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Water to the Promised Land

ALSO: BOOZE, SEX, AND REALITY CHECK :: IF YOU DON'T SNOOZE, YOU LOSE

WASHINGTON STATE

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I am: Lisa Heard, and as of May, I am one of WSU's most recent graduates!

I believe: That receiving scholarships means you are not alone—that others came before me and I can build off their successes. The woman who my scholarship was named for was fearless. She got through college during the Great Depression and forged a career when few women were in business. I kept her portrait on my wall for inspiration.

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first words

*Uncle Sam took the challenge in the year of '33
For the farmers and the workers and for all humanity
Now river, you can ramble where the sun sets in the sea
But while you're rambling, river, you can do some work for me*

—Woody Guthrie, “Roll, Columbia, Roll”

In the early 1950s, Washington State College and the Bureau of Reclamation published a *Farmer's Handbook for the Columbia Basin Project*. Written for new farmers breaking ground in the newly irrigated Columbia Basin Project, the handbook offered advice on everything from what crops to grow to what kind of windbreak to plant so the soil doesn't blow away.

The manual advised on how to situate the new homestead with the prevailing wind in mind and explained the irrigable land classification defined by the Bureau of Reclamation and how water allotments are figured. With proper financial credit (also explained) and another extension bulletin or two, the new farmer should be able to create a life for himself and his family on the newly watered Columbia Basin.

Indeed, what is striking about this helpful book is its pioneering implication. Without water, much of the Columbia Basin was merely desert to be crossed on the way to somewhere greener. Only with water did it become “the planned promised land.” The farmers to whom the manual was directed were the last pioneers, and the Columbia Basin was the last unconquered realm of the American frontier.

The land made fertile by the Columbia Basin Project was originally intended for poor farmers displaced by the Dust Bowl. But such best laid plans were disrupted by World War II and subsequent social and economic shifts. The Grand Coulee Dam, long dreamed of by local visionaries, would back up the Columbia River to provide water and power to irrigate an intended 1,027,000 acres. But the war effort required huge amounts of electricity to power aluminum plants and the Hanford nuclear facility, so its original purpose was delayed long enough for socioeconomic realities to change.

Irrigation water did not start flowing until well after the war was over, and for the most part, the displaced farmers from elsewhere never showed up. Bulletin 566 of the State College of Washington's Agricultural Experiment Stations, *The Columbia Basin Settler: A Study of Social and Economic Resources in New Land Settlement*, revealed quite different settler profiles than originally anticipated.

By the mid-1950s, 53 percent of the Columbia Basin settlers had come from Washington itself. Another 28 percent were from Oregon, Idaho, and Montana. Also, the newly settled farmers were, at least given the original intentions, relatively well-to-do: “The median value of assets was \$17,800, and the net worth, \$14,000.”

Although the authors concluded that there seemed to be plenty of settlers to occupy the newly available farms, they also worried that, given a further drop in farm prices (or a “new Depression”), the future might see a shortage of qualified settlers.

Clearly, they need not have fretted. Though the Columbia Basin Project has not yet been completed, the effect of existing irrigation on the economy of central Washington has been enormous. Even if the specifics are different from the original intent, one need only glance occasionally from side to side on a drive along State Route 26 between the scablands and the Columbia to understand the effects of public works.

On an altogether different note, we welcome the return of Nature Boy's “Mini-Me.” The four-foot-tall model for the more familiar 30-foot-tall, 25-ton sculpture on the side of Holland Library that we know as Nature Boy (more correctly, “The Reader”) had been residing at the Cathedral of St. John the Divine in Spokane for the past 63 years. But now he is home (see “[Last Words](#)”).

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Three Great Ways to Belong to One Great Organization

Membership has doubled! That's right, there are now over twice as many members of the WSU Alumni Association (WSUAA) than there were just a few short years ago. They joined to support student scholarships, take advantage of all the incredible member benefits, connect with other Cougs, and show their Cougar Pride. We extend our thanks to all the alumni, students, friends, faculty, Coug parents, and staff whose membership has helped the WSUAA claim its rightful place among the finest and fastest-growing alumni associations in the country. We salute our Annual, Life, and Platinum Life Members.

Platinum Life Membership

Platinum Life Membership is one of the new ways to belong to the WSUAA that we announced last year. It was suggested by and created for Cougs who want to help the WSUAA do even more for WSU. To date, the response has been incredible. Platinum Life Members enjoy all the same great benefits and services as Annual and Life Members, plus additional recognition and a growing suite of extras.

If you have not yet joined, or you are a current member interested in one of the other membership types, please sign up today. Your membership is vital to the continued success of the WSUAA and WSU.



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posts



VIA PINTEREST/COURTESY JASON KRUUP

The story behind the sign

Many signs display Cougar pride on the way to Pullman, but only one stands 27 feet high and 400 feet long. The “Go Cougs” shed 12 miles east of Othello on Highway 26 was created in 1998 by Cougar brothers Orman and Gavin Johnson.

“We needed to build a potato storage,” Orman says.

It was that simple.

“We’d drive to football games and we’d see small signs,” he says. “We thought, ‘we should do that’.”

And so the process began.

Orman and Gavin say they knew they wanted to use sheet metal so there wouldn’t be any upkeep, but they didn’t have a lot of selection when it came to colors.

“It’s probably not ‘Bill Moos crimson,’” Gavin admits, noting the colors cost them a little extra. And a windmill.

Gavin says the person supplying them with the sheet metal said he would give them the extra in exchange for an old windmill they had on the farm. The swap was a no-brainer.

Since then, the shed area has seen everything from pickup football games to graduation pictures.

“We’re having my daughter Becca’s wedding reception in there this summer,” Orman says.

The Johnsons have a long history of Cougar blood. Orman and Gavin’s grandfather started the trend when he graduated from Washington State College in 1906, followed by their three uncles in the 1930s and mother in the 1940s. Next was Orman’s sister, who graduated in 1967, followed by Orman in 1969 and his youngest sister in 1972. And

while Gavin did not actually attend WSU, his pride shows he might as well have.

“Most of the family has the red license plates,” Gavin says.

Kristin Gauthier, Orman’s daughter and WSU alumna, says that while in college, people would ask her where she was from, and when she explained her farm was where the sign was located, she was almost seen as a local celebrity.

“It’s fun to share and everybody knows where it is,” she says.

And “everybody” isn’t that much of an exaggeration. They’ve seen people from all over the world stop to take pictures, says Orman.

When they were on vacation in Hawaii, Orman says someone noticed his WSU hat and they had the normal exchange of “Go Cougs” before starting up a casual conversation. The young man, who was attending Seattle Pacific University, just happened to have a picture of the shed on his phone, Orman says.

“Obviously I know there’s a special history with our family,” says Gauthier. “There’s an aspect of history and tradition and it’s really nice to be a part of.”

So where do the Johnson brothers go from here? Gavin says they have discussed plans to add painted Cougar heads to the ends of the shed.

“That shed is never going to be taken down,” Gavin said. “It should last at least 60 years. But if needs to be replaced, it will.”

*Kelly Montgomery '13
Murrow News Service*

Great company

Since graduation and after working in the “other” Washington and worldwide in over 20 countries, last year our downsizing exercise to “Condolandia” forced a rigorous review of my WSM collection. This stimulated this somewhat distant perspective.

WSM captures in so many interesting ways Washington’s special and very diverse ecology stimulated by its ocean frontage, mountainous ranges, micro and macroclimates, and diverse cultural bases from which the focused work of WSU faculty is provided with interesting and informed experiences. Washington is a different place and via WSM, you present WSU as a special institution. My youthful memories in the state, productive experiences in Pullman, and periodic engagements with alums overseas are strengthened and resurrected through your work. Having received master’s degrees from other prestigious schools, I am reminded of the tendency to advance alumni contributions, faculty achievements, sport accolades, etc. You are at a different level such that WSM’s always interesting and some even enlightening articles, has become my state version of my favorite magazine, *Smithsonian*.

Recent highlight recollections include the archeological digs at Neah Bay, Washington soils, feeding the world, fading memories, and several foods from rhubarb to apples.

Keep up the good work!

*David Bathrick '64
Retired Foreign Service Officer,
Minister Councillor*

Gun Show Nation

I read the conversation with Joan Burbick in the Summer '13 issue with great interest. Based on my personal experience she made many valid points.

However, I believe she failed to grasp the principal reason the NRA shifted to a strong political posture in the 1970s. As an NRA Life Member active since the 1970s, I can confirm that the NRA (along with the gunowners it represented) was forced into defense against a legislative juggernaut. Draconian state and federal laws were enacted in response to the assassinations of the 1960s. These laws created the huge, federal BATF bureaucracy which has demonstrably done nothing to make our country safer since 1968.

At the same time, the militant radical movement, epitomized by the Black Panthers parading heavily armed around the streets of Oakland, also led to calls for further infringement on citizens’ right to bear arms by municipalities and states. Despite Ms. Burbick’s thinly veiled implication that the NRA was reacting in a racist manner, the NRA has consistently supported the rights of minorities to exercise their civil right to own firearms. Rather, it has been elected political leaders that have historically denied minorities these rights.

It might interest your readers to know that as a resident of Stephenson South in 1966, I kept my hunting rifle and shotgun in my dorm room closet ... as did my roommate. We often enjoyed



@ecmortenson: Vont les pumas! Northwest biofuel researchers will have a booth at Paris Air Show <http://ow.ly/1Ycdc> #WSU



@Twitter 'yelling' attracts followers - For a #pundit's popularity, confidence trumps accuracy <http://bit.ly/16mSd5i> #WSU



The one-way trip to Mars posed by #WSU's Schulze-Makuch is one step closer to reality. <http://ow.ly/k9IUG>

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hunting and shooting along the valleys of the Palouse country and pheasant was often cooked up on a Sunday afternoon on contraband hotplates. With apologies to Dorm Mama Luck.

Bill Wright '71

I read the article "Gun Show Nation—a conversation with Joan Burbick" with a combination of interest and dismay.

The interest was in an article about gun shows which I find interesting in their own right and could be viewed as a uniquely U.S. subculture. The dismay was the quick hits that cast the shows in an unfavorable light with use of words such as "racist," "sexist,"

and "neo-Nazi book exhibits." Perhaps some gun shows have these elements, but the last gun show I attended in February 2013 included a large number of blacks, Hispanics, Asians (too many cultures to easily list), a large number of women, and if there were neo-Nazis they had their tattoos hidden.

If we are writing about gun shows and the romance of the West, why not look at the relationship between firearms and the strong Populist movement in the West? Perhaps the article does not fairly reflect the content of the book but after reading the author's views in the article I wonder if conclusions were reached first followed by research.

I'll let you know my opinion of the book—I just placed it on hold at a nearby library.

*Richard Utter '73
Walnut Creek, California*

Dan and Val Ogden

Your article about Dan and Val Ogden brought back memories about one of my favorite elective classes while attending WSC in the late '50s. I selected Political Science 101 and was fortunate to have Dan Ogden as my instructor. From the first day it was obvious that Dan was a Democrat and the

class was going to be informative and exciting.

As I remember our tests were essay type and the first one shook up all of us as the average was 26 out of a possible 100 points. Dan laughed and told us he grades this way to sometimes discover a Rhodes Scholar. After this shock, we then understood what Dan wanted and the median grade improved.

I was born into a Democratic family and Dan's influence solidified my beliefs.

*Jack Domit '60
Post Falls, Idaho*

What's new?



Washington State University Vancouver opened its new **Engineering and Computer Science building** in January 2012. The 60,000-square-foot building offers laboratories, classrooms, and study spaces.



The building's design is LEED gold certified featuring durable composite and recycled materials and lots of natural light. *Photos courtesy WSU Vancouver*



INTERPRETIVE ILLUSTRATION BY GUSTAVO CASTILLO. ORIGINAL STAR TREK SHIP DESIGN BY MATT JEFFRIES/CBS STUDIOS INC.

The tractor beam has arrived

Capt. James T. Kirk: You left spacedock without a tractor beam?

Capt. John Harriman: It doesn't arrive until Tuesday.

— from *Star Trek: Generations*

by *Eric Sorensen* :: Phil Marston is not a Trekkie, nor has he given much thought to the *Star Trek* tractor beam that can use focused beams of energy to attract and repel derelict spacecraft or, in one case, *USS Enterprise* Capt. James T. Kirk.

He was just intrigued by something, in this case, the way an acoustic beam is scattered by a sphere.

“Basically, it goes into the category of a problem you solve because it would be curious to see what the answer is and whether there is something there that you didn’t anticipate,” he says. “That was true.”

Moreover, in the serpentine path from abstract musing to basic science to demonstrated

phenomenon, the WSU physicist sowed the seeds for a small-scale but real-life tractor beam that could have applications in both nanotechnology and medicine.

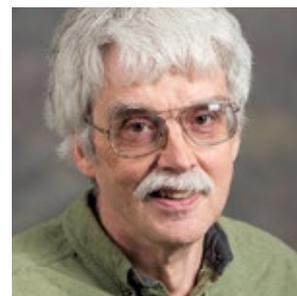
In his original inquiry, published in 2006, Marston noticed that when he plotted the forces of a beam of sound around a sphere, certain places on a graph would have negative force. In other words, the beam was acting on an object in such a way that it would attract it, not repel it.

If a lot of sound was being scattered back from an object, it would be pushed forward. However, he reasoned, if no sound was scattered back, there was some chance the object could be pulled toward the source.

He had pondered this for another four years or so when researchers in Hong Kong moved his thinking along. Where Marston had used math and sound, they used a geometric diagram and light canted at different axes, creating a sort of cone. By coming in at different angles, the light—

which behaves similarly to sound for experimental purposes—had different total forces. In their case, the angles were such that their total forces could in effect be a pulling, negative force.

Earlier this year, a team of Czech and Scottish researchers focused two laser beams with a lens in a way that let them control the light’s polarization. To explain this, Marston



PHIL MARSTON BY ROBERT HUBNER

produces from his cluttered shelves a heavily bookmarked copy of James Clerk Maxwell's *Treatise on Electricity and Magnetism*.

"I bought this book in a bookstore in downtown Seattle in the 1960s," Marston says.

He spends a few minutes riffling for what he calls "the most important picture in theoretical physics from the nineteenth century," then brings the diagram up on his laptop.

According to Maxwell, when an electromagnetic wave is propagated in space, the



electric and magnetic fields are perpendicular to each other. Light, he theorized, would behave similarly.

The Czech and Scottish researchers went beyond theory, building an apparatus in which they could rotate the electric field in a way that the objects they were working with—polystyrene particles as small as 400 nanometers, or less than 1/1,000th of a millimeter—could be drawn toward the light source.

David Grier, a New York University physicist who has also worked on tractor beams, told *Physics World*: "This really is a clean demonstration of Marston's principle in action."

It's still a far cry from the *Enterprise's* tractor beam, as the Czech and Scottish researchers were working with small objects and similarly small forces, says Marston.

"It turns out they don't care," he says, "because they're less interested in attracting people"—or spaceships.

"They're interested in tracking biological cells or small objects you would like to assemble in some controlled way," he says.

Stronger may not be better

by Adam Lewis '13 :: A pack of seventh grade soccer players huddles around a makeshift batting cage inside WSU's Sports Science Laboratory one Friday last March. One by one, they step inside the black netting to stand under bright lights and high-speed cameras.

"3 ... 2 ... 1," a voice calls out.

An air-pressurized cannon shoots a soccer ball 30 feet across the cage and the 13-year-old tries to head the ball back in the direction from which it came.

The purpose of such madness? Kasee Hildenbrand, associate professor in the College of Education, is exploring the role the neck plays in the incidence of concussions.

Her preliminary work tracking one of Pullman's youth soccer teams over the past two years challenges the prevailing wisdom about athletic head injuries: Developing a strong neck is the only way to avoid concussions.

"I don't think increased neck strength leads to more concussions," she says. But "I think neck strength alone is not going to prevent them, as the current train of thought goes."

The current theory hasn't been especially effective. Hildenbrand says recent reports suggest between more than 1.8 and 3.6 million

"heading" a lobbed soccer ball back at the machine. They fitted each kid with tracking stickers and headbands to measure the force of impact when the ball makes contact with the forehead.

"It's kind of an exciting time for the lab, and hopefully we can continue to do cool things," Nevins said. "There's a lot of awesome stuff that goes on down here that people don't ever hear about."

Their first test subject? Hildenbrand's son Kaden, an avid soccer player at Pullman Middle School. "I had mixed emotions when my mom told me she'd be shooting a soccer ball out of a cannon at my head," he says.

But the cannon, built by WSU engineering students, was just tossing lobbs.

Hildenbrand and Nevins' theory is that neck strengthening—a practice preached by football trainers across the country—must be



Strength training paired with improved flexibility may reduce concussions in young athletes. Photo Rick Gomez/Blend Images

youth athletes suffer concussions each year. More parents are now questioning whether their kids should play sports at all.

"It appears from the youth research and the football player research that I have done, that impacts tend to be of a higher magnitude in kids with stronger necks and that athletes with a previous history of concussions tend to have stronger necks," Hildenbrand says.

So the professor and Sports Science Laboratory research project manager Derek Nevins teamed up to examine more closely the role the neck plays by studying each player

accompanied by the development of flexibility and a greater range of motion, says Hildenbrand.

"That translation of research out of the lab and into the field or the clinic [is their current challenge]," she says. "It's always been a question of mine of how you facilitate that, because there are a lot of amazing things that happen in laboratories that either don't make it to the clinic for lack of interest or publicity or they don't make it for lack of planning."



Watch a video of the soccer cannon in action at wsm.wsu.edu/extra/soccer-concussion.

A fitting business

by *Hannelore Sudermann* :: Growing up, Loralyn Young '62 heard different versions of her Grandma Lucy, her grandmother's mother. She was a Pennsylvania-born girl from a large family and for some time was apprenticed to a tailor. She married a homesteader more than 30 years her senior, and was widowed in Kansas with a



had to pry open the lids and peek inside. "I remember finding beautiful light lavender silk from a dress and lots of feathers, egret feathers, long beautiful and white, and long black ones." She also found celluloid fruit, cherries and berries, black bird wings, and "all kinds of wonderful stuff." But the explorations would come to a quick end when her grandmother would miss her and call her back downstairs.

As the years passed, the trunks moved to Young's mother's home and then to her own.



Clockwise, from left: Loralyn Young '62. Lucy Stevenson. Courtesy WSU Department of Apparel, Merchandising, Design, and Textiles. The costume museum management class exhibit at WSU Manuscripts, Archives, and Special Collections. Photo by Robert Hubner

Besides letters, papers, and family tokens, there were the materials, the ribbons, buttons, the needlepoint, and the lace that seemed too precious to just throw away. Young wondered, "What to do?" One day, she found the answer in a *Washington State Magazine* story about Washington State University's costume and textile collection.

She called curator Linda Bradley, who was somewhat intrigued by Young's inheritance. "But when it showed up on campus, I was really excited," says Bradley. The artifacts included a century-old German thread cabinet, a quilted petticoat, a sewing rocking chair, and goods for building hats. "Items that can provide a scenario of what life had been like," says Bradley.

It was a feast of fresh material for Bradley's students, who were enrolled in a museum costume management course last spring.

When Stevenson moved here in 1894, Washington itself "was pretty rough and tumble at that point," says Bradley. She sent student Abby Conley to do more research over winter break. Issaquah, the town where the Stevensons settled, was called Gilman at the time. Its residents farmed, cut timber, and worked as coal miners. "It was interesting to take a look at where she [Lucy Stevenson] was in history," says Conley. "And that she was building something in her own name."

She had her own store, on property only in her name. Perhaps she learned something about owning property years earlier after her first husband died. She also had tailoring and bookkeeping skills to use in supporting herself and managing her money.

young child at the age of 35. She later married Civil War veteran John Stevenson and started her second life. Then they moved to Washington where, at the age of 60, Lucy opened her own hat and dressmaking business in Issaquah. From some accounts, she was clever and hardworking. From others, precise and demanding.

"My uncle told me one time that she ruled with an iron fist," says Young, raising her hand. "No smoking in the house. Do things her way." In a lifetime of family letters, Lucy Stevenson comes across as strong-willed and independent.

From Young's mother, she had more of a picture of a close and caring grandmother who doted on her baby granddaughter. "In her aging years, my mother would say 'Oh, I miss my grandma,'" she says.

But Grandma Lucy was also a tempting mystery. "When I was growing up, I stayed a lot with my grandmother (Lucy's daughter Willa)," says Young. "I would sneak upstairs and explore." Finding crates and trunks, little Loralyn simply



In the process of finding a home for Lucy's things, Young herself learned more about her family and her community. And she provided a catalyst for WSU's students to focus on a particular time in history. "I so much wanted the kids to parallel that economic and cultural time with our current time and culture, bank failures and all," says Young.

Last spring Bradley's class on costume museum management blended items from Stevenson's shop with pieces from the existing costume collection to create an exhibit exploring Lucy's story and fashion and history at the turn of the last century.

Education was so important to her mother and her family, says Young. Finding a home at a university for their heirlooms is fitting. "I am so glad they accepted it," she says of the donation. "And that they did something with it."

 Browse a gallery of photographs from the Lucy Stevenson collection at wsm.wsu.edu/extra/Stevenson-exhibit.

An even playing field

by Tim Steury :: Anyone who has negotiated the Pullman campus in winter will hardly be surprised that students dependent on wheelchairs tend not to select Washington State University. Only about five wheelchair-using students currently brave WSU's hills. Among them is Svetlana Lockwood, a graduate student in computer science.

Lockwood, who has cerebral palsy, married a Pullman resident and moved here from Latvia. Her description of life in the former Soviet country illuminates a stark contrast.

Teachers there discouraged Lockwood's parents from bothering to pursue further education for their daughter. She was largely confined to a third-floor apartment with no elevator. Even when she emerged, streets and sidewalks were nearly impassable for a wheelchair.

Anyone in her circumstance was almost completely dependent on family members for help—just as she was dependent on her husband her first semester at WSU. He would deliver her to class and pick her afterward. But one thing he could not do was help her take tests.

Even though her hands are crippled with cerebral palsy, she says she can take notes, if slowly and in a script only she can interpret.



COLLEGE AVENUE ON PULLMAN CAMPUS/GOOGLE MAPS STREET VIEW

"We mitigate difficulties. We provide them with an even playing field and hopefully remove barriers as much as we can." —Meredyth Goodwin

But her first time taking an exam in a computer class, she was able to finish only about 80 percent of it. Obviously, such an approach would not work.

After struggling through her first semester, Lockwood learned of the University's Access Center. Among the many services the Access Center offers, one of the most valuable is working with faculty and instructors to accommodate students who need extra time, arranging schedules and proctors.

Access Center Director Meredyth Goodwin estimates that of 600 students served by the center, 550 need testing accommodations. Many simply need extra time to complete their task, and testing accommodations mitigate the majority of disabling conditions.

Overall, says Goodwin, "We mitigate difficulties. We provide them with an even playing field and hopefully remove barriers as much as we can."

Under the Americans with Disabilities Act of 1990, educational institutions receiving federal

money are required to provide access to any student who has met admission requirements. Given the wildly varied nature of human needs, such a requirement is neither easy nor predictable. The difference the ADA made, on top of the Rehabilitation Act of 1973, is difficult to quantify. But without these pieces of legislation, it is likely that disabled students' experience would be more like Lockwood's in Latvia than here.

"Both laws allow people with disabilities the access they need to be able to compete on an equal footing in an academic arena," says Goodwin.

The disabilities of students served by the center range from being in wheelchairs to psychological and learning disorders.

Most of the students served by the center have "invisible" disabilities, says Goodwin. "They look just like you and me."

One of the challenges to the center's workers is they generally do not know the nature of the disabilities until the students arrive.

How to sign "Go Cougs"

DOUBLE
PAW
PUMP



DOUBLE
WHISKER
WIPE

This year, for the first time in about a decade, four hearing-impaired students arrived on campus, and four signed up for distance learning. The on-campus students required sign language interpreters for lectures, and the online students required transcriptions. All of which is very expensive, particularly for science classes.

"It's one thing to interpret Psych 101," says Goodwin. "But when interpreting advanced science curricula at a medical level, it's very difficult. The joke was that signers work-

Much of their work is trial and error, says Goodwin, involving a "lot of conversation with faculty."

Overall, however, says Goodwin, it doesn't matter what the disability is. "It all impacts their learning."

Goodwin says the center's staff of eight are all strong proponents of self-advocacy, which is quite different from high school.

"We will help the student identify what is appropriate," she says. But then the student has to go and identify himself or herself to

3.0. Goodwin interprets that figure as 55 percent who are not particularly struggling.

But for those who are, and who also work very hard, "I would love to be able to award those students scholarships," she says wistfully.

In the case of Svetlana Lockwood, add opportunity and accommodation to an intelligence and talent that her earlier teachers did not recognize, and one result is the dissertation on higher dimension computation that she is currently writing.

In 2011, she received a National Science Foundation graduate research fellowship, which provides three years of funding. Last year she was awarded a NSF grant that enabled her to study for seven months in Norway at the Kavli Institute for Systems Neuroscience and Centre for the Biology of Memory, part of a group working to better understand neural networks in the brain.

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access center

ing with a vet med student should go ahead and get their degree."

The largest group the center works with are students with psychological issues like depression, anxiety, bipolar disorder, and schizophrenia. The center also works with a small number of low-vision or blind students.

Staff members help the students with time management, as well as academic coaching and attention deficit hyperactivity disorder counseling.

their instructors and talk about what they need.

"We can be advocates if things go awry, but we cannot put things in place for the student."

Neither does the center go out and find students, she says. "They must identify to us. Our role here is access," she says. "Of all the services provided, in the end it is up to the student."

Of the students served by the center last year, 55 percent have grade point averages above a

From Holland Library to hacking history

by Eric Sorensen :: Of all the ways a college student can find trouble, at least Ralph Barclay started in the library.

It was 1960, and he was wandering through the engineering library, then on the third floor of Holland, when his eye was drawn to a freshly minted *Bell Systems Technical Journal*. Inside, amid some positively mind-numbing treatises, he found the article, "Signaling Systems for Control of Telephone Switching."

Years later, this one article would be referred to as "the keys to the kingdom," a plain-spoken description of how the phone system evolved and, unbeknownst to the authors, the means by which an 18-year-old electrical engineering student from Soap Lake could hack into its inner workings.

"I thought, 'This is way better than using a pay phone,'" Barclay, who died in 2009, recalled to Phil Lapsley, author of *Exploding the Phone: The Untold Story of the Teenagers and Outlaws Who Hacked Ma Bell*. "... this is a way to get around all that other stuff and do it directly."

That "it," Lapsley adds, "was making free calls."

:: continued page 18

Our Story

Fifty years back: WSU in 1963 :: The WSU Bowling Club: Knocking down pins since 1952



CONSTANT COFFEE

:: by Hannelore Sudermann ::

IF THERE'S A LIQUID for which Olympia is more known than rain, it's coffee.

With several roasters, and dozens of cafes, the community is pretty much fueled by caffeine.

Roaster Batdorf & Bronson arrived in the 1980s in the middle of the pack of Northwest coffee companies, some of which are now international names. While others have grown exponentially, even internationally, Larry Challain's company has stayed constant—an Olympia presence, a craft roaster with carefully selected beans, and a community landmark.

From his childhood, Challain '73 has vivid coffee memories. The smell of canned commissary coffee was a daily presence in his family kitchen. And the Cuban coffee stands around Key West, where his father was stationed, dazzled the boy. "I remember these humungous steam espresso machines with the eagle on top," he says.

Years later, after completing a degree in psychology at WSU, Challain was working as a tugboat engineer in the Puget Sound and came across Wet Whisker, which later became Seattle's Best Coffee. He felt at home with the sounds and smells in the small Seattle business that sold whole bean and drip coffee. Challain and his wife Cherie decided then that they would go into coffee for themselves.

They did their homework. Challain visited with Jerry Baldwin at Starbucks and Jim Stewart, founder of Wet Whisker. And then the Challains started saving. For 11 years. They moved to Olympia for Cherie's day job and found a space to set up a storefront for Dancing Goats Espresso Company in 1988. The name is a reference to a folk story about the discovery of coffee in which a goatherd noticed his flock would dance after eating the berries from a certain bush.

Challain quickly made friends with Dick Batdorf, the owner of neighboring coffee shop Batdorf & Bronson. Batdorf had retired from Tacoma Community College and took up a second career in coffee. He was also a fine roaster from whom Challain was happy to buy beans. "He would tell these great stories while he was roasting," says Challain.

But their friendship was too brief. Just two years after Challain opened Dancing Goats, Batdorf died of a heart attack. The Challains bought his company, blended the businesses, and became Batdorf & Bronson. They kept the name Dancing Goats for a few of their storefronts and their flagship coffee blend.

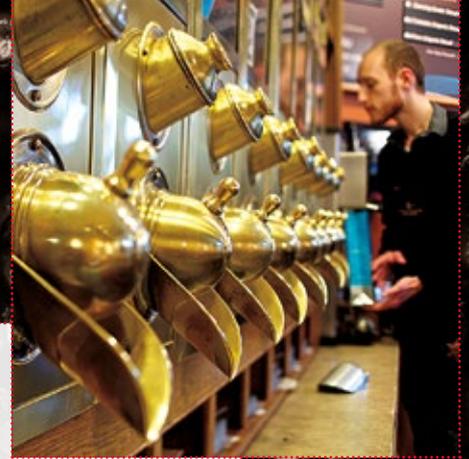
The Challains taught themselves how to roast, but depended on several original employees for advice and taste training. They had a good vision and resisted temptation to cut corners. "That can cost you more in the end," says Challain. "It takes years to build a good reputation and only a moment to wreck it."

They focused on roasting the best coffee to highlight the qualities of the bean, whether it's fruitiness, nuttiness, or flavors of burnt caramel, chocolate, or spice. With a solid supply of local home customers and espresso bars and restaurants in the Northwest and on the East Coast, the company has grown at a steady pace. Today they have six retail outlets in addition to a healthy mail order business.

On the main floor of the roastery, heady smells waft from the large, noisy machine at the front of the room. Two workers are manning the apparatus as it stirs and heats the beans. Just next door is the public tasting room, a bright space designed by Cherie Challain, who also designs the packaging and logos.

The room behind is filled with pallets, burlap bags from Ethiopia, Costa Rica, Indonesia. Though demand for coffee has grown over the past 20 years, it hasn't become harder to source quality beans. "Those larger roasters, they're not always into the same coffee we are," says Challain. While the company has a green buyer who travels to coffee regions all the time, the Challains visit a farm or community of origin every year.

That's just the kind of basic, nuts and bolts way of doing things that Challain and his team plan to continue. "We're not maybe your hippest hipster roaster," says employee Jenya Campbell. "But we've done this so long, we know how to do it." ☒



MATT HAGEN

Composing Cougar soccer



"I've always been a believer that the more you have the ball and the more opportunities you can create, the better chances you have of winning the game."

—Keidane McAlpine
Photo WSU Athletics

by Jason Krump '93 :: A music business graduate from Birmingham-Southern College, Keidane (Kih-Dawn-EE) McAlpine had designs on moving to Atlanta to work in the music industry.

He soon realized his disposition and the music business were discordant. "I'm not mean enough for that," he says with a laugh.

Fortunately, McAlpine's time at college had created other, more harmonious, opportunities.

"The doors that kept opening were the soccer doors," says McAlpine, who is now the Washington State women's soccer coach.

After his college playing days, BSC women's coach, Lorrin Etko-Shepherd, offered him a position.

"She said I got a parttime job if I want it," he remembers. "Next thing you know I am a full-time assistant."

And then head coach.

"She decided to retire," he explains. "She said, 'You're taking over' and I said 'What?'"

"I'm 26 at the time and trying to transition the program into the Division I level. Who knew?"

McAlpine served as head coach at BSC for five years and, in 2004, led the school to an NCAA postseason berth.

In 2006, he moved to Auburn as an assistant coach and helped guide the Tigers to six straight NCAA postseason appearances.

During the winter of 2012 he became the fifth head coach in the WSU program's history.

Now it's late May 2013 and McAlpine is between recruiting trips, having just returned from London. In a couple days, he leaves for New Jersey.

McAlpine inherited a team, from former head coach Matt Potter, that advanced to NCAA postseason play three of the last four seasons, including second round appearances in 2009 and 2011.

"You know you've got a program you can build on because it does have a foundation already set in place," McAlpine says. "Now you're adding your twist and hope to continue the building process."

Considering his music background, it's apt that his twist is up-tempo.

"I've always been a believer that the more you have the ball and the more opportunities you can create, the better chances you have of winning the game."



It's also a style he believes strikes a chord with the audience.

"I think it's far easier to follow an up-tempo team. As long as they're shooting a ball on goal it's a good thing."

Throughout his first season, McAlpine gradually implemented his up-tempo style, "adding small pieces week to week."

A 1-0 victory over Washington in the 2012 regular season finale capped a 12-win season, and for the fourth time in five years, the Cougars earned a berth to postseason play.

As he enters his second season, McAlpine's challenge is to advance the Cougars to the Sweet 16, something never done before.

"We're definitely a program that's established, but can it go another level?" McAlpine asks.

"Yes," he answers.

It's a message he delivers on his recruiting trips to London, New Jersey, and all points in between.

"Every player that we recruit, we tell them the goal is to find people who want to be the first at something. To be the first to make the Sweet 16, the first to make the Elite Eight, the first to make the Final Four, the first to win a championship, the first to do it again."

And that's music to Cougar fans' ears. <<

Then-senior Micaela Castain (*above, far right*) is being hugged by team members after scoring the decisive goal in the 1-0 win over Washington last November. *Photo WSU Athletics*



National champs

The WSU women's rugby squad won their second national championship in the last four years, beating Winona State 60-5 in May. The team, undefeated this season, has competed in the Division II nationals for the last five years. Next year, the club sport will move to Division I, with stronger competition for the Cougs. *Courtesy WSU Women's Rugby*



Cougar Crew Days In March, alumni and team members of men's crew, the oldest sport club at WSU, gathered for Cougar Crew Days, as they do each year. But this year's celebration had special significance: 40 years of rowing competitions.

Rich Stager '74 and Ken Abbey, vice president of business affairs, formed the crew team in 1969, built the Cougar Shell House on the Snake River, and

appointed landscape architecture professor Ken Struckmeyer as the first coach. The team entered competition in 1973.

The Cougar Crew Days included a banquet, auction, and the annual race between team members and alumni (pictured above). According to Doug Engle '80, they raised more than \$36,000 for the team over the weekend. *Photo courtesy Lisa Curtis '83*

» in season

WASHINGTON'S SWEET CORN SECRET

:: by *Hannelore Sudermann* ::

WASHINGTON CORN? Midwesterners may scoff, but right now an abundance of sweet corn from Yakima Valley and around the Columbia Basin is heading to grocery stores, farm stands, and farmers markets from Anacortes to Zillah. It is something of a surprise that our state is also one of the largest sweet corn producers in the country.

The stuff at the farm stands is just a hint of how much of the crop is here. Three states dominate in the production of sweet corn for canning and freezing. The first two are no revelation: Wisconsin and Minnesota. But some years Washington is the source of 850,000 tons of the succulent seed, nearly 200,000 tons *more* than Wisconsin. And last year, Washington led the nation in sweet corn production.

In Benton and Franklin Counties, “it’s a pretty important rotation crop,” says WSU extension agent Tim Waters. It’s a C4 grass and as a grass it’s pretty good for breaking disease cycles in fields for typical Columbia Basin crops like potatoes, onions, and carrots. The C4 classification refers to the plant’s super-efficient ability to fix carbon in the right conditions: warm weather and plenty of water. Most grasses are C3.

Corn, also known as maize, is a crop native to the Americas. It started as a grass and was likely first cultivated about 8,700 years ago in what is now southwestern Mexico. Only recently have scientists determined that it is descended from *teosinte*, a grass that heads a skinny “ear” with only about 12 seeds or kernels.

It’s a beautiful example of farmers over centuries selecting for traits like size and yield. Then dramatic change came in the twentieth century when seed companies and university research programs focused on breeding and hybridizing the plant to increase yields, improve disease resistance, and enhance sweetness, among other things. The University of Illinois is credited with the first supersweet varieties.



Left to right: Guy Madison at 100 Circle Farms in Paterson. Photo Zach Mazur. Husked corn from Sakuma Bros. farm in Skagit Valley. Photo Saara Kuure

So why is it here? Irrigation is the key. Corn needs sufficient water during three critical stages: tasselling, silking, and earfill. Without it the ear doesn't fill out. In the Columbia Basin "when you want the water, you turn it on. When you don't, you turn it off," says Guy Madison '78, who works as a consultant at 100 Circle Farms.

Nowadays growing the crop is a precise science, says Madison. "You're basically a plant doctor, focusing on the interrelations of the nutrients in the soil and asking questions on a daily basis," he says. Some of those questions come through soil and tissue samples checking to see if the plant needs more nitrogen, phosphate, or zinc. "We're asking the plant, 'How are you feeling? Are you lacking something?'"

ONE OF THE BEAUTIES of farming corn in the Columbia Basin is that it can be used in double cropping systems, so the farmers can harvest two different crops from the same field in a single year, says Waters. First they plant a pea crop in February and by June are ready to harvest and follow it with corn, which ripens from June to October. Since peas fix nitrogen, and corn requires it, it's a perfect pairing.

The corn is planted right on the heels of the pea harvest, says Madison. While the combines are rolling through the fields picking up the peas, the planters are sometimes right behind them putting down the corn.

At 100 Circle Farms, Madison grows corn, peas, and other crops in irrigated circles. The corn harvest itself happens quickly, with a team of combines working a field to fit it in the optimal window during which the sweetness, tenderness, and moisture are just right. From there it's a quick trip (often under an hour) to the processing plant before the

rapid change of sugar sweet to starch. "When everyone else goes to bed, they're running 24/7," says Madison.

HARVEST IN THE BASIN starts in mid-July and runs through October. West of the Cascades, it starts in late August. If you have fresh corn, the best way to prepare it is to "grab it off the stalk and throw it into boiling water," says Waters. "The longer you wait from picking to eating affects the flavor a bit."

Besides the big-scale processing farms, there are small farms growing corn around the state. Last spring Ken Christianson '74 and his son Eric '12, a graduate student at WSU Mount Vernon, planted two fields of hybrid sweet corn on their small Skagit Valley farm.

A few years ago they bought their neighbor's place, where sweet corn has been grown and sold locally for over 20 years. "We decided to carry on the tradition," says Ken Christianson, who owns a tree nursery and before that worked in the vegetable seed business. He loves growing plants from seed.

The father and son put just over an acre of yellow supersweet corn and about a quarter acre of white supersweet. When it's ready for harvest in late August and early September, they plan to stock their roadside stand with the corn.

"I think the Skagit is a great place for sweet corn roadside production," says Christianson. The ample water and days in late summer when the temperature is in the mid-80s provide the Christiansons and their neighbors the right conditions for a delicious crop. For timing, they can't compete with the early cropping possible in Eastern Washington, says Christianson, but "the quality of local-grown is worth the wait." <<



Off the cob, try corn in soup or salsa. For a few of our favorite corn recipes, visit wsm.wsu.edu/extra/corn-recipes.

:: from page 12

Lapsley writes that Barclay figured this out by gleaning several insights from the journal. The first, and perhaps biggest, was that a 2,600 Hz tone in the telephone line reset a remote switch. The journal, now shelved on the top floor of the Owen Science and Engineering Library, has the number “2,600” underlined, in pen, possibly by Barclay, or possibly by one of the legions who sought out the article in his wake.

Within weeks of reading the journal article, Barclay put together a nine-volt battery, a rotary dial, and a single transistor oscillator circuit that could make the 2,600 Hz tone. It worked, but inconsistently, as AT&T, also known as Ma Bell, was converting to a system in which phone digits were represented by multiple frequencies, not the single frequencies of Barclay’s first creation. Over the coming months, he built a more sophisticated box that included a touch pad he made from a mechanical Burroughs adding machine. He

The fun ended with the summer, when he was arrested and charged with bookmaking, possibly because a friend who often used the phone talked a lot about horses. The charge was reduced to making a phone call without paying for it, a misdemeanor. At his trial, the judge recalled freezing water in the shape of nickels to make long-distance calls from pay phones. He gave Barclay a suspended sentence, and Barclay’s phreaking days were over.

His widow, Trudy Boardman, says he went on to have a prosperous career with a video and broadcast technology firm, as well as a company he launched himself.

“He was just a curious guy who saw this article in a technical publication and decided to mess with it,” she says.

Curiosity seems to have been a hallmark of many early phreakers, says Lapsley.

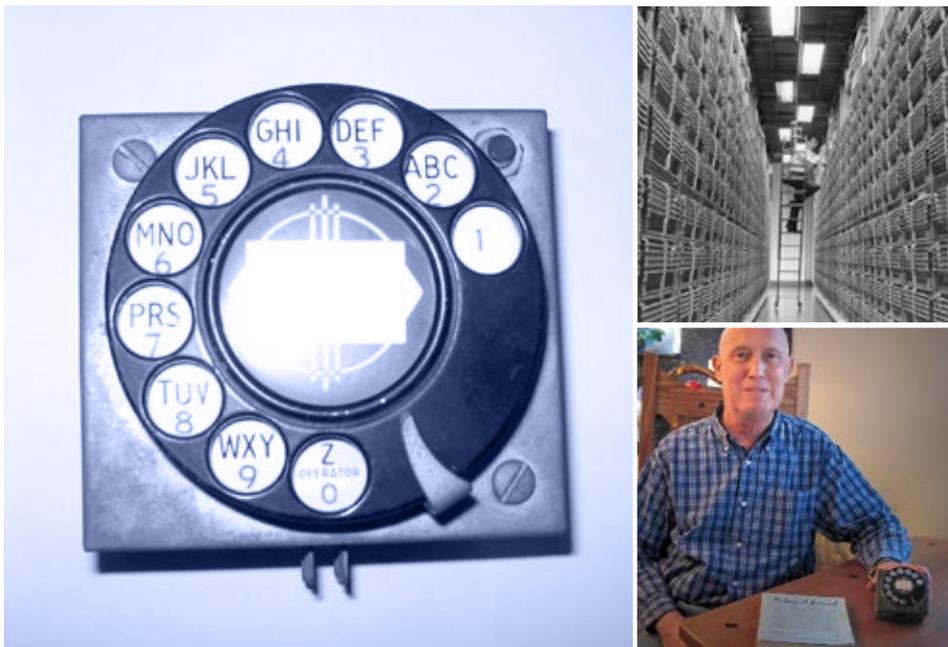
“Some of it is just being nosy and being curious, being open to new things,” he says. “A second thing, which is harder to describe, is a lot of people who are involved in either computer security or any other kind of security have their brains wired in a particular way that they notice vulnerabilities and they see things that, for lack of a better word, normal people don’t see. They look at something and they immediately think, ‘Well gosh, this is a vulnerability.’”

That has some clear downsides in the later phreakers, many of whom had more nefarious and mercenary interests, as well as many modern-day hackers following in their footsteps.

Michael Quinn (’83 PhD Computer Science), author of *Ethics for the Information Age* and dean of the Seattle University College of Science and Engineering, sees a downside to Barclay’s curiosity and thrill with the technical challenge of the blue box.

“He did make use of his invention,” Quinn says in an email, “and I imagine he got a lot of satisfaction and gained prestige by helping his friends call home for free. I believe Mr. Barclay’s actions were unjust (and therefore wrong) because he deprived AT&T of what it was due: being paid for the use of its long-distance telephone network.”

For his part, Lapsley looks at Barclay’s “fundamental motivation,” which “was not to rip anybody off. The fundamental motivation was, ‘Hey, look at this amazing network that we can play with and learn about. . . . I look at that and find it very difficult to get real worked up from a loss or damage or evil perspective.’”



An early, non-blue version of Ralph Barclay’s “blue box.” Photo Phil Lapsley. Automated long-distance calling started with the Bell System’s #4A toll crossbar switching, circa 1957. Photo AT&T Archives and History Center. Ralph Barclay. Photo Phil Lapsley

The 2,600 Hz tone also let one reroute a call to most anyplace. And because billing was based on a local switch unaffected by the tone, these calls were now off the books.

The thrill of a free phone call seems quaint by today’s standards, when one can talk internationally for as little as a penny a minute, or get a cell phone with unlimited domestic long distance. To be interviewed for this story, Lapsley called Pullman over Skype for free from Bangalore, India.

But Lapsley calculates that in the mid-1950s, when the first known “phone phreaker” hacked into the system, a ten-minute long-distance call from Miami to Denver cost \$5.90. That, he says, comes to \$48 in today’s dollars. Worming one’s way into the phone network had an added appeal for Barclay, who grew up tinkering with telephones and radios: He could now play with the largest machine in the world.

housed it in a metal box that happened to be painted blue.

From then on, this device would be called “the blue box,” with its status elevated by the 1971 *Esquire* article, “Secrets of the Little Blue Box.” Steve Wozniak and Steve Jobs built and sold the box, and both said it led to their founding Apple Computer. As far as anyone knows, and as AT&T later asserted in a memo obtained by Lapsley, Barclay’s blue box was the first.

Barclay used his blue box to make an occasional personal call, help friends call home for free, and mostly, he told Lapsley, “to see where we could call.”

The following summer, while working in a radio and television repair shop in Ephrata, he took to calling farther and wider as a friend whose dad worked for the phone company gave him a book operators used to route calls.

Dynamic duo

by Alyssa Patrick '13 :: As seniors at Lewis and Clark High School, Eric Brandon '12 and Nick Linton '13 often skipped lunch to create plans for a zero carbon emission housing development.

“Our friends would come and ask if we were ready to go to lunch, and we’d say just 10 more minutes, or 15 more minutes” Brandon says, replaying the conversations. Linton interjects with his own reenactment, “We have to finish this last little façade.”

In 2008 Brandon and Linton entered their proposed sustainable housing development, called Green Ridge, in Washington State University’s inaugural Imagine Tomorrow competition. The competition brings students together in interdisciplinary teams to address energy challenges through technology, behavior, design, or biofuels. The judges for Imagine Tomorrow are faculty and industry professionals.

“We read Imagine Tomorrow’s mission statement about looking toward a future in which we’re not at odds with our environment but we’re participating and recreating it. We were interested in how that could translate into design,” says Linton.

The pair took first prize and split a \$5,000 award.

The year Brandon and Linton won, WSU researchers received a National Science Foundation grant to develop another integrated design and sustainability project. Mike Wolcott, director of the Institute for Sustainable Design and professor in civil and environmental engineering, spearheaded the grant that created the Integrated Design Experience (IDX) course at WSU.

The senior design class focuses on solving real-world problems with the help of students from different disciplines. Each year a different industry partner presents a challenge and 40-50 students work in teams to design solutions. “A big part of what IDX is doing is creating an energy literate workforce. The students who take this course will bring an integrative, sustainable approach to their industries,” says Wolcott.

That course brought Linton and Brandon back together. Linton had enrolled at WSU and Brandon at University of Idaho. However, Imagine Tomorrow had given them a taste for design competitions, so even though they lived

on separate campuses the pair met weekly throughout their freshman year to collaborate. By spring semester they had a faculty mentor helping them with a design, and Brandon was at WSU every Friday. “I began to get a feel for campus and the Cougar spirit. Then I started talking to Mike Wolcott about IDX,” says Brandon. He decided to transfer.

“Eric and Nick have a friendship that speaks to what we do in IDX,” says Wolcott. “Ultimately, problems are not dictated by one profession so it takes the diversity of people’s backgrounds to make real solutions.”

The IDX studio in the Engineering Laboratory feels like the creative office of a new startup company. Students work around tables that run down the middle of the long,

rectangular room. The faculty members who run the course sit at a hexagonal table in the front part of class, called the “command center,” partitioned off with short black filing cabinets.

In 2011 the IDX focus was Washington state ferry terminals. “It was rewarding to hear that industry professionals wanted to use our ideas,” says Brandon.

While working on that project, Brandon and Linton also started tinkering with the workings of the IDX course itself. They wrote a proposal for hiring undergraduate fellows who could help with logistics of the course, allowing faculty to focus more on teaching.

Linton and Brandon became paid undergraduate fellows for IDX in fall 2012. Focusing

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Word cloud terms: BEST #1, RELEVANCE, CONCENTRATIONS, OPPORTUNITY, GRADUATE, INTERNATIONAL, INNOVATION, MANAGEMENT, INFORMATION, BUSINESS, SUCCESS, GLOBAL, EASY TO GET ON, VALUE, PROFESSIONAL, CONNECTIONS, OPERATIONS, FRIENDLY, MILITARY, MARKETING, LEADERSHIP, FINANCIAL, HBM, NETWORK, ACCREDITED, ACACSB, COUGAR, FRIENDLY, WORLD-CLASS, ACACSB, ACCREDITED, INTERNATIONAL, INNOVATION, MANAGEMENT, INFORMATION, BUSINESS, SUCCESS, GLOBAL, EASY TO GET ON.

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Eric Brandon '12 (*left*) and Nick Linton '13 worked together on architecture and engineering projects through college. Now both are starting their careers with summer internships in Seattle. *Photo Matt Hagen*

on communications, their primary goal was to streamline information organization in IDX and to rebrand it to attract more students and partner companies.

Today, five years after their first collaboration, Linton and Brandon have

managed to parlay their partnership into work on more projects relevant to WSU and the environment. In addition to his fellowship, Linton has also participated in IDX with his architecture studio class. Brandon started research for his master's degree in

engineering. Who knows, maybe one day they will collaborate again.

Whether they do or not, Wolcott is confident they will find success. "I have no question that they will do good things, no question at all."

Remember the time what's-his-face was guarding that guy on that other team? And that one guy took that shot – was it a two- or three-pointer? And boom! He drained it and the crowd went wild. I'll never forget that!

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Apple-a-Day

by *Tim Steury* :: Danielle '12 and Megan '13 LaRiviere could sell iceboxes to Eskimos. Or coals to Newcastle. Even apples to Yakima.

Three years ago, prompted by their insurance agent father who bemoaned the lack of good snack food, they started visiting businesses around their hometown of Yakima offering to provide them with a steady supply of apples. Subscribers get a small cooler stocked weekly with the best apple varieties available.

From the start, their Apple-a-Day service got a "pretty good response," they say.

Good enough, that is, that when it came time to return to school for fall semester, they bought a van, hired a delivery driver, and conducted their customer service from Pullman.

After three summers of building Apple-a-Day, they expanded into the Tri-Cities. Then, when it came time for Megan to graduate, they got to thinking, says Megan: "If it works where apples are everywhere, it's probably going to work where people are a lot more health-conscious and have a lot more money."

So Danielle and a friend, Lexi Schmidt '12, who had joined the venture, moved to Bellevue and started building a clientele there. Clients now range from professional offices with four employees to Puget Sound Energy's headquarters, with coolers in many locations.

Danielle and Lexi pick up their apples on Monday at the Peterson Fruit warehouse in Mukilteo, then spend the rest of the week making sales and deliveries and appearing at networking events. They do no advertising, relying on word of mouth, cold calls, and their ever-present Apple-a-Day uniforms, red polos and jackets.

Megan was an entrepreneurship major and entered their business plan in an annual business plan competition sponsored by WSU and the University of Washington. She and Danielle, a Spanish major and business minor, won the award for "most passionate."

Once they pass 70 clients on the east side of the west side, they plan to move into Seattle.

Next? Oysters to Shelton? Potatoes to Othello? Doubtful. They're too busy.



Danielle LaRiviere '12 and Lexi Schmidt '12 deliver apples to clients in Bellevue while Danielle's sister Megan '13 manages the Yakima and Tri-Cities end of Apple-a-Day. Photo Matt Hagen



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A Cougar trade show

by Hannelore Sudermann :: A stroll through the grand ballroom at Bellevue’s Hyatt hotel one weeknight last spring took visitors into something that was part business networking event, part WSU Cougar reunion. The occasion, a CougsFirst! trade show, offered a chance to see and sample from an assortment of about 40 WSU alumni-owned businesses.

It was also a time to catch up with old friends. Gary Wood ’79, sat at a table lined with beers and flyers for his business Great Artisan Beverage Company, a craft and specialty beer wholesaler. As Wood set up his samples, he explained that after school and a few jobs, he found his calling one day when he “followed a beer truck into a warehouse,” he said. “It was a Cougar dream come true.”

Bruce Titus ’79, a WSU classmate and owner of Bruce Titus Automotive Group, wandered over to say hello. “There’s a whole bunch of us here who went to school together,” he said, pointing out several other classmates in the room.

Registration for the 40 booths filled up quickly, among them Cougar quarterback Drew Bledsoe’s Doubleback Winery, the Visit Seattle marketing organization, and the Great Alaska Adventure Lodge.

It was a mix of new startups and established landmarks. One aisle featured DJ Darin Hanson ’01 at one end and BJ Duft’s ’86 Herban Feast Catering at the other. The catering booth offered small cracker cones filled with a tangy mousse made of Cougar Gold cheese. There were also tech firms and the Tacoma Rainiers, a shipping business, and a Coug-owned law firm specializing in defending DUI cases.



More than 500 people attended, and Brian Quint ’77, the owner of Aqua Quip, a Renton-based business selling swimming pools, hot tubs, and barbecues, was thrilled. “It’s so great to be able to come to this event and meet other Cougs,” he says. Being a business in western Washington, and having gone to Washington State University, “there’s a special connection, even if you were there 10 years before I was or 20 years after.” <<<



Top (left) to bottom: Jack Thompson welcomes Puget Sound business owners at the CougsFirst! tradeshow in Bellevue last April. Drew Bledsoe in demand as a photo op. Drawing for Wine by Cougars giveaways. Butch with attendees. Photos by Paul Dent

Coordinates

:: Water to the desert: The Columbia Basin irrigation project

WATER TO THE DESERT

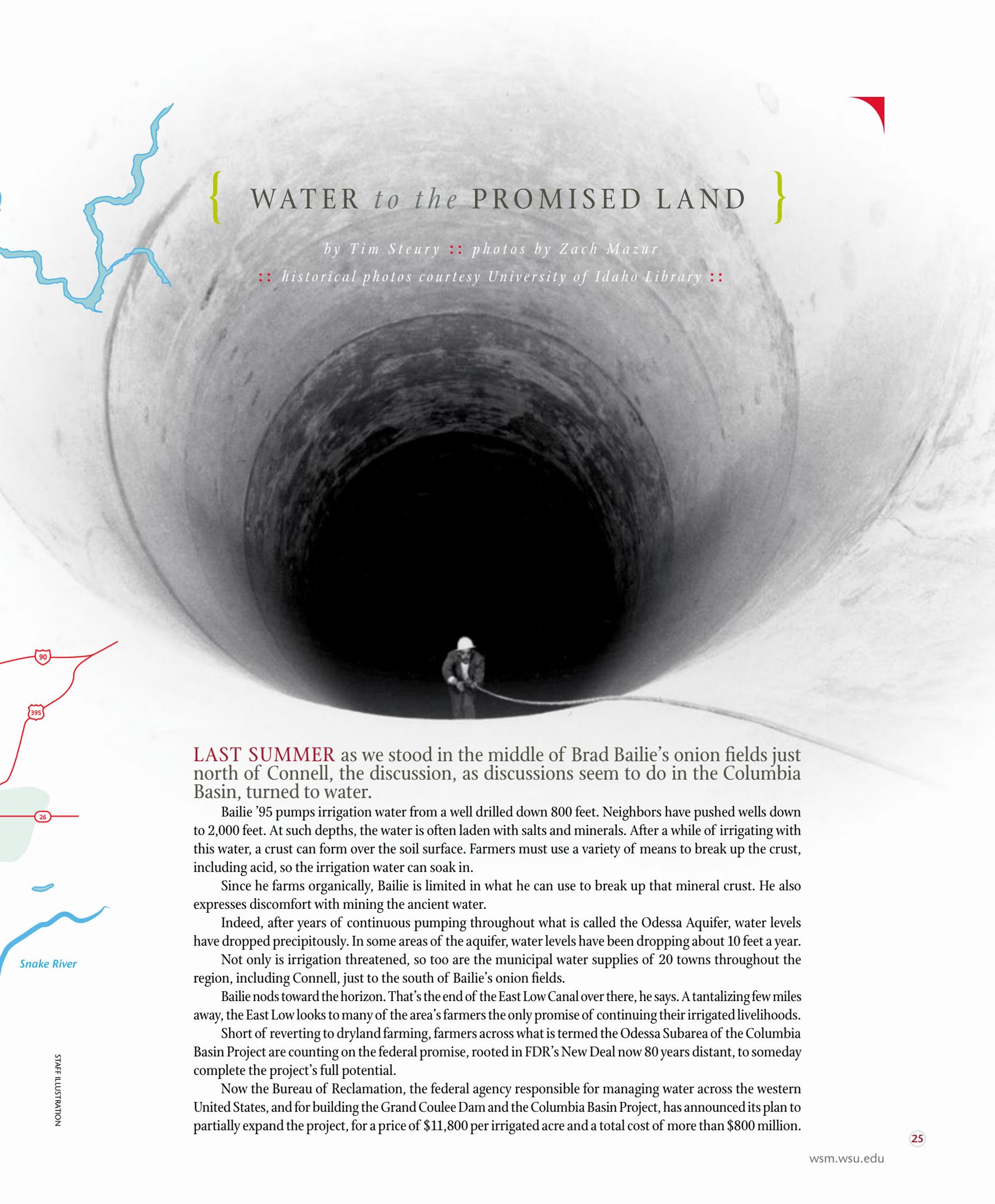
As an aquifer declines, farmers hope for water promised 80 years ago.





Whether Brad Bailie '95 irrigates by boom sprinklers or drip irrigation, his water has to come from deep wells since the East Low Canal of the Columbia Basin Project ends just a few miles from his farm.

Opposite: Historical photo taken at the Coulee Dam irrigation pumping plant; a man gives scale to the Bacon siphon.



{ WATER *to the* PROMISED LAND }

by Tim Steury :: photos by Zach Mazur

:: historical photos courtesy University of Idaho Library ::

LAST SUMMER as we stood in the middle of Brad Bailie's onion fields just north of Connell, the discussion, as discussions seem to do in the Columbia Basin, turned to water.

Bailie '95 pumps irrigation water from a well drilled down 800 feet. Neighbors have pushed wells down to 2,000 feet. At such depths, the water is often laden with salts and minerals. After a while of irrigating with this water, a crust can form over the soil surface. Farmers must use a variety of means to break up the crust, including acid, so the irrigation water can soak in.

Since he farms organically, Bailie is limited in what he can use to break up that mineral crust. He also expresses discomfort with mining the ancient water.

Indeed, after years of continuous pumping throughout what is called the Odessa Aquifer, water levels have dropped precipitously. In some areas of the aquifer, water levels have been dropping about 10 feet a year.

Not only is irrigation threatened, so too are the municipal water supplies of 20 towns throughout the region, including Connell, just to the south of Bailie's onion fields.

Bailie nods toward the horizon. That's the end of the East Low Canal over there, he says. A tantalizing few miles away, the East Low looks to many of the area's farmers the only promise of continuing their irrigated livelihoods.

Short of reverting to dryland farming, farmers across what is termed the Odessa Subarea of the Columbia Basin Project are counting on the federal promise, rooted in FDR's New Deal now 80 years distant, to someday complete the project's full potential.

Now the Bureau of Reclamation, the federal agency responsible for managing water across the western United States, and for building the Grand Coulee Dam and the Columbia Basin Project, has announced its plan to partially expand the project, for a price of \$11,800 per irrigated acre and a total cost of more than \$800 million.

{ WATER to the PROMISED LAND }

THE COLUMBIA BASIN PROJECT is a network of canals, dams, reservoirs, laterals, wasteways, and ditches designed to carry water from the Columbia River to irrigate more than a million acres of the Columbia Basin. Built over a period from before 1946 until after 1966, the project was, as Paul Pitzer points out in his excellent *Grand Coulee: Harnessing a Dream* (WSU Press, 1994), “an accomplishment larger in size, more complicated in engineering, and more costly than Grand Coulee Dam, the project’s key feature.”

It takes a while to grasp just how big the Columbia Basin Project is. Even presented directly with the evidence, as I am on an April day, with maps and figures and a personal tour of a sizeable fraction of the project, the largest irrigation project in the United States challenges the imagination as much as the vastness of the Columbia Basin landscape itself.

After 18 years as manager of the East Columbia Basin Irrigation District, one of three districts responsible for managing the Columbia Basin Project’s water, my guide, Craig Simpson ’90, continues to marvel not only at the geographic scale of the project, but also at the capability and genius of the people who conceived and built it.

“As an engineering geek, when I came here, it was a good job,” he says. But as he learned the specifics of a system designed to deliver water to more than a million acres, the marvel of this engineering phenomenon sank in. “Those engineers had their act together,” he says.

Crossing the East Low Canal, just outside of Othello, and just north of Brad Bailie’s onion fields, where one of the project’s main arteries nears the end of its 87-mile delivery of water, gives little hint of the project’s magnitude, even if you know that the irrigation sprinklers visible from State Route 26 are pumping water diverted from the Columbia River 50 miles to the north and directed through miles of canal and pipeline. The East Low begins its delivery with a capacity of 4,500 cubic feet per second. By the time it reaches State Route 26, it has already delivered 4,200 acre feet of water to a land rich in soil but poor in rainfall. An acre foot is the amount of water it takes to cover an acre one foot deep, about 326,000 gallons.

Columbia River water becomes Columbia Basin Project water when, with six 65,000-horsepower and six 67,500-horsepower pumps powered by generator turbines in the Grand Coulee dam, it is pumped 280 feet up from Lake Roosevelt to Banks Lake, the holding, or “equalizing” reservoir. Banks Lake was created by damming both the north and south ends of the 27-mile-long Grand Coulee, which was formed by ancient floods. Banks Lake has a storage capacity of 715,000 acre feet.

From Dry Falls Dam, at the south end of Banks Lake, the water flows into the Main Canal and then into the West and East Low canals. Altogether, Columbia Basin Project water flows through 300 miles of main canals, 2,000 miles of lateral canals, and 3,500 miles of drains and wasteways.

As large as it is, though, the Columbia Basin Project was never finished. A combination of higher than expected costs and the withdrawal of farmers on its eastern edge put its completion on hold for the last 60 years.

Altogether, surface water has been supplied to about half of the intended 1,029,000 acres promised in the original plan. Farmers in the Odessa Subarea, which is included in the project but never received surface water, were eventually given temporary permits to pump from deep wells.

Now, as a proposed antidote to the declining Odessa aquifer caused by that “temporary” deep-well pumping, the Bureau of Reclamation is proposing to extend the project’s reach.

The process toward reaching a decision on pursuing such a project is obviously long and tortured. But after numerous studies, reports, and environmental impact statements, in April, the week before my visit with Simpson, the Bureau of Reclamation released its long-anticipated “Record of Decision.”

In the 25-page statement, the bureau announced its choice of “Modified Partial-Replacement Action Alternative 4A.” If developed, Alternative 4A would provide Columbia Basin Project surface water to 70,000 acres of Odessa Subarea land currently being irrigated from deep-well groundwater. Once water is provided, those wells would be placed on standby status.

The proposal includes enlarging the East Low Canal south of I-90 and adding second barrels to five existing siphons. It would also create a pressurized pipeline system to deliver the water to fields. This would include pumping plants, approximately 150 miles of buried pipeline, various monitoring stations, and 150 miles of electric transmission lines.

Reasons given for selecting Alternative 4A include the most benefits to the area with the least impact on other environmental resources. Also, at the estimated cost of \$11,800 per acre irrigated, Alternative 4A is the cheapest.

The Columbia Basin drew waves of settlers in the early twentieth century eager to homestead the fertile, but dry, land. Where some had succeeded earlier with cattle, newcomers made an impressive start with dryland wheat. But the climate was fickle. A few years of drought forced many to give up.

Concerned with the depopulation of the area, local businessmen conceived audacious schemes. Rufus Woods, owner of the *Wenatchee World* newspaper, became the champion of a dream to dam the upper Grand Coulee.

A tireless promoter, Woods joined other Columbia Basin dreamers to finally capture the imagination of the other Washington, making a great dam and irrigation project a key part of the New Deal.

“In 1933, when the New Deal assumed the project,” writes Pitzer, “it took the vision of the agricultural/industrial empire and added the dimension of planning. President Roosevelt encouraged planning at the federal level and appointed advisors and cabinet members with similar views... In its early stages, the New Deal planners wished to create organized rural communities, and they intended to plan from the top down with guidelines coming directly from leaders at the federal level.”

Their goal for the Columbia Basin was what historian Richard Lowitt called “The Planned Promised Land.”



Historical photos, top left to right: View of Grand Coulee Dam spillway section. Car gives scale to completed section of main canal. Worker stands on siphon. **Bottom row, left to right:** Craig Simpson, manager of the East Columbia Basin Irrigation District. The East Low Canal. The Lind Coulee Siphon.



This was Progressivism at its boldest. The Grand Coulee Dam would back and divert the Columbia River to irrigate a rich land lacking only water and provide small farms to farmers displaced by the Dust Bowl, populating it with small but vibrant planned communities. The beneficiary of the project would be the small farmer. Indeed, farmers would be limited to 160 acres.

Even though the original idealism had faded, perhaps the culmination of the original idea was realized in “Farm-in-a-Day” in 1952. To mark the first delivery of water to the Columbia Basin Project, promoters determined to build and plant an 80-acre farm near Moses Lake, complete with irrigation, of course, and give it to the most deserving veteran of either World War II or the Korean War. He and his family would be given a fully functional farm, created in a 24-hour period.

Donald Dunn, a veteran of World War II and a dryland farmer from Kansas, was chosen through a search by the Veterans of Foreign Wars. In the spring of 1952, 70 pieces of heavy equipment and 34 tractors leveled, tilled, and planted the land. Crews began building the house and outbuildings.

At 4:30 that afternoon, Bureau of Reclamation commissioner Michael Straus opened a valve to begin irrigating one of the farm’s fields. “Here this afternoon we celebrate the addition of the equivalent of a new state to the union,” he told the gathered crowd, