say in Oregon writ large. But Ronni isn’t concerned about the competition. “The wine boom was bound to happen here. It’s happened in all the great grape-growing regions of the world. But those who don’t have a distinctive product with a sense of place probably won’t last.”

Willakenzie, meanwhile, will still have its same soil. “The tagline here is ‘dirt matters,’” Ronni says. “We’ll always respect our land.” ■





STUDENTS

Inside Chemical Valley

In one of Ontario's most polluted regions, **Lisa Letourneau** studies the effects of neurotoxins on local residents

Growing up in Algonac, Michigan, LSA senior Lisa Letourneau lived about 25 miles away from the smoke stacks and refineries that surrounded the Sarnia 45 Indian Reserve. She heard of the health concerns due to the heavy air pollution. And she was especially curious about the Aamjiwnaang First Nation, the reservation's community of approximately 850 Chippewa (Ojibwe) individuals, because Letourneau herself is Native American; her father's family belongs to the Wyandot of Anderdon Nation.

Fast forward to spring 2010, when Letourneau learned about a research project led by Nil Basu, assistant professor of environmental health sciences at U-M's School of Public Health. Funded by grants from the Great Lakes Commission and U-M's Clinical and Translational

Science Awards program, the research investigates how complex pollutants impact the health of the members of the Aamjiwnaang First Nation. Specifically, they are looking at the distribution of arsenic, lead, manganese, and mercury — known neurotoxins — and how they may affect children’s cognitive development.

Letourneau, who is majoring in sociology and minoring in Native American studies, says that the project immediately “sounded like a perfect fit.” During the school year, she conducted research for credit as part of LSA’s Undergraduate Research Opportunity Program (UROP). She has even integrated her interest in nutrition by analyzing food consumption on the reserve.

“It gives me an opportunity to work with and help people who are a part of a culture that I’m deeply interested in because of my own background,” she says.

The study is being conducted in response to a call for action from concerned individuals and communities. Previous studies have suggested that the reservation’s exposure to pollutants contributes to skewed birth rates (two girls born for every boy) and higher rates of death, miscarriage, and disease. Data from Environment Canada’s National Pollutant Release Inventory suggests that the Sarnia Reserve is ground zero for Ontario’s heaviest air pollution — with nearly 290 million pounds of pollutants

being released from 46 plants surrounding the reservation in 2005.

In total, there are 62 industrial facilities within 15 miles of the reservation — an area commonly known as “Chemical Valley.” The researchers aim to provide and empower the Aamjiwnaang First Nation with data and evidence regarding how the pollution affects the health of those living on the reserve.

Each month, Letourneau and Diana Cryderman, a Ph.D. candidate in the Department of Environmental Health Sciences at the School of Public Health, visit the Sarnia Reserve. They take seasonal samplings from nearby soil and streams, as well as parks and schools and assess metal levels across the border in Port Huron, Michigan, to compare measures.

“I don’t remember actually driving through [Chemical Valley] until my first trip to Aamjiwnaang. I was surprised at how immediately the pollution affects you. Visually, there are stacks and flames everywhere. The smell is overpowering, and I often develop nagging headaches when we spend a lot of time outdoors there — whether this has to do directly

with industry or not, I am not sure,” says Letourneau.

The researchers also meet with the families participating in the study. These meetings often involve developmental testing and collecting blood and hair samples. Letourneau says they’ve become “regulars” at the reservation, visiting at least once each month. She has found that taking four semesters of Ojibwe, the native language of the Aamjiwnaang First Nation, has aided these interactions.

“Although I only know some Anishinaabemowin (the word for the Ojibwe language, in Ojibwe), it has helped me establish a connection with study participants. Only some have noticed that I speak a little bit of it, but it does allow for a more personal connection,” says Letourneau.

As part of UROP, Letourneau attends bi-weekly discussion groups to share stories and lessons learned.

“[This] has given me fieldwork experience that I may not have been able to have until I was a graduate student,” says Letourneau. “It has really given me an idea of what I’d like to do in the future.”

Those plans include graduation in 2012 and a master’s degree in public health, focusing on a program in nutrition.

“I want to find a way to combine my interest in nutrition with my interest in Native American culture,” she says. “That would be my ideal job.” ■

Lisa Letourneau (right) takes soil samples at a park in Ontario’s Sarnia Reserve. Scores of factories in nearby “Chemical Valley” may be harming human health. “[Chemical Valley] is literally across the street from houses and community buildings,” she says.



by Katie Vloet



Wide-Open and Close-Knit

The plains and people of North Dakota come to life in Brenda Marshall's new book

THOUSANDS OF YEARS AGO, the Red River Valley in the northern Plains states was a glacial lake. It beget some of the richest farmland in the nation, but also a challenging landscape that tested the endurance and resolve of all its settlers: men and women, bonanza farmers and homesteaders, people willing and unwilling to reach beyond their grasp.

Before Brenda K. Marshall, an English Department lecturer, knew anything else about the novel she set out to write — including the characters and the plot — she knew one thing: This was the setting for the story.

“I was trying to understand how a regional psyche, a personality, is established,” says Marshall, who grew up in the Red River Valley in eastern North Dakota. “Dakotans believe they are superior because they can live in this place: hearty, strong, resilient, independent. Yet there’s also an incredible defensiveness. We don’t have political power, people on the outside don’t think we’re important.

“That sense of, ‘We can do anything! Nobody likes me!’

always fascinated me, and that really grew out of the era I write about in *Dakota*.”

Dakota, Or What’s a Heaven For (North Dakota Institute for Regional Studies, 2010) is Marshall’s second novel. It is set in the Dakota Territory during the late-19th century, when wealthy industrialists from the East picked up large parcels of land and local homesteaders acquired much smaller plots, creating an inevitable tension between the two groups.

The epic story features the intertwined lives of many characters, including Frances, a woman who marries a man so she can be close to his sister, whom she loves; and Kirsten, the daughter of Norwegian homesteaders who becomes an important part of Frances’s life.

Marshall knows the modern version of the Red River Valley well, and often visits family members who still live there. She recalls growing up in a place both wide-open and close-knit. “I rode my pony 10 miles away and felt like I was in the Wild West, but someone always knew where I was.”

Dakota is a finalist for a High Plains Book Award and received a silver medal for Best Regional Fiction Mid-West from Independent Publisher Awards. Marshall’s publicity has included a video trailer for the book, in which she explains that the second part of the novel’s title is taken from a Robert Browning poem, *Andrea del Sarto*, which asks, “Ah, but a man’s reach should exceed his grasp, or what’s a heaven for?” Says Marshall: “In this novel, there is a good deal of reaching and grasping, but it’s a dangerous thing for a woman’s reach to exceed her grasp in this place and time.”

WATCH THE *DAKOTA* BOOK TRAILER
www.lsa.umich.edu/alumni/wire

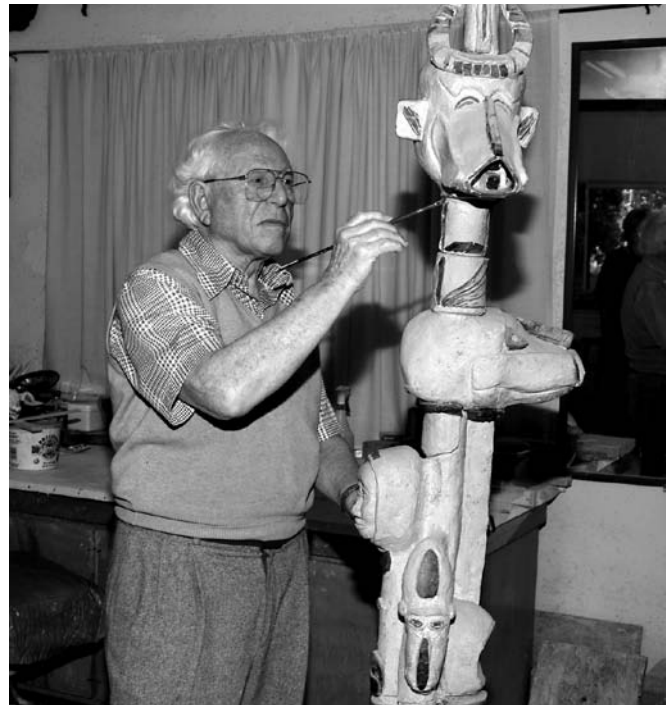


ALUMNI

Glitter in Your Golden Years

Facing retirement, **Joan Kadri Zald** ('56, M.S.W. '59) went searching for role models who didn't let age stop them from pursuing their passions and embarking on new adventures.

IN HER 60s, JOAN KADRI ZALD WAS HEALTHY, ACTIVE —and worried. She had stopped taking new clients in her social work practice and was on her way to retiring. Burdened by negative stereotypes of seniors and memories of family



(FROM TOP LEFT, CLOCKWISE) Robert L. Kahn, Lois Kivi Nochman, Harry Steinberg, Lois Schwartz.

As people live longer, many are looking for new ways to enrich their retirement years. According to a survey by Harris Interactive for AIG SunAmerica, Americans ages 55 to 64 say they want to continue to learn (81 percent), to try new things (70 percent), to travel (65 percent), and to have a new hobby or interest (63 percent).

members whose lives deteriorated in their later years, she wondered how retirement would affect her.

"I was looking for good role models," she says. The search led her to 37 retirees, whom she photographed and interviewed for her book *Portraits of Creative Aging: Living Longer and Better* (Corby Publishing, 2010). Nine of her interviewees are U-M graduates, and four are featured here, sharing their stories adapted from Zald's book. Their personal tales "illuminate and inspire those seeking to put glitter into their golden years," Zald says.

/ ROBERT L. KAHN (top left)

FORMER CAREER: psychology professor

CURRENT PASSION: illuminating successful aging

When he faced mandatory retirement at age 70, Robert Kahn ('39, Ph.D. '52) was teaching both in LSA and in the School of Public Health, as well as doing research on organizational behavior at the Institute for Social Research. Upon retirement, he joined a research team studying age, funded by the MacArthur Foundation. The results of the research were published in the book *Successful Aging* (Dell, 1999), on which Kahn collaborated with John Rowe, M.D. Their primary finding? The way you live, not your genetic makeup, determines how successfully you will age.

IN HIS OWN WORDS: "I began a whole new life. Not only was the [aging] research new for me, the collaboration with physicians and geneticists was new for me as well. It was intellectually exciting and it also got me in touch with a group of relatively young people. It is marvelous in your old age to acquire a bunch of young exciting colleagues and to be interacting with them. I have also become a letter writer in my old age. Letter writing may be an 18th-century habit, but the 18th century wasn't called the 'Enlightenment' by mistake."

/ LOIS KIVI NOCHMAN (top right)

FORMER CAREER: community college English instructor

CURRENT PASSION: swimming

Lois Nochman ('46, M.A. '49) enjoyed swimming laps at the YMCA pool. After teaching English for 30 years, she accepted an invitation to swim for the YMCA team. Soon, she joined other, more advanced teams that participated in the U.S. Masters and World Masters swimming competitions. Since, she has set 111 national records and 60 world records in the 70–74, 75–79, and 80–84 age brackets. In 2010, she became the first female swimmer from the state of Michigan to be inducted into the International Masters Swimming Hall of Fame.

IN HER OWN WORDS: "I have always loved water — watching it, moving over it, and being in it. When I was growing up in Ann Arbor in the 1930s and '40s, there were no public pools or school pools. Girls were allowed to swim at the U-M Union men's pool for fifteen cents from 8:00 A.M. to 11:00 A.M. on Saturdays, if we entered the building through the side door. Women and girls weren't allowed in the front door then.

"The meaning of swimming to me is a complex one. It's very Zen. I become one with the water. I think that's true of anything you master; you become it."

/ LOIS SCHWARTZ (bottom left)

FORMER CAREER: instructional technologist

CURRENT PASSION: music and networking

After running a small company in New York City, longtime opera lover Lois Schwartz ('57) now welcomes U-M graduates to the Big Apple, especially those who are pursuing careers in music. As "Auntie LoLo" (which she named herself after the eccentric character Auntie Mame), Schwartz attends their events, introduces them to people who can help launch them, and sometimes lets them stay in her apartment. After doing this informally, she became music chair for the U-M Entertainment Coalition in New York. Schwartz, who never married or had children, thrives on this work, which combines her love of music with her desire to nurture young artists. She was awarded the U-M Distinguished Alumni Service Award in 2007.

IN HER OWN WORDS: "When I was in my fifties, I attended a panel discussion on the need for business professionals in the arts. I volunteered at the New York City Opera and attended the arts administration program at Marymount College. My internship was at American Opera Projects, an organization that encourages young composers. I've had many different jobs in my life that may not seem related, but one thing I've enjoyed in all of them is putting people together. I'm like a matchmaker. I just love it when I put extraordinary people together and they hit it off."

/ HARRY STEINBERG (bottom right)

FORMER CAREER: physician

CURRENT PASSION: sculpture

When Harry Steinberg ('35, M.D. '36) and his wife, Pat, were searching for a piece of outdoor sculpture, they met Michael and Claire Hanzakos, talented artists whose work had been shown in museums and galleries nationally. As an art enthusiast, Harry began to study with them. After both Pat and Michael passed away, Harry married Claire. On the day he retired at age 74, his avocation became his work. His son, a builder and architect, constructed a studio for Harry and Claire. It became a center for a community of other artists, too. Harry, now 101 years old, exhibits his work in several galleries in Los Angeles, where he lives.

IN HIS OWN WORDS: "My work is both traditional and very non-traditional. I work in clay and an offshoot of that has been sculpture made from found objects. People now bring me all sorts of objects such as wood, glass, and metal to use. It has become a challenge and an adventure to take objects and change them into something else. I keep trying new things, and I'm not standing still. I still feel emotional excitement about my work, and I look forward to each day and the job of creation. Our house and garden are filled with our work as well as the sculpture, masks, and pots we have collected. Museum and university groups frequently come to tour our house and grounds." ■

by Rachel Harkai

Houston's 7.5-mile MetroRail line has an average daily ridership of approximately 45,000. About half of all MetroRail riders have a car available to them but choose mass transit instead of driving.



ALUMNI

The Return of Rail?

Rising gas prices. Bad roads that are always under construction. Expensive, often unreliable cars. If there's a better way to get from A to B, it might be by train, a mode of transportation that's making a surprising comeback in U.S. cities.

"ANY CUSTOMER CAN HAVE A CAR PAINTED ANY COLOR that he wants, so long as it is black," Ford Motor Company founder Henry Ford said famously in his 1922 biography. At the time, fewer than 20 percent of Americans owned automobiles.

Today, only nine percent of American households are without a car. It costs an average of \$9,700 dollars per year for a household to drive — a figure that will only rise as non-renewable fossil fuels run out and gas prices inflate.

Chris Frey ('99, M.S.I. '01) serves as board president of Transportation Riders United (TRU), a mass transit advocacy non-

profit focused on the Detroit region. According to Frey, a growing number of Americans believe that current transit technologies are not working — not just for individual families, but for Americans writ large.

LSA alumni like Frey are among those looking for alternatives to automobiles by rethinking and even reinventing the train — which may, in fact, be our best hope for getting around in the future.

DETROIT AND THE STREETCARS OF YESTERYEAR

Frey and TRU were part of a recent effort to bring light rail to Detroit. In the 55 years since Detroit shuttered its last streetcar, public transit has been limited to an increasingly sporadic array of bus routes. This past June, however, both city and federal governments approved a final route for light rail service that will run from Detroit's downtown to its northern border.

"Light rail will be the first and is the most definite project [in the area]," says Frey. "It will be up and running by 2016, possibly sooner." Once complete, the modern electric train will travel down the center of Detroit's historic Woodward Avenue, making stops at strategically selected commercial and residential areas.

In an area where up to 71 percent of millennials (residents ages 18-35) say that they never use public transportation, proponents of light rail hope that the project will significantly change how Detroit's citizens get around. In Frey's opinion, having options is a quality of life issue.

Still, there are naysayers. Frey says one of the main criticisms of light rail is that the technology isn't advanced. "They say that it is essentially the same as Detroit's streetcar system," he says.

While it is safe to say that current light rail systems and streetcars of yesteryear are more similar than they are different, today's trains boast many improvements,

including less frequent stops, which allow for a smoother, faster ride; the potential for cleaner energy sources; increased passenger capacity, and improved accessibility to accommodate a diverse range of riders.

"The irony of rapid transit," says Frey, "is that a lot of it isn't really new." In fact, many rapid transit projects simply involve improving technology and infrastructure that already exists.

BEYOND BULLET TRAINS

Another major focus of the transit improvements in Southeast Michigan is to accelerate Amtrak.

"Amtrak service between Detroit and Chicago will soon be much faster," says Richard Murphy (U-M '02, M.U.P. '05), transportation programs coordinator for the Michigan Suburbs Alliance. His proclamation should come as good news for passengers of Amtrak's Wolverine line, which connects the two cities with 304 miles of track. In recent months the route has been criticized for regular delays, multi-hour stops, and train speeds as low as 25 miles per hour. "Much of the trouble," says Murphy, "has been speed cuts due to freight maintenance."

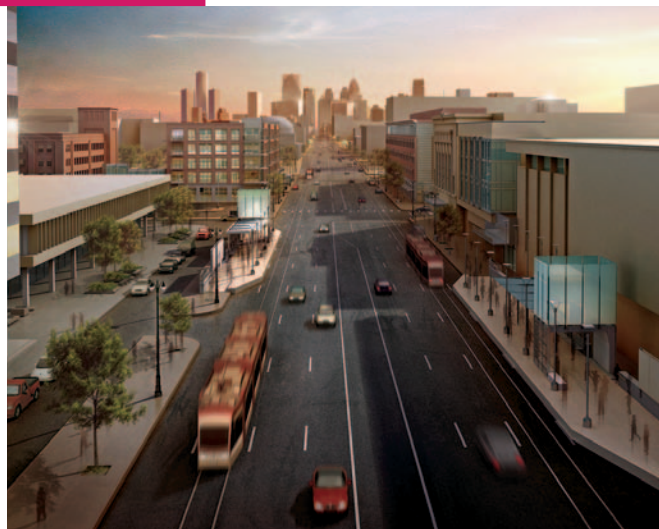
Outside of the Northeastern United States, Amtrak operates on rails owned by freight railroads. This means that Amtrak passengers are subject to the schedules and maintenance of slower freight trains with which they share tracks.

But that could change soon. In 2010, the Michigan Department of Transportation received a \$150 million grant to purchase the tracks between Kalamazoo and Dearborn from private owner Norfolk Southern. Another \$196 million was allocated for track improvements that could bring speeds up to 110 miles per hour, which would bump the corridor into rapid transit status.

Between Detroit and Ann Arbor,

(LEFT) **Woodward Avenue, 1956.** After 93 years of service, Detroit's streetcars took a final ride down the city's central avenue before being replaced with 150 diesel buses. Detroit eventually sold the retired streetcars to Mexico City, Mexico.

(RIGHT) **A rendering of the proposed Woodward Light Rail line in Detroit.** The city's full 9.3-mile system is slated for completion in 2016.





TRANSIT TERMINOLOGY

High-speed rail, light rail, rapid transit—they all involve getting people out from behind the wheel of a car. But all transit systems aren't created equal.

Here's how they differ:

TRADITIONAL RAIL

The first locomotives were powered by steam generated from burning coal, wood, or oil. By the mid-1900s a combination of diesel engine and electric generators had become more reliable than steam engines and, thus, more common. Today, Amtrak's passenger trains run on a combination of diesel and electric power.

RAPID TRANSIT

Trains aren't the only kind of transit that can qualify as "rapid." Motorbus services can garner the distinction too, as long as they operate on a completely separate rail or road from other motor vehicles and pedestrian traffic. Rapid transit systems generally have a large passenger capacity and serve urban centers.

HEAVY RAIL

More commonly called the metro or subway, heavy rail is an electric railway equipped to handle heavy volumes of traffic. Heavy rail operates on exclusive rails that are separate from other vehicles and from foot traffic, and can reach relatively high speeds.

LIGHT RAIL

Light rail service typically involves passenger cars that move on fixed rails and operate using electric power. Light rail usually has a "lighter volume" than heavy rail (thus the name) and sometimes runs on street-level, sharing its rail space with pedestrians and vehicles. These systems also may be called trolleys or streetcars.

HIGH-SPEED RAIL

High-speed railways use dedicated rails and electric power to serve densely populated corridors at speeds of 124 miles per hour or greater. China's newest high-speed trains average 222 miles per hour. Amtrak's Acela Express train, which runs from Washington, D.C., to New York City, is America's fastest, reaching speeds up to 150 miles per hour.

the train will make multiple stops in communities like Ypsilanti and Dearborn, as well as at the Detroit Metropolitan Airport, providing commuters who are currently confined to their automobiles a real alternative.

“The end result won't be 200-mile-per-hour bullet trains,” says Murphy, “which would require building new tracks. But between Detroit and Chicago there will be much faster, more reliable service.”

ROADBLOCKS AND OPPORTUNITIES

Even in areas where plans and resources for rapid transit seem ready to be put into action, questions remain unresolved, more work is required to connect the dots, and progress can be far from streamlined and efficient. The biggest question, says Frey, is always, “how are we going to fund it and how are we going to govern it?”

Many Californians have been asking these same questions since voters approved a nearly \$10 billion bond issue to build a true high-speed rail system in 2008. Since then, the state has received additional billions in stimulus and funding from the federal government. But in order to be realized, California's plans are still in need of more support from federal and local governments, as well as significant investment from the private sector.

“We need a lot more federal money and private money,” says David Crane ('75). From 2004-2010 Crane served as special advisor to then-California Governor Arnold Schwarzenegger. Crane has been on the board of the California High-Speed Rail Authority since 2007.

“We have almost 40 million people with an immediate and regular need for transportation,” says Crane. Not only does California boast the heaviest automobile traffic on any stretch of America's interstate highways, it's also the most populous state in the nation.

If high-speed rail isn't made to be a priority, he argues, future generations will suffer. “We live in a very competitive world,” says Crane. “We're competing with countries that have more advanced rail systems and very fine education systems. If we put an insufficient amount of money into education and infrastructure, when the exact opposite is happening other places in the world, we end up with fewer opportunities.”

Crane puts it on the shoulders of millennials to urge decision makers to rethink priorities. Frey is in agreement. “Let your elected officials know that you want it,” says Frey.

Though Crane may be separated from Frey and Murphy by distance and demographics, the three are fighting a similar battle: to make quality transit available as fast as possible.

“Of all the causes to work toward,” says Frey, “this is one that is doable. It really can happen.” ■

C.C. Little Had a Mouse

In 1925, **Clarence Cook Little** became president of U-M. His time here was fleeting. His work standardizing science experiments and laboratory mice was not.

BEFORE C.C. LITTLE, researchers got their test animals wherever they could find them: pet stores, barns, garages. This was good business — nothing is cheaper than a free mouse — but bad science: Identical results are impossible without identical test subjects.

C.C. had grown up breeding dogs and knew that there was much less variance among inbred pups. Some terrible traits surfaced, but through generations of careful mating and culling, those hidden derangements could be skimmed away.

So when C.C. came to Harvard in 1909 he did just that: In three years he bred 10,000 identical mice, perfect little test subjects.

Back then, many researchers believed in a “cancer virus.” C.C. did not because he could breed mice that almost always developed tumors, or others that almost never did so. They didn’t need to “catch” cancer. By the time he became president of the University of Maine in 1922, it was obvious to C.C. that cancer was

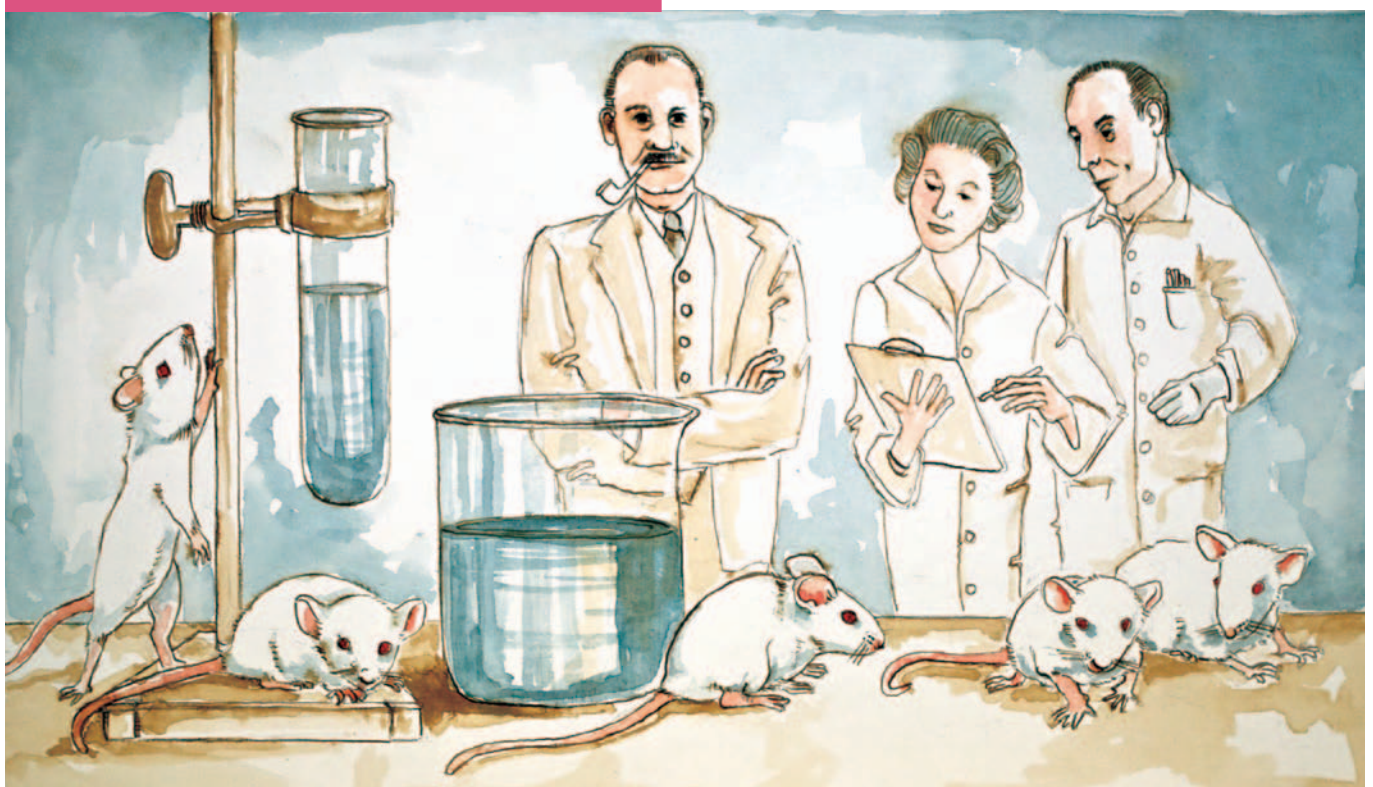
rooted in a “mysterious ‘derangement’ within a single body cell.”

Detroit automobile executives met the athletic, chatty C.C. in Maine during east-coast vacations. The Detroit men understood C.C. because they understood the genius of the assembly line: identical pieces, identical processes, reproducible results. “[They] saw that [my mice] added efficiency, accuracy, and repeatability to biological work,” C.C. wrote.

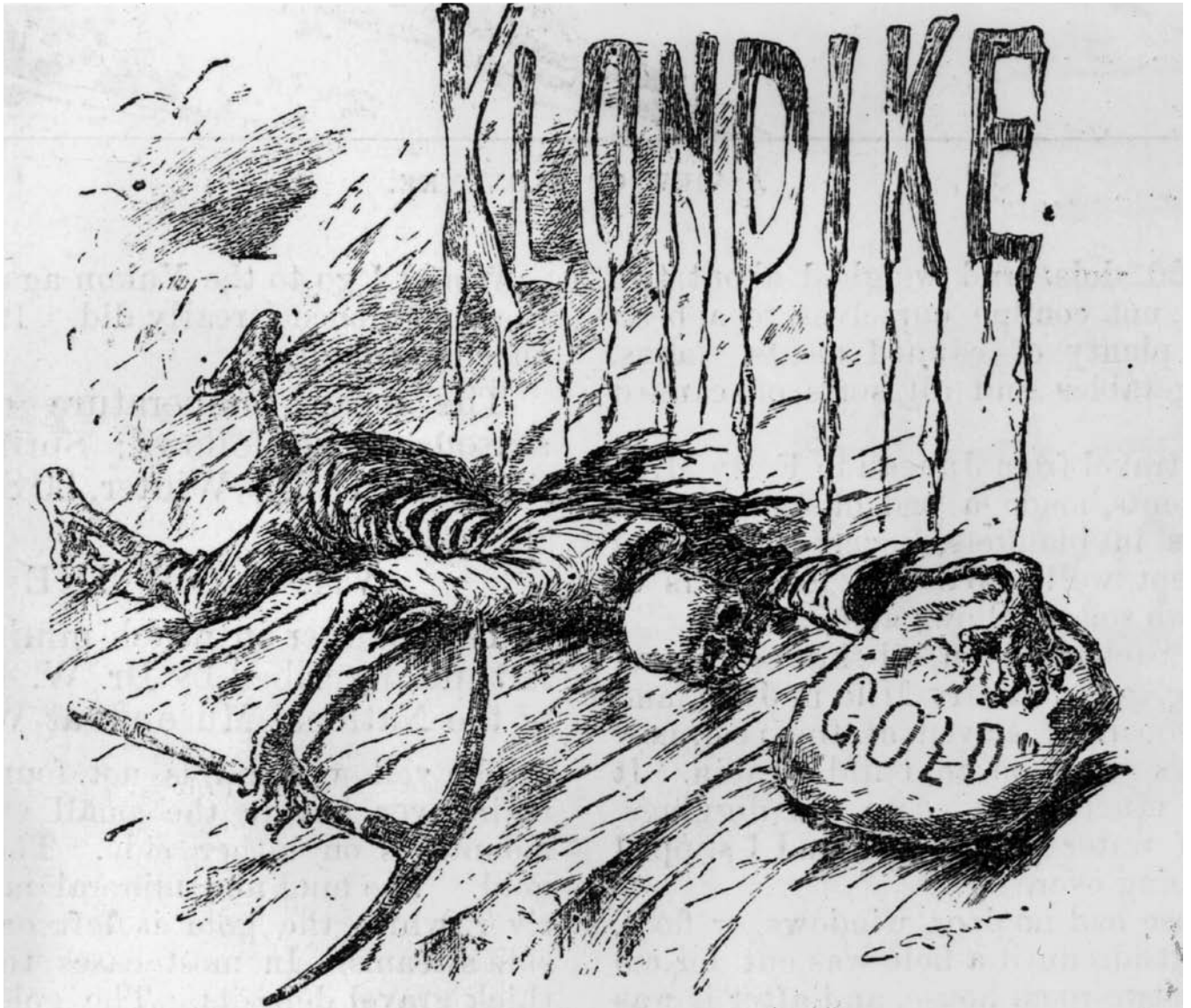
The Detroit men lured C.C. to Michigan, made him president of the University, built him a lab. This did not go well. C.C.’s research continued smoothly, but he clashed with everyone. C.C. believed in genetics, in eugenics and euthanasia, in women’s rights, in preventing unwise pregnancy through birth control, and in Prohibition. The Regents and trustees grew tired of seeing the University in the newspapers. The students grew tired of drinking fruit punch at parties.

After four years at Michigan, C.C. resigned and moved back to Maine, back to his mouse laboratory, and poured his energy into making mice a tool scientists could use to help people. By 1944, he was shipping 9,000 cloned mice to researchers every week. In 1978, he posthumously received the Cancer Research Institute William B. Coley award for advancing cancer research. ■

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by James Tobin



From the *New York Herald*.]

[July 24, 1897.

ALUMNI

WHAT PROFITETH IT?

Starved or Drowned or Chased Down by Wolves: The Disappearance of Dutch Ferbert

A great halfback and coach of the pre-Yost era went off to find millions in Alaskan gold — **but did he?**

IN THE SPRING OF 1900, football fans in Ann Arbor got bad news. After three winning seasons, word was going around that the Wolverines' 26-year-old coach — Gustave “Dutch” Ferbert — would not be back in the fall. He was heading for the Yukon gold fields, he had told friends, and he would come back with a fortune or not at all.

In Seattle, with a couple of pals, he boarded a steamer for the frigid wilderness where prospectors were panning streams in the greatest gold rush since the 1850s in California. Early reports placed him in the Klondike region of the Yukon Territory, where the first strikes had been made in 1896. But by 1900 the dwindling Klondike claims were surpassed by new strikes in Alaska's impossibly remote Seward Peninsula, near the Arctic Circle. Ferbert's remaining prospecting buddy, Jack Noyes, was ready to quit the Yukon, but Ferbert was still game. He'd try his luck in the new gold fields near Nome, he told Noyes. The two parted, and Noyes sailed for Seattle.

Then Dutch Ferbert disappeared.

A year went by, then two. No news came to Ann Arbor or to Ferbert's mother in his hometown of Lakewood, Ohio, near

Cleveland. Letters to him were returned stamped “Uncalled for” or “Address unknown.” “Where is ‘Dutch’ Ferbert?” sports pages demanded.

“If Ferbert is alive,” his friend George Haller said, “some of us would surely hear from him.”

IN THE 20 YEARS that varsity football had been played at Michigan, Ferbert had

been one of the greats, a quarterback and right halfback who helped the squad to a four-year record of 33–6–1. Stocky and no one's idea of handsome, he was “a bulldog in courage,” a sportswriter said. At 150 pounds he was small even by that era's standards, but “he could send that 150 pounds into the line with all the force of a battering ram.”

The fall after his graduation in 1897, he



(OPPOSITE PAGE) **24th July 1897:** A *New York Herald* cartoon illustrating the destructive power of gold fever in relation to the Klondike gold rush.

(ABOVE) **A long line of gold prospectors** (circa 1898) climb the Chilkoot Trail through Chilkoot Pass during the Klondike gold rush. The temporary tent settlement called “The Scales” sits on a flat below.

(LEFT) **The 1893 University of Michigan** football team. Dutch Ferbert is second from the right in the second row.



CHAMPIONS OF THE WEST

Dutch Ferbert hardly ranks with the household names of Michigan football history. But it's because of Ferbert, as much as anyone, that we sing of the Wolverines as “the champions of the West.”

On November 24, 1898, in the last seconds of the season-ending game at Chicago, Michigan—coached by Ferbert in his second season—went ahead by one point to win its first Western Conference championship. In the stands was U-M student Louis Elbel, and in the euphoria of the train ride back to Ann Arbor, Elbel jotted lyrics to a song in praise of “The Victors” of that day.

For a brief period, “The Victors” was ousted as the Michigan fight song by “Varsity.” Read about Michigan's other fight song on p. 57.

was back in Ann Arbor as head football coach. In his first season the team won six, lost one (to Chicago) and tied one—a scoreless contest against an Ohio Wesleyan team coached by one Fielding H. Yost, then 25 years old. The next year was Ferbert's best, with the team seizing its first championship of the Western Conference (forerunner of the Big Ten). Ferbert finished the 1899 season, his third, with an overall record of 24–3–1.

Then came the itch for gold, the lure of the north—whatever it was that Robert Service, poet of the gold rush, called “The Spell of the Yukon.”

FOR THE NORTHERN PROSPECTORS, the odds against riches were long. In the Klondike rush alone, 100,000 tried to get there, 40,000 made it, and only 4,000 found any gold at all. And it was brutally dangerous, as Jack London's classic stories make clear.

In 1904, hopes for Ferbert's survival rose when a member of the faculty received a letter from the adventurer. Then he dropped out of sight again. Reports filtered back that he had starved or drowned or been chased down by wolves.

Finally, in the fall of 1909, the sports page of the old *Chicago Record-Herald* carried a blaring headline: “‘Dutch’ Ferbert Makes Fortune in Alaska.”

The story said Ferbert was in Seattle. There he had written an unnamed friend to say he was back in the United States with “enough of this world's goods to

keep the wolf from the door the balance of his life,” and had claims in Alaska's Candle Creek region worth a million dollars or more.

He had struggled for years, the story said. One claim after another had failed to pan out, and he had scraped by on earnings from odd jobs. Then came his big strike near the tiny town of Deering, on the Kotzebue Sound, where he staked out “some of the best claims in the region.” Why family and friends had barely heard from him in all those years remained a mystery.

Was it all true? There seems to be no way of knowing for sure. Newspapers of that era were notorious for embellishing scarce facts for the sake of a good story, and the *Record-Herald's* article attributed its information to not so much as a single named source, let alone Dutch himself. And a man gone nearly 10 years may have felt the need to exaggerate his deeds to account for lost time.

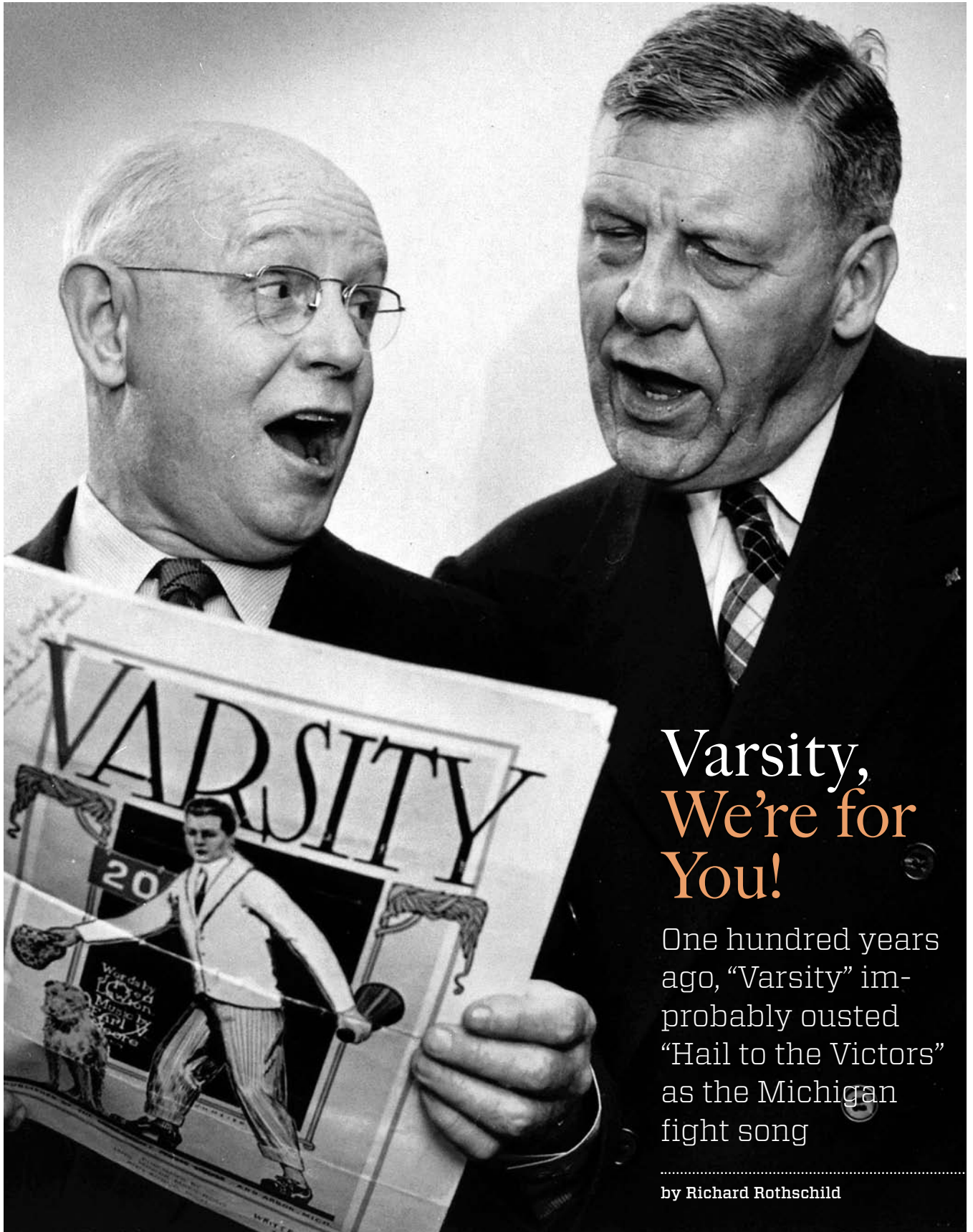
The record of Ferbert's later life is frustratingly thin. When he died of a heart attack in Cleveland in 1943 at the age of 69, brief obituaries noted his Alaskan adventure but said he had spent the rest of his career as a mining engineer, not as a millionaire who had made it for life when young. He never married.

On his death certificate there was a blank for “Industry or business in which work was done.” On that line, whoever filled out the form wrote one word: *Coach*. ■

High Street in Canada's Dawson City, a gold mining town, on January 1, 1898.



From **song-writing alumni** to **campus myths**, our interactive ride accelerates this second.



Varsity, We're for You!

One hundred years ago, “Varsity” improbably ousted “Hail to the Victors” as the Michigan fight song

by Richard Rothschild

IT'S THAT OTHER MICHIGAN FIGHT SONG, the one that's often played right before the iconic "The Victors."

One hundred years ago this fall, "Varsity" was written by Earl V. Moore ('12, M.A. '16) and J. Fred Lawton ('11). It made its debut on October 6, 1911, in front of 2,000 students at University Hall to immediate acclaim.

And, for a time, it was *the* Michigan fight song.

That's like saying Handel's *The Messiah* is better known for, "Lift Up Your Heads, O Ye Gates," rather than the rousing "Hallelujah" chorus, but "Varsity" is the song that fans heard at Michigan athletic events in the 1910s.

"It should be remembered that in 1911 'The Victors' did not occupy the pride of place that it has today," says Joseph Dobos (U-M '71), a longtime historian of Michigan music matters. "From 1900 until around 1909, it had disappeared from campus.

"It could be found on piano sheet music, but it was not played by the University band at football games and rallies. The two most revered campus songs at the time were 'Yellow and Blue' and 'Hot Time in the Old Town Tonight' [with special Michigan lyrics]."

Also, Louis Elbel's final lyrics to "The Victors," ("the champions of the West")

(PREVIOUS PAGE) "Varsity" creators Earl V. Moore and J. Fred Lawton sing their beloved tune on its 25th anniversary.

(BELOW) Kickoff of the 1912 Michigan-Cornell Game at Ferry Field, where "Varsity" instead of "The Victors," would have been featured as the Michigan fight song.

didn't make sense after 1907. The words referred to the Western Conference, of which Michigan had been a charter member since 1896. But in 1907, angered over rule changes for recruiting and eligibility, legendary football coach Fielding Yost took Michigan out of the Western Conference. The Wolverines played as an independent for the next 10 years before rejoining what would ultimately become the Big Ten.

Figuring Michigan needed a more contemporary fight song, Moore, who was studying in the School of Music (then a private Ann Arbor conservatory), and Lawton put their heads together.

Dobos said that while looking at an advertisement posted on a streetcar, Lawton was inspired for a verse:

"Varsity, we're for you.

Here for you to cheer for you.

We have no fear for you, Varsity!"

Once they reached their streetcar stop near Lawton's house, they rushed inside to give birth to their creation.

"When the song was finished [Lawton and Moore] played it over and over [on the piano], and Lawton's family came to listen," Dobos wrote in "The Story of Varsity," a short article for the Michigan Band Alumni Association. "Soon the whole family was marching arm in arm, singing the chorus of 'Varsity.'"

"Varsity" went public a few days later for the weekly Friday night mass meeting at University Hall.

"As Moore played the opening syncopated chords of 'Varsity,' from the console of the Frieze Memorial Organ, the assembled throng roared its approval," Dobos wrote.

"The song was a hit; encore after encore was demanded."

Also on hand was Eugene "Ike" Fischer, the conductor of the Michigan band. Dobos said Fischer immediately recognized the attraction of "Varsity" and agreed to play the song the next day for the Michigan-Case football game. The song was played at halftime of the Wolverines' 24-0 win.

The Michigan Daily described "Varsity" as "stirring" and predicted it would be "one of Michigan's most popular songs."

"It's a great tune," says Carl Grapentine, who is entering his 42nd year as the voice of the Michigan band at football games. "Most schools would be happy to have it as their fight song. But Michigan has 'the greatest college fight song ever written,' according to John Philip Sousa. Just an embarrassment of riches, I guess."

"The Victors" began being used again when Michigan returned to the Western Conference in 1917, and by the 1920s it was being played more often than "Varsity."

But that doesn't diminish the legitimacy of "Varsity." Unlike "The Victors," which has a melody similar to "The Spirit of Liberty March," by George Rosenberg, "Varsity" is a wholly original tune.

"Out of the dozens of Michigan songs that were written between 1890 and 1920," Dobos says, "'Varsity' survived and is still revered." ■



WATCH THE U-M MEN'S GLEE CLUB SING "VARSITY" AND "HAIL TO THE VICTORS" www.lsa.umich.edu/alumni/wire





Each U-M building has a story, although some are filled with more folklore than fact. Test your U-M knowledge and see if you can separate veracity from balderdash in this campus quiz.

Fact or Myth?

FACT OR MYTH? *Answers below right.*

1. The School of Dentistry was designed to **look like a molar** from an aerial view.

2. You can occasionally see **ROTC students rappelling down** the tall portion of the School of Dentistry.

3. At the main entrance to the Law Quad, **six former University presidents are represented as Gargoyles.**

4. In the 1930s, U-M doctors conducted autopsies on the fourth floor of the C.C. Little building, which at that time was part of the University Hospital. When renovations began in the early 1990s, **30 bodies were found preserved in formaldehyde.**

5. When West Hall was built, the University included a **300-foot basin**, constructed into the building's foundation, to study marine hydrodynamics.

6. When **indoor plumbing** came to Ann Arbor, it was installed in the University President's House first.

7. The Dennison building is sinking one inch every year—**it was designed by an engineer from MSU.**

8. The Fleming building was designed to be "riot proof" since it was built in the politically active era of the 1960s. This includes emergency access to the **steam tunnel network connecting the building to the President's House** as well as walls that lean outward so ladders cannot be placed against them.

9. The Betsy Barbour residence hall was built to be the ideal dorm, after **poor campus living conditions caused tuberculosis** and the death of a Chinese student in the early 1900s.

10. State Street got its name from a proposal to put the **State Capitol in Ann Arbor.** While Lansing may have won that honor, Ann Arbor got the best university instead.

11. When the Michigan Union opened in 1904, **the front doors were off-limits to women.** Females could only enter if they were escorted through a side door.

12. The Museum of Art building was originally built to honor U-M alumni who died in the **Civil, Mexican-American, and Spanish-American wars.**

13. **If you step on the Block M** on the Diag before your first blue book exam, you'll fail it.

14. The "UGLi" was so named in part because of the **unattractiveness of the Shapiro Undergraduate Library** before its renovations.

15. Part of the Randall Laboratory has a separate foundation and its own walls for specialized experiments requiring **controlled temperature, freedom from vibration, and a natural shield for radiation experiments.**

16. There's a spot next to the Dana Building that is untouched. This natural garden shows what the area would look like **if humans never intervened.**

17. **The bronze puma statues** outside the Museum of Natural History roar whenever Michigan beats Ohio State in football.

- ANSWERS:**
- 1. Myth
 - 2. Fact
 - 3. Fact
 - 4. Fact
 - 5. Fact
 - 6. Fact
 - 7. Fact
 - 8. Myth
 - 9. Fact
 - 10. Fact
 - 11. Fact
 - 12. Fact
 - 13. Myth
 - 14. Fact
 - 15. Fact
 - 16. Fact
 - 17. Myth
4. Myth
5. Fact: Baisn pictured at the bottom right of this page.
Leroy Burton.
Burrill Angell, Marlon (BOTTOM ROW) James Henry Simmons Freize; Henry Phillip Tappan, Hutchins; (MIDDLE ROW) O. Haven, Henry Burns page: (TOP ROW) Erastus 3. Fact: Pictured on previous 2. Fact
1. Myth



PHOTO Courtesy of Bentley Historical Library



Vacationing in a Wasteland

Ruins in the shadow of
Chernobyl, now open to tourists

IN 2010, DREW PETERS ('96) JOINED A TOUR group of mostly young men carrying handheld Geiger counters. What he saw in the virtual ghost town of Prypiat in Ukraine — which was vacated after the 1986 Chernobyl disaster — was a curious landscape of vacant hammer-and-sickle-adorned Communist-era buildings, trees growing in apartment buildings and around a Ferris wheel, and scenes that could have been sets built for the History Channel show *Life After People*.

“Human beings can do a lot of damage, but then the trees take over,” says Peters. “Some of it reminded me of the Mayan ruins — except it was like the Mayan ruins with 1970s Communist apartment complexes.”

On April 26, 1986, fuel rods exploded inside reactor four at the Chernobyl nuclear power plant, which led to a meltdown where uranium fuel melted through protective barriers. Radioactive material invaded the atmosphere and soil.

Yet the scope of the disaster wasn't immediately known, to the

world at large or to the people who lived nearby. The town of Chernobyl wasn't evacuated for six days. Communist Party officials — who released little information about Chernobyl — decided to hold a May Day parade in nearby Kiev several days after the disaster.

As for Peters, he's still figuring out how to answer when people invariably say, “Why Chernobyl?” In part, he says, “I've always been interested in ghost towns.” His interest was piqued in 2004 when a Ukrainian woman took photos of herself on a motorcycle in radiation zones. “Mad Max-style, supposedly a renegade tour,” Peters recounts, though it turned out she was traveling with a tour guide in very un-renegade fashion.

No matter. Peters booked a visit, on which tourists used their Geiger counters to creep closer to the higher levels of radiation. Peters knew the tour wouldn't go anywhere near the worst radiation zones, and, anyway, he was interested in seeing a town that was “stuck in time,” that has been called the Pompeii of the nuclear age. “It was more interesting to me to see a town that was preserved as it was in 1986.” ■



SEE MORE OF PETERS' CHERNOBYL IMAGES
www.lsa.umich.edu/alumni/wire

Name That Nobel Prize Winner

Whether they graduated from LSA or taught classes here — or both! — these geniuses have expanded our understanding of how the universe works.

Can you connect the winner of the Nobel Prize in Physics to the groundbreaking discovery?

Answers below.

[a.]

This physicist, a professor at U-M in the 1950s, won the Nobel Prize in Physics in 1960 for inventing the bubble chamber, a vessel usually filled with liquid hydrogen and used to detect the electrically charged particles moving through it.

+ HINT

Pictured in 1960 at Lawrence Berkeley National Laboratory's particle accelerator facility.

[b.]

Born in Ann Arbor, this alumnus won the Nobel Prize in Physics in 1976 for his pioneering work discovering a new heavy elementary particle. Today, he teaches at the Massachusetts Institute of Technology.

+ HINT

Pictured (on left) with his team and the evidence that revealed the existence of the J/ψ particle.

[c.]

In 2004, this alumnus shared the Nobel Prize in Physics with David Gross and Frank Wilczek for the discovery of asymptotic freedom in the theory of the strong interaction. In other words: the closer quarks are to each other, the weaker the strong interaction will be between them.

+ HINT

Pictured visiting his alma mater, the Bronx High School of Science.

[d.]

In the late 1970s and early 1980s, this physicist taught at U-M. In 2001, he won the Nobel Prize in Physics — along with Eric Allin Cornell and Wolfgang Ketterle — for his work on the Bose-Einstein condensate.

+ HINT

Pictured with the apparatus used to achieve the Bose-Einstein condensate.

[e.]

This physicist spent a large part of his career researching and teaching at U-M. He won the Nobel Prize in Physics for his discovery of the tau lepton, a pioneering experimental contribution to lepton physics. At U-M, he was a co-advisor to Samuel Ting, also featured in this story.

+ HINT

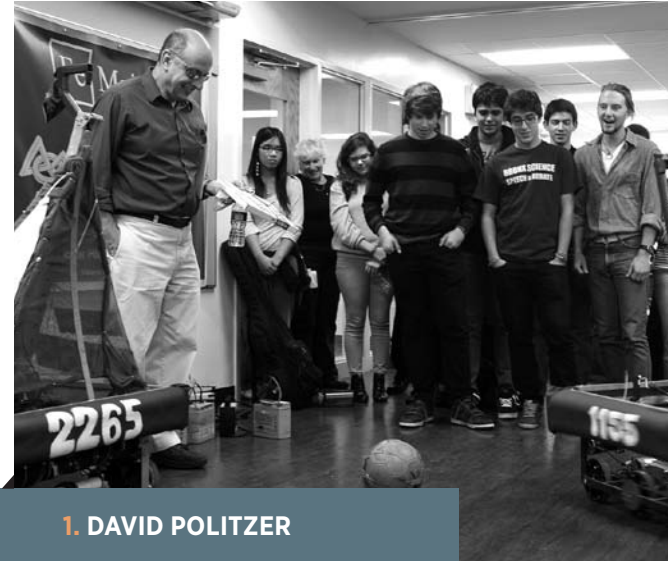
Pictured at the disassembled Mark II detector, which operated at the SPEAR electron-positron collider at SLAC.

[f.]

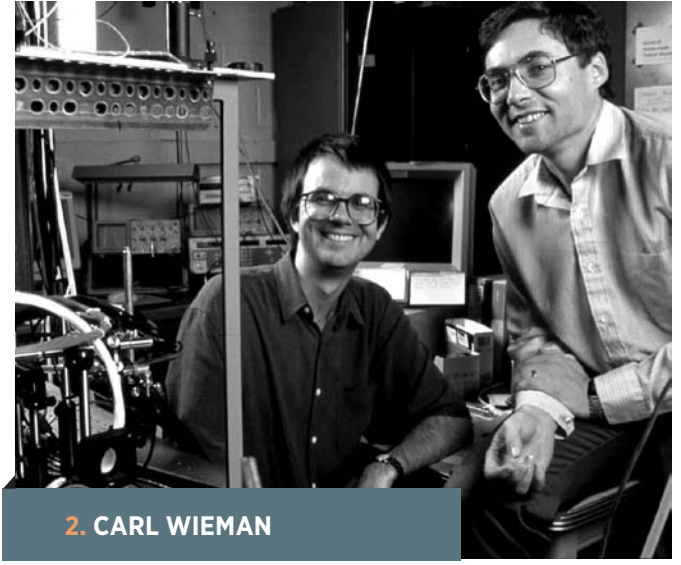
Now a U-M emeritus professor, this physicist won the Nobel Prize in Physics “for elucidating the quantum structure of electroweak interactions in physics” according to the Nobel committee. He shared the honor with his former student Gerardus 't Hooft.

+ HINT

Pictured (second from right) viewing preparations for the superconducting magnets for CERN's LHC collider.



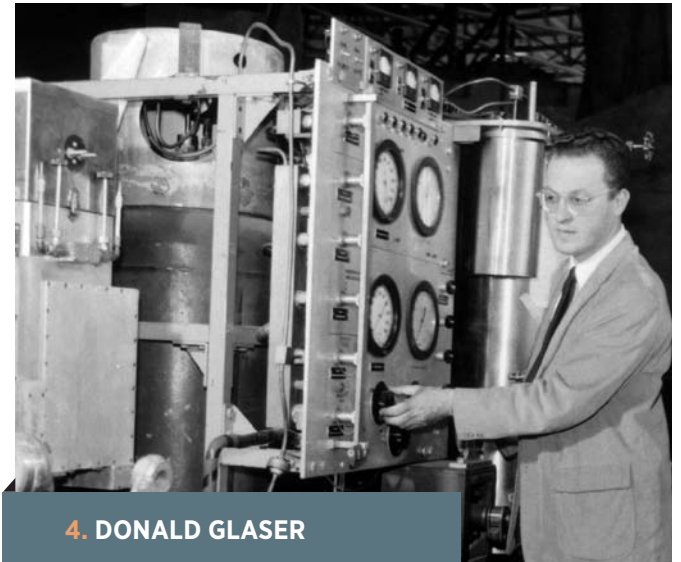
1. DAVID POLITZER



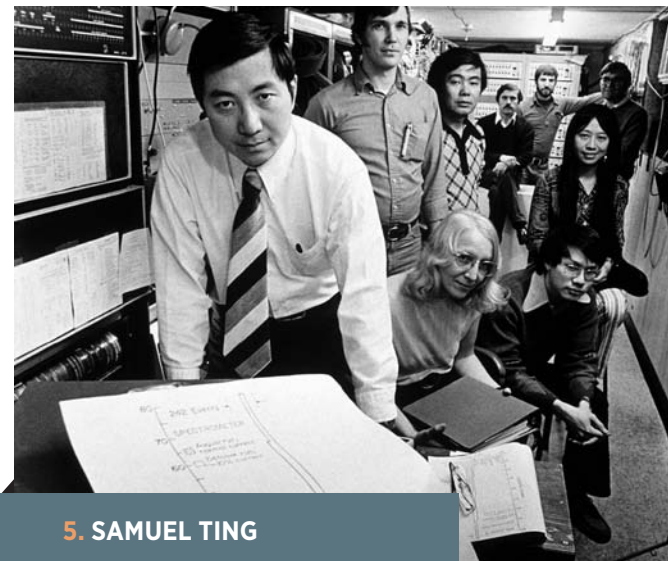
2. CARL WIEMAN



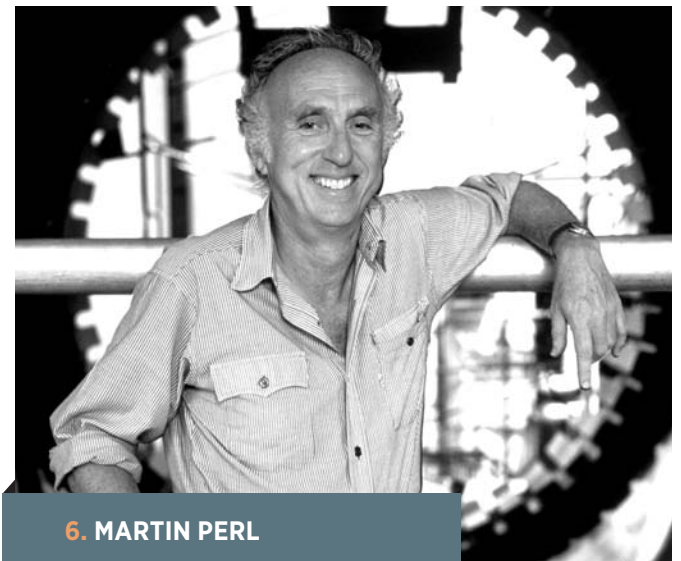
3. MARTINUS VELTMAN



4. DONALD GLASER



5. SAMUEL TING



6. MARTIN PERL

Playing the Game

by Aaron Mondry ('07)



I PLAYED POKER FOR A LIVING for about six months. Since my livelihood depended on my earnings at the table, I readied myself by repeating a seemingly simple goal: make good decisions today. Then I would sit down, hear the blaring slot machines, and try to ignore the opponents who liked to razz players. After a few hours I fatigued. My thoughts became muddled. I made foolish calls and overly brazen bets. In practice, my goal was a platitude.

That might surprise people who think that poker is a game of hard arithmetic. Take a simple example: I have four cards to a flush with two cards remaining — a little math later and I know I have roughly a one-in-three chance of pulling out the winning hand. But at the table, such information is nearly meaningless if I can't deduce what my opponent is holding.

So I took to studying the players around me. I tried to know them like I was their shrink because while poker relies heavily on numbers, it is primarily a game of psychology.

Developing profiles of my opponents was no small task considering poker players win by lying. I had to be attentive to every detail, scavenging for clues whenever they appeared. If there was a showdown and the cards were revealed, I would memorize the hand and how my opponents played it. These moments, when concrete information replaces conjecture, are poker gold. Sometimes I discovered “tells,” physical or verbal manifestations of card strength. For example, one particular player never touched his cards — unless he was bluffing. Then he would put his palm over them as if they couldn't be concealed enough.

And just as I would fatigue at the table, so did my opponents. They would become angry, scared, tired, or ignorant, and I had to adjust my play to their shifting emotions. For example, players commonly “tilt” when they are frustrated by the game. These players become reckless, and if I noticed the telltale signs of tilting, I could capitalize on their weaknesses. Usually, I'd come out ahead if I stuck with

my hand and didn't fold to their bets.

Paradoxically, I sometimes made the best and bravest plays when I turned off my brain. When the odds told me one thing but my intuition told me something else, I'd often go with my gut. Our unconscious minds sort through data in a way we consciously cannot. The best poker players gather the information, calculate the odds, study their opponents and, in the end, trust instinct and experience.

Even though the margins from online poker were higher, I primarily played at the casinos. The psychology of face-to-face interactions made it more engaging. Ultimately, I quit poker for a living because playing a game — even one as complex as this — just wasn't fulfilling enough. These days I'm a freelance writer, which utilizes many of the same skills I developed through poker, believe it or not. And I still take my own advice: make good decisions today. Turns out it applies even when you're not deciding whether to fold. ■

Texas Hold 'em

"In the Pocket" Odds

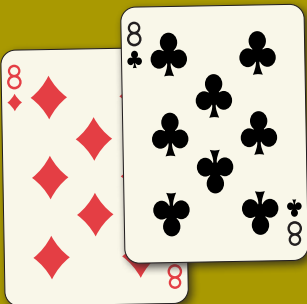
"Pocket" cards are the first two cards given to each player.



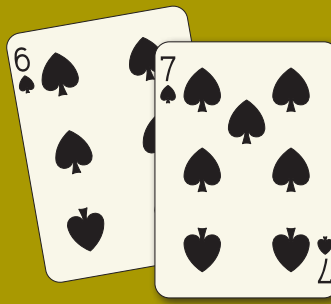
220-1



331-1



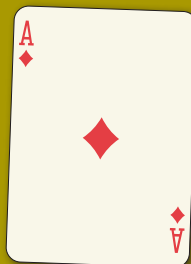
16-1



24.5-1



81.9-1



5.7-1

World Series of Poker

This storied tournament culminates with a \$10,000 no-limit hold 'em main event every year. Since 2004 the tournament has attracted entrants numbering in the thousands. The winner of the main event is crowned the World Champion of Poker.

Trophy Bracelet



Since 1976 a bracelet has been awarded to the winner of every tournament event. By the end of 2011, 959 bracelets will have been awarded to event winners.

Two Celebrities Who Played in the 2010 Main Event



JASON ALEXANDER



RAY ROMANO

Biggest Prize in Any Main Event

\$12
MILLION



Won by Jamie Gold in 2006 with a queen of spades and a nine of hearts.

Broadcasting and Announcers



JIMMY "THE GREEK" SNYDER
1973, 1978-79



DICK VAN PATTEN
1993-95

The very first televised coverage of the tournament in the 1970s was in the form of network specials financed by the tournament owners. ESPN started covering the tournament in 1988 and has broadcast almost every year since.

DID YOU MISS IT?

Make sure you check out these stories!



A refrigerator-sized digital camera. **P.10**

George Washington writes
a letter to his dentist. **P.38**



**FORTY-SIX FACTORIES.
FOUR NEUROTOXINS.
ONE INVESTIGATION. P.44**

Vacationing in the shadow
of Chernobyl. **P.61**