IN WISCONSIN
Fall 2008
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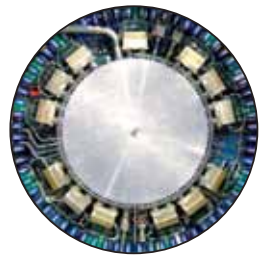

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INSIDE

Cover:
In a flash of bright colors, a graphic represents what happens when protons — the particles found in atoms — smash together in a massive accelerator and shatter almost instantly into a shower of smaller specks.

Letters

On Wisconsin Magazine welcomes letters related to magazine content, but reserves the right to edit them for length and clarity. You may e-mail your comments to WAA@uwalumni.com; mail them to *On Wisconsin,* 650 North Lake Street, Madison, WI 53706; or fax them to (608) 265-8771. We regret that we don't have space to publish all the letters we receive, but we appreciate hearing from you.

Saving Sudan

Kudos to John Allen and *On Wisconsin* for the courageous and inspiring cover story on Kou Solomon in the Summer 2008 issue ["Song of Solomon"]. It was so moving to read about the way he was able to get an education, and then devote himself to helping his homeland to heal. I went to the [Save Yar] Web site and made a contribution to help him and his American friends who are raising funds to help the children of Sudan. I urge others to join me in this small way to help save that unhappy and desperate country.

Eileen Martinson Lavine '45
Bethesda, Maryland

The Summer 2008 *On Wisconsin* was a marvelous edition — especially the cover story of Kou Solomon, which has broken my heart by grief and mercy. We, the people at the far corner of the globe, have had a chance to learn the truth about the human rights violations in Sudan. It's really weird to think that people would not even know about their age due to being abducted as infants. Kou was really brave and lucky to be there in the United States for his schooling. [Erin] Heitkamp, while at Bell Multicultural School, provided vital support to Kou. I (we all) should thank her and her family. So, Kou, your decision to return to Sudan is fully meaningful and necessary. You can save your country and its children by your advocacy and help bring back the nation from the Stone Age. I wish you all the best in your mission. I am very proud of you, knowing about your heartfelt historical life struggle.

Thank you to *On Wisconsin* and its entire team.

Surya Nath Adhikari (Short course '02)
Kandaghari, Katmandu, Nepal

Famous Faces, Favorite Memories

Jenny Price's article featuring the photo of Mickie's ["Famous Faces, Favorite Places," Summer 2008] brought back a flood of memories. To me, and to many other students, Mickie's was more than a good meal at a good price. It was the people who worked there and what they did for us with true friendliness, compassion, and many times, love.

As a freshman in the fall of '57, I roomed in a home on Lathrop Street, and Mickie's became my source of meals for the next four years. Norm and Hank (co-owners then) and Rosie (head waitress) quickly reached out to me as "one of the boys" — as they did with many others.

They had an almost parental instinct to pick out those students who were on a very tight budget. When Rosie would see we had finished our seventy-five-cent roast beef special and we were still hungry, she always gave us more bread and butter to fill the void. If Norm or Hank would sense we weren't eating well (due to lack of funds), they always had an apple or a banana to give us — Norm said he had "bought too many that day" and he needed to get rid of them. In my heart, I knew he was helping us eat well. Hank did the same.

If Norm sensed we were low on money, he would pull out his IOU box, write the amount owed on a small piece of paper, and say with a smile, "Don't worry about it; pay me when you can," and then give us a free apple.

I remember one year I came to pay my $10 IOUs, and Norm said he didn't have time to sort out my debt, "so just forget about it."

These caring, wonderful people were the legacy of Mickie's; they were Mickie's, and I hope to express these heartfelt feelings for many other students for the Norms, Hanks, and Rosies who helped us through some hard-working years at UW.

For those years spent at Mickie's, I say a resounding thank-you to their memories.

Jim Kukuk '62
Janesville, Wisconsin

What a great trip through happy memories! I refer to your splendid article "Famous Faces, Favorite Places." However, I was disappointed that a big favorite from the early 1950s wasn't included. I refer to Picnic Point.

While in graduate school, I married a girl from Whitewater, and we soon had a family addition. That meant spending money became extremely tight for us, as it was also for many young families attending the UW on the GI Bill. As a consequence, late afternoon and evening picnic outings to Picnic Point were a favorite diversion. And best of all, in contrast to the bars, lounges, and eating places, it was affordable!

I can't begin to count all the memories my wife and I share — even after fifty-six years — of the wonderful times we enjoyed at that beautiful place! I'm certain that many other readers from that period had similar experiences.

Edward Feldmann MS'54, PhD'55
Venice, Florida

The Benefits of Forest Fires

I enjoyed reading "Rising From the Ashes" by Jill Sakai about Yellowstone National Park's recovery from the 1988 fires [Summer 2008]. I worked in Yellowstone from 1985 to 1993, so I had the privilege of experiencing the park before, during, and after the "summer of fire."

On September 7, as the fires approached Old Faithful, I started the day by knocking on Old Faithful Inn guest room doors to evacuate the hotel. As we waited for our own evacuation, I stood on top of the inn with friends, in awe as the fire roared through the trees a quarter-mile away. Thank goodness nobody there was hurt and the iconic inn was spared, but it closed for the season that day, and our jobs were over.

Many of us who worked in the park knew about the benefits of fire to a forest's ecosystem, although it was tough to sell that idea to most of the tourists. Articles like this are important to inform the public and policy makers about the natural processes that affect our wild lands.

Claire Peters '83, MS'01
Madison

Thanks from Japan
Thanks (*arigato*), *On Wisconsin!* I am much too far away to visit my former university campus, but not too far away to personally thank the staff for their excellent magazine that ends up in my mailbox in Japan. Your Summer 2008 *On Wisconsin* once again reminded me of home. Your design, pictures, and articles have me reading it from cover to cover, and it is wonderful to be reminded from time to time that I graduated from such a fine university.

John Wells '74
Yokohama, Japan

Will the Real Var Bar Please Stand Up?
I believe your Flashback article in the Summer 2008 issue contains some incorrect information. The article states that the Varsity Bar opened in 1962. However, I recall many pleasant hours spent drinking beer at the Varsity Bar during the years 1950–54.

Thomas Drought '54, LLB'59
Bayside, Wisconsin

(Editor's Note: There have been at least two Varsity Bars on State Street. The Var Bar we showed was in the 500 block. It opened in 1962 and closed in 1968, and the space is now Gino's. Judging by city directories of the era, the Varsity Bar you refer to was located at 625 State, a block closer to campus and across the street from the one shown in the photo. This Varsity Bar seems to have closed around 1960, becoming next the Fireside Pancake restaurant, and today the Mediterranean Cafe.)

Update Your Address
UW-Madison wants to stay in touch with you. To update your contact information, which is maintained by the UW Foundation, please visit www.uwfoundation.wisc.edu/survey. To log in, use the ID number above your name on the magazine label. This information is shared selectively with other campus units and the Wisconsin Alumni Association to ensure that alumni information is consistent and accurate. Thank you!

Correction
In the Summer 2008 story, "Famous Faces, Favorite Places," we misspelled the name of Mickie's Dairy Bar. *On Wisconsin* regrets the error.

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Some people believe that a University of Wisconsin-Madison education is not affordable, so it is not possible.

MICHAEL FORSTER ROTHBART

Some people are wrong.

These five students are smart, committed and hard-working. Of course. They're Badgers. Chances are, three of them receive financial aid. Today, more than 60 percent of all UW-Madison undergraduates receive financial aid and the trend is climbing.

There are other students just as talented who could be, should be and would be Badgers, but they believe the doors of the University are closed to them. "Great people" will help these students and their families. The UW Foundation has allocated $20 million to match unrestricted gifts to the "Great people" need-based scholarship initiative. Your "Great people" gift can open doors.

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Publisher
Wisconsin Alumni Association
650 North Lake Street, Madison, WI 53706
Voice: (608) 262-2551 • Toll-free:
(888) WIS-ALUM • Fax: (608) 265-8771
E-mail: WAA@uwalumni.com
Web site: uwalumni.com/onwisconsin

Co-Editors
Niki Denison, Wisconsin Alumni Association
Cindy Foss, University Communications

Senior Editor
John Allen, Wisconsin Alumni Association

Writer
Jenny Price '96, University Communications

Editorial Associates
Paula Apfelbach '83 and Ben Wischnewski '05, Wisconsin Alumni Association

Art Director
Earl J. Madden MFA'82, University Communications

Production Editor
Eileen Fitzgerald '79, University Communications

Design, Layout, and Production
Barry Carlsen MFA'83, Toni Good '76, MA'89, Kent Hamele '78, Christine Knorr '99, Nancy Rinehart, University Communications

Campus Advisers
Paula Bonner MS'78, President and CEO, and Mary DeNiro, Vice President of Marketing and Communications, Wisconsin Alumni Association • Albert Friedman, Associate Director, and Amy E. Toburen '80, Director, University Communications • Lynne Johnson, Senior Director of External Relations, University of Wisconsin Foundation

Advertising Representative
Madison Magazine: (608) 270-3600

Alumni Name, Address, Phone, and E-Mail Changes • Death Notices
Madison area: (608) 262-9648
Toll-free: (888) 947-2586
E-mail: alumnichanges@uwalumni.com

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From Pigskins to the Mysteries of Physics

As someone who is fortunate enough to work on one of the most beautiful college campuses in the country, I've always loved fall. Autumn is a time of year that never fails to bring a sense of anticipation, but this year, that spirit is especially strong.

There's always the electric anticipation of a new football season, and the feeling that this year, our talented team could catapult Wisconsin into the spotlight once again.

C&N PHOTOGRAPHY

And then, there's the anticipation of the incoming freshman class. Every year, our students get brighter and more accomplished. I look forward to how they continue to amaze me, both with their creative achievements as students, and with their inspiring work once they move on and begin to live out the Wisconsin Idea as alumni.

But what makes this fall especially intriguing is the addition of several other special moments in time. It's an election year, with all the changes that new leadership will entail. And here on campus, of course, we are welcoming our new chancellor. The WAA executive committee met recently with Carolyn "Biddy" Martin PhD'85, and I'm excited about the new vision she brings as she builds on the already impressive successes of former Chancellor John Wiley MS'65, PhD'68.

I was especially happy to hear that [Chancellor Martin] plans to focus on the positive and celebrate our great university — because we have a lot to celebrate.

Chancellor Martin has a definite sense of UW-Madison's role as a global leader — not just in higher education, but also in meeting the major challenges now facing our nation and our planet, from the economy to the environment. She plans to emphasize the importance of our world-class research, as well as the value of the search for truth and beauty through the arts and the humanities. And I was especially happy to hear that she plans to focus on the positive and celebrate our great university — because we have a lot to celebrate.

One example that comes to mind is UW-Madison's involvement in the CERN supercollider, which you'll read about on page 18 ("Heart of the Matter"). In what may be the biggest experiment of all time, scientists hope to flip the switch this fall and send atoms racing around a seventeen-mile ring deep beneath the ground on the border of France and Switzerland. Their hope is to detect the Higgs particle, also known as the God Particle for its potential to unlock a mystery of physics that has puzzled scientists for decades — what gives objects mass. The excitement around this unprecedented international experiment is palpable as the scientific community prepares to rewrite the textbooks.

As the Carly Simon song goes, "We can never know about the days to come, but we think about them anyway." I know you'll join me in anticipating — and hoping for — the best possible outcomes for Wisconsin and for our world.

Paula Bonner MS'78
President and CEO
Wisconsin Alumni Association

A Homecoming for Martin

New chancellor calls the campus 'a place I know and love.'

JEFF MILLER

The university's alumni are "among our best and most important ambassadors," says Carolyn "Biddy" Martin, shown above talking during a campus visit this spring. She was appointed UW-Madison's new chancellor by the UW System Board of Regents in June.

Football, in an unexpected way, helped chart a career trajectory that led **Carolyn "Biddy" Martin PhD'85** to become UW-Madison's new chancellor.

"I come from a family of football coaches, and I've always liked teams and teamwork," she says. "The idea of being a team leader or head coach attaches me to a part of my personality that takes me back to my roots."

During the past eight years as provost at Cornell University in Ithaca, New York, and for four years as senior associate dean of Cornell's College of Arts and Sciences before that, Martin discovered new skills. Those talents transcended her scholarly work as a professor of German literature and women's studies.

"I loved getting to know what was going on in a full range of fields across the university," says Martin, who earned her UW doctorate in German literature, an interest that began during study abroad as an undergraduate at the College of William and Mary. "I like helping to integrate various directions and programs and facilitating other peoples' success."

Martin, who began her new position in September, talked with writer Dennis Chaptman '80 for *On Wisconsin.*

What led you to seek the chancellorship at UW-Madison?
I think of UW-Madison as one of the best research universities in the country, indeed, in the world. It means a lot to me to be able to assume a leadership position at a place I know and love. Wisconsin is a great educational and research institution with a strong commitment to public service, affordability, and economic diversity. Those things matter to me and are worth all of the effort and intelligence we can bring to bear.

What were some of your favorite places as a student?
I learned to cross-country ski while I was at Madison, so I spent a lot of time at the Arboretum in the winters. I also took sailing lessons on Lake Mendota and I loved the lake. And one of my favorite places, not surprisingly, is the Union Terrace. I also loved Wisconsin Avenue, where I lived for a while. It offered a view of the Capitol and a short walk to the lake. I loved the Farmers' Market and Concerts on the Square.

How do you view the role of alumni?
They are the outcomes of a university education. They are among our best and most important ambassadors, and among the university's biggest supporters. The fact that there are over 340,000 living alumni whose successes owe at least something to their education at UW-Madison says the university has an extraordinary impact, all the more so when you take the multiplier effects of their many contributions into account. They also help us conserve much of what is important about the history of the university, while pushing us at times to move forward.

What's your approach to fundraising — another important aspect of your new job?
Fundraising is a joy. It entails helping people understand the extraordinary things that are going on at the university, and the excellent work our students, faculty, and staff are doing and the potential they have to make a difference. A chancellor has to be a translator of the aspirations of the university to a wider public and seek their support for what higher education can do for individuals — and for the world.

What are your priorities as you begin this job?
In the short term, I want to get to know the people and renew my familiarity with the place. I will find as many opportunities as I can to interact with students, faculty, staff, and alumni. I want to make it a point to get to know the leadership of the city and the state, building collaborative relationships for the hard work ahead.

The most important long-term goal is to enhance the already outstanding quality of the research, teaching, and outreach missions of the university. Some very immediate challenges that require attention involve faculty recruitment and retention in a very competitive environment, affordability and student access, and diversity.

One of my top priorities will be fundraising for financial aid and faculty support, which is key to dealing with affordability, recruitment, and retention issues. I'm also looking forward to working with the people who have responsibility for various diversity initiatives to see what kinds of things we might do, or do differently, or what we can add and how I can be a champion for those initiatives.

In the case of undergraduate education, I'm interested in the students' overall experience, doing what we can to enhance education inside and outside the classroom, how the advances in research get translated into the undergraduate curriculum, and ensuring that students benefit from the extraordinary discoveries made on the campus every day.

Election Reality Check

Wisconsin Advertising Project pulls curtain back on campaigns.

Presidential candidates John McCain and Barack Obama have declared their intentions to be competitive in states their respective parties haven't won in years — but if they don't really mean it, the Wisconsin Advertising Project can call their bluff.

"Advertising is reality," says political science Professor **Ken Goldstein,** the project's director. "If [the candidates are] not advertising, they're not serious." The project produces a comprehensive database detailing the content, timing, volume, and targeting of political ads, which it releases during the course of the election season to reporters who are hungry for information about the inner workings of campaigns.

"I don't have to be in the Obama strategy room or the McCain strategy room to know which states they're targeting. I'll know when I see the [advertising] buys," Goldstein says. "I don't need to sit in on their focus groups to know what issues are working for them. I can tell that from the ads they're running."

This year, Goldstein and his research team, working out of a small office in campus's North Hall, are immersed in what will be an unprecedented presidential election when it comes to the amount of political advertising that airs, as well as its reach.

"In 2004 … 95 percent of the advertisements were in forty-four media markets — 25 percent of the country," he says. "This is going to be a year where we see advertising in places where we have not seen advertising before in presidential elections."

Goldstein, a self-proclaimed political junkie who made the jump to graduate school after working as a researcher for CBS News, started studying advertising somewhat by accident. In 1996, as he was finishing up his studies at the University of Michigan, he missed a flight and was stuck at a Washington, D.C., airport for several hours. While he waited, Goldstein read an article about a new company that was tracking political ads and decided to track down its founder, Evan Tracey.

"It was one of those things where — before I knew it — I had turned over everything I had to him, and the Wisconsin Advertising Project was born," Tracey says. TNS Media Intelligence/CMAG, Tracey's company, provides the project with detailed, real-time tracking information about ads.

Every political ad has a unique digital fingerprint, and its profile is coded after one airing, making it possible to detect the ad and track it when it airs again. The advertising project — funded by a grant from the Chicago-based Joyce Foundation — then analyzes the data to build a database that shows who is airing the ads, the content and tone of the ads, the issues covered, and where the ads are being aired.

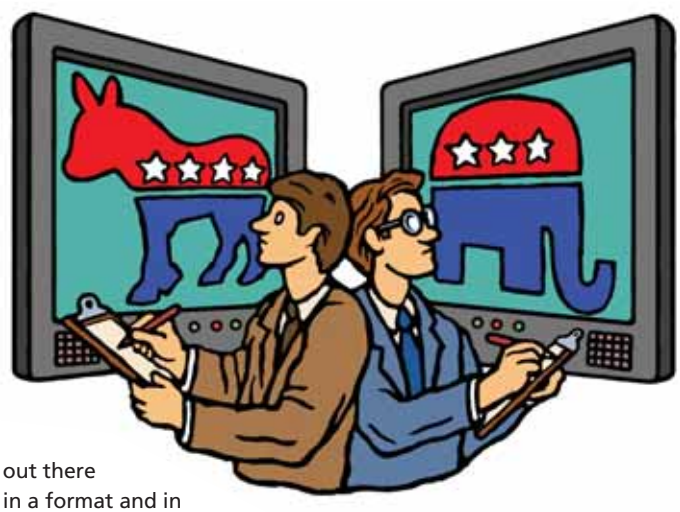
Goldstein and his team of about ten undergraduate researchers — he calls them the project's "engine" — have coded virtually every significant political advertisement broadcast in the top seventy-five media markets in 2000 and in the top one hundred markets from 2001 to 2004.

Stephanie Nielsen x'09, a political science major who is working on Capitol Hill and considering law school, became involved with the advertising project in fall 2006, after taking Goldstein's introductory political science course. Nielsen says it's "interesting to see in a very hands-on way the link between how much these campaigns spend on advertising and getting a certain message out there, and what impact that has in a practical sense on how people view that candidate."

And **Ben Tabielson '06,** now in his second year at Yale Law School, says working on the project with Goldstein "had a huge impact on my capacity for and inclination toward rigorous analytical thinking."

Goldstein's work is used for teaching, for what he calls "geeky research," and for helping both reporters and the public to better understand the political process. On days when the project releases its latest poll or study, he works from home, clearing voicemail on one phone and making calls on another to keep up with the volume of media inquiries.

Tracey says that intense interest demonstrates that Goldstein's work is both insightful and useful. "He's really done a very good job of detecting strategic decisions — both good and bad — and putting them out there in a format and in a forum that goes beyond just a bunch of academic review types and really gets out there into the mainstream press and the mainstream media," Tracey says.



SPENCER WALTS

— Jenny Price '96

Change Agents

A surprising approach to substance abuse gets powerful results.

As any Wisconsinite knows, our love of beer and other booze often gets the better of us — with some extremely sobering consequences. The state regularly tops national rankings in high-risk and heavy drinking; binge drinking among young people is widespread and rising; and diseases and accidents related to alcohol and drug abuse are Wisconsin's fourth leading cause of death and fourth among reasons for hospitalizations. The economic toll is estimated at some $5 billion a year paid by health care, criminal justice, and social service systems.

But a program at the School of Medicine and Public Health is taking a new approach to tackling these challenges. Called the Wisconsin Initiative to Promote Healthy Lifestyles (WIPHL), the federally funded initiative uses SBIRT — which stands for screening, brief intervention, and referral to treatment. The method is now being used at twenty-four primary health clinics around the state, and will be expanded to others in coming years.

Among alcohol and drug abuse programs, SBIRT is a revolution. "Whereas traditional treatment focuses largely on alcoholic and addicted individuals, [this] focuses on the whole range of risky and problem substance use," says **Richard Brown,** the initiative's clinical director and an associate professor of family medicine. "Since non-alcoholic and non-addicted risky and problem substance users by far outnumber alcoholics and addicts ... they, as a group, cause greater harm to families and communities."

The idea is to catch problem users before they do harm or their conditions get worse. Four key questions about alcohol and drug use, and additional questions about other health behaviors, help identify drinking and drug problems at an early stage.

The screening is done with all adult patients as a routine part of their health care visits. Patients identified with problems talk with health educators one to three times and agree upon changes. For many patients, these steps are enough to significantly reduce the patients' alcohol and drug use. If the health educator and patient agree that more intensive care is needed, the patient may be referred for further treatment, and costs may be covered by WIPHL.

While the mainstream notion of an intervention involves family and friends confronting the user, SBIRT uses "motivational interviewing," a nonjudgmental way to help a patient identify reasons for a problem and reinforce a readiness to change.

"When people discover that a behavior conflicts with their own goals, they find motivation to change," says Brown. "Self-motivated people are more likely to succeed at the difficult task of changing behaviors than those who agree to change for other people's reasons."

The program's staff has seen it work countless times. **Christina Lightbourn '96,** a health educator at UW Health Northeast Family Medical Center in Madison, recalls a patient who drank as many as forty-eight beers during a weekend — yet didn't acknowledge a problem and said she was tired of being lectured to stop by her mother.

Lightbourn didn't lecture, instead offering information about potential health risks. She wasn't sure the fifteen-minute session had had much impact — until the following month, when the patient told her physician that she had reduced her consumption to three or four beers on three occasions. The patient, who said she was concerned about her health, has stuck with the changes for nearly a year.

"Motivational interviewing works because it allows the practitioner to meet the patient where they are in the change process. … It can help them move forward and empower them to make changes," says Lightbourn.

A study has found that Wisconsin saves nearly $1,000 in health care and criminal justice costs for each patient who goes through SBIRT — savings the federal government can embrace in an era of belt-tightening.

— Joan Fischer MA'95

COURTESY OF THE U.S. GEOLOGICAL SURVEY

COOL TOOL

Where in the World Is Rabies?

In June, Walton County, Florida, issued a rabies warning after several raccoons there turned up with the disease. Three days later, Hall County, Georgia, suffered its twenty-fourth rabies case this year. Later that month, rabies showed up in bats in Anderson County, South Carolina. If researchers want to keep track of the spread of rabies, they could subscribe to a dozen small-town newspapers, and still get just a fraction of the reports. Or they could check out the Global Wildlife Diseases News Map, which puts all the animal health news in one place.

Created by the UW's Nelson Institute for Environmental Studies and the U.S. Geological Survey (USGS), the map provides an online resource about the health issues facing animals around the world. Pushpin-like icons connect to news reports of different health conditions, from rabies and anthrax to pesticide and lead poisoning. According to USGS librarian **Cris Marsh '89, MA'04,** the tool has garnered interest in a wide variety of places. "We get public health officials, the U.S. [Department of Agriculture], wildlife biologists, as well as people in the university and wildlife rehabilitation realms," she says.

See the map at wildlifedisease.nbii.gov/wdinNewsDigestMap.jsp.

— John Allen

Body of Work

Do these media messages make me look fat? Absolutely, women say.

It's a question that seems to come up time and again: do media images of stick-thin supermodels truly cause women to dislike their own bodies more? After poring over seventy-seven studies on the topic involving more than fifteen thousand research subjects, UW psychology researchers **Shelly Grabe** and **Janet Hyde** say the answer is definitely "yes."

SPENCER WALTS

"We've demonstrated that it doesn't matter what the exposure is, whether it's general TV watching in the evening, or magazines, or ads showing on a computer," says Grabe, now an assistant professor of psychology at UC-Santa Cruz. "If the image is appearance focused and sends a clear message about a woman's body as an object, then it's going to affect women."

While this may seem obvious, Grabe believes that many people still resist the idea that societal influences, such as the media, can have a real impact on how women view themselves. When individual studies have made this connection in the past, she explains, critics have often dismissed them for focusing on groups of especially body-conscious women, such as college students, or exposing test subjects to unusually racy photos.

To avoid these criticisms and settle the question once and for all, Grabe and Hyde pooled and analyzed data from every well-designed study they could find. These included controlled experiments, in which researchers tested the effects of media images directly, and investigations that correlated body concerns with women's self-reported consumption of TV, movies, and magazines.

The examination revealed that regardless of study design or specifics, exposure to images of ultra-thin actresses and models significantly increased women's concerns about their looks, including how dissatisfied they felt, and their likelihood of engaging in excessive dieting and other unhealthy eating behaviors. What's more, studies conducted in the 2000s showed, on average, a larger impact from the media than did those from the 1990s.

"This suggests that despite all our efforts to teach women and girls to be savvy about the media and have healthy body practices, the media's effect on how much they internalize the thin ideal is getting stronger," says Grabe. With body dissatisfaction now established as a major risk factor for low self-esteem, depression, and eating disorders, it's a troubling result.

Grabe hopes that wider recognition of the media's influence will encourage people to see poor body image as a societal issue, rather than a problem of individual women — or, worse, a matter of vanity — as it's often viewed now.

"I want to stress that it's totally normal for women to want to be attractive," she says. "But what's happening in our society is that many women are striving toward something that's not very realistic or obtainable. And that leads to a lot of health consequences."

— Madeline Fisher PhD'98

Keeping Social Workers on the Job

The job is high stress and comes with a low salary, so it's no wonder that child welfare workers are most likely to leave the field within the first two years.

Since 2000, however, the UW School of Social work has been bucking that trend with help from a federally funded training program that pays for social-worker students to get a master's degree in exchange for a one- or two-year commitment to working in Wisconsin's public child welfare system.

The program admits twelve to fifteen students each year, and about three-fourths of its graduates still work in children's protective services, foster care, or special-needs adoption in twenty-seven counties and the Ho-Chunk and Oneida nations. **Susan Michaud,** the program's director, attributes that stability to a focus on specialized coursework and internships that prepare students for what they will experience, giving them the tools they need to succeed on the job.

— Jenny Price '96

CATCHING UP

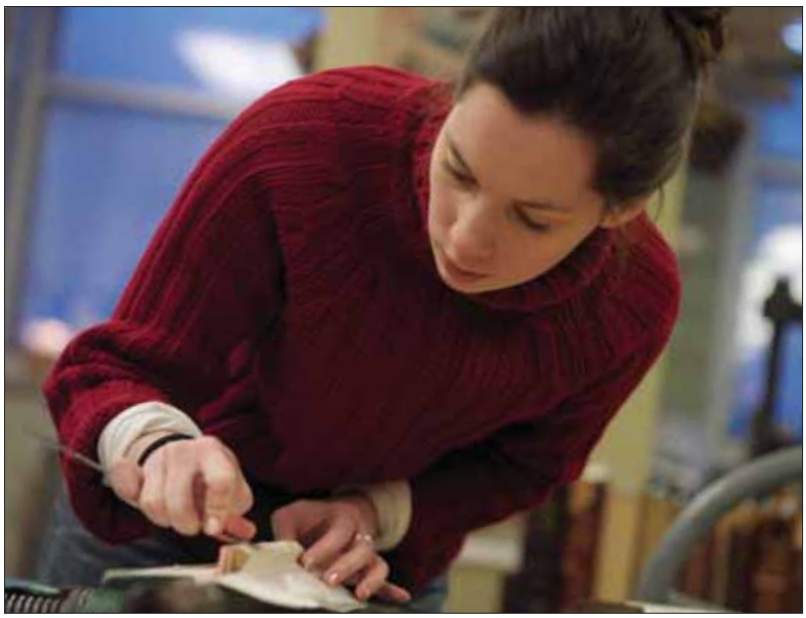
A group of UW-Madison researchers is working to reinvent the wheel on behalf of the Department of Defense. Working with Wausau, Wisconsin-based Resilient Technologies, Professor Tim Osswald and two graduate students are developing an **airless tire** for military vehicles. The idea for the tire grew out of reports from Iraq, where army convoys have been stopped by attackers shooting out the tires of humvees. An airless tire would enable the vehicles to withstand such attacks.

In its quest to translate research into economic impact, UW-Madison's **University Research Park** is preparing to open a second campus, this time on Madison's east side. The URP's first campus is on the city's far west side, and the organization hopes a downtown facility will attract young entrepreneurs in the fields of information technology, engineering, computer sciences, and medical devices. Located in the Marquip Building on East Washington Avenue, the new space is being renovated to create ten "incubator suites" and two conference rooms.

Four UW-Madison engineering grads are winning praise for designing a pile of junk. Dan Zignego '07, Jake Varnes '08, Bill Schmitz '08, and Nick Bobinski '08 are the brains behind Wing 2 of the **Rubble Pile,** a heap of wreckage meant to simulate a disaster scene. Located at Wisconsin's Camp Douglas, the Rubble Pile is a mass of steel, concrete, smashed vehicles, and mannequins, and it's used for training firefighters from around the state. Wing 2, the result of a senior design project in Civil and Environmental Engineering 587, opened to the silent screams of its victims in June.

Book Hospital

The book conservation lab works to repair damaged tomes.



ERIC FERGUSON

A student worker makes repairs in the Book Conservation Lab.

Very few people are as passionate about paper as **Marta Gomez.** She will rhapsodize about the quality and color of the many varieties that fill drawers in the Book Conservation Laboratory in the basement of Memorial Library.

"This is Japanese paper," she says, holding up a stiff, translucent sheet. "People call it rice paper, but I don't know why. It's actually made from mulberry. It has very long fibers, which makes it very strong. And when we use it, we make sure we tear it rather than cutting it so that the fibers remain intact."

Her pulp attraction is only natural. Gomez is the director of the lab, which is responsible for keeping the UW's paper-based information available for those students, researchers, and faculty who need it. The conservation lab's job is to repair the damage that time — or the libraries' patrons — do to the millions of books the university owns. It's a job that keeps her and her staff busy year-round.

The conservation lab is part of the libraries' preservation department, which aims to keep UW data accessible. It includes not only the conservation lab, for delicate work, but also an assessment section, to designate the appropriate options for a damaged book; a bindery, to prepare books for commercial binding; and a microfilm lab, to transfer bulky paper pages into tiny photographed images.

The preservation lab is essentially the libraries' hospital, taking in damaged books and finding a way to heal them. When a damaged book arrives in the lab, Gomez and her team of student workers and volunteers do their best to diagnose its problems and give it the surgery it needs. Typical repairs include replacing covers, repairing broken spines, and reattaching torn or removed pages. Simple repairs can take less than half an hour; more complicated jobs can run half a day. Because of the time necessary for such careful work, the lab's backlog runs to some 1,200 volumes.

To some, the conservation lab may seem anachronistic. The UW Libraries are currently involved in an effort called the Google Project, which aims, ultimately, to transfer many of the libraries' collections into a digital format so that the books can be searched and downloaded over the Internet. So why spend so much time repairing paper?

Some books, says preservation librarian **Andrea Rolich MA'69, MA'70, PhD'81, MA'89,** couldn't — or shouldn't — be replaced. "Not only do some books have intrinsic value beyond the words they contain," she says, "but users still prefer to read many materials in paper format. Even some of our younger, tech-savvy students have complained that they must go to the Internet for too many materials these days."

— John Allen

one number

35

The weight of Bucky's head in pounds. The mass of the mascot's noggin was revealed in *Being Bucky,* a documentary by **John Fromstein '78** and Scott Smith that explores the lives of the students who portray Buckingham U.

UW Draws Tech Giants to Madison

UW-Madison is a world leader in computer research, and now that expertise has attracted not one, but two technology giants to the city.

Internet firm Google opened a research and development office downtown this fall, with twenty "Googlers" focused on hardware and software systems design. The company was drawn by the strength of the College of Engineering's computer architecture group, including the efforts of emeritus professor **Jim Smith** to reduce the power consumption of computers.

Software giant Microsoft is opening a development laboratory near campus, led by emeritus computer science Professor **David DeWitt,** who has done groundbreaking work in hooking together thousands of computers to perform data-intensive tasks. "More and more, the world is about data," he says.

DeWitt says the lab has a half-dozen graduate students who get to "come in and work inside the Microsoft firewall and do projects that they just couldn't do" in a university setting, collaborating with three other faculty members and six full-time employees. Large grants for core computer science research at universities have dried up, making it harder to do the type of work the department did twenty years ago.

"If we're successful or Google is successful, and one of us grows, that will just benefit everybody else in town," DeWitt says. "And hopefully, if we're successful, there will be startups."

— Jenny Price '96

PHOTOS COURTESY OF WISCONSINVIEW

Summer, fall, winter, spring — satellites capture all of the state's colors for WisconsinView. These images were taken during a particularly intense year and show the record snowfall that hit Madison in the winter of 2007–08. The snow was at its worst in February 2008 (lower left) and lingering into March (lower right).

The State of the State

Let there be no mistake: Wisconsin has four distinct seasons. These views of summer, fall, winter, and spring are from the archives of WisconsinView, a federally funded program that offers free and easy Web access to a variety of statewide images and data at www.wisconsinview.org that would otherwise be difficult or expensive to get.

The program, led by UW-Madison and part of a nationwide effort called AmericaView, has five thousand registered users from Wisconsin and beyond. Among them are utility companies, which use the information to determine where to put power lines or water mains, and dairy farmers, who use the program's data to pick good pastures for grazing.

The program also helped out Wisconsin Emergency Management by using satellite imagery to map severe flooding that hit the state in June.

— Staff

CATCHING UP

It may not be a stellar job, but at least it's interplanetary — nuclear engineering professor Gerald Kulcinski has been tapped by **NASA** to chair the agency's human capital advisory committee.

The work of climatologist Eric DeWeaver was highlighted by the U.S. Fish and Wildlife Service in that organization's decision to add **polar bears** to the list of threatened species. DeWeaver surveyed different climate models to estimate the anticipated loss of polar bear habitat.

University Housing has added two more options to its menu of **learning communities.** Students living in Adams Hall may now join an Arabic language community, and Sellery Hall offers a community for those interested in entrepreneurship.

The seminal book on Wisconsin's fish species and the environmental challenges they face will now be available online. George Becker '39, MA'39, MS'51, PhD'62's 1983 tome ***Fishes of Wisconsin*** may now be found in the libraries' digital collection.

When people form opinions about **stem cell research or nanotechnology,** their understanding of the science behind the work plays a negligible role. In a study of national public attitudes, UW communications researchers learned that other factors — such as religious values or a tendency to defer to scientists and their findings — are more influential than the science itself. Those who say religion plays a big role in their lives, for example, say that scientific knowledge doesn't really affect how they feel about stem cell research.

Stunted Growth

Ecology classes hope to weed out a predator at the UW Arboretum.

BRYCE RICHTER (2)

What makes a grassland a prairie? The right species of plants. Alicia Rachow and Amy Hong work with Brad Herrick to catalog flora at the Arboretum's Greene Prairie site as part of General Ecology 460. The students are studying ways to manage highly invasive reed canary grass.

Greene Prairie at the UW Arboretum is one of the finest restored landscapes in the world, a grassland so meticulously crafted that even experts mistake it for pristine nature. Sadly, though, it's hardly the jewel of ecological restoration it once was — a fact that became all too clear to students in last fall's General Ecology 460 course.

"It's so thick," said **Amy Hong '10** about the choking expanse of reed canary grass that blankets the prairie's southern end. "When you look at it, you can just tell — it's the only thing out there."

"It's startling [to see] how much it has changed the appearance," added her classmate **Daniel Underbakke '10.** "You walk out on that prairie and think, 'Wow, something's not right here.' "

Reed canary grass was indeed never in the plans when botanist Henry Greene first created this prairie out of abandoned farmland in the 1940s. Nevertheless, in recent years the plant has muscled in and spread, thanks mostly to urban stormwater runoff that courses across the site with every rain. Today, nearly ten acres of big bluestem, compass plant, and other prairie species have been replaced by the shoulder-high, invasive grass. And though its march has slowed of late, scientists don't know how much more land reed canary grass might consume — or exactly how to stop it.

Still, there is hope, and some of it rests with these students. A couple of years ago, an Arboretum restoration planning committee began devising a large-scale experiment in which a mix of burning, applying herbicide treatments, and seeding of native plants would be tested for its ability to subdue the weed. Based on a decade's worth of scientific studies by Arboretum research director **Joy Zedler MS'66, PhD'68** and her graduate students, the plan was backed by plenty of brainpower.

But the committee also needed manpower, and that's where the students came in. Last September, some sixty General Ecology class members surveyed plant diversity and abundance in experimental and control plots, sowed native seeds, and then later crunched the data they'd collected. The work continues this fall with a new cohort of students, and the plan is to enlist classes to help for three more years to come.

"At a time when resources are stretched, we could never, as Arboretum staff, have pulled this experiment off on our own," says Arboretum ecologist **Brad Herrick,** who is helping oversee the work. "So incorporating the students is a perfect way to do this. It's an education for them, first and foremost. But at the same time, we're advancing restoration ecology research and addressing land-management questions."

Finding ways to restore lands overrun by reed canary grass couldn't be more urgent. The Wisconsin Department of Natural Resources estimates that the plant now dominates more than half a million acres — or almost 10 percent — of Wisconsin's wetlands, and has invaded many, many more. Once established, it spreads quickly via seeds and underground stems, snuffing out native plants at an alarming rate and eliminating habitat for wildlife.

By showing students an example of the problem in the university's own backyard, **Susan Will-Wolf,** the course's laboratory instructor, hopes they'll recognize that nature doesn't necessarily reside away from people. Instead, humans are an integral part of the land-

scape and shape it every day — whether they intend to or not.

"I want the students to realize that the natural world spans a continuum from urban natural areas to wilderness, and that we need to care for all of it," she says.

Caring for the land isn't necessarily easy, though, as the students quickly learned last September. The sun was hot, the air was muggy, and the experimental plots were unexpectedly tough to find. Then came the plant identification. Reed canary grass was easy to spot, of course, once students knew what to look for. But they also had to learn four dozen or so native species and then carefully estimate the amount of ground they covered — all while swatting at a cloud of voracious mosquitoes.

Meanwhile, Arboretum staff and course instructors scurried about, answering questions, showing students the tricks to sampling, and reviewing the data they'd collected. The amount of effort and coordination made a strong impression on **Carrie Kretsch '07.**

"I remember my mom always griping about the dandelions in our backyard," she says. "But I'd never really thought about how difficult [a plant] might actually be to get rid of, or why someone would spend so much effort and money in trying to do so."

Because last fall's students were working during the experiment's first year, they didn't record much change in the prairie as a result of the herbicide treatments and burning. Nonetheless, Underbakke appreciated the chance to collect some real data and analyze them back in the lab.

"We saw while being out in the prairie that, yes, there's a heck of a lot of reed canary grass out there, but then [the analysis] showed the same thing statistically," he says. "It's very powerful to see how what you perceived visually is reflected in the statistics."

The data collected last fall also provide a critical baseline against which subsequent classes can compare their findings and, they hope, begin to document a recovery in the prairie. But even if the experiment falls short of controlling the weed, it's sure to offer scientific insights that Arboretum staff and researchers can incorporate into future restoration attempts, says Herrick.

In the meantime, a small payoff came at the end of each afternoon's toil last September: getting to sow the seeds of native plants with such charming names as Joe-Pye weed, porcupine sedge, and yellow avens. The hypothesis is that suppressing reed canary grass with burning and spraying will allow these species to gain a roothold, and then grow up and shade out the sun-loving invader.

For Kretsch, the day's final activity came as a delightful surprise.

"What am I doing with this?" she recalls asking when someone suddenly handed her a bucket of seeds. "And they said, 'Oh, we're restoring the prairie.' And I said, '*I'm* restoring the prairie?' It was cool."

— Madeline Fisher PhD'98

Class Note

Six Wars, One Course

History 319: The Vietnam Wars

At first glance, there seems to be a glaring misprint on the syllabus for this course. America had one conflict in Vietnam, hence one war. Right? Not so fast.

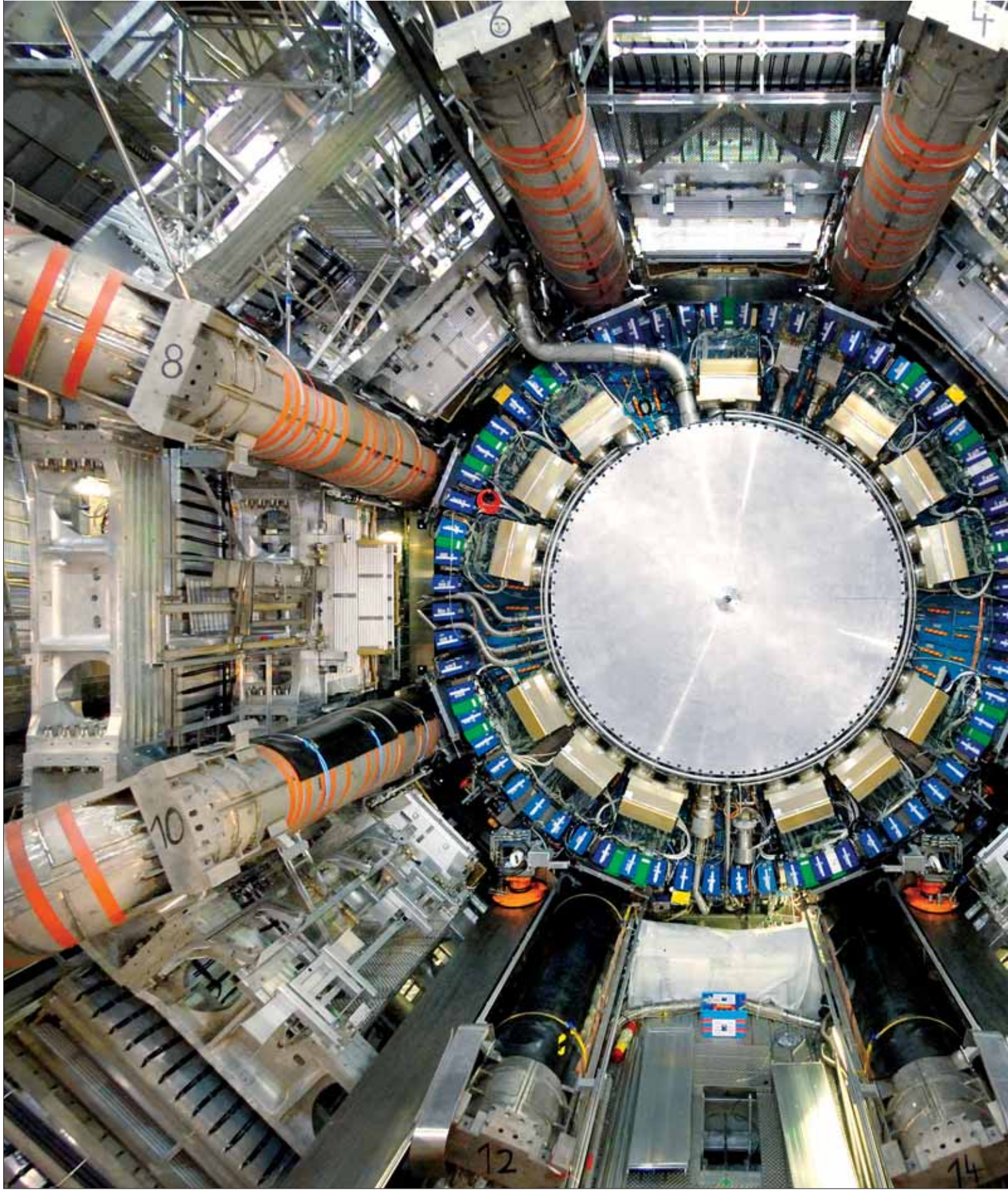
"We're not just doing one war," says professor **Alfred McCoy,** "which I think is a fundamental mistake many courses make — to see this as an exercise unique to the United States. There was in fact a multiplicity of Vietnam wars."

History 319 focuses on the American war in Vietnam as one of six interrelated regional conflicts spanning more than a century, beginning in 1850 with the French colonial conquest and ending in 1979 with Vietnam's invasion of Cambodia. Offered every fall to 150 undergraduates, the class has become one of the most popular at the UW since McCoy arrived on campus in 1989.

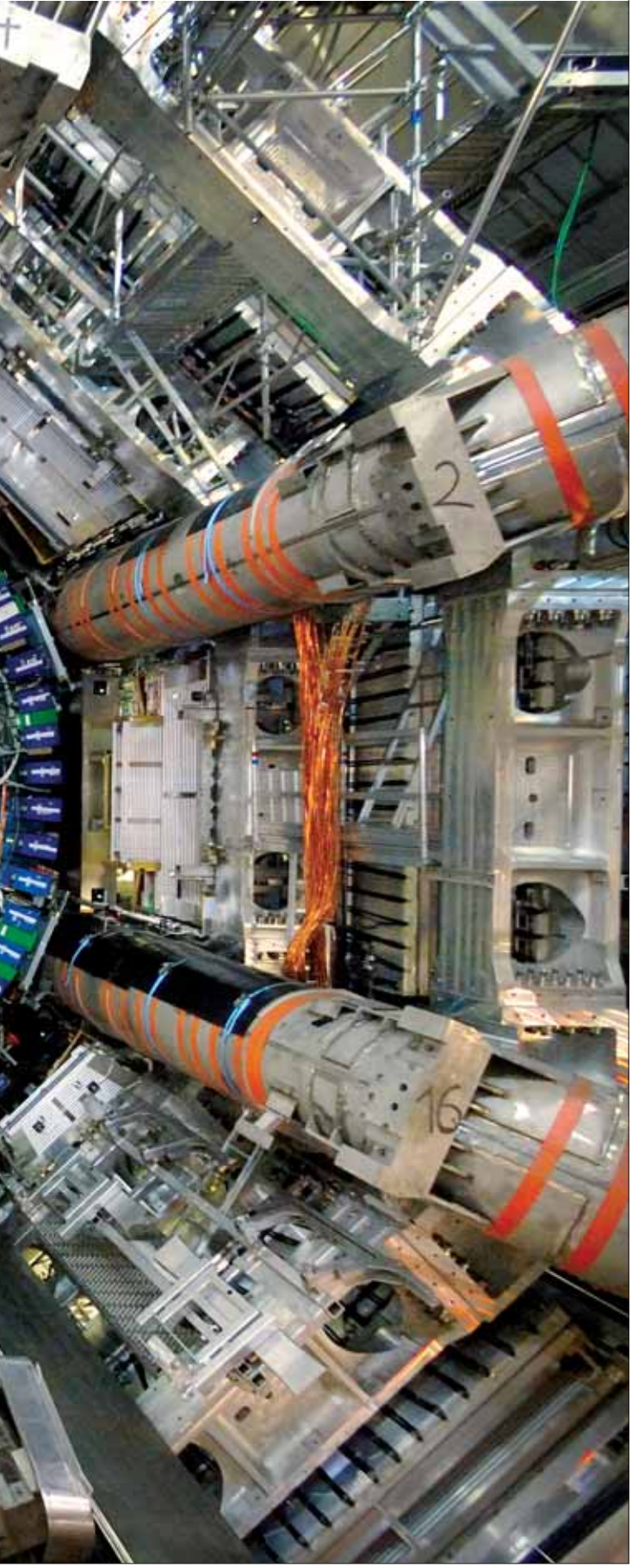
The course material focuses less on memorization and more on forcing students into critical engagement, with McCoy stressing the importance of multiple interpretations in studying history. Veterans are invited into the course's discussion sections to talk about the war, creating an important cross-generational dialogue, which is best exemplified by **Danielle Trussoni '96**'s national award-winning book, *Falling through the Earth*, which began as her term paper for the course.

History 319 culminates with a twelve-page research paper that draws from more than a dozen primary and secondary sources. Crafting a well researched, educated argument, McCoy notes, is one of the most important abilities for a historian. "I often tell my students that after all the details, names, dates, and places have long been forgotten," he says, "what I really want [them] to take away from the class is how to make an argument."

— Ben Wischnewski '05



Paradox of size: It will take the biggest and most powerful accelerator ever built to catch a glimpse of the tiniest atomic particles that form all matter. The accelerator, called the Large Hadron Collider or LHC, will slam particles together up to 600 million times per second at nearly the speed of light, smashing them open inside two main particle detectors, called ATLAS, shown here, and CMS. UW-Madison faculty members are playing key roles in the immense experiment, which involves dozens of countries and thousands of scientists and engineers.



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Heart of the Matter

Three hundred feet below the French-Swiss border, UW scientists are playing central roles in a massive experiment to solve the biggest mysteries in physics. What will it take to succeed?

By Jill Sakai PhD'06

Nestled among the picturesque fields between France's Jura Mountains and Switzerland's Lake Geneva lies a cluster of boxy buildings interlaced with streets bearing the names of famed physicists of the past.

This crowded campus of the European Organization for Nuclear Research, usually called CERN, is home to the largest scientific instrument ever built: a particle smasher so powerful it will condense enough energy to move a Boeing 767 at two hundred miles per hour into a proton beam thinner than a human hair.

It's not a place you would expect to spot Bucky Badger.

Yet, here he is, in a hallway of Europe's preeminent physics research institution, more than four thousand miles from home. Bucky's likeness adorns the office door of physics professor Sau Lan Wu, a Vilas Professor and one of dozens of UW-Madison professors, staff, and students working at CERN on the biggest particle physics experiment ever undertaken.

The energy and tension on the CERN campus are almost tangible as thousands of scientists and engineers work against the clock to put the finishing touches on the Large Hadron Collider, or LHC, which after nearly twenty years of planning is expected to begin operating this fall. When up and running, this massive machine will slam particles together at nearly the speed of light, bursting them open and providing an unprecedented look at the atom's innards — exotic subatomic building blocks with Seussian monikers such as lepton, meson, muon, and gluon.

UW-Madison is among a handful of institutions with large groups working on both major particle detectors at the LHC, called ATLAS and CMS. Wu's group was the first American research team invited to work on the ATLAS experiment, and physics professor Wesley Smith heads a team that has built more of the fourteen-thousand-ton CMS detector than any other university group. Together, Smith says, the UW teams top the list of American universities with leadership roles on the project.

Simply put, as the LHC gears up to start running, UW scientists are poised to make one — if not more — of the biggest discoveries of modern science.

Build Your Physics Vocabulary

ATLAS — A Toroidal LHC ApparatuS (ATLAS), one of the two main particle detectors at the LHC, was constructed in an underground cavern by lowering and joining one piece at a time over several years.

CERN — A historical acronym based on the French name for the European Organization for Nuclear Research. This particle physics laboratory, founded in 1954, straddles the French-Swiss border near Geneva, Switzerland.

CMS — The Compact Muon Solenoid, the other main particle detector at the LHC, is named for its giant solenoid magnet, which UW physics professor Wesley Smith compares to an MRI machine strong enough to scan an entire hospital.

Detector — A large machine filled with sensitive electronics that track and record the showers of particles produced by a proton collision.

Higgs particle — Also called the Higgs boson, this particle is thought to give matter its mass, via a mechanism like the attraction that gathers a retinue around a pop star in a crowded room. Finding this missing link in the Standard Model is one of the main goals of the LHC.

LHC — The Large Hadron Collider accelerates two proton beams at nearly the speed of light in opposite directions around a seventeen-mile ring built three hundred feet underground. In huge barrel-shaped detectors spaced around the ring, the particles will smash together and recreate conditions in the earliest moments of the universe.

Particles — The characteristics of these tiny atomic building blocks determine the properties of all matter.

Proton — A positively charged subatomic particle located in an atom's nucleus. The beams used in the LHC are composed of protons from hydrogen atoms.

Standard Model — A set of theories that forms the best current understanding of particle physics, though it does not explain why matter has mass nor some recently observed phenomena, including dark matter.

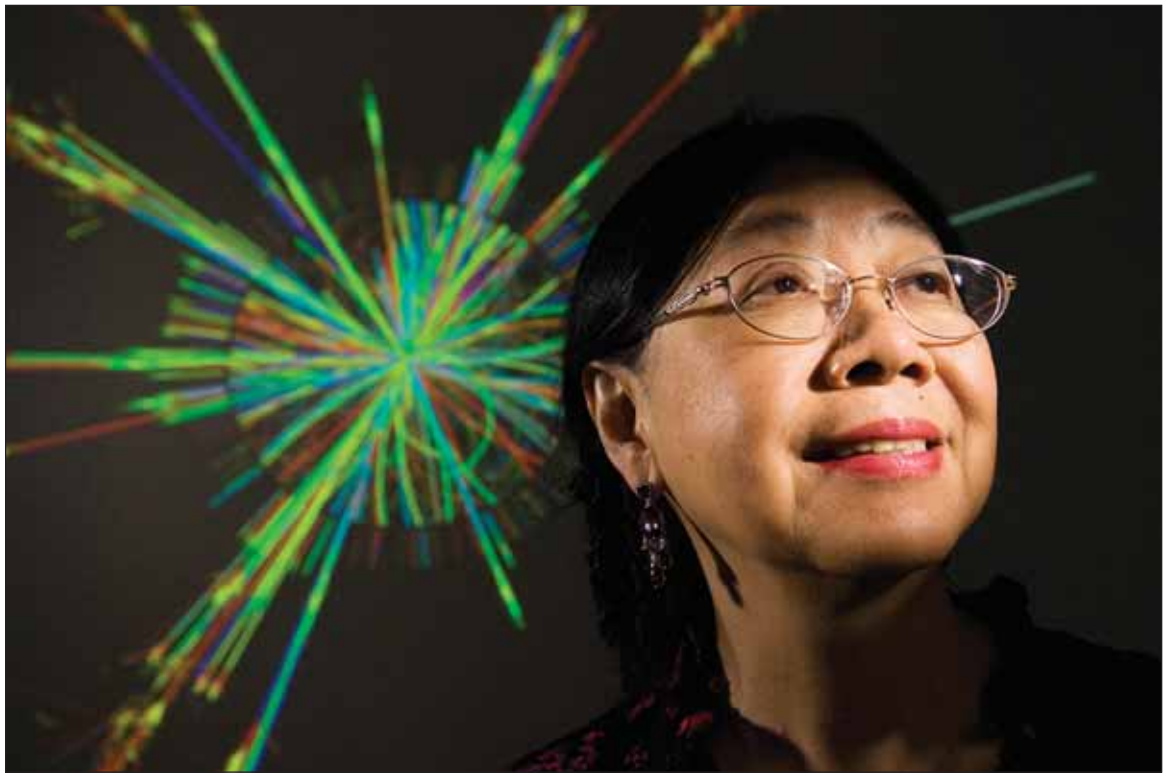
The Frontier of Physics

It's hard to describe the LHC without superlatives. It will be the world's biggest and most powerful particle accelerator, flinging protons around its seventeen-mile, underground ring eleven thousand times per second until they barrel headlong into one another in the most energetic particle collisions ever recorded. The accelerator's massive superconducting magnets are even the coldest spot in the universe, aside from a few small lab experiments. At -456°F, the magnets are a mere three degrees above absolute zero, the theoretical deep freeze where all atomic motion stops — well, cold. Even outer space averages nearly five degrees above absolute zero.

As big as the LHC is, the ideas behind it and its experiments are even bigger.

The incredibly high energies achieved in the collider aim to mimic the conditions that existed a millionth of a billionth of a billionth of a second after the Big Bang. The energetic particles created in such an atmosphere are highly unstable, shattering almost instantly into a shower of smaller specks. Physicists use such ephemeral particles to probe the nature of the universe, hoping to improve our understanding of the physical principles underlying every aspect of the world we live in. A modern age of discovery is alive and well in high-energy physics, and this is its frontier; only by creating higher and higher energy particle collisions can physicists unlock the atom's remaining secrets.

The best explanation of the physics of the very small is called the Standard Model of particle physics. Not so long ago, the atom was believed to be the smallest unit of matter. During the twentieth century, however, physicists cracked the atom's central nucleus, and now the



JEFF MILLER

Sau Lan Wu, a UW-Madison physics professor, leads a group that was the first American research team invited to work on ATLAS, one of two main particle detectors built underground at the French-Swiss border. Her team specializes in studying simulations of particle collisions, preparing for the data that in time will be produced by the LHC. "We do not know where a discovery will come from," she says, "so we try to cover as many areas as possible."

model is well populated with different particles that are responsible for nearly all of matter's fundamental properties.

Yet, the Standard Model has one glaring hole: the Higgs particle, sometimes referred to as the God particle. Thought to be the source of all matter's mass, the Higgs was first postulated in 1964 by British physicist Peter Higgs. People have been searching for it ever since, rewarded only by tantalizing but unconfirmed glimpses.

Does it really exist? The LHC should finally settle the question.

A Needle in a Barn Full of Haystacks

Whether in his Chamberlin Hall office on the UW-Madison campus or its counterpart at CERN, Wesley Smith looks remarkably relaxed for a man whose job leaves no room for error.

As part of the senior management of the CMS project, Smith has been entrusted with the daunting task of selecting data for the entire two thousand-member team. He is in charge of designing, building, and running the CMS "trigger system," a sophisticated filter that sorts the most interesting patterns from a sea of data. It's a critical job, given the staggering scale of the LHC's particle collisions: up to 600 million each second. As protons collide and splinter almost instantly into smaller particles, physicists take the resulting debris of particle tracks, momentum, and energy to reconstruct the "whodunit" of the whole collision.

As protons collide and splinter almost instantly into smaller particles, physicists take the resulting debris of particle tracks, momentum, and energy to reconstruct the "whodunit" of the whole collision.

"You identify all the particles coming out, you identify all their energies, then add everything back up, and you have the complete picture of what happened in the collision," says Smith.

With a process of this scale, there aren't enough computing resources in the world to store such a huge amount of data, much less analyze it. But fortunately, Smith says, that's not necessary. Most collisions produce particles and physical interactions that are already well understood. Against this background, the trick is to find those few that reveal interesting new phenomena. Pauline Gagnon, an Indiana University physicist on the ATLAS team, describes the process as "looking for a needle in a barn full of haystacks."

Says Smith, "I'm throwing away 99.999 percent of all the data produced at the Large Hadron Collider in this detector. And if I make a mistake, that data is lost. Forever."

The Road to Discovery

Success at this numbers game comes with a twist: as the scientists search for something no one has ever seen, how do they know what to look for? And how will they know when they find it?

"If they exist, each of these new particles has a distinctive signature, due to the

way they are produced and the way they decay," explains Sau Lan Wu. "We have some expectations from theories, telling us about exceptionally rare and telltale events that will indicate a discovery."

Wu has been hooked on discovery since early in her career. As a young scientist in the early 1970s, she was on one of the teams that discovered the "J particle," which confirmed the existence of a subatomic bit known as the charmed quark. Her team leader, Samuel Ting, shared the 1976 Nobel Prize in physics for the discovery. A few years later, as a newly appointed assistant professor at UW-Madison, she developed the approach that led to the discovery of the gluon, a particle that "glues" together the pieces of an atom's nucleus.

Today, she is driven by the goal of adding a third finding to her name. "Our focus is on physics discovery," she says. "We have positioned ourselves to be ready when the data come in. … We do not know where a discovery will come from, so we try to cover as many areas as possible."

Each research group within the ATLAS and CMS collaborations helps prepare for data analysis, as well as designing and building the detector. Wu's group specializes in studying particle collision simulations that mimic the data that will be produced by the LHC. Simulated collisions and the resulting decay patterns are generated based on current theories about how particles behave and interact, and they help the scientists learn what to expect and how to interpret what they might see once the machine is operating — for example, a mismatch between a simulation and an experimental outcome may signify something previously unexplained.

"By running these simulations, we gain a lot of understanding," Wu says. "We learn how to identify and reject from our data the very common events, to expose the few rare and golden events hidden in the data that could reveal new physics that lies beyond our level of current understanding."

After years of exhaustive testing, the group is ready for the unexpected, says UW assistant professor Bruce Mellado, who works closely with Wu. "The Higgs is the jewel of the collaboration," he says. "And once you understand the Higgs, you are prepared for everything else."

> "Whether we see it or not, it will be a big discovery. … We have very good theories that tell us what we think is going to happen, but if it's something else, it'll be even more exciting."

Rewriting the Textbooks

Though the Higgs particle has garnered much of the limelight as the LHC nears completion, it is not the only goal, nor will its absence signify a failure.

"Whether we see it or not, it will be a big discovery. … We have very good theories that tell us what we think is going to happen, but if it's something else, it'll be even more exciting," says Smith.

A Higgs discovery would fill in the last gap in the Standard Model, virtually confirming the theory. No Higgs, on the other hand, would mean the Standard Model is fundamentally flawed. "If we don't find it, we'll know it's not there, and we have to go back to the drawing board," Smith adds. "This will be a textbook rewriting experience."

Aside from the Higgs, many physicists are in search of what they call "new physics" — particles, interactions, or phenomena beyond the reach of the Standard Model. Some hope to find evidence of alternate or extra dimensions, such as those proposed by string theory, which holds that everything in the universe is made of tiny vibrating strings of energy. Other scientists have postulated that some proton collisions may create microscopic black holes. A lawsuit filed this spring against CERN and several U.S. agencies attracted attention — and some concern — related to this idea, though physicists say any black holes created would be far too weak to cause trouble and would evaporate almost immediately. The U.S. government filed a motion in June to dismiss the lawsuit; as of press time, a ruling had not yet been issued.

An Incredible Opportunity

Like students everywhere, the five UW physics doctoral candidates working on the CMS experiment have needed cheap housing — but in this case, finding it required crossing the border from Switzerland to France. And they've solved the transportation challenge by sharing one car.

These compromises are small tradeoffs for the chance to work at the cutting edge of their field, say the students who are working on their dissertations at CERN and playing an integral part in the LHC effort.

"It's an incredible opportunity," says Jessica Leonard, a fifth-year doctoral student.

While a single university is unlikely to have more than a handful of people interested in a given topic, the students at CERN are surrounded by many of the top minds in their fields. "When I was in Wisconsin, I spent maybe a week working on a problem. Here, I can go down the hall and knock on someone's door, and they can give me the answer to whatever the problem is right there," says fourth-year student Marc Weinberg.

The project's buzz and energy are powerful, the students say. "It sucks you in. It definitely gives you good reason to want to spend all your time working on it," says Bill Quayle PhD'08, who just completed his graduate work on the ATLAS project. "It's very easy to [think], 'Another week has gone by? It's five o'clock in the morning again?' " — *J.S.*

JEFF MILLER

UW physics professor Wesley Smith heads a team that has built more of the CMS — one of the two main particle detectors — than any other university group. Shown here with a computer graphic depicting how scientists are filtering the massive amount of information recorded in the experiment, Smith explains just how important it is to identify and save the key data. "I'm throwing away 99.999 percent of all the data produced ... in this detector," he says. "And if I make a mistake, that data is lost. Forever."

In addition to the Higgs, Wu's group is searching for other exotic hypothetical particles and evidence of supersymmetry, a theory that could help explain interactions among many of the fundamental forces of nature, or even the mysterious dark matter and dark energy that make up the vast majority of our universe, says UW associate professor Yibin Pan, a member of Wu's team.

Scientists also look for new physics by focusing on what's *not* there. As the high-energy products of proton collisions decay into showers of smaller particles, the scientists add up the energies of all the detected particles and compare them to the starting protons. If the two values don't match, something unseen must account for the difference.

"For example, if you see a jet of particles going off in one direction but you don't see anything going off in the opposite direction, you know the momentum has to be balanced," explains CERN theoretical physicist John Ellis. "It's what I once called a Zen event. You know the little saying, 'What is the sound of one hand clapping?' Well, what is the sound of one jet of particles? It could be dark matter."

Competitive Collaboration

After decades of work, the LHC and its detectors are nearly ready for their debut. As the time approaches, the atmosphere on the CERN campus is thick with excitement and tense anticipation. While everyone is eager to start collecting data, the scientists continue to test and re-test components, connections, and computer systems up to the last moment — ensuring, if possible, that everything will work as planned. With somewhere around twenty-five hundred miles of cabling in ATLAS alone, even a task as straightforward as checking wiring connections is no small feat.

And everything has to be just right. The level of precision demanded by the project is mind-boggling; one slight miscalculation could doom the entire endeavor. Says Dick Loveless, a UW-Madison scientist in Smith's research group, "If the beam gets loose, the beam would destroy the detector — it would drill a hole right through it."

Adding to the tension is the fact that ATLAS and CMS will be looking for the same things. The two detectors are designed differently and will use slightly different analysis methods, but both have their sights set on the Higgs particle and supersymmetry, exotic particles, and dark matter. And when the data start coming in, all eyes will be watching to see which experiment reports a discovery first.

"You never want to rely on one experiment. You could make mistakes in one," explains Smith. "You want to have two independent experiments, produce two independent analyses ... and if they agree, you really know that you've got it."

The development phase for ATLAS and CMS has been marked by cooperation and frequent communication — even joint meetings. It just makes sense, Smith says, to seek feedback from others who are intimately familiar with the problems you're facing.

"No other external review, either provided by the lab or other experts, could check our work as well as we could check each other," he says. And, in the end, he acknowledges, each experiment needs the other to provide independent confirmation of any finding — and to convince the world about what they have found.

As the teams prepare to shift to data collection and analysis mode, however,

the friendly rivalry may escalate. "There's a lot of competition between the [CMS and ATLAS] experiments, and it's going to heat up even more," laughs Smith.

Number Crunching

While the data are expected to start pouring out of the LHC sometime this fall, don't expect breakthrough discoveries just yet. The scientists will have a lot of number crunching to do before they can extract the physics from the raw data. The complexity of the analysis, combined with the volume of data produced, adds up to a tremendous demand for computing power. Fortunately for the groups led by Wu and Smith, UW-Madison is ready to deliver.

"Wisconsin is unique in that we have the largest regional computing facilities for both ATLAS and CMS," says Smith.

Much of the UW's computing advantage is thanks to computer science professor Miron Livny, a pioneer in the field of distributed computing, which pools the computing power of hundreds or even thousands of individual processors to efficiently crunch through large data sets.

Combining Livny's computing tools and expertise with Smith and Wu's data has proven to be a boon for both disciplines. "It's a wonderful example for interdisciplinary work, where we work together in a way that advances both of our sciences — me as a computer scientist and them as physicists," Livny says.

Livny's computing prowess benefits the broader LHC community. As the principal investigator on a national initiative known as the Open Science Grid, Livny has provided distributed computing resources to the larger CMS and ATLAS collaborations, which they will use to help divide their data among many universities and institutions for local processing.

"We are really sitting on several key aspects — we have a very strong scientific activity, we have a very strong software involvement, and we have a significant infrastructure involvement at the national level," Livny says. "It's a very powerful convergence for UW."

People Who Need People

During meal times at CERN, the cafeteria hums with an expectant energy, fueled by an intense scientific drive and ubiquitous strong Swiss coffee.

With the international scope of the project and its participants, you might overhear groups chatting in French, English, German, or Chinese — but no matter the tongue, all are speaking the language of physics. The art of working together has become a hallmark of the Large Hadron Collider (LHC). Officials at the United Nations headquarters, only a few miles away in downtown Geneva, might do well to take a few notes at CERN.

"It's a big social experiment. It involves a lot of negotiations, a lot of compromises, a lot of collaboration," says UW physicist Yibin Pan about the project, which encompasses some six thousand people representing nearly two hundred institutions.

"Physics is ahead of the curve in international relations," jokes UW-Madison researcher Dick Loveless.

The scientists agree, however, that such a large project couldn't happen any other way. "It is extraordinarily difficult, but somehow we've managed — with all these funding agencies and forty different countries — to pull it together," says UW physics professor Wesley Smith. "This machine is completely a global effort."

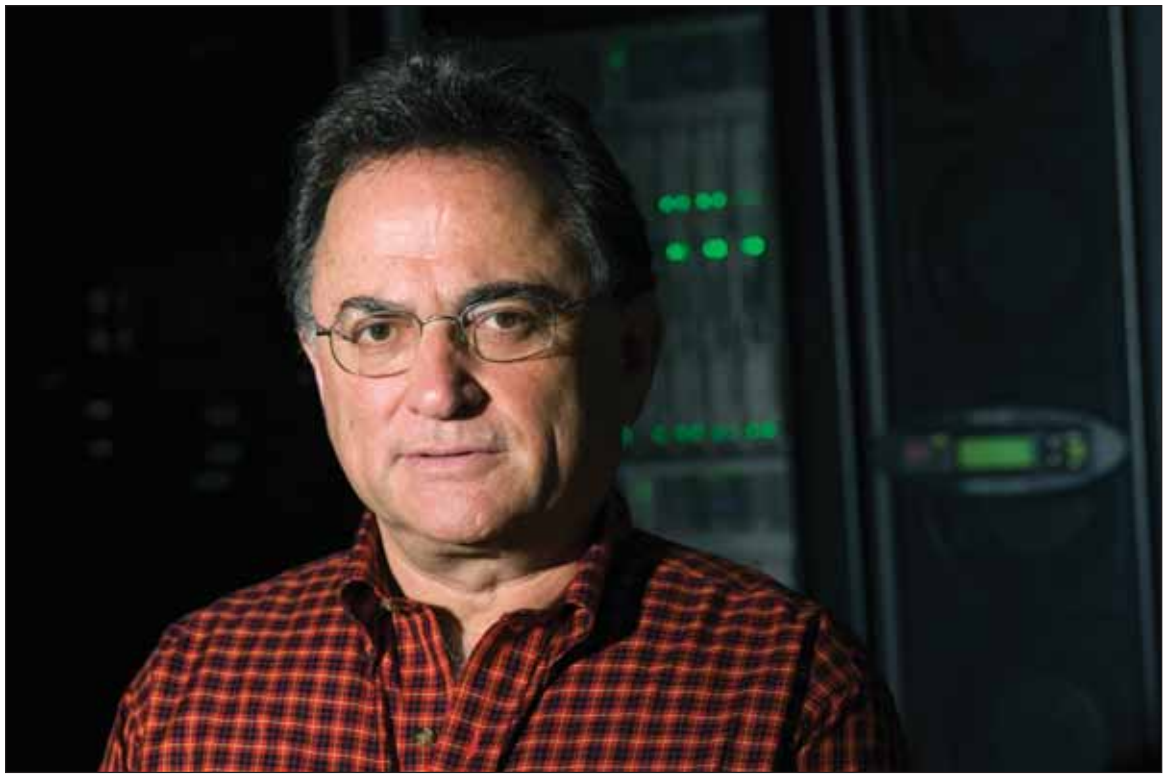
Fellow UW physicist Sau Lan Wu views the LHC as a model for the future of particle physics. "A big thing about this kind of collaboration is to learn the culture of working together, to learn how to share, and how to build things together," she says.

As the accelerator nears completion, the first stage of the sociological experiment looks like a resounding success. But how to handle scientific success will offer its own set of challenges. "None of us has ever worked on such a big collaboration," says Pan. "People are still trying to work out a way to distribute credit in case of discovery."

— *J.S.*

DICK LOVELESS

UW scientist Armando Lanaro (left) and Dan Wenman (right), an engineer at the UW Physical Sciences Laboratory, install one of the specialized particle-detecting chambers on the CMS — one of the two main particle detectors — in 2003. The UW built a large portion of the detector, with many of the pieces designed in Wisconsin, then shipped to CERN and assembled on site.



JEFF MILLER

Miron Livny, a UW computer science professor, specializes in distributed computing, which pools the computing power of thousands of processors to conduct number crunching at a huge scale. Livny leads a national initiative that uses this ability to collect and divide data from the LHC among many universities and institutions — including the UW — for processing. Scientists estimate that the data recorded for the project will be enough to fill the equivalent of about 100,000 DVDs every year.

Wu says the speed of physics success may come down to computing power. "Several years ago, what we are doing now would have been impossible without all these computing technologies. Science, in a way, is driven by the technology," she says. Compared to other institutions, she adds, "We have a lot more computing resources. … [I hope] we can detect a discovery faster."

Even so, any discovery will require time. "It may take us two or three years to make sense out of what we're seeing, because scientific discoveries do not come along and announce themselves as discoveries," Smith says. "You don't sit there and see it flash, 'Higgs! Higgs! Higgs!' First is the realization that you have something that you can't explain, and that's called a discovery. But defining what discovery you have is often more difficult."

The scientists must carefully check and re-check their work, challenging and gradually excluding every possible explanation until left with only one. Even then they must verify the explanation with further testing, always tending toward caution in their interpretations.

"It is very important to have cross-checking," says UW physicist Yibin Pan. "We are talking about the discovery of potentially new particles. We don't want to have a false alarm."

Exploring the Energy Frontier

What drives these scientists to pursue a task that requires decades of work, presents major challenges, and offers unrelenting stress — with no guarantee of success? Ultimately, it may come down to basic human curiosity. People have always felt the urge to explore and expand their frontiers, and these scientists are no different.

"The potential to discover the unexpected is really one of the best parts of being an experimental physicist," says Wu.

Much like Columbus gazing at the western horizon of the Atlantic or Galileo peering through his telescope at the stars, the LHC offers a window into a new world, a previously inaccessible realm full of high-energy particles beyond what physicists call the "energy frontier." Legions of scientists around the world are eagerly awaiting what the LHC may find.

At the moment, it is largely a cerebral pursuit, with few if any planned practical applications. The LHC itself will not cure diseases, nor solve the growing world food and energy crises. But, as many scientists are quick to point out, human ingenuity will undoubtedly step in. Countless technologies — x-rays, transistors, lasers, and magnetic imaging, to name a few — can trace their roots to obscure intellectual endeavors that, at the time, had no foreseeable practical use.

CERN is well known as the birthplace of the World Wide Web, devised in 1989 by scientist Tim Berners-Lee as a way to improve data handling. His original manuscript, modestly titled "Information Management: A Proposal," is still on display in the CERN campus museum, complete with a handwritten comment from his boss: "Vague, but exciting."

While most Geneva tourists enjoy the lake, city, and mountains, University Communications science writer Jill Sakai PhD'06 spent her visit three hundred feet underground in the CERN tunnels.

HOLLYWOODBADGERS

Wisconsin alumni work together to open doors in show biz.

By Jenny Price '96

Hollywood can be a tough town for a Badger, or for any creature, really. William Faulkner called it "a place where a man can get stabbed in the back while climbing a ladder."

But Lesley Feinstein '03 and Mary Rohlich '03 turned that concept inside out in 2005 when they launched Hollywood Badgers, a group aimed at helping UW-Madison students and alumni break into the entertainment business. At the time, Feinstein was working for a talent agency and Rohlich for a movie studio, where she was flooded with resumes from UCLA and USC students seeking internships.

As Rohlich sorted through the stacks, she kept returning to one thought: "I want to hire a Badger."

The pair, who both graduated with degrees in communication arts, decided Wisconsin alumni living and working in Hollywood needed some camaraderie — in the form of monthly happy hours — and some honest-to-goodness help navigating a notoriously tough industry.

Today, three years after the first Hollywood Badgers meeting, the group has more than one hundred and thirty members — 90 percent of them under age thirty-five — and some serious word-of-mouth buzz.

"It just spread like wildfire, and we had no idea that there were so many people a) who wanted to help and b) who were out here," says Rohlich, who receives e-mails every week from students who are preparing to make the move to Los Angeles.

With a student chapter in Madison and a new Web site, HollywoodBadgers.com, the group encourages students and new graduates to join, upload resumes for consideration for internships and jobs, find roommates, and make connections — all before even setting foot in Hollywood.

The group gives new arrivals to town the skinny: it helps to know someone to get a job; even with a college degree, you might have to start in the mailroom; you've got to be willing to work for little or nothing; and, most important, to live in Los Angeles, you must own a car.

"It's kind of like a little safety blanket out here," says Feinstein, who now works as coordinator of integrated marketing for MTV.

Feinstein and Rohlich don't just preach the group's mission — they live it. Rohlich, who now works as an assistant to Seth Gordon, director of the upcoming movie *Four Christmases*, hired five interns from the UW when she was working at Columbia Pictures.

"A lot of us who started [Hollywood Badgers] have gotten to a place where we can help in different ways now," she says. "It's not like you come out here and send your resume and expect to get a job. You have to know somebody who can put your resume in front of somebody to get you in for the interview."

DON MILICI

Rohlich (left) and Feinstein founded Hollywood Badgers in 2005.

Katie Weigand '07 didn't even make it all the way to California before the powerful talent agency International Creative Management (ICM) first called her for a job interview. Weigand, who earned her degree in art history, had been working for a talent and modeling agency in Madison when she met Feinstein at a Hollywood Badgers panel on campus. The two women kept in touch, and Weigand sent Feinstein her resume after graduation. ICM tracked Weigand down as she was making the long drive from the Midwest because Feinstein had forwarded her resume to an ICM agent she knew. Weigand interviewed the day after arriving in Los Angeles and started work the following week in the mailroom — right alongside people with advanced degrees from Ivy League schools.

"I'll always remember that this was how I was able to land on my two feet out here," Weigand says. As it turns out, her stint in the mailroom lasted just three weeks; she now works as the assistant to an agent in ICM's international and alternative media department, which buys and sells reality TV programming, including *Dancing with the Stars*.

Colleen Kerns '06 turned to the group's Web site to find a roommate before relocating to Hollywood. One woman who responded to her post had cats — a deal breaker for Kerns's allergies — but the cat owner's boyfriend ended up helping Kerns land her first job at a small TV production company. Now that Kerns is working as a director's assistant, she says she's "hoping to definitely return the luck," a mindset Hollywood Badgers has instilled in its members.

"I'll always remember that this was how I was able to land on my two feet out here."

The group also creates a little piece of home for UW graduates, as Rohlich found when a college friend who had been struggling to meet people and find work because of the writer's strike attended one of their football-watching parties.

"She was just glowing and felt like she was at home. … It was just a totally different energy, and she was just so happy, and it was like she'd found her place here," Rohlich says. "It definitely still feels like you're in Madison when you're around these people."

UW alumni did not have much of a profile or formal network in Hollywood when Richie Schwartz '97 moved to Los Angeles ten years ago to work as an assistant to movie director David Lynch. He recalls driving to a sports bar one morning, hoping it would be open so he could watch a Wisconsin football game. A group of Michigan alumni was there with the same idea, and Schwartz thought, "This can't be possible. Where are all the Badgers?"

Hollywood Badgers was "sorely needed" and has strengthened the UW alumni presence, says Schwartz, who now works as manager of creative affairs for late-night host Conan O'Brien's NBC-Universal-based TV production company. He also has used his industry connections to link other UW alumni with job prospects.

"Wisconsin meant nothing to a lot of people. It was just a name," he says. "Having the cachet of a group is almost a brand in a way."

It was clear the group had made an impression after Feinstein got promoted at the talent agency where she once worked as an assistant to a film agent. "He said to me, 'I only want to hire someone from the Hollywood Badgers, because everyone I meet from that group is just so smart and motivated,' " Feinstein says.

Kerns, who served as the same agent's assistant before leaving to work for movie director Brandon Camp, heard the identical directive in searching for her replacement. "He really wanted me to get someone from Wisconsin," she says. "It was kind of a rush — we had to settle for someone from Texas."

Jenny Price is a writer for *On Wisconsin*.

Walking the Walk

After witnessing the damage from an oil spill, John Francis gave up driving and talking for years on end — all to raise awareness about the need to protect the environment.

By Dashka Slater

PHOTO COURTESY OF JOHN FRANCIS

Francis took this self-portrait in 1974, two years after he made the decision to give up using motorized vehicles. Facing page: Today, he lives in Point Reyes Station, California, where he oversees Planetwalk, a nonprofit he founded to raise environmental awareness.

ONE FRIDAY MORNING in February, a group of students at the University of California at Berkeley settled onto the blue upholstery of a north campus lecture hall and readied themselves for a guest speaker. The students — undergraduates in a class called Introduction to Culture and Natural Resource Management in the U.S. — had been told that John Francis PhD'91was a man of unusual commitment to the environmental cause; he had gone for twenty-two years without riding in a motorized vehicle, and seventeen years without speaking. They prepared themselves for someone noble and ascetic — someone who would exhort them to be uncomfortable — and more than one of them felt slightly irritated at the prospect.

But Francis was not exactly what they had expected. For one thing, he was playing a banjo.

The banjo is a happy instrument by nature, but in Francis's hands it became positively exuberant. He danced a little as he played, shutting his eyes, swaying, smiling, and tapping out a rhythm on the banjo's silver body. Some of the students clapped along. When the song was over, Francis held out his arms.

"Thank you for being here," he said. "And I say, 'Thank you for being here' because after seventeen years of not speaking, those were the first words out of my mouth."

Francis's journey began in 1971 when two oil tankers collided beneath the Golden Gate Bridge, spilling 840,000 gallons of crude into San Francisco Bay.

ART ROGERS

Determined to end his participation in the oil economy, Francis walked across the United States and South America. Along the way, he earned a bachelor's degree at Southern Oregon State College, a master's degree at the University of Montana-Missoula, and a PhD at UW-Madison. Eventually, he got a job at the U.S. Coast Guard writing oil spill regulations, was named a Goodwill Ambassador for the United Nations, and wrote a book about his experiences that has been optioned to be made into a movie. Now the man who became famous for walking and not talking spends his time flying around the world giving speeches.

But Francis doesn't just talk. He acts out any story he tells with a precise and comic pantomime vocabulary developed during the years he was mute. Standing in the UC-Berkeley lecture hall, he acted out driving to see the oil spill with his girlfriend, Jean, his arm slung over her invisible shoulder. He acted out walking twenty miles from his former home in Inverness, California, to the town of San Anselmo in homage to a friend who had died in a boating accident. He even acted out the chip he had on his shoulder, the chip that said, "I'm walking for the environment. What are *you* doing?"

By the time his lecture was over, the students — part of a generation that is not particularly attracted to the notion of personal sacrifice — were completely captivated. "I thought it was going to be really serious," one student remarked to another afterward. "But it was so *chill.*"

It's a common response to an encounter with Francis. His story makes people expect him to raise a haughty eyebrow at their profligate lifestyles. Instead, they find a merry-eyed man who is far more interested in listening than in lecturing.

"He has a tune in his head that he marches to, and he definitely does what he thinks is right for him," says Barbara Borns, former student services program manager at UW-Madison's Gaylord Nelson Institute for Environmental Studies. "But he doesn't pressure people to accept him or buy into his lifestyle."

WHEN I FIRST MET Francis, twenty-eight years ago, he was living in Ashland, Oregon, and he was undoubtedly a local personality. I was a sixteen-year-old high school student, and Francis was then in his mid-thirties, but we were both mentored by the same teacher, the poet Lawson Inada, who taught at Southern Oregon State College, and we had friends in common. I remember Francis as a gentle, humorous presence who communicated with whistles and gestures and sometimes by writing on a pad of paper.

We had been out of touch for decades when I met him at his office in Point Reyes Station, California, last winter. Housed in the upstairs floor of an Old

West saloon, his office was small and sparse, with a desk, a filing cabinet, a bookshelf, and a window framed by stained white curtains. On the walls were photographs of family and friends, a couple of his watercolors, and an immense map of the Yukon River watershed, where he had recently traveled.

At sixty-two, Francis was no longer the willowy beanpole that I remembered from my teen years, and his dreadlocks and beard are going gray. He drives now (a hybrid Toyota Prius), and he talks. But the basic spirit was the one I remembered — affable and inquisitive. His laugh is an infectious, sputtering guffaw that seems to seize his entire body.

Still, much has changed. He is married now, with two sons, aged one and seven. (He also has a nine-year-old daughter who lives with her mother in Bolivia.) His book, *Planetwalker: How to Change Your World One Step at a Time*, which he self-published in 2005, was recently reissued by National Geographic Books. His Prius was a gift from producer/director Tom Shadyac (*Evan Almighty*, *Liar Liar*, *Ace Ventura: Pet Detective*), who wants to turn the book into a movie. In the course of catching up, Francis mentioned canoeing one thousand miles down the Yukon River with Native Alaskans to highlight environmental and social concerns, speaking at an outdoor retailers convention, participating in a walk with the American Indian Movement's Dennis Banks, and giving the closing address at the prestigious TED (Technology, Entertainment, Design) conference, right after Al Gore.

He's also been an ethics adviser for Strong Angel, a national disaster relief initiative. And overseeing Planetwalk, a nonprofit organization that he founded to raise environmental awareness, keeps him busy developing environmental curricula for schools, as well as handling a number of related projects. It's a diverse and wide-ranging resume, which Francis sums up in the broadest of terms.

"I'm a planetwalker," he says. "A planetwalker is someone who realizes that we are on the planet with everybody else, and they're just kind of walking around. It's a metaphor for a lot of the problems we seem to be facing. They're so huge, and we cannot imagine taking them on. But if we do it one step at a time, with a vision, I believe we can solve most of the problems that are facing us."

FRANCIS FIRST HAD THE idea of ending his collaboration with the oil economy after witnessing the oil spill on San Francisco Bay in 1971, but he didn't act on it for several months. When he did, he found it immensely difficult. Traveling at three miles per hour while the rest of the world went sixty meant missing out on everything from impromptu volleyball games (by the time he got there, the games were over) to his job as a volunteer firefighter (he couldn't ride in the fire truck). And he made people angry. His choice not to drive seemed an implicit criticism of their car dependence. People wanted to argue with him about the futility of his action, and being a twenty-seven-year-old man with passionate convictions, he found himself more than willing to oblige.

"I got to the place where I was arguing so much with people about it, that I came upon my birthday, and I decided I was just not going to speak for one day," he recalls. "And that really changed my life. The first thing I learned was that I was not listening to anyone. I already knew what I thought was the answer." Intrigued by what keeping silent was teaching him, he kept silent for another day, and then another, and then at last decided to remain silent for a year. Each year on his birthday, Francis would evaluate whether he wanted to continue his silence.

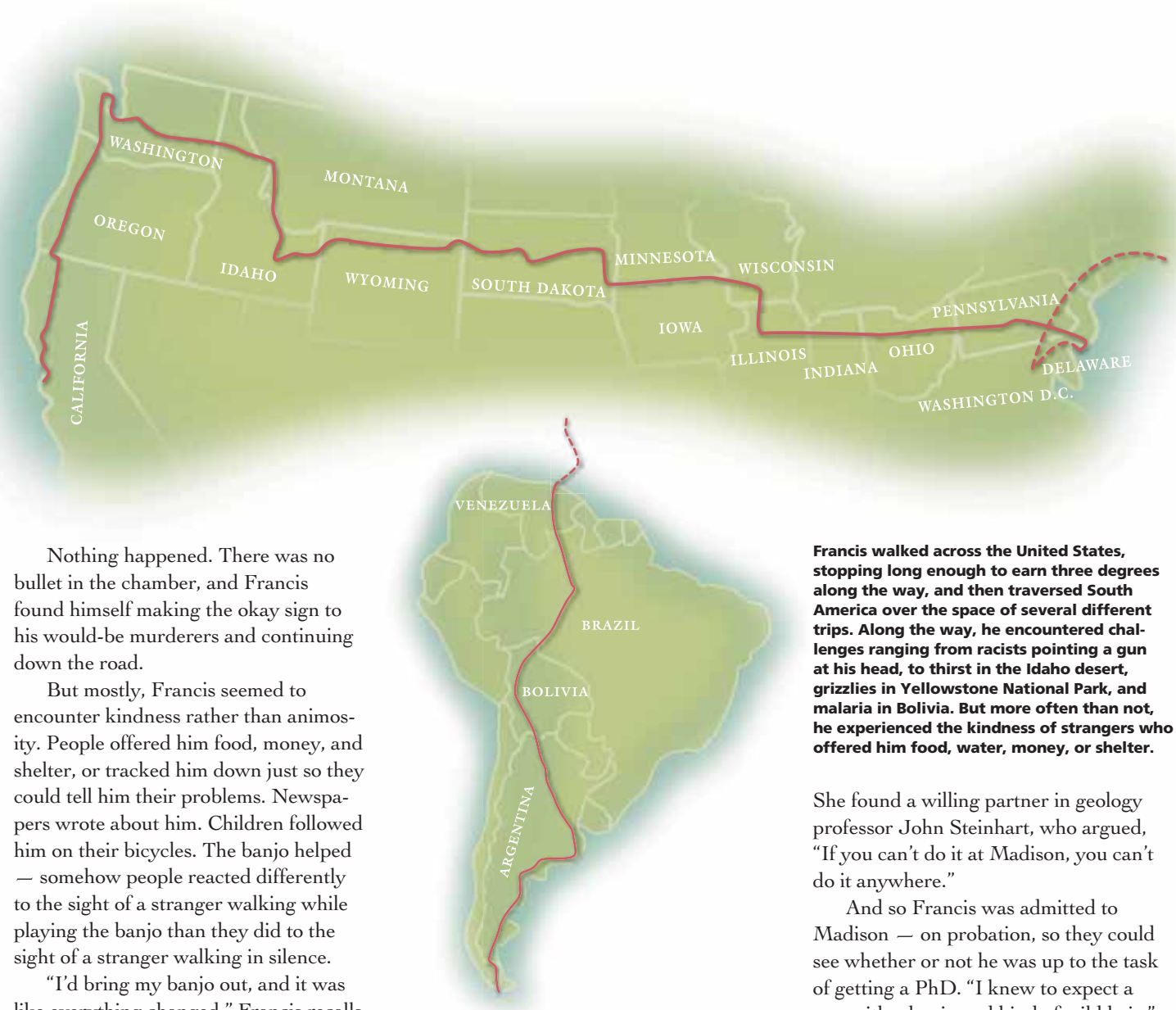
When Francis stopped talking, he discovered he could no longer lie, at least not without putting a great deal of effort into it. And he realized that he had been lying quite a bit, compensating for the low self-esteem that can be the legacy of growing up black in America. Being silent meant that not only could he no longer lie, but he had to allow himself to become something like a clown. He writes in the book about becoming a "colorful local character" — the black man with the banjo who neither drives nor talks. "I decided to embrace my condition, to grab the tail of the tiger and use the notoriety to further the cause of environmental protection," he writes. "I decided to use my life for change."

And so Francis set out walking, carrying with him newspaper clippings that explained why he was silent and on foot. He walked to Ashland, Oregon, a distance of five hundred miles. He got a college degree there, went north to Washington, and then set out for Montana, sometimes walking twenty-eight miles in a day. Reading about his journey, you keep thinking he'll be arrested or beaten up; after all, he's a black man who doesn't talk, and he's walking across middle America and camping out by railroad tracks and roadsides. It's hard to imagine a more vulnerable position.

"Yeah," he replied when I made this observation. "My parents were really frightened. At the same time, I have to say that we are all vulnerable. We travel along at sixty miles per hour in automobiles, pass each other by inches, and we don't think we're vulnerable. I think forty thousand people per year [the number of Americans who die in car accidents] would beg to differ."

Once, early in his journey, he was walking on a country road in northern California when two white men in a pickup truck pulled up. "Boy, are you lost or something?" one asked, and then placed the barrel of a .44 against Francis's head and pulled the trigger.

> "I'd bring my banjo out, and it was like everything changed. Instead of looking at me with suspicion, they would play an air banjo and smile and wave."



Francis walked across the United States, stopping long enough to earn three degrees along the way, and then traversed South America over the space of several different trips. Along the way, he encountered challenges ranging from racists pointing a gun at his head, to thirst in the Idaho desert, grizzlies in Yellowstone National Park, and malaria in Bolivia. But more often than not, he experienced the kindness of strangers who offered him food, water, money, or shelter.

Nothing happened. There was no bullet in the chamber, and Francis found himself making the okay sign to his would-be murderers and continuing down the road.

But mostly, Francis seemed to encounter kindness rather than animosity. People offered him food, money, and shelter, or tracked him down just so they could tell him their problems. Newspapers wrote about him. Children followed him on their bicycles. The banjo helped — somehow people reacted differently to the sight of a stranger walking while playing the banjo than they did to the sight of a stranger walking in silence.

"I'd bring my banjo out, and it was like everything changed," Francis recalls. "Instead of looking at me with suspicion, they would play an air banjo and smile and wave."

Francis's ability to disarm people who might be hostile or suspicious of him was crucial during his many years on the road. He knew that his choices would anger some people, but he no longer minded. "I just took that as the price of admission for what I was doing," he says now. "There was a point when I wanted everyone to do what I did, and then early on, especially after I stopped talking, I realized that this was a journey *I* was on — *I* had to do it."

Surprisingly, people were willing to join him on that journey, even if it meant changing the way they did things. While getting his master's at the University of Montana's graduate environmental studies program in Missoula, his fellowship required him to be a teaching assistant. It was probably the first time anyone had taught a university class there without talking, and there were complaints from parents who felt their tuition payments entitled their children to a teacher who spoke. But the university backed him up, and it turned out that the misunderstandings that sometimes grew out of Francis's pantomime engendered some of the most interesting discussions. In the end, he won a teaching award.

When Francis applied to Madison, the Nelson Institute's Barbara Borns remembers thinking, "Oh boy, this is kind of a strange fellow." Borns, who is now a board member of Planetwalk, called around to see if she could find someone to run interference for him. She found a willing partner in geology professor John Steinhart, who argued, "If you can't do it at Madison, you can't do it anywhere."

And so Francis was admitted to Madison — on probation, so they could see whether or not he was up to the task of getting a PhD. "I knew to expect a guy with a banjo and kind of wild hair," Borns recalls. "My whole staff was kind of uptight — 'How are we going to communicate with him? How are we going to know what he wants?' — but it only takes about five minutes of being with John to be comfortable." Francis's nonverbal communication methods slowed things down, but Borns says that the pace had its benefits, explaining, "It gave you a different level of communication."

Francis proved his academic chops in his first semester. But there were times when he doubted he would get his degree. He remembers a point two years into his program when he was struggling with earth sciences and thought that perhaps he would just move on. "And then I realized, this is a PhD program, and you are a fellow here," he recalls.

Continued on page 57

Cold Digger

Fifty years ago, UW scientist Charlie Bentley made his maiden voyage to a frigid, faraway land – **and he's been returning ever since.**

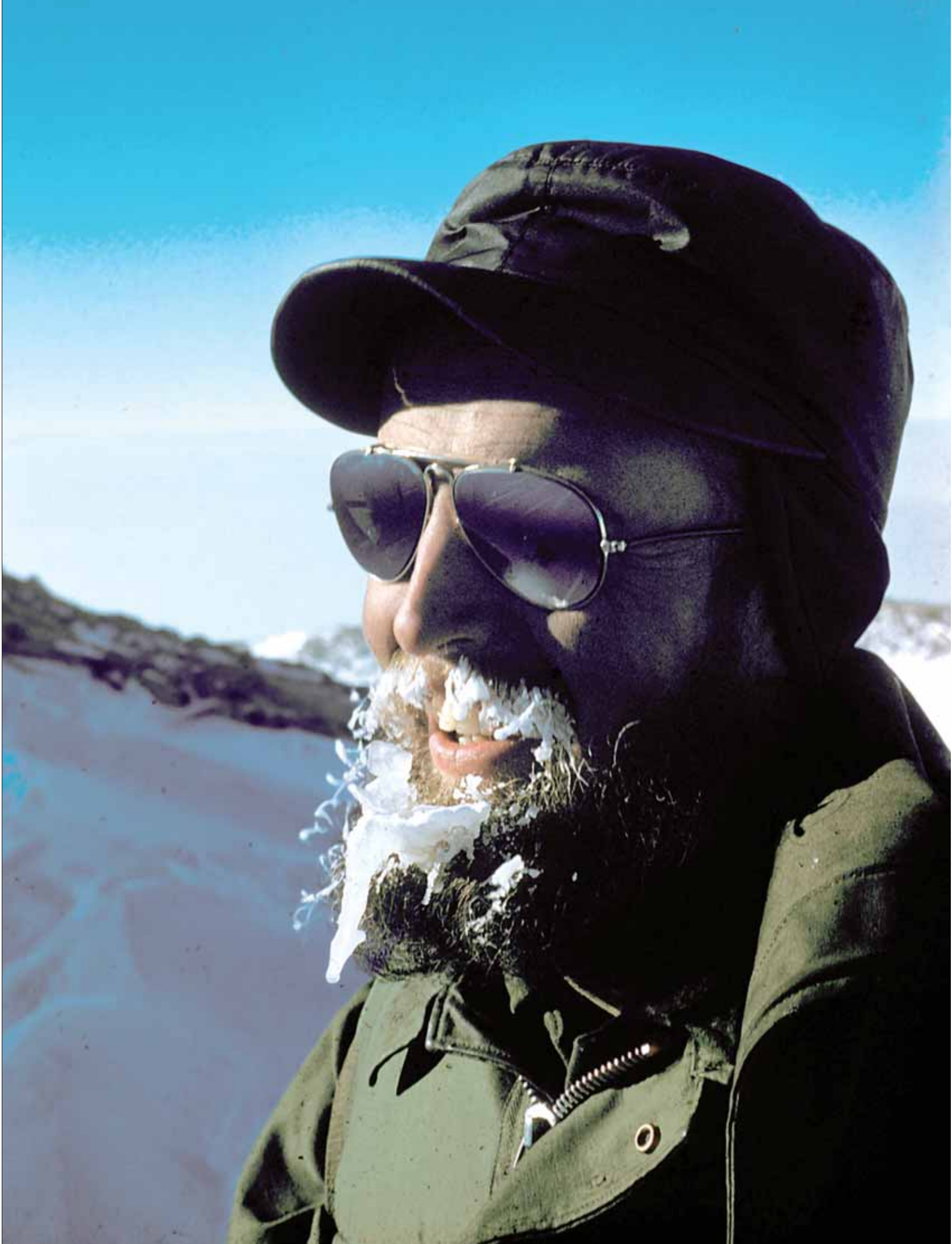
By Jenny Price '96

Charlie Bentley's adventure of a lifetime has lasted more than fifty years.

It started in 1957, when he first set foot in Antarctica as a young researcher. Bentley's own photographs — some reproduced on these pages — document his two-year stay, including exploration of uncharted territory and some remarkable discoveries.

"I never looked back. I never looked around. I never considered doing something else," says Bentley, shown at right in December 1958. Today an emeritus UW professor of geophysics, he has returned fifteen times and is considered a leading expert on Antarctica. Yet, his work is not done. Now seventy-eight, Bentley serves as principal investigator for the UW's Ice Coring and Drilling Service and most recently traveled to the continent in January 2008.

But it was his first trip into the unknown that got him hooked.



Bentley, far left, defended his PhD thesis at Columbia University and left the next day for the first leg of his journey. He boarded a ship bound for Antarctica from New Zealand with other team members (left to right): Ned Ostenso '52, MS'55, PhD'62, the team's assistant geophysicist and a UW assistant professor in the early 1960s; Tony Morency MS'66, PhD'68, the team's mechanic; and Vern Anderson, the team's chief glaciologist. Mario Giovinetto, not pictured, was the assistant glaciologist. Bentley, the team's chief seismologist, marked his twenty-seventh birthday — December 23, 1956 — "in the raw sea, he recalls."

Penguins and seals populated the unbroken sea ice where Bentley and his team disembarked from their ship during the journey south.

"There were no rules or regulations about how close to the animal life you could get, so you could walk right up," he explains. Today, the Antarctic Treaty System dictates that only researchers with special permission can get this close. Bentley says the penguins and seals in Antarctica have no natural enemies outside of the water, "so once they're up on the ice, they have no reason to be afraid of anything."

Ice measures three to six feet thick in the Antarctic sea, the reason Bentley's ship needed Navy icebreaker USS *Atka* to lead the way through the expanse of large pieces of floating ice that were packed together. A helicopter that took off from the icebreaker would search for openings, called leads, to help find an easier route.

PHOTOS COURTESY OF CHARLIE BENTLEY (5)

Mukluks made from caribou skin offered some relief when the temperature hit 65 degrees below zero. Bentley's colleague Ned Ostenso, at left, is sporting heavy leather mitts known as "bear paws" or "nose wipers," because of the fur on the back. "They still have them; I got some last January," Bentley says. But the rest of modern Antarctic gear replaces animal skins with down clothing and thermal boots. The new stuff is lightweight compared with the heavy, army-issue clothing that kept Bentley and his team members warm on their traverses, but, he says, "I don't think it works any better."

Byrd Station was still a work-in-progress when Bentley and his team arrived. Living quarters and research labs, made up of four-by-eight-foot prefab panels clipped together, were still under construction. They traveled from Little America Station in February 1957 by Sno-Cats — tracked vehicles built for driving on snow and terrain — a nearly month-long trip along a marked trail. "It seemed like it was always sunny and nice weather," Bentley says. "We did have storms, but they don't linger very long in my memory."

Layers of previously accumulated snow record individual storms and big changes in temperature each season. Researchers were able to get a closer look using this snow pit, dug 100 feet deep.

Bentley says he climbed down on occasion to help with the work, but it was the chief responsibility of the team's glaciologists, Vern Anderson and Mario Giovinetto. The person pictured here is not identified.

Improvisation was key when it came to testing geophysical equipment in the lab at Byrd Station. Bentley used a simple stick to flip the on/off switch for amplifiers that were connected to twenty-four detectors out on the snow surface. Meanwhile, his other arm had to remain inside a developing box, where sensors recorded the signal reflected from the bottom of the ice sheet after charges were set off to determine ice depth. Bentley taught himself how to do seismic work on a research visit to Greenland while completing his PhD. "It worked beautifully; the records are just as good as anything they get nowadays … but the ease of getting them is rather different," he says.

PHOTOS COURTESY OF CHARLIE BENTLEY (5)

Snow buried buildings at winter's end, along with the Sno-Cats that Bentley and his team would take on their summertime traverse across the continent. It took several days to dig out the vehicles before the journey could begin — six months after they first arrived at Byrd Station.

Ordinary life events crept in during the winter months that put much of Byrd Station underneath snowfall, including these puppies born midwinter, the offspring of a pair of huskies that joined the station as pets. Bentley took advantage of the minimal entertainment available during his second winter at Byrd Station: Ping-Pong and movies. "I saw *Mogambo* seven times," he says of the 1953 film starring Clark Gable, Ava Gardner, and Grace Kelly.

Water for Byrd Station came directly from the Antarctic snow, which the navy man pictured above is shoveling into the station's melter. Bentley says there was no need for the resulting water to be treated, because it was "nice clean snow," though, he admits, "sometimes it got a little diesel fuel in it" from the generator that provided the heat.

PHOTOS COURTESY OF CHARLIE BENTLEY (2)

5,000. Bentley covered that many miles on five traverses of Antarctica during the 1950s and 1960s. On the first traverse, his team discovered the lowest point on earth not covered by water — later designated as the Bentley Subglacial Trench — at 8,383 feet below sea level. The team made the discovery by drilling holes in the ice, setting off explosives, and measuring how long it took for the seismic signal to return. Antarctica's Sentinel Range of mountains also has peaks named for Wisconsin researchers, including Bentley.

Bentley and his team decided to name this extinct volcano Mount Takahe after the group's first re-supply plane — a Navy R4D that happened to share the name of a New Zealand flightless bird. Shown here in December 1957, with Bentley reclining at the front, the group did its own navigation during its three-month journey across previously unexplored territory. "We were so far from where anybody had ever been before," he says.

Back to the Future

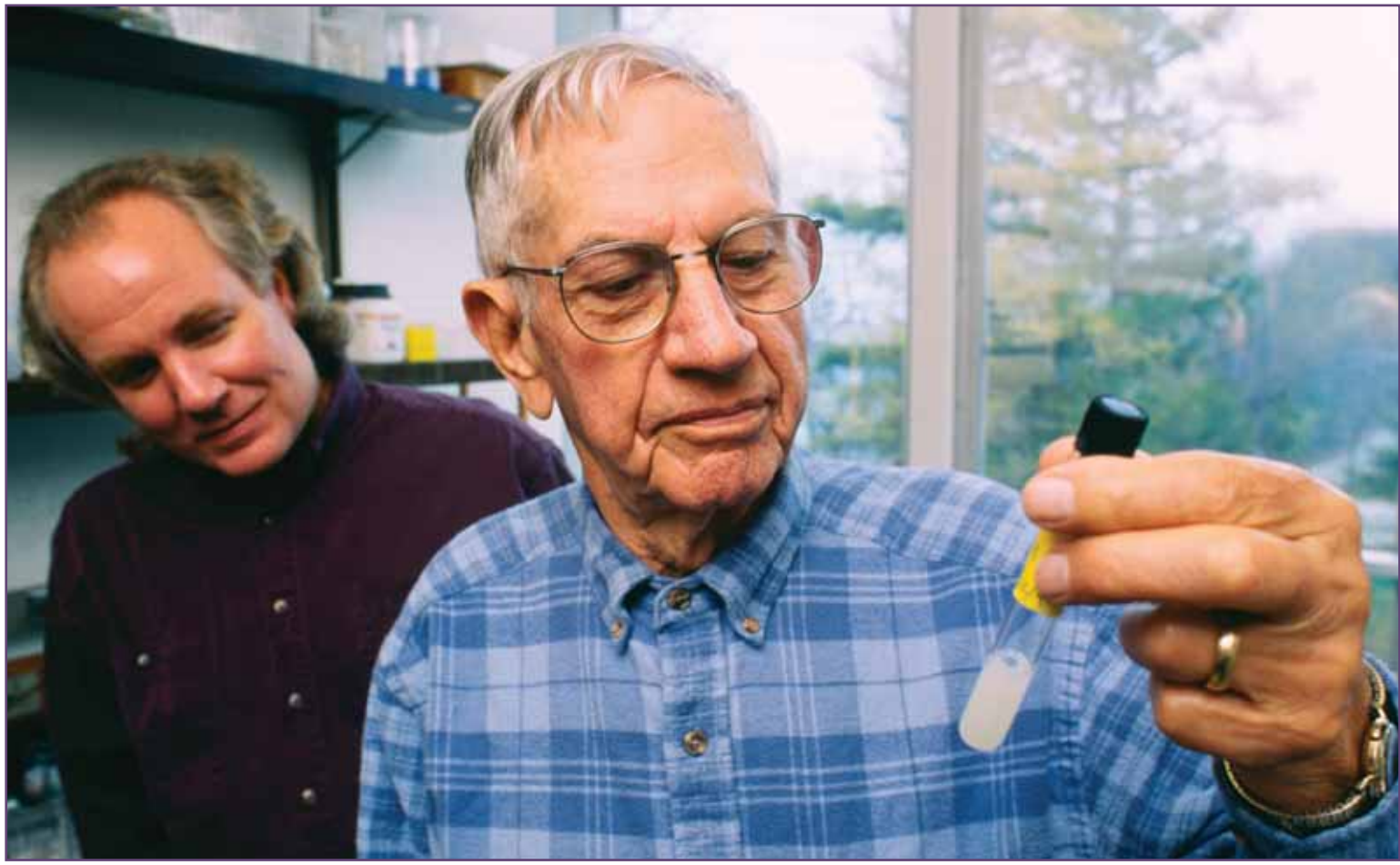
Charlie Bentley plans to go back to Antarctica in 2011. That's when the Deep Ice Sheet Coring Drill is expected to reach the bed of the West Antarctic Ice Sheet, where he did his early exploration of the continent.

The powerful drill, developed at UW's Space Science and Engineering Center, is boring through a distance greater than two miles. Bentley serves as principal investigator for the drill project, which produces ice cores containing a record of the last 80,000 years of the earth's climate. Scientists use that information to determine the connection between previous increases in greenhouse gases and climate change.

"The best way to figure out how to predict climate in the future is to understand what climate has done in the past," Bentley says. "And the best record of what climate has done in the past comes from ice cores." *—J.P.*

On Wisconsin writer Jenny Price '96 is in the market for a Sno-Cat she can drive to work during Madison's brutal winter months.

WOLFGANG HOFFMANN



Botulin production circa 1994: Eric Johnson (left) and Ed Schantz examine a test tube containing 300 million therapeutic doses of botulinum toxin.

Missing out on Botox helped change the way the UW evaluates the commercial possibilities of research.

WARF's new wrinkle

By John Allen

Eric Johnson wants a second bite of the poisoned apple.

The first was bittersweet. It gave the bacteriology professor the foundation for his career, and provided the material for dozens of publications, but it could have been so much more.

To clarify: the apple here is just a metaphor.

The poison is literal.

COURTESY OF ERIC JOHNSON

Johnson's lab at the Food Research Institute cultured C. botulinum bacteria (like the fellow — not actual size — at far right on facing page) in large glass jugs. For years the lab earned part of its funding by selling purified toxin to academic and commercial researchers around the country. UW grads Michael Goodnough and Carl Malizio turned that work into a spinoff company, Metabiologics.

Johnson is an expert in botulin — that is, botulinum toxin — one of the most poisonous substances on the planet. Two decades ago, when he was a young addition to the faculty of the College of Agricultural and Life Sciences, Johnson took that first nibble under the guidance of Edward Schantz '31, PhD'39, an emeritus professor at CALS's Food Research Institute. Schantz was perhaps the world's leading expert in the production of botulin, and he'd been providing the toxin — particularly a batch he'd developed in November 1979, called 79-11 — to a San Francisco ophthalmologist named Alan Scott. It was the key ingredient in an eye medicine Scott was developing called Oculinum, and Schantz and Johnson thought that Oculinum might prove successful. They went to the Wisconsin Alumni Research Foundation (WARF), which acquires and manages patents on behalf of UW-Madison researchers, and asked WARF to patent 79-11.

But WARF was not enthusiastic — not about 79-11, or about botulin in general.

"I don't want to get anyone there in trouble," says Johnson, "but they kind of thought we were crazy. They didn't think anyone would ever want to use [botulin] as a medicine."

And, at the time, they had a point. "In the 1980s, the world market for botulinum toxin was zero," says Paul Pucci '02, MBA'05, a licensing associate at WARF. Oculinum was then still being tested, and the notion of injecting a deadly substance into the muscles around a patient's eyeball could not have seemed appealing. WARF declined the request.

And that, notes Johnson with regret, was unfortunate. "Of the 150 milligrams of botulinum toxin in that original batch, we kept back 50 for research. The rest treated some twenty thousand patients."

In 1988, Scott sold his interest in Oculinum to Allergan, a pharmaceutical company then known chiefly for producing eye drops. The next year, the U.S. Food and Drug Administration approved botulin batch 79-11 for the treatment of strabismus (crossed eyes) and blepharospasm (uncontrolled blinking). Allergan renamed the drug Botox and soon discovered that it was useful for treating a wide variety of ailments, including pediatric cerebral palsy, hemifacial spasm, and cervical dystonia or "wry neck." And, more profitably, it made an effective wrinkle remover, turning the drug into

a household name and cultural icon. According to Allergan's 2007 annual report, Botox sales amounted to $1.2 billion last year, not one dime of which goes to Johnson, WARF, or UW-Madison.

"That was a mistake," says Pucci. "But we try to learn from our mistakes and make better decisions going forward."

WARF, like Johnson, is now hoping for a second, more profitable bite of the apple. In 1996, Johnson and other researchers developed a new, purer batch of botulin, which WARF did patent. In 2004, the foundation licensed it to a company called Mentor Corporation, which hopes to turn it into a Botox competitor under the name PurTox.

According to Pucci, Botox helped change the way WARF judges patent opportunities, opening the foundation to ideas that don't seem immediately profitable. It also made Johnson far more savvy about how to find commercial opportunities in his research — and eager to recover the public renown that he and Schantz missed out on.

Long Balls and Lotto

To see the House that Patents Built, go to 614 Walnut Street. It's hard to miss: a 181-foot tower that dominates the skyline of western campus. This is the headquarters of the Wisconsin Alumni Research Foundation, and it's one of the most obvious material legacies of the commercial success of UW research.

Founded in 1925, WARF has acquired patents on more than 1,800 UW-Madison scientists' inventions and discoveries, and — with some 856 patents pending — the number is growing rapidly. WARF has also entered into more than 1,500 licensing agreements to bring those inventions to market, and has returned more than $900 million to the university through grants to researchers.

But most of that money, says licensing manager John Hardiman, has come from just a dozen or so patent groupings, such as Harry Steenbock's method for irradiating milk to activate vitamin D, and further vitamin D-related inventions from Hector DeLuca MS'53, PhD'55 and fellow researchers; Karl Paul Link's development of the blood-thinner dicumerol (and — under the name Warfarin — rat poison); Dale Wurster's pharmaceutical tablet coating; and Folkert Belzer and James Southard's organ transplant solution.

"This is a home-run industry," says Hardiman, meaning that it's the big hits that pay the bills.

WARF decides whether to try to acquire a patent based on the answers to four questions: Is the invention actually new and original? Is it useful? Is it something people would pay money for? And is it enforceable? If the answer to all four is yes, then WARF is likely to go after a patent.

But this is risky, as the patenting process costs far more than the few hundred dollars that the U.S. Patent and Trademark Office requires as its filing fee. WARF must conduct what's called a "prior art" search — in other words, it must make sure that the invention the UW scientist came up with hasn't already been invented by someone else and isn't obvious to someone schooled in the art. And it must answer any questions or concerns that the patent office has. The process can take years and typically costs between $10,000 and $50,000. After that, licensing managers and associates — such as Hardiman and Paul Pucci, who handle the work on UW-Madison's purified botulin — have to negotiate a licensing agreement with a company, hoping to bring the invention to commercial success within twenty years, the lifespan of a typical patent.

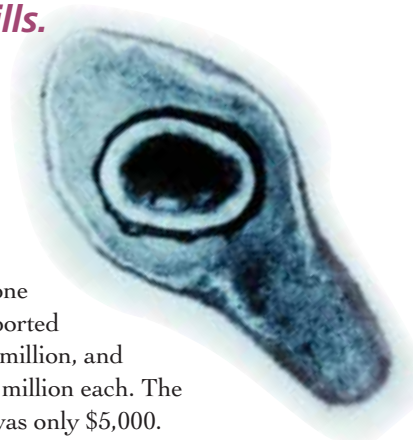
Extending Hardiman's baseball metaphor, WARF used to aim for home runs by being very selective about the pitches it swung at. But since missing out on Botox, he acknowledges, WARF has "become much more aggressive." While in the past WARF tried to limit its patenting efforts to ideas that had obvious commercial potential, botulin showed that big opportunities can be far from obvious.

"When Ed Schantz and Eric Johnson came to WARF with botulinum toxin, there was no way of knowing what a huge market would develop," he says. "But then that's how revolutionary markets are — sometimes they don't develop until the product is there."

Currently, WARF seeks around two hundred new patents each year, not including foreign patent equivalents, and it negotiates as many as a hundred new licensing agreements annually. This more aggressive posture reflects what Brad Barham sees as a growing desire among universities to turn research into commercial success. Barham, chair of the UW's department of agricultural economics, and associate professor Jeremy Foltz conducted a survey of more than a thousand life scientists nationwide to ask them about their commercial endeavors.

The results, published in 2007, indicate that relatively few university researchers are getting patents, but a very small number are scoring big. Some 53 percent of the scientists surveyed held no patents at all, and another 39 percent had just one. Only 8 percent were receiving patent revenue, but one researcher reported receiving $24 million, and two others $1 million each. The median gain was only $5,000.

"This is a home-run industry," says John Hardiman. When it comes to patents, it's the big hits that pay the bills.



"When your lab's budget is $200,000 a year, that's not a lot of money," Barham says. Patenting, he discovered, "is

really sort of like a lottery. Most people aren't seeing much of any payoff. But the ones who are get huge returns."

Passion for Poison

Eric Johnson hopes to be one of the winners of that lottery. Since coming to the UW in 1985, he's been named as an inventor on some twenty-six patents, but the one with current home-run potential is U.S. Patent #5,512,547: "Pharmaceutical composition of botulinum neurotoxin and method of preparation," which he and his former student Michael Goodnough '86, MS'91, PhD'94 acquired in 1996. That formulation of botulin is the basis for PurTox.

To him, a second bite of the apple would mean more than money — it would be a chance to restore credit for botulin development to those who deserve it.

Johnson is the guardian of the UW's role in the story of botulin. His office is literally crammed with history. Pointing to the floor-to-ceiling stacks of boxes, he shrugs and says, "There are some important papers in there, originals from Ed Schantz's years

"Ed was a wonderful, gentle, helpful man," says Johnson, "who also thought that poisons were really interesting."

As a UW graduate student, Schantz had studied milk production, but during the Second World War, he joined the army and was put to work in the biological weapons program at Maryland's Fort Detrick. There, between 1944 and 1971, he became an expert in the purification and production of botulin, chiefly with the aim of investigating its military potential.

Considered the most toxic protein on Earth, botulin is the product of the bacterium *Clostridium botulinum*, which gets its name from the Latin word for sausage: botulus. It was initially discovered on tainted meat, and before Botox, botulin was chiefly known as the cause of botulism, a particularly nasty form of food poisoning. A neurotoxin, botulin does its deadly work by impeding communication between nerve and muscle cells, thus paralyzing its victims. The median lethal dose (that is, the amount that, if given to a hundred subjects, would result in death for at least fifty of them) is one billionth of a gram per kilogram of the victim's body mass. This means that, theoretically, one kilogram of pure botulin would contain enough poison to kill every man, woman, and child on the planet.

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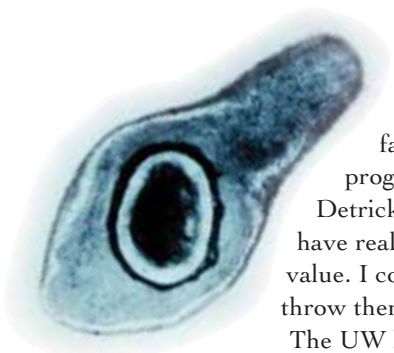


at [the biological warfare research program at] Fort Detrick. They could have real historical value. I couldn't just throw them away."

The UW had botulin studies long before Schantz came to Madison in 1972, but his arrival added a titan of toxins to the university's faculty.

Still, Schantz determined that the poison would make a poor weapon — the toxin is unstable and easily destroyed, and there are vaccines against it. But botulin did show several intriguing characteristics: it's specific, meaning that it can be targeted to particular nerve groups; its effects last for a long time; and its high toxicity — the lethal dose is lower than the amount necessary to raise antibodies against it — means that it can slip past a body's defenses. These elements all made it intriguing to doctors in search of new medications, including Alan Scott, creator of Oculinum.

"Although the paralyzing action of botulinum toxin had been known and studied by several physiologists for many years, it was never visualized at the time as a means of treatment for control over nervous diseases causing involuntary muscle activity in the human body," Schantz wrote. "The use of botulinum toxin in medicine for the treatment of human disease was an entirely new concept."

The intriguing possibility of medicinal botulin stuck with Schantz, even after the United States joined the Biological and Toxic Weapons Convention and shut down Fort Detrick's botulin operation. Schantz returned to his alma mater, taking along his poisons and his contacts. From his lab at the UW's Food Research Institute, he continued to culture *C. botulinum* in glass jugs, purifying batches of the poison and shipping samples to "any reputable laboratory," he wrote.

"Ed was very generous," says Johnson. "He shared his botulinum toxin openly, and at little profit to himself. I don't think there was a piece of botulinum research done anywhere that Ed didn't have a hand in."

When Johnson joined the faculty in 1985, Schantz brought him into the botulin-producing business, enticing him with the poison's possibilities. "It's fascinating to me that something so poisonous can be used as a medication," says Johnson. He took over the production business as Schantz withdrew into retirement, and when the older scientist passed away in 2005, Johnson eulogized him in university publications.

He also defends Schantz's role from what he feels are slights from the Botox crowd. "Allergan likes to imply that they developed botulinum toxin all on their own," he says. "Well, they can't get away with saying that kind of thing when I'm in the room."

Although Schantz and Johnson didn't land a patent on 79-11, the two scientists continued to work on botulin.

Johnson's lab produced toxin —and antibodies specific to it — and sold the material to researchers and commercial entities, with the profits going to support the lab.

"It was a nice little business," Johnson says. "It helped fund our lab, and it meant that we weren't as dependent on grants as other researchers are." It also became a training ground for Schantz's academic heirs — Johnson and the students who came through his lab.

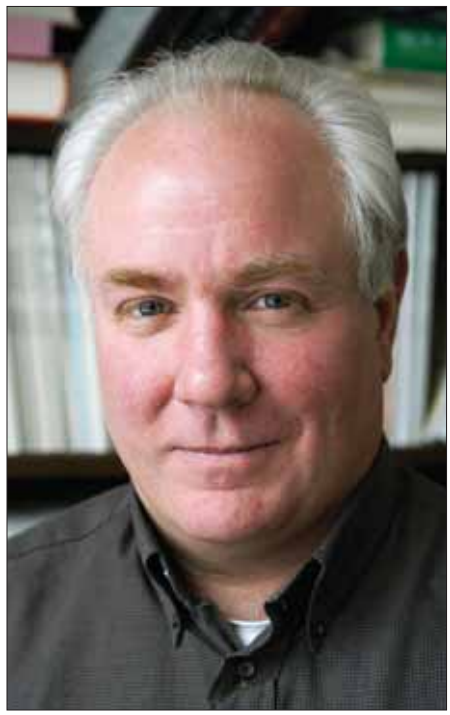
Eventually, the university required that the botulin business move off campus. It wasn't considered research, and so the university felt it shouldn't take up lab space or time, and further, increasing security concerns were making it impossible for Johnson to use students in his lab. "I'd have to get FBI clearance for them," Johnson says, "and that just takes too long." And so Johnson's former students Michael Goodnough and Carl Malizio '88 spun the poison-making enterprise off as a new company, Metabiologics. Located at the UW's research park, it continues to produce botulin for government and university labs and has seen growth of between 20 and 30 percent a year since 2004, according to Goodnough.

But for Johnson, also a Metabiologics board member, commercial ambition is just a sideline. "I don't know business," he says. "I know toxin." And what he wants is to see botulin's role as a medication grow.

The Second Bite

To see Madison's Houses that Botulin Built, travel to the University Research Park on the city's southwest side. There, two buildings bear the name Mentor Biologics. One manufactures the poison; the other will freeze-dry it for transport. But none of the drug is currently being sold, as PurTox awaits approval by the FDA. The drug is in its third and final phase of clinical trials for cosmetic uses, and the first phase for therapeutic uses.

Mentor Biologics is owned by Mentor Corporation, a company based in Santa Barbara, California. Before taking on PurTox and entering the botulin sweepstakes, the firm was best known for manufacturing breast implants. PurTox marks a completely new line of business for Mentor, which is why the company built its botulin factory in Madison.



JEFF MILLER

Eric Johnson has spent decades trying to find ways to turn the world's deadliest protein into a highly versatile medication. WARF hopes that PurTox will earn the UW a significant return on that research.

"Mentor Biologics has just one product," says vice president AnnaMarie Daniels, "and that's PurTox. We want to be in Madison to be close to Eric Johnson and his expertise."

The UW-created, newer variety of botulin, Mentor believes, is better than the stuff that's in Botox. "It's a highly purified, extremely well characterized form of the toxin," Daniels says. She believes that purity gives PurTox a superior composition, and she hopes that this, as well as the cachet of a connection to Ed Schantz's intellectual heirs, will enable Mentor to expand its role beyond cosmetic medicine and break into therapeutic treatments.

"When Americans hear botulinum toxin, they immediately think of wrinkles," she says. "But worldwide, at least half the market is therapeutic, for the treatment of neuromuscular disorders."

Mentor's investment in Madison shows that the company has high hopes for PurTox, but there are also considerable risks. Not only does Botox dominate the botulin market, but there are other competitors as well. Under the names Dysport and Reloxin, the French pharmaceutical company Ipsen produces botulin, and the U.S. firm Solstice Neurosciences produces a variety of the toxin under the name Myobloc.

Although PurTox may not turn out to be a home run, Hardiman says that Mentor's willingness to gamble on botulin — and to open a facility in Madison — illustrates one important way that the toxin is already offering a return to the university. The arrival of Mentor supports not only Johnson, by providing him with a commercial outlet for his research, but it also aids Metabiologics, as it will draw on that firm's techniques and expertise. Goodnough, like Johnson, is party to the PurTox patent, and he, Johnson, and Malizio are acting as consultants for Mentor Biologics. The business may give Metabiologics the capital and the workload to expand beyond its current two-employee base, as well as attract a wide variety of bioscience jobs to the Madison area.

"We think we can build a critical mass in town around biotech research," Goodnough says. "The more companies that we can locate here near campus, the more opportunities we can create here for scientists and researchers. And the more opportunities there are, the more of them will want to be part of the university."

But Johnson hopes to guard Schantz's botulin legacy, so Madison's economy is a secondary concern. His goal is to secure a little of the public renown that he feels his mentor missed out on.

"Ed had the foresight back in the forties to see that this could be something," Johnson says. "Botulinum toxin has been really valuable and fundamental in expanding our understanding of biology and disease. It's led to some fundamental discoveries in basic biology."

John Allen is senior editor of *On Wisconsin* — although the botulin treatments make him look more like a junior editor.

Scene

Creepy Crawlies

Students at C.H. Bird Elementary in Sun Prairie, Wisconsin, try to make peace with the bug world during a visit from the UW entomology department's Insect Ambassadors program. The ambassadors are undergraduate and graduate students who take the critters to visit skittish kids at local schools, clubs, and organizations. "Kids love playing with the live insects," says ambassador (and grad student) Mike Hillstrom '03. "And it gets [them] to open their minds about insects — that every insect isn't scary and gross." Well, maybe not *every* insect.

Photo by Jeff Miller

Team Player

Rachel Ruetz

Five things you should know about dance team co-captain **Rachel Ruetz x'10**:

- Ruetz is one of three captains on this year's squad. The other two, **Katie Brown x'10** and **Alyssa Johnson x'10,** are her roommates. "We all work together on choreography," Ruetz says.
- She was born to cheer for the Badgers. Her father, **Howard Ruetz '91,** was a member of the football team, and her mother, **Julie Ziehm Ruetz '81,** was on the pompon squad — forerunner to today's dance team.
- Ruetz has studied dance for ten years, covering ballet, jazz, tap, and hip-hop. Of the team's routines, jazz is her favorite.
- Ruetz was accepted into the School of Education, where she'll major in elementary education, and she hopes to draw on her dance experience in her career. "I'd love to coach," she says. "It's probably one of the main reasons I got into teaching."
- Dance may not be a varsity sport, but it's certainly competitive. Ruetz and her co-captains will lead a young team, with no seniors, through the spirit squad tournaments. These include the Universal Dance Association camp in Milwaukee in August and nationals in Orlando in January.

Badger Jake

Via words sent from here and abroad, one soldier's story speaks to many.

People from all over the country are rooting for **Jake Wood '05** these days, but it's not because of anything he did on the football field.

Wood, a backup on the Badger offensive line for four years, started a blog called *Jake's Life* to keep in touch with friends and family after he joined the United States Marine Corps following graduation. Since then, he has completed a tour of duty in Iraq and is now serving a seven-month stint in Afghanistan, expecting to return home in November.

"It was my way of letting people know where I was," Wood wrote in March. "When I got to Iraq, it became a way for me to vent about what was going on around me."

Wood's blog posts are candid, funny, poignant, and harrowing as he details his life during training, combat, and everything in between. Always present is his intense love for Wisconsin sports and his anticipation of the next big game — his gear in Afghanistan includes a Motion W camouflage hat.

He shares his fear of large camel spiders found in Iraq, the thrill of learning wilderness survival techniques that he describes as "*Castaway* meets *Robinson Crusoe*," and his struggle for the right words to say to the mother of a fallen comrade. Wood has lost friends, and he has friends who have lost arms, legs, and fingers in the line of duty. He is telling just one soldier's story, but it resonates with readers looking for a real account of the war they can't find on the nightly news.

"Today was vehicle breakdown," Wood wrote from Iraq in April 2007. "Apparently the humvee I was in decided it didn't want to make righthand turns anymore. I don't know for sure, but I think that's kind of mission essential. … Humvees like to break a lot. Simple things too. Like doors. I'm not sure there is a humvee in the Marine Corps that has four working doors. The U.S. can put a man on the moon but they can't give me a simple door that will unlatch and swing open."

Sometimes Wood ruminates on the pleasures and comforts of home that are familiar to his readers. "I filled an entire six-hour block of post talking with Cartwright about how good a Qdoba burrito would be right now. Chicken, rice, cheese (no beans), hot salsa ... that conversation also included Miller Lites."

When Wood's blog took off in readership — fueled in part by being featured in an article by *New York Daily News* sports columnist Mike Lupica — Wood initially didn't know how to respond. "I decided that, after reading e-mails I was getting from random people around the country, my writings were helping people connect to the war," Wood wrote.

Readers have posted comments describing his blog as a "must-read," and their feedback has become an unexpected network of support for Wood and his family. "Thank you for doing what you do, and Jake, come back safely to your Mom," wrote one anonymous reader whose sentiment is echoed by dozens

COURTESY OF JAKE WOOD (4)

During the seven months Jake Wood served in Iraq during 2007, he found creative ways to show Badger spirit. He saw a spike in blog readership when links to his postings about military life popped up on some Wisconsin fan forums.

of other comments posted to the blog.

Wood's mother, Chris, who lives in Bettendorf, Iowa, marvels at how strangers from coast to coast follow her son's life so closely. Some, including a group of women from a Madison assisted-living community, have even mailed Wood and his unit items that they need, such as protein powder packets, gum, books, and magazines.

"I think he has thousands upon thousands of followers on his blog, and they are so anxious to read every update," she says. "They are just looking for the next chapter in his life, and now that he doesn't get to post as often, I think there's anxiety, because they're wondering, 'What's Jake doing now?' "

Because of a new role in Afghanistan as a scout sniper, Wood decided he could not safely write about operations there — as he did when in Iraq — without putting himself and his unit at risk. But, he promised readers, he will continue to write about "my personal life and antics as I always have.

"That being said," he added in a blog post, "I expect the number of readers I have to drop by about ninety-nine percent. If you are in the other one percent … well … God bless you …"

After he returned home from Iraq, Wood wrote that the seven months he spent there were "a lesson in psychology, in culture, a firsthand look at the best and worst qualities that can be found in society. Iraq aged me by decades while simultaneously revealing my youth and insignificance to the grand 'scheme.' "

Wood, a former Academic All-Big Ten player, who graduated with degrees in political science and real estate/urban land economics, plans to pursue an MBA when he leaves the marines in October 2009.

Barry Alvarez, Wood's former football coach, recalls the moment when the former offensive lineman came to discuss his plans to enlist. "I think he's a guy that really — when he believes in something — really puts his heart and soul into it," Alvarez says.

As he prepared to leave for Afghanistan in April of this year, Wood reflected on how hard it was to say good-bye once again. "It's difficult in those awkward moments with your family when they are asking you if you are scared or nervous or any one of the other million emotions you could be feeling on the verge of heading back," Wood wrote. "To be truthful, it's a cocktail of everything. I could quite honestly put any name on the gut feeling I have sitting in my stomach. The fact is that I'm going back and that's why I signed up in the first place, so there aren't any complaints on my end."

— Jenny Price '96

To read Jake's Life*, see http://badgerjake.blogspot.com/.*

Wood (top, at far right) with some of his Badger teammates in November 2004, and (above, third from left) in Iraq in July 2007 with fellow marines from Golf Company.

SPORTS INFORMATION (2)

IN SEASON

Women's Cross Country

Circle the dates: On November 2, the Big Ten Championships will take place in Ann Arbor, Michigan. The NCAA Regionals will follow in West Lafayette, Indiana, on November 15.

Keep an eye on: **Hanna Grinaker x'10.** This junior from Detroit Lakes, Minnesota, is already a two-time All-Big Ten and All-American honoree. With a personal best time of 20:11.8 in the 6000 meters, she is looking to win her first Big Ten title this fall.

Think about this: Under fourth-year head coach **Jim Stintze '81,** the Badgers have made three consecutive trips to the NCAA Championships, with a fourth-place finish in 2006.

Lee Kemp '79, MBA'73 received delayed fulfillment of his **Olympic dreams** this summer. The former Badger wrestler had qualified to join the U.S. team for the 1980 summer games in Moscow when President Jimmy Carter ordered a boycott in protest over the Soviet Union's invasion of Afghanistan. Some 28 years later, Kemp finally made the Olympics — as a coach for the U.S. wrestling squad.

UW basketball coach Bo Ryan has a new honor to add to his resume. He's been inducted into the **Pennsylvania Sports Hall of Fame**, Delaware County Chapter. A native of Chester, Pennsylvania, a Philadelphia suburb, Ryan played basketball, football, and baseball in high school and had his first head-coaching job at Sun Valley High in nearby Aston.

It may be disorienting, but now every direction on the **Kohl Center's floor** is North. Two-time U.S. Open golf champ (and Monona, Wisconsin, native) Andy North and his wife, Sue, donated $100,000 to replace the arena's basketball floor.

Looking for an insider's view on gridiron action? Check out the **Badger football yearbook,** which is now posted online. Print copies of the forty-page program sell for $15, but PDF files are now downloadable for free at www.uwbadgers.com/sport_news/fb/media_guide/?sportid=111.

UW rowing celebrated twin victories this spring, as the Badgers won **two national championships.** The men's varsity eight won the Intercollegiate Rowing Association National Championships for the first time since 1990. The women's light crew also won, its fourth championship in five years. Both races were held on the Cooper River in Camden, New Jersey.

Hall to the Chief

Reed Hall assumes the top spot on WAA's executive committee.

Culminating his second stint on WAA's volunteer board of directors, **Reed Hall '70** became the board's chair on July 1. Hall, who spent five years on the board from July 1997 to June 2002, will have a one-year term as the association's top adviser, and says that his primary goal is to forge a good relationship with UW-Madison's incoming chancellor, **Carolyn "Biddy" Martin PhD'85.**

"It's important to have a very, very solid working relationship with the chancellor's office," Hall says, noting that WAA's president and CEO, **Paula Bonner MS'78,** had strong and successful ties with outgoing chancellor **John Wiley MS'65, PhD'68,** enabling WAA to expand its programming for both alumni and students. "Paula and John and the rest of the board worked together very well, and I hope we can continue to improve that," he says.

Reed Hall

Hall, who lives in Marshfield, Wisconsin, is the executive director of the Marshfield Clinic, one of the nation's largest private, multispecialty medical practices. Bonner says that his experience in working with such a large organization will serve the alumni association well. "With more than 300,000 graduates around the world, we've got to serve a huge population with different goals and desires," she says. "Reed has the skill set to help us hear and respect all those voices, while keeping us focused on the strategic goals that are important to the organization as a whole."

In addition to forging a good relationship with Chancellor Martin, Hall says those goals include aiding the university in its 2009 reaccreditation process and planning for the association's 150th anniversary, which will take place in 2011. "I think we can offer a lasting gift to the university and the state," he says.

Hall succeeds **Doug Griese '75,** WAA's chair from July 2007 to June 2008. Along with Hall, several new members will join the WAA board of directors in 2008, including **Farrah Flanagan '98,** an editor and producer with CNN in Atlanta, Georgia; **Curt Fuszard '76,** president and CEO of Associated Investment Services of Green Bay, Wisconsin; **Jean Towell Gebhard '79,** assistant director of media relations at Northwestern Mutual in Milwaukee; **Diana Haugen '05,** a public relations specialist from Santa Monica, California; **Pete Kappelman '85,** co-owner of Meadow Brook Dairy Farms in Manitowoc, Wisconsin; and **Stephanie Swartz '74,** chief nursing officer of Gundersen Lutheran Medical Center in La Crosse, Wisconsin.

— John Allen

Nominate a Wisconsin Original

WAA is seeking nominations for the 2009 Distinguished Alumni Awards. If you know of a UW-Madison graduate who exemplifies the best of the university's influence, we want to hear about him or her. Find nomination materials at uwalumni.com/awards. WAA will accept nominations until September 30, 2008.

I Scream, You Scream ...

BOB RASHID

With the glee of a mad scientist, Bryce Hefty, age twelve, mixes flavors into ice cream during Grandparents University in July. This summer featured three sessions of the WAA-sponsored event, up from two in previous years. The expansion allowed some nine hundred grandchild-grandparent pairs to attend the event. Grandparents University offers families a chance to bond on campus while studying one of ten "majors." The scene above came from the food science major, held in Babcock Hall.

Chapters to the Rescue

In conjunction with this year's Homecoming theme, Bucky to the Rescue, WAA and its chapters around the country are launching a food drive. Each week that the Badgers play a Big Ten opponent, chapters are encouraged to collect food from fans who attend game-watching parties. WAA will offer prizes for participating chapters. For details, see uwalumni.com.

You Just Never Know

By Jan Hasselman Bosman '60

When I graduated from the UW, I had everything I needed: a diploma, a diamond ring, and a signed teaching contract. I'd been trained by the best, Russell Hosler, to teach typing. I thought I would teach and retire, while managing a family along the way. I didn't know much about the power of possibility or letting life create itself.

But about forty-five years into my scripted life, I had a new vision, and I worked with a firm to create and market a product — a scrapbook for saving old handwritten recipes and the stories behind them. I've learned a lot in the last two years.

- **I had a lot to learn, mostly about myself.** I said many times that I was glad I chose teaching rather than sales, for I didn't think I could take the pitching of a product or the rejection of losing a sale. It didn't occur to me that teaching is all about pitching and selling (the five-paragraph essay, algebraic equations, or the mechanics of digestion), and if a teacher doesn't do it well, the students won't buy.
- **Self-promotion takes a lot of time.** You are the best person to promote your project. You believe in it; you breathe it. But, for every minute you're making calls or speeches, you're abandoning something or someone else: family and friends, writing, reading, exercising. Sometimes you have to ask, "What do I have to give up today to follow my passion?"
- **Fear is real in all its forms.** Sometimes, rather than making a pitch, I just eat a Reese's peanut butter egg or take a nap. It's just so much simpler. Sometimes I'm afraid that someone will tell me that my idea is dumb, though no one has. Sometimes I'm afraid to succeed (because then I'll really have to do something — write an article or make a speech or deliver a book). Fear hasn't conquered me, but I haven't completely conquered it, either.
- **Don't set your purse in the sink.** Once, before I talked to a group of genealogists in Elgin, Illinois, I set my purse in the bowl of an automated sink while I freshened up. What I discovered in seconds was not only a purse full of water, but also a great opening for my speech a few minutes later.
- **Bloomington can work.** Another time, I was asked to speak to a group of women in Bloomington, Illinois, 150 miles from my house. There was no way I could justify the cost until I coupled the speech with a trip to the Abraham Lincoln Museum in Springfield, accompanied by my sister. That way, I got more for the gig than the money the group could afford to pay.
- **Don't undervalue yourself.** We all get to ask for what we need. I no longer tiptoe up to the "Do you have a budget?" question. I know that the work I do has value, and I can ask for a fee. Negotiation also works.
- **People will help you.** Not everyone will profit from your project, but some will help you anyway. You might want to walk alone, but help is not overrated.
- **Don't mortgage the farm.** I know there are people who are willing to live out of their cars in order to follow their dreams. I'm not one of them, so I'm promoting creative thinking. You might have to get up earlier and go to bed later. You might have to get a part-time job while relying on your spouse's income. I was lucky. I inherited a small amount of money at my mother's death and chose to invest it in my dream. I could have put the money in the bank and let the dream die. Make a good choice, but it's really cramped sleeping behind a steering wheel.

What I've learned is that you never know what's in your heart, waiting to bloom. You never know when you will see life's patterns in a fresh way. You never know who will buy fourteen books and who will buy none. The life I envisioned when I graduated forty-eight years ago is so different from the life I live. I'm seeing better now than I did then … despite the glasses and developing cataracts. So keep your eyes open. You just never know.

Jan Hasselman Bosman '60 taught high-school English and business for thirty-two years. She lives in Woodstock, Illinois, and sells *Memories of Family, Friends, and Food* at www.bosmanmemories.com.

If you're a UW-Madison alumna or alumnus and you'd like the editors to consider an essay for use in On Wisconsin, *please send it to WAA@uwalumni.com.*

What I've learned is that you never know what's in your heart, waiting to bloom. You never know when you will see life's patterns in a fresh way.

Tell us your news.

Please share your recent accomplishments, transitions, and other significant life happenings by e-mailing the (brief, please) details to apfelbach@waastaff.com; mailing them to Alumni News, Wisconsin Alumni Association, 650 North Lake Street, Madison, WI 53706-1476; or faxing them to (608) 265-8771. While we can't publish every item that we receive, we do appreciate hearing from you.

Please e-mail death notices and all address, name, telephone, and e-mail updates to alumnichanges@uwalumni.com; mail them to Alumni Changes, Wisconsin Alumni Association, 650 North Lake Street, Madison, WI 53706-1476; fax them to (608) 262-3332; or call them in to (608) 262-9648 or toll free to (888) 947-2586.

Most obituary listings of WAA members and friends appear in the Badger Insider, *WAA's quarterly publication for its members.*

x-planation: *An* x *preceding a degree year indicates that the individual did not complete, or has not yet completed, the degree at UW-Madison.*

Compiled by Paula Wagner Apfelbach '83

early years

Best wishes go out to **Millicent Coombs Freed '30, '33** of Madison. Her one-hundredth birthday falls on October 5.

A new elementary school on Madison's far west side will bear the name of the late **Paul Olson '31, MS'52,** a beloved science teacher, principal, environmentalist, and outdoorsperson. He was instrumental in purchasing and developing the Madison School Forest, not far from the new school, which opened this fall. It's one of the state's first LEED-certified ("green") elementary schools. Olson died in 1993.

After sixty-two years of arbitration and mediation work, **Arthur Jacobs '34, MA'35** of Rye, New York, has retired at age ninety-six. The occasion brought many accolades, including being named the National Academy of Arbitrators' 2008 honoree. Jacobs' spouse, **Marcia Fox Jacobs '38,** retired in 1982 as the head of social services for New York state's largest retirement home.

40s–50s

Gene Hallstrand '40 sent a photo taken at his ninetieth-birthday open house in December. He was a ski jumper and instructor, served in the navy during World War II, and made a career in sales. Hallstrand lives in Sequim, Washington.

Don Smithana '50 of San Diego, California, is an engineering graduate, but he's been drawn to languages as well. He's written one book in Japanese and two in English: *Decoding America's Ancient Indian Languages* and *America … Land of the Rising Sun: Was the Culture of Japan "Made in U.S.A."?* (Anasazi Publishing).

When Wilmington [Ohio] College held its commencement in May, emeritus professor of history **Larry Gara PhD'53** received an honorary doctorate for his four decades of teaching. But Gara is more than an educator: he's also a peace activist and social-justice champion who's never been afraid to act on his convictions.

A leading award for animal conservation, the Indianapolis Prize, has gone this year to field biologist **George Schaller MS'57, PhD'62.** His relentless work since 1952 to save endangered species was honored at a September gala with the Lilly Medal and $100,000, which he'll use to fund grants for young biologists. He's vice president of science and exploration for the Wildlife Conservation Society, whose CEO said, "George Schaller has literally defined the endeavor of wildlife biology in the service of conservation."

Joseph Brenner PhD'58 earned his doctorate in organic chemistry; spent most of his career with Du Pont de Nemours International in Geneva, Switzerland, working primarily in the Middle East, Africa, and eastern Europe; and now has written his first book — but not about chemistry. It's an "interdisciplinary extension of logic to real phenomena" called *Logic in Reality* (Springer Dordrecht).

"My memories of the courses I began on September 22 fifty years ago … remain fresh today with me here in Sydney, Australia," writes **John Brien MS'59** in his essay "Fifty-Year Madison Memories … from 15,000 Miles Away." It chronicles his arrival from Australia in 1958 to study agricultural journalism, as well as his career in academia, consultancies, research, and eventually international communication. In additional to two doctoral degrees, Brien has earned the 2008 Award of Excellence in Research from the Association for Communication Excellence in Agriculture, Natural Resources, Life and Human Sciences.

The Heart Moves in a Circular Direction: A Story of Healing (iUniverse) is a new work by Madisonian **Ingeborg Gillman Casey '59, MS'61, PhD'67** that blends experiences with her schizophrenic mother with wisdom gained through her career as a psychologist. "As a story about struggle and perseverance, facing fears, and taking risks," Casey writes, "the book offers insights to people facing various challenges of their own."

60s

Chalk up seven for **Susan Schuckit Naimon Winebrenner '60** of San Marcos, California: she's just published her seventh book, *The Cluster Grouping Handbook: How to Challenge Gifted Students and Improve Achievement for All* (Free Spirit Publishing).

The Duncan, Oklahoma, home of **Patrick Homrig '61** is a local landmark that's made it into P.J. Lassek's *Oklahoma Curiosities: Quirky Characters, Roadside Oddities, and Other Offbeat Stuff* (Globe Pequot Press). Homrig's 1906 home contains fine arts, antiquities, and collections from his world travels, and his yard holds statuary, wrought iron, and seven hundred plant species. He's also an art teacher, cat lover, and appraiser and art expert.

Phillip Baker MS'62, PhD'65 of Kensington, Maryland has retired after forty-three years with the National Institutes of Health. He's best known for his research on regulatory T cells and their influence on antibody responses to bacterial pathogens.

The ACLU of Wisconsin Foundation gave state representative **Frederick**

Seventy Days of Solitude in Denali

Learning to perceive in 360 degrees, becoming part of the landscape and wildlife as senses are heightened, trusting one's instincts and ability to adapt as never before, and beginning to thrive — not just survive — in the wilderness: these are some of the lessons that **Willie Karidis '81** gained from seventy days alone in Alaska's Denali National Park.

Karidis is the executive director of the Denali Education Center (denali.org) at Denali National Park, and his odyssey, called Wilderness of Denali 100, began on January 21.

It was an expedition to retrace the steps of pioneering naturalist Charles Sheldon, who spent the same days in January through March of 1908 in the heart of the Alaska Range. During his stay, he envisioned a national park that would preserve the ecosystem of the area, and it was through his efforts — and those of his good friend Teddy Roosevelt and others — that Mount McKinley National Park was established in 1917.

A century later, Karidis traveled fifty miles into the park to camp in the exact area where Sheldon had camped. He took daily temperature readings, shot still photos and videos, and kept a journal of his experiences, all of which are yielding valuable insights as they're compared to Sheldon's observations from the same locations.

PHOTO COURTESY OF WILLIE KARIDIS

Willie Karidis replicated the work of pioneering naturalist Charles Sheldon by camping alone in Denali National Park. He says that there were a couple of feet of snow, but in the draws and rivers, the wind blew so hard that the landscape appeared almost lunar.

Reaping much more than data, though, Karidis was bombarded with new stimuli, and notes that "it was as if I had walked into a living, breathing computer, where I was a tiny speck of insignificance surrounded by new and exciting possibilities. … At the same time, I felt exposed, as if all the eyes of the woods were watching me." Still, he says, "I could not have been happier."

Karidis adds that "negative emotions … have no home here. Patience, compassion, tolerance, happiness, and love all fit naturally and encourage wise judgment and sure steps. [This] helped me to see the simplicity, the basic core of balanced life. … Wilderness is where we all come from."

Karidis has created a blog (wildernessofdenali100.blogspot.com) about his trip, is making a short film, and is also writing a book called *Faith in a Moment*. He explains the title this way: "My Sheldon quest, planned for twenty-two years, has taught me that having a dream comes down to the moment when it is fulfilled. The greatest lesson is that we share 'faith in a moment' [that's specific to each person], but whatever your faith is, we share the hope that the moment will come." — *P.A.*

Kessler '62, LLB'66 (D-Milwaukee) its Edgar Lifetime Achievement Award in February. On his twenty-first birthday, he became the youngest person, up to that time, to join the state legislature, and his career has included service as a county and circuit court judge, labor arbitrator, redistricting consultant, and community supporter.

The UCLA Medical School recently honored **Robert Kotler x'64** of Beverly Hills, California, for thirty years of voluntary teaching in its head and neck surgery division. He's also founded Ernest Mitchell Publishers — named after the "iconic cook at the Pi Lambda Phi house in the early sixties" — to produce his two books on cosmetic surgery.

Jon Nelson '64, MS'67, PhD'70 retired in 2004 after thirty-five years on the Penn State economics faculty, but he's hardly been resting. Nelson has maintained an active research program that included presentations at five international conferences last year.

The Franklin Institute has given Virginia Tech electrical engineering professor emeritus **Arun Phadke PhD'64** its 2008 Benjamin Franklin Medal in Electrical Engineering for his collaboration with Virginia Tech colleague James Thorp on reducing and recovering from power-grid blackouts.

After forty-five years of pioneering work in investment management and twenty-two years of appearances on the PBS television program *Wall $treet Week with Louis Rukeyser*, **Louis Holland '65** has certainly made a name for himself. The Glen Ellyn, Illinois, resident retired this spring as CEO of Holland Capital Management and as president of the Lou Holland Trust.

This spring the UC-Davis Prize for Undergraduate Teaching and Scholarly Achievement went to comparative literature professor **Brenda Deen Schildgen '65** — a scholar of medieval European literature and Biblical studies who works with writings in six languages and is an expert on Dante, Chaucer, and the gospel of Mark. The $40,000 prize is believed to be the largest of its kind in the nation.

The commitment to occupational health and safety that Madisonian **Terry Likover Moen '66, MS'77, JD'96** has shown over twenty-seven years has earned her a Lifetime Achievement Award from the Wisconsin Safety Council. She supervises the occupational health portion of WisCon — the Wisconsin State Laboratory of Hygiene's onsite safety- and health-consultation program for businesses.

(Doris) Sorrel Hays MMusic'68 had a thrill in May: the New York City Opera performed *Our Giraffe* — for which she composed the music — during its *VOX 2008: Showcasing American Composers* series. Hays's "eclectic, hybrid musical writing" has also earned her eight commissions from the German public-broadcasting institution Westdeutscher Rundfunk. She lives in Buchanan, Georgia.

The note from **Leon**

Jacoby '68, MS'71 of Cedar Grove, Wisconsin, was brief, but impressive: he's "marked thirty-five years with plumbing-ware giant Kohler Company."

70s

Longtime WAA Chicago chapter leader and die-hard Badger fan **Denny Schackter '70** has made tennis his avocation *and* his vocation: this spring, he received the Chicago Tennis Patrons' 2007 Billie Jean King Award — its honor for lifetime achievement — and retired from a sales career with Wilson Racquet Sports.

All Souls (Harcourt) is a recent fiction work by New Yorker **Christine Costigan Schutt '71, MA'72** that gives readers a look at the "small cosmos" of an elite Upper East Side girls' school. Her other books include the National Book Award finalist *Florida*, as well as two collections of short stories: *Nightwork* and *A Day, A Night, Another Day, Summer*.

The late **Paul Brandt MS'72** spent his career protecting the lower Wisconsin River, so it's fitting that the state's Department of Natural Resources (DNR) dedicated part of the Lower Wisconsin State Riverway in his honor in May. Brandt, a lifelong DNR employee, surprised the conservation community when he left more than $600,000 to the Lower Wisconsin Riverway Fund upon his death in 2006.

Is the modern-day workplace a complex place? You bet, says **Marjorie Sunde DeVault '72, MS'76.** She's edited *People at Work: Life, Power, and Social Inclusion in the New Economy* (New York University Press), in which each essay is a case study of a different aspect of the working world. DeVault is a professor of sociology at Syracuse [New York] University.

Gary Goshgarian PhD'72, writing as Gary Braver, has written his seventh novel: a psychological medical thriller centering on cosmetic surgery called *Skin Deep* (Forge). In it, a homicide detective must find out who is killing the beauties of Boston by strangling them with black stockings. Goshgarian teaches English at Boston's Northeastern University.

Indiana University's Center on Philanthropy honored **Harriet Ivey '72** with a Spirit of Philanthropy award in April for her work since 1998 as the founding president and CEO of the Indianapolis- and Phoenix-based Nina Mason Pulliam Charitable Trust. It supports more than 150 nonprofits annually, and has enabled dozens of nontraditional students to obtain college educations.

Okay, who remembers "Loose Bruce" — **Bruce Kerr JD'72** — performing in the Rathskeller? Well, after earning his law degree, Kerr (loose brucekerr.libsyn.com) "took twenty years off to write and perform songs, then returned to law." Now he has news about both fields: he's been promoted to assistant general counsel at Sun Microsystems in Santa Clara, California, and syndicated radio host Dr. Demento is including Kerr's song parody "The Day the Data Died" on his latest compilation CD.

The new executive director of Milwaukee's Charles Allis Art Museum and Villa Terrace Decorative Arts Museum is **Elly (Ellen) Pick '72.** She was most recently the director of development and marketing for the Museum of Wisconsin Art in West Bend.

The Materials Research Society has lauded **William Weber MS'72, PhD'77** as its inaugural fellow for his contributions to the fields of glasses and ceramics. A laboratory fellow at Pacific Northwest National Laboratory in Richland, Washington, he leads research on defects and ion-solid interactions in ceramics.

Three graduates have been named distinguished professors at their universities: **Maureen Carr PhD'73** is a professor of music at Penn State who also received a UW School of Music Distinguished Alumna award in 1998. **Jerrold Brandell MS'77** is a practicing psychoanalyst and social worker psychotherapist at Wayne State University in Detroit. And **Carl Lund PhD'81** is a professor of chemical engineering at the University of Buffalo [New York].

Noting that many UW grads in medical, therapeutic, and psychological fields have trained at Madison's Mendota Mental Health Institute, local author **Tom Doherty MS'73** suspects that some have wondered about its history. He brings much of it to life in *The Best Specimen of a Tyrant: The Ambitious Dr. Abraham Van Norstrand and the Wisconsin Insane Hospital* (Spenser-Hoyt), the story of one of Mendota's early superintendents.

We can add three names to the list of Badgers who are leading institutions of higher learning: **Robert Holub MA'73, MA'76, PhD'79** is the new chancellor of the University of Massachusetts' flagship campus in Amherst. He was most recently provost and vice chancellor for academic affairs at the University of Tennessee. In March, **John Schwenn MS'73, PhD'76** became president of Dalton [Georgia] State College, while **Nick Zeppos '76, JD'79** was being named the eighth chancellor of Vanderbilt University in Nashville, Tennessee. He's its first chancellor in seventy years to be promoted from within.

Oregon State University in Corvallis has welcomed **Franklin Sherkow '74** as its new director of civil-engineering outreach, and he'll also teach three senior courses. Sherkow has spent the last thirty years in the practice of engineering, primarily in southern California.

Is winning a Pulitzer Prize getting to be old hat for UW alumni? Nah, keep 'em coming. **Walt Bogdanich '75** of the *New York Times* has earned his third Pulitzer for his investigative reporting on toxic ingredients in medicine and other products imported from China, while the *Milwaukee Journal Sentinel*'s **David Umhoefer '83** earned his Pulitzer for local reporting — an investigation into pension deals for Milwaukee County workers that violated county and IRS rules.

At New York University's Institute for the Study of the Ancient World, **Charles Jones '76** is the new head of the library — a position that follows three years leading the Blegen Library at the American School of Classical Studies in Athens, Greece.

Patient Listening: A Doctor's Guide (University of Iowa Press) is a new book by **Loreen Herwaldt MD'77** that uses the illness narratives of two dozen writer-patients to teach listening skills to health care professionals. The author holds appointments in the departments of internal medicine and epidemiology at the University of Iowa's medical school.

We'd lost track of **John Myles PhD'77,** but he brought us up-to-date: he's been teaching sociology at the University of Toronto since 2001, chairs the political sociology section of the American Sociology Association, and was elected to the Royal Society of Canada in 2004.

"The spring of 2008 marks a thirty-year anniversary," writes **Pattie Hunn Skannes '77,** who moved to an Alaskan island thirty years ago and began her career as a salmon biologist. She now helps to manage the commercial troll salmon fishery for the state's Department of Fish and Game.

Retired U.S. Army General **Montgomery Meigs MA'78,**

PhD'82 has joined the board of trustees of MITRE — a not-for-profit firm that provides systems engineering, R&D, and IT support to the federal government. Currently a visiting professor of strategy and military operations at Georgetown University's Walsh School of Foreign Service, Meigs has had a highly decorated, thirty-five-year military career, serving as commander in Europe and of the NATO peacekeeping force in Bosnia, among many other posts.

The positive and negative implications of our digital innovations, now and in the future, are the subject of *Media in the Digital Age* (Columbia University Press) by **John Pavlik '78.** The author is a professor and chair of the journalism and media studies department at Rutgers University.

The *Network Journal* has included **Sheryl Adkins-Green '79** and **Felicia Norwood MA'82** in its annual list of "25 Influential Black Women in Business." Adkins-Green is the general manager and VP of multicultural beauty at the Alberto Culver Company in Melrose Park, Illinois, but she's particularly proud of A Better Chance — an educational initiative that she co-founded. Norwood is the president and chief operating officer of ActiveHealth Management in New York City, and an advocate for minority youth. She's served on the boards of visitors of the UW's political science department and the La Follette School of Public Affairs.

The International Reading Association has a new board vice president in **Patricia Edwards PhD'79.** She's a distinguished professor of teacher education at Michigan State University in East Lansing and was president of the 2006–07 National Reading Conference.

To recognize his commitment as the longest-serving member of the Random Lake, Wisconsin, board of education, **John Hawley '79, JD'82** now has a library and a scholarship named after him. The scholarship benefits local students who attend UW-Madison.

80s

Cool Things Happen When You Speak a Foreign Language (Willowgate Press) is both a true statement and the title of a new book co-authored by **Christopher Gallagher '80** — his eighth, in fact. Gallagher has also done some stand-up comedy, but by day he's a cardiac anesthesiologist at Stony Brook University on Long Island, New York.

Eric Lui '80, an associate professor and chair of the civil and environmental engineering department at Syracuse [New York] University, is one of two educators there to receive a Meredith Professor of Teaching Excellence award. Lui proposes to use the funds from the three-year honor to create a course that will study the elements of a sustainable environment holistically.

John Matel MA'80 has been a career foreign-service officer since 1984, serving in Brazil, Norway, Poland, and Washington, D.C. Now he knows plenty about Iraq as well — he's recently been a provisional reconstruction team leader at Al Asad Western Anbar. Matel planned to return to Washington in September to direct the U.S. State Department's International Information Programs policy office.

Speaking of foreign service, **Daniel Speckhard '80, MA'82, MS'83** has gone on to another ambassadorship — this time in Greece. A career diplomat, Speckhard's last posting was as the deputy chief of mission at the U.S. embassy in Baghdad, following a year directing the Iraq Reconstruction Management Office there.

Barbara Cox JD'82 has recently been named the Foltz Professor of Law at California Western School of Law in San Diego. An expert on gender issues, she served on the 1980s Madison Equal Opportunities Commission that drafted one of the country's earliest domestic-partnership ordinances. Cox's work was honored in April by the San Diego Lesbian, Gay, Bisexual, Transgender Community Center.

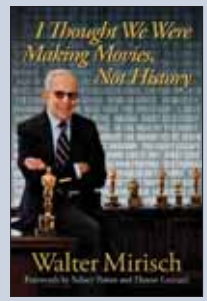
The new work by **Steven Meyers PhD'82** won't be a must-read for the general public, but its publisher says that *MRI of Bone and Soft Tissue Tumors and Tumorlike Lesions: Differential Diagnosis and Atlas* (Thieme Medical Publishers) is "practical, in-depth, invaluable." Meyers teaches radiology, imaging sciences, and neurosurgery at the University of Rochester [New York].

Amy Vedder MS'82, PhD'89 has long admired the Washington, D.C.-based Wilderness Society's focus on "good ecological, economic, and policy information," and now she's directing its ecology and economics research department. The society was co-founded in 1935 by the late UW professor **Aldo Leopold.** Vedder is known for her pioneering studies of Rwandan mountain gorillas and for co-founding the Mountain Gorilla Project.

Performance psychologist **Rob Smith '83** of Waltham, Massachusetts, has published *Black Belt for Life: A Memoir of Personal Development and the Martial Arts* (Xlibris). He says he views it "more as an extended letter to his son, whom he tries to teach the principles inherent in the martial arts."

What's **Steve Burrows '84** been up to lately? He's been shooting comedic commercials in the U.K., Australia, New Zealand, South Africa, Japan, and Thailand, and finds that "humor is indeed universal." He also works in TV, short films, and feature films, and this

Bookmark



Walter Mirisch '42 has seen it all in Hollywood, and his new book, *I Thought We Were Making Movies, Not History* (University of Wisconsin Press), offers an account that film critic Leonard Maltin calls a "panoramic look at the film industry from the 1940s to the 1990s, with all its highs and lows. … a must-read."

Mirisch writes with humor and candor about his start as an usher at Milwaukee's Oriental Theater to his place at the pinnacle of the industry — his Mirisch Company has produced, in whole or in part, more than one hundred films, including *West Side Story*, *Some Like It Hot*, *Fiddler on the Roof*, *The Apartment*, *The Great Escape*, *In the Heat of the Night*, *The Pink Panther*, and *The Magnificent Seven*. It's garnered eighty-seven Academy Award nominations and twenty-eight Oscars, including three for Best Picture.

In addition, Mirisch has received the Academy's Thalberg Memorial Award and its Hersholt Humanitarian Award, the DeMille Award from the Hollywood Foreign Press Association, the Selznick Lifetime Achievement Award in Theatrical Motion Pictures from the Producers Guild of America, and an honorary doctorate from the UW. He's served four terms as president of the Academy of Motion Picture Arts and Sciences.

Bookmark

In *Abroad for Her Country: Tales of a Pioneer Woman Ambassador in the U.S. Foreign Service* (University of Notre Dame Press), **Jean Wilkowski MA'44** shares her challenges as an early international career woman.

During her thirty-five years of diplomatic service, starting in 1944, Wilkowski rose through the ranks at the State Department to become the first woman U.S. ambassador to an African country and the first woman acting U.S. ambassador in Latin America. She worked in nine countries on three continents before retiring in 1980.

Among Wilkowski's last career endeavors were preparing for the 1979 U.N. Conference on Science and Technology in Vienna, and accompanying a U.S. delegation on a visit to China. She's the only woman to receive the Foreign Service Cup from the Diplomatic and Consular Officers, Retired.

Donna Shalala — a former U.S. Secretary of Health and Human Services and a former UW-Madison chancellor who's now president of the University of Miami — called *Abroad for Her Country* a "serious and charming autobiography of a pioneer woman diplomat. Madeleine [Albright] and Condi [Rice] would not have made it to secretary of state without Ambassador Wilkowski's courage and skill."

spring, he joined the directorial roster of Great Guns USA, a production company in L.A. See burrowsofhollywood.com "for all the silliness."

Most people probably wouldn't mind being paid to think about cookies all day, which is what **Greg Hundt '84** does. He's the VP of supply chain for the HoneyBaked Ham Company in Atlanta, but he's also the new president of Heidi's Heavenly Cookies, a recent HoneyBaked acquisition. Yum.

Depression strikes one in five people, and research shows that writing can help. That's why Hayward, California-based science journalist and editor **Elizabeth Maynard Schaefer '84** has provided therapeutic techniques in *Writing through the Darkness: Easing Your Depression with Paper and Pen* (Ten Speed Press). A bipolar-depression sufferer herself, Schaefer has also taught a creative-writing course for people with mood disorders through Stanford University since 1988.

Jay Sorensen '84 says that "ancillary revenue" in the airline industry — revenue beyond ticket sales — is both the industry's best way to cope with fuel costs and the subject of his new book, *Ancillary Revenue Guide: The First-Ever Resource for Airlines Seeking Ancillary Revenue Nirvana* (AirlineInformation.org). Sorensen is the president of IdeaWorks, his own brand-marketing firm in Shorewood, Wisconsin.

Jeffrey Toretsky '84 was one of only thirteen physician-scientists this spring to receive a 2008 Clinical Scientist Award in Translational Research from the Burroughs Wellcome Fund — a $750,000 award, given over five years. Toretsky is a pediatric oncology physician and researcher at Georgetown University's Lombardi Comprehensive Cancer Center.

Christopher Struck '85 writes that he's worked in Denmark, became director of engineering for Dolby Laboratories, and then was VP of engineering for Tymphany Corporation. Now he's founded CJS Labs in San Francisco, a consulting firm specializing in acoustics and engineering for audio and telecommunications. Struck also reports that **John Radanovich '85** is a music journalist living in Delaware; Milwaukee attorney **Tomislav Kuzmanovic '85, JD'88** spent time this spring trying his second case at the International War Crimes Tribunal in The Hague; and **Mark Giaimo '86** is a mural artist, cartoonist, and musician in Washington, D.C.

The Great Lakes Water Wars (Island Press) is a comprehensive account of the people, stories, and issues behind the battles over the earth's largest collection of fresh surface water — and a timely offering by Madisonian **Peter Annin '86** that's now in its fifth printing. The author is a former *Newsweek* reporter.

With a recently completed MBA from DePaul University under his belt, **Kenneth Blazer '86** of Aurora, Illinois, has been promoted to director of global accounts at APL Logistics — part of the Singapore-based NOL Group.

You'd have to try hard to keep up with **Helen Klebesadel '86, MFA'89** (klebesadel.com) — the Madison-based artist, educator, and activist has led many watercolor and creativity workshops this summer and fall throughout Wisconsin and in Kansas City.

When publishers of Detroit's major ethnic and minority newspapers gathered for a roundtable conference this spring, their host was **Hayg Oshagen MA'86, PhD'90,** a professor at Wayne State University and the director of its Project Ethnic Media. The event was part of New Michigan Media, a networking initiative that Oshagen founded in 2006.

The top 1 percent: that's where *Washingtonian* magazine ranked **Mark Behrens '87** among Washington, D.C., attorneys. He's a partner in the public-policy group of Shook, Hardy & Bacon. Thanks to Mark's father, **Edwin Behrens '60, MS'61** of Great Falls, Virginia, for letting us know.

Duke (Victor) Fisher III '87 has a long history of success as an activist, mediator, special professor of law at Hofstra Law School, and as the co-founder, CEO, and lead trainer of Learning Laboratories — a Bainbridge, New York-based training and facilitation organization. Fisher's work was honored in 2007 with the Cooke Peace Innovator Award from the New York State Dispute Resolution Association.

Since 2006, **(Barbara) Erin Gallagher '87** has been working in The Hague as a war-crimes investigator for the United Nations International Criminal Tribunal for the former Yugoslavia, focusing on the 1995 Srebrenica Massacre in Bosnia. Gallagher earned California's 2005 Investigator of the Year award for her work in her previous post as a criminal investigator for the San Francisco district attorney's office.

Gloria Materre '88 is just one of several Badger attorneys who's been on the move recently. She's a specialist in corporate, real estate, and entertainment law who's joined Chicago's Handler, Thayer & Duggan as senior counsel. Solheim Billing & Grimmer in Madison has welcomed **Lauren Lofton '96** as an associate; **Amanda Prutzman '02, JD'07** and **Jillian Walker '02** have joined the collections group of Messerli & Kramer in Minneapolis; and **Michael Strand '02** is a new associate in the real estate and land-use groups at Denver's Brownstein Hyatt Farber Schreck. Lastly, patent attorney **Bryan Clark '04** is a new associate with the Webb Law Firm in Pittsburgh.

A Markwardt Award has gone to **Robert White PhD'88** from ASTM International, one of the world's largest international standards-development and delivery systems. The honor recognizes White's contributions in developing standards for the fire performance of wood in building construction. He's been with the USDA's Forest Products Laboratory in Madison since 1975.

90s

The Orlando, Florida-based design firm of MSCW has promoted **Keith Becker '90** from senior landscape designer to project manager. He was previously a landscape architectural designer and construction manager for Walt Disney World.

Jodi Dinkes Hurwitz '90 has won an Emmy Award! At the September 2007 ceremony for the primetime television awards, she was honored in the Outstanding Variety, Music, or Comedy Special category for her work as the producer of NBC's "Tony Bennett: An American Classic." She lives in Scarsdale, New York, with her spouse, **Mark Hurwitz '90.**

Navy Commander **Joseph Olson '91** has become the commanding officer of the U.S.S. *Green Bay* — "an exciting honor for a Wisconsin native and big Green Bay Packers fan!" writes his father, **Dick Olson '59** of Madison. The new vessel is an amphibious transport dock ship that's scheduled to be commissioned in January.

Kevin Rau '92, MFA'04 has won a Gold Award from *Graphis, The International Journal of Visual Communication* for a poster that he designed celebrating the fiftieth anniversary of the Helvetica typeface. It will also appear in the *Graphis Poster Annual '08/'09*. Rau is a UW-Oshkosh adjunct faculty member and the proprietor of rauhaus design in Oshkosh.

One a day for one year: that's the commitment that Madisonian **Angela Richardson '93** (a.k.a. Olive Talique) made on January 22, when she began carrying her camera everywhere and posting one photo every day on flickr.com/photos/olive_talique/sets/72157603781128699, along with her commentary and feedback. In May, Richardson was part of a local exhibit marking her one-hundredth day.

Lynne Snifka '93 writes that she "recently shocked herself and many of her loved ones" by moving to Fairbanks, Alaska, to become an assistant professor of journalism at the University of Alaska.

Kudos to **Amanda Veith '93,** the executive producer of a short comedy film called *The Job* (TheJobTheShort.com) that received the Grand Prix in May at the tenth Festival International des Très Courts, which highlights the world's best short films — and that's just a *recent* accolade among the many it's earned. Veith worked with Screaming Frog Productions in L.A. to create the film.

Teacher magazine has called the Milken Educator Awards the "Oscars of teaching," and **Anne Clark MA'94** received one during a gala event in March. She was among seventy-five educators to receive an award check of $25,000 through the country's largest teacher-recognition program. Clark is an instructor and a curriculum and special-education coordinator at the Boston Arts Academy.

Nick Glass MA'94 founded TeachingBooks in Madison, but he's also initiated a fun and unusual collection: hundreds of delightful audio clips of children's book authors pronouncing their names and sharing brief stories about those names (TeachingBooks.net). What's more? Glass is thrilled to be on the Newbery Medal committee this year.

With degrees in economics, international management, and marketing, **Michael Wandschneider '94** seems well equipped for his recent promotion at Kohler Company in Kohler, Wisconsin. He's moved up from senior product manager of performance showering to marketing manager of bathing products.

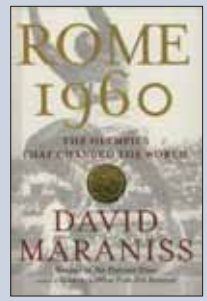
It would be quite a commute from The Dalles, Oregon, to Madison, so **Erica Bode Jacobsen '95** — who was recently promoted to editor of the *Journal of Chemical Education*'s secondary-school chemistry section — works long distance. The publication's editorial offices reside at the UW, where Professor **John Moore** of the chemistry department serves as editor-in-chief.

Yorel Lashley '95, MA'98 is a professional musician and band leader (meleemovement.com) who's making a difference in New York City through Drum Power (mydrumpower.com), a youth leadership program that he founded in 2000. Lashley is also a recent parent, along with his spouse, **Erica Nelson '98.** She danced professionally in New York before earning a law degree and joining the Center for Family Representation as a staff attorney.

Wisconsin Woman magazine called **Fabiola Lazo Steckler Hamdan '96, MS'97** a "force of nature in Madison's Latino community," and the Business Forum, a professional women's organization, honored her with the 2007 Dane County ATHENA Award. Why? After she arrived from Bolivia, Hamdan overcame many challenges and has given so much as a social worker for the Dane County Department of Human Services and a founder of many social-service organizations.

After **Lubna Qureshi '96** completed her doctorate in history at UC-Berkeley in 2006, her dissertation earned a book

Bookmark



Cold War rivalries, spies, defection attempts, the civil rights and women's movements, the first doping scandal, the advent of television and product-promotion money, and legendary athletes all came together in Rome in 1960 to create an Olympics to remember.

Pulitzer Prize-winning author, *Washington Post* associate editor, and master storyteller **David Maraniss x'71** has now crafted a stirring and provocative account of those Games in *Rome 1960: The Olympics That Changed the World* (Simon & Schuster).

Maraniss weaves a rich tale by chronicling the complex confluence of sports, culture, and international politics that marked the 1960 Games. He also follows many of those Games' unforgettable athletes — decathlon gold-medal winner Rafer Johnson, sprinter Wilma Rudolph, and the young boxer who gained fame as Muhammad Ali — whose individual triumphs were symbolic weapons in an escalating Cold War.

Even the recent summer Olympics in Beijing — with the protests and controversy that swirled around it — may not make history, foreshadow a new era, or create the kind of lasting influence that those Olympic Games in Rome did, nearly fifty years ago.

contract from Lexington Books. Look for it this fall: *Nixon, Kissinger, and Allende: U.S. Involvement in the 1973 Coup in Chile*.

Steve Vanderheiden MA'96, PhD'01 has written *Atmospheric Justice: A Political Theory of Climate Change* (Oxford University Press). He's an assistant professor of political science and environmental studies at the University of Colorado in Boulder.

Poetry lovers, keep your eyes on **Erin Hanusa '99** of Madison. She's been hailed as one of the nation's most promising young poets and has garnered lavish praise for her debut collection, *The House of Marriage* (Louisiana State University Press), whose "passionate, candid verse reconciles longing with understanding."

This spring the *Tampa Tribune* profiled **Monica Sanghavi Patel '99** as one of its "Rising Stars" — a young professional who's definitely going places. Patel works for the Florida chapter of the March of Dimes; she's the organization's state director of the March for Babies, its major fund raiser.

Aurora Health Care's corporate affairs department has a new VP of government affairs in **Rachel Roller '99.** She joined the Milwaukee-based not-for-profit health care provider last year.

There was a nice Badger collaboration on *Along Wisconsin's Ice Age Trail* (University of Wisconsin Press): **Eric Sherman '99** and **Andrew Hanson III '89** co-edited the book, and U.S. Representative **David Obey '60, MA'68** (D-Wisconsin) wrote the foreword. The Ice Age National Scenic Trail is a thousand-mile footpath that lies entirely within the state.

Neal Vermillion MA'99 spent some vacation time in Wisconsin this summer while transitioning between his last post as consul at the U.S. embassy in Antananarivo, Madagascar, to his next post as consul at the U.S. consulate general in Perth, Australia.

2000s

Getting exercise can be tough when you're traveling, but **Giselle Schmitz '00** is trying to help. As president of Rox Fitness in Mountain View, California, she's developed a novel online trainer: a comprehensive video workout program that's goal oriented, includes a circle of support, adapts as the user becomes more fit, and is viewable on any device that can capture and play MP4 videos.

Two UW zoology grads are going to the dogs — literally. **Erika Thomas '04** and **Katie Raschka '04** met their freshman year and were roommates throughout college. Then, after a few years in animal-related work, Raschka bought a Central Bark Dog Day Care franchise in New Berlin, Wisconsin, and asked Thomas to manage it. They celebrated their first year in business in July.

We rarely receive such humbling Alumni News submissions as this one from **Ann Klosterman '06**: she bicycled across the country — from San Diego to St. Augustine, Florida — in seven weeks to raise money for the developmentally disabled adults with whom she works at Community Entry Services in Jackson, Wyoming.

A 2008 Gates Cambridge Scholarship has gone to **Rishi Wadhera '06,** a medical student at the Mayo Clinic College of Medicine in Rochester, Minnesota. He'll use it to complete an MPh in public health at Cambridge University in England. Wadhera is the first Badger to receive this scholarship, created in 2000 by the Bill & Melinda Gates Foundation.

Paula Wagner Apfelbach '83 swears that Alumni News will not make you look fat.

John Francis
Continued from page 31

"Obviously, there are people who believe that you can do this work. And it hit me how I would shoot myself in the foot as a black man, to say that I couldn't do things because that's what I got raised to think. From then on, I just went on and got my degree. And it was because I had professors there who took the work that I was doing as serious, important work. It was one of the better experiences of my life."

Francis finished his course work, passed his preliminary exams, and began work on his dissertation on the costs and legal conventions of managing oil spills. The topic seemed obscure until March 1989, when the *Exxon Valdez* spilled 10.8 million gallons into Prince William Sound. Suddenly reporters were calling the Institute for Environmental Studies and asking to speak to an expert on oil spills. The only problem was that the expert didn't speak. Francis's major professor, John Steinhart, fielded the calls for him.

ON EARTH DAY 1990, Francis gathered with friends and family at a hotel in Washington, D.C. His forty-fourth birthday had recently passed, and he had marked the occasion as he always did, by re-evaluating his vow of silence. Now, after playing a song on the banjo, he opened his mouth and spoke the words he would return to again and again in his later incarnation as a public speaker: "Thank you for being here."

"Praise the Lord!" somebody shouted.

The very next day, as Francis was riding his bicycle to Gallaudet, the college for the deaf, he was hit by a car. Yet having cast aside one vow, he was not ready to dispense with the other, and he refused to ride in the ambulance, choosing instead to walk the fifteen blocks to the hospital, despite a badly injured shoulder. News of his decision made the *Los Angeles Times*.

Francis was in Washington to research his dissertation, and he ended up defending it by telephone so that he wouldn't have to walk back to Madison. A year later, in 1991, he was with some friends in New York when he got a call from the Coast Guard in Washington, D.C. The agency was developing the regulations that would implement the 1990 Oil Pollution Act, which had been passed in the wake of the *Valdez* disaster. They needed a method for quantifying the economic value of natural resources damaged by oil spills, a topic that Francis had researched for his dissertation, and they hoped he could join them immediately. They would send him a plane ticket by overnight mail.

But Francis still didn't ride in planes — or in trains or cars. Amazingly, the Coast Guard was willing to wait for him to arrive by bicycle. Since he wasn't able to get back and forth quickly, he had to finish up some business in New York. By the time he was finally able to hit the road and bike to D.C., it was two months later.

Francis stayed at the Coast Guard for fourteen months, developing methods for measuring natural resource damage, and acting as project manager for a study on the oil spill risks of deep-water ports. He was given a civilian service award and, having made plenty of D.C. connections, he certainly could have continued working in environmental policy. Instead, Francis decided to continue walking. He sailed to the Caribbean aboard a seventy-two-foot wooden yawl, eventually walking across Cuba, Brazil, Bolivia, Argentina, Venezuela, and Chile as a U.N. Goodwill Ambassador.

It was while walking past a prison in Venezuela in 1994 that he had an epiphany. Confronted by a guard demanding identification, Francis found himself imagining that he was an escaped prisoner cleverly disguised as Dr. John Francis. As he thought about it during the next hundred miles of walking, he realized that he *was* a prisoner — a prisoner of his own decision not to use motorized vehicles. What if the Coast Guard hadn't allowed him to take two months to get to Washington? Would it have been worth passing up the opportunity to resolve the very problem that had inspired him to stop driving in the first place?

"The lesson for me was that I have to reassess wherever I am to get to the next place," Francis told the students at UC-Berkeley. "I have to let go of the old self, which is very scary sometimes. Who am I going to be after I start riding in cars?"

THE JOHN FRANCIS OF 2008 is a man who continues to devote his life to the environment, but whose definition of the environment is broader than most people's — it includes civil rights, human rights, gender equality, and economic equity. "It's really about how we treat each other," he says. "Absolute bottom line. Because if we are part of the environment, and we treat ourselves so badly, what we do manifests in the physical environment."

Starting on Earth Day each year, Francis spends several weeks walking, and then flies home from wherever he ends up. Since 2005, he has been retracing his journey across the country, moving from east to west. This year he walked through Pennsylvania and Ohio. "I have this dream to walk around the world, which I haven't completed yet, although I've probably put that many miles in," he explains. "The journey is really the process, and it's not whether I get around the world, it's the experience I have on that journey."

And so he travels from place to place, giving lectures, joining environmental and community partnerships, and developing a curriculum called Planetlines that aims to use walking as a vehicle for studying science, social justice, and community service. Things seem to fall into place for him, and contacts lead to other contacts, all adding up to a life that continually surprises him.

"What I thought was going to happen was I was going to start walking and I would get a little cabin in Inverness, and I would spend the rest of my life just exploring around here, which wouldn't be a bad life," he says thoughtfully.

"Not a bad life," he repeats, and smiles. "Instead, I'm all over the world."

Dashka Slater writes about the environment for publications ranging from *Sierra* to *The New York Times Magazine*. She is also the author of three books for children and a novel for adults. Read more at www.dashkaslater.com.

A Father's Legacy

UW professor uses inheritance to help others finance the cost of college.

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After her father died two years ago, **Ellen Zweibel** received an inheritance. She wasn't quite sure what she would do with it, but the UW-Madison professor knew she would like to help others.

Her father, John Gould, had emphasized education. "He didn't have a college degree, for a combination of financial and family reasons," says Zweibel, who teaches and conducts research in physics and astronomy in the College of Letters and Science. "He fostered my curiosity, and he always encouraged me to be interested in science and the world.

"I wanted to do something to memorialize him in some way," she says. "He was a refugee from Czechoslovakia during the Nazi era. I thought about helping refugees, but I was not really sure what to do."

So Zweibel turned her thoughts to funding young people's dreams. "I have been reading so much about how the cost of education is pricing so many people out of the market," she says. "I'm very proud to be a faculty member here. I'm very proud of the education we can offer people. I want it to be as accessible as possible."

She met with staff at the UW Foundation and discovered a new initiative that would match her gift dollar-for-dollar if it went to campus-wide unrestricted, need-based student support. The foundation's board of directors has made $20 million available to match such gifts. (Endowment funds of $25,000 or more for need-based scholarship gifts restricted to colleges or similar units are being matched fifty cents on the dollar.)

"I am in two departments, astronomy and physics, and my father liked chemistry," Zweibel says. "So my first thought was a scholarship for a student in one of those fields, but when it was explained that there was this match, I made no restrictions. That was just too good to pass up."

JAMES GILL

"I'm very proud of the education we can offer people. I want it to be as accessible as possible," says Ellen Zweibel, UW professor of astronomy and physics, who has used an inheritance to support need-based scholarships through the UW Foundation's recently launched initiative, "Great people. Great place."

Soon thereafter, Zweibel set up the first faculty-supported, need-based scholarship endowment as part of the foundation's recently launched initiative, "Great people. Great place."

"I didn't know whether the amount of money I was talking about would matter," she says. "I didn't know if you needed half a million dollars to walk through the [foundation's] door. I was surprised to discover that a relatively modest amount of money can make a big difference. Would a $1,000 or $2,000 grant make a difference to a student, given that it's less than tuition? I'm sure now that it does."

She looks to her past for an indication of how financial times have changed. "My mother became a high school teacher shortly before I went to college," says Zweibel, who grew up in New Jersey. "Her take-home pay was about three times the cost of room, board, and tuition at the University of Chicago, where I went as an undergraduate. That's just staggering for a place that now, I think, costs close to $50,000 a year. The cost of education compared with wages and salaries has just gone up so much.

"Considering the kinds of jobs my parents had — my mother being a teacher, my father being a tool-and-die maker — with three kids, they could never have sent all three of us to private schools," she says. "Education transforms people on the outside and on the inside. It makes such a difference in what you can do in life."

Zweibel believes there's another good reason for faculty members to support students. "I think it matters for students to know that [someone] cares about keeping them in school, especially a faculty member," she says. "They see this other side of us, where it might seem to them sometimes that we're creating obstacles for them. I believe it's important for them to see that we care about making education accessible — regardless of means."

"Would a $1,000 or $2,000 grant make a difference to a student, given that it's less than tuition? I'm sure now that it does."

As for her feelings about the use of that inheritance? "There certainly were other things I might have done with it," she says with a smile. "Setting up this scholarship has brought me nothing but happiness."

— Chris DuPré

A Homecoming for Tandem Press

Plans for this off-campus studio will make it an on-campus gem.

It's not that the people at Tandem Press mind sharing space with Wisconsin's state car fleet facility. Rather, being off campus makes Tandem Press's mission of bringing together artists, master printers, and UW-Madison students, faculty, and staff more of a challenge.

According to East Campus Gateway plans, Tandem Press will be able to leave the fleet behind and take up residence in state-of-the-art space just east of the Kohl Center. This new home, located on the ground floor, will make it possible for people to sample many of the prints this nationally known fine-arts press has to offer.

"It has always been the dream of Tandem Press to move to campus, since we are currently three miles away," says **Paula McCarthy Panczenko,** executive director. "To be on campus will enable us to increase our visibility to the university community, visiting alumni, and the Madison community at large."

Panczenko, the board of directors, and friends of Tandem Press are working to raise $2.5 million for this important step in Tandem's progress. Thanks to a $250,000 challenge gift from a couple who wishes to remain anonymous, the campaign was launched with a dollar-for-dollar match.

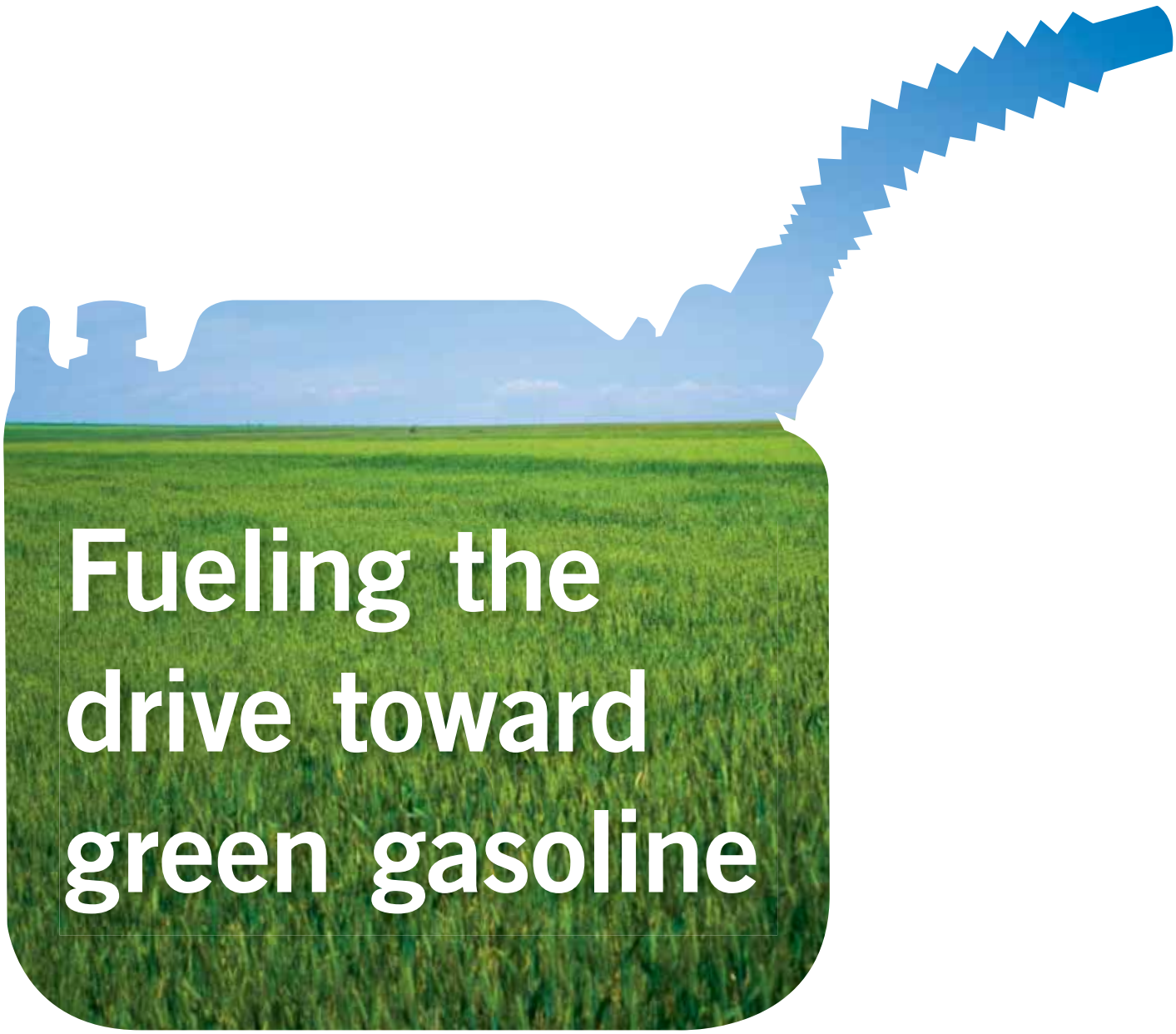
"We have been supporting Tandem for about five years. Their work is stunning. Moving Tandem closer to campus will help tremendously in giving them more exposure to faculty, students, and especially alumni," explains one of the donors. "They will have the opportunity to display their work. This will be a natural place for alumni events. We want to see this happen, and when it does, it will enable Tandem to make an even bigger contribution to the growth of the arts community.

"As someone involved in the entrepreneurial world, I believe that in order to create a vibrant climate for entrepreneurs, we need a vibrant climate for the arts. Tandem Press is one of the university's hidden assets."

Founded in 1987, Tandem Press is a self-supporting printmaking studio affiliated with the Art Department in the School of Education. A wide range of what Panczenko describes as "blue chip" artists cycle through Tandem year-round.

Printmaking is a centuries-old process that begins with an artist's design. Transferring the design to a final series of prints that reflect the artist's vision is labor intensive and meticulous, but the results are spectacular works of art sought by museums and private collectors. Visit tandempress.wisc.edu for a look at new pieces and more information.

— Merry Anderson



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Virent, founded upon University of Wisconsin-Madison discoveries, recently was selected as the only biofuel company among North America's 100 top tech start-ups. Now Virent is working with Shell on joint research and development efforts to convert sugars from biomass directly into 'green' gasoline and gasoline blend components for use in today's engines.

Virent's success reflects WARF's commitment to advancing world-class research at UW-Madison through funding, patenting, licensing and protecting inventions of university faculty, staff and students. Since 1925, WARF has been driven to help companies like Virent make their innovative dreams come true.

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Credit card not required in MA and PA. ^Upon activation of new DIRECTV service, DIRECTV will mail one (1) Wisconsin dish cover to the name and address used to activate the new DIRECTV account. Please allow 6–8 weeks for delivery of dish cover. †Eligibility for local HD channels based on service address. A DIRECTV Slimline Dish required in some markets to receive local HD networks delivered by DIRECTV. An H20, HR20, H21 or HR21 model DIRECTV HD Receiver and an HD television set are required to display HD programming. Number of channels varies by package selected. **PROGRAMMING OFFERS:** OFFERS MAY NOT BE COMBINED. LIMIT ONE PROGRAMMING OFFER PER ACCOUNT. Account must be in "good standing," as determined by DIRECTV in its sole discretion, to remain eligible for offers. DIRECTV System has a feature which restricts access to channels. In certain markets, programming/pricing may vary. Package pricing at directv.com/packages. **FOUR FREE MONTHS OFFER:** Featured package name and price: PREMIER $104.99/mo. 2008 NFL SUNDAY TICKET billed in four monthly installments of $74.99 each. In the fifth month, PREMIER package will automatically continue at the then-prevailing rate and DVR service will continue at $5.99/mo.; unless customer calls DIRECTV to change equipment and service. NFL SUNDAY TICKET automatically continues each season at a special rate, unless customer calls to cancel prior to start of season. Blackout restrictions and other conditions apply. **SHOWTIME OFFER:** SHOWTIME free for six months, a $72 value. Offer void where prohibited, taxed or restricted. CUSTOMER'S SHOWTIME SUBSCRIPTION WILL AUTOMATICALLY DISCONTINUE IN THE 7TH MONTH. **INSTANT REBATE:** Advanced equipment instant rebate requires activation of NFL SUNDAY TICKET (retail price $299.96 or 4 monthly payments of $74.99 each) and the PREMIER package or LO MÁXIMO package ($104.99/mo). DVR service ($5.99/mo.) and HD Access fee ($9.99/mo.) commitments required for HD DVR lease. LIMIT ONE ADVANCED EQUIPMENT REBATE PER DIRECTV ACCOUNT. **INSTALLATION:** Standard professional installation only. Complex/Custom installation extra. **SYSTEM LEASE:** Purchase of 18 consecutive months (24 months for advanced receivers) of any DIRECTV base programming package ($29.99/mo. or above) or qualifying international services bundle required. **FAILURE TO ACTIVATE ALL THE DIRECTV SYSTEM EQUIPMENT IN ACCORDANCE WITH THE EQUIPMENT LEASE ADDENDUM MAY RESULT IN A CHARGE OF $150 PER RECEIVER NOT ACTIVATED. IF YOU FAIL TO MAINTAIN YOUR PROGRAMMING COMMITMENT, DIRECTV MAY CHARGE A PRORATED FEE OF UP TO $480. RECEIVERS ARE AT ALL TIMES THE PROPERTY OF DIRECTV AND MUST BE RETURNED UPON CANCELLATION OF SERVICE, OR ADDITIONAL FEES MAY APPLY. VISIT directv.com OR CALL 1-800-DIRECTV FOR DETAILS.** Programming, pricing, terms and conditions subject to change at any time. Pricing residential. Taxes not included. Receipt of DIRECTV programming subject to terms of DIRECTV Customer Agreement; copy provided at directv.com/legal and in first bill. HBO is a service mark of Home Box Office, Inc. SHOWTIME and related marks are registered trademarks of Showtime Networks Inc., a CBS Company. Starz, Encore and all related registered marks or unregistered service marks are property of Starz Entertainment, LLC. NFL, the NFL Shield design and the NFL SUNDAY TICKET name and logo are trademarks of the NFL and its affiliates.

Campus Resources

Wisconsin Alumni Association (WAA)
(608) 262-2551
Fax (608) 262-3332
Toll free (888) 947-2586
(888-WIS-ALUM)
WAA@waastaff.com
uwalumni.com

Alumni Address Changes
(608) 262-2551 or
Toll free (888) 947-2586
www.uwalumni.com/directory
alumnichanges@uwalumni.com

Alumni Death Notices
(608) 262-2551 or
Toll free (888) 947-2586
alumnichanges@uwalumni.com

UW Foundation
(608) 263-4545
uwf@uwfoundation.wisc.edu
www.uwfoundation.wisc.edu

UW-Madison
www.wisc.edu

Call WAA toll free at (888) WIS-ALUM for more details about these events. Or check out our event calendar at uwalumni.com/calendar.

online

Online History 102: The 1920s to the Present with Stan Schultz — History isn't a thing of the past. It's shaping the present. Find out how post-Civil War American history continues to impact your everyday life by taking part in Professor Schultz's informative, entertaining online course held October 28 to December 11. Visit uwalumni.com/learning or call (888) 947-2586 for details.

october

4 **UW Advocacy Forum** — You're invited to this year's Alumni for Wisconsin Advocacy Forum on Saturday, October 4. This is an exciting opportunity to visit campus, meet with UW leaders and elected officials, and share your ideas on how to strengthen our great university. Visit alumniforwisconsin.org or call WAA's Mike Fahey at (608) 263-2645 for more information.

10 **Homecoming Golf Outing** — This annual event at University Ridge Golf Course is part of UW-Madison's Homecoming celebration. The package includes eighteen holes of golf, complimentary cart rental, lunch, and more. Proceeds benefit the Dean of Students Crisis Loan Fund. For details, visit uwalumni.com/homecoming or call (888) 947-2586.

16 **Badger Career Expo** — Make contacts and explore your career options at the first-ever Badger Career Expo in Minneapolis. You'll meet with representatives from dozens of Wisconsin companies who are looking for driven Badgers to join their companies. Visit uwalumni.com/badgerexpo for more information.

17 **Made in Wisconsin: Miller Brewing** — Take a "hard-hat" tour of the famed Milwaukee brewery. Afterward, eat lunch at the Miller Inn, enjoy a guided tasting of different beer styles, and hear from Miller employees. Register online at uwalumni.com/madeinwi.

18-25 **Homecoming 2008** — It's Bucky to the Rescue! Make plans now to attend a variety of super events during Homecoming. Visit uwalumni.com/homecoming to see a full schedule, including the 5K charity run/walk, pep rally, parade, and the BADGER HUDDLE® tailgate.

23 **Chancellor's Welcome** — Join UW alumni, students, staff, and friends of UW-Madison at this complimentary Kohl Center event to celebrate our great public university and officially welcome Chancellor Carolyn "Biddy" Martin PhD'85 as its new leader. Call WAA at (888) 947-2586 for details.

november

14–16 **First-Year Parents' Weekend** — Parents of first-year students will have a chance to attend Friday classes, meet campus officials, and cheer for the Badgers at Camp Randall Stadium. Visit uwalumni.com/fpw for details.

21–23 **Greek Life Reunion Weekend** — Celebrate with UW Greek alumni at the annual Greek Reunion Weekend. Enjoy a Badger football game, tours of campus fraternities and sororities, and more. Visit uwalumni.com/greek for details.

CAMP RANDALL STADIUM
EST 1917

2008 BADGER FOOTBALL SCHEDULE

AUGUST
30 Akron

SEPTEMBER
6 Marshall
13 @ Fresno State (WAA Tour)
27 @ Michigan

OCTOBER
4 Ohio State
11 Penn State
18 @ Iowa (WAA Bus Tour)
25 Illinois (Homecoming)

NOVEMBER
1 @ Michigan State (WAA Bus Tour)
8 @ Indiana
15 Minnesota (Parents' Day)
22 Cal Poly

All UW alumni and friends are invited to attend WAA's BADGER HUDDLE® pre-game tailgates at all away football games and select home games. Visit uwalumni.com/huddles to register.

After the 2008 season, Coach Bret Bielema and his staff invite Badger fans to travel with them on a one-of-a-kind Caribbean Cruise with the Coaches. You'll have the chance to talk one-on-one with the coaches at exclusive dinners and receptions for UW travelers. Make your reservation today at uwalumni.com/footballcruise.

Contact WAA:
(888) 922-8728
SheriHicks@uwalumni.com
uwalumni.com/athletics

ALFRED EISENSTAEDT/TIME & LIFE PICTURES/GETTY IMAGES

The Game of *Life*

When Marquette University kicked off the 1939 football season at Camp Randall, it wasn't exactly the game of the century. The Badgers won, 14-13, but it was the team's only victory in a 1-6-1 season. So what was Alfred Eisenstaedt doing there?

The legendary *Life* magazine photographer was looking at pretty girls — or rather *one* girl, Merrilyn Knud Hansen '42. Knud Hansen (then Merrilyn Olson) was the subject of a pictorial on coed life, and Eisenstaedt was snapping shots of her and her date, Brooks Conrad x'42. The photos were published, amid articles on the start of World War II, in *Life*'s October 1939 issue. But *On Wisconsin* can now reveal a hint of scandal attached to the images: they were staged. Knud Hansen, a Madison native, says the social editor of the *Wisconsin State Journal* had nominated her for the project, and that her date for that day had been hand-picked, too. "I was pinned to Carstens Slack ['40]," she says, referring to her steady boyfriend, "but he was a Kappa Sigma. The editor was married to a D.U. [Delta Upsilon], so she matched me with Brooks [also a D.U.]. It was very political."

Knud Hansen went on to marry Slack, and after he died in 1991, she married John Knud Hansen. She now lives in Maryland. Conrad left the UW without receiving a degree. He passed away in March 2008. Eisenstaedt's reputation continued to grow — his photo of a sailor and woman kissing in Times Square at the end of World War II is a national icon. And Marquette? It last played a varsity football game in 1960.

— John Allen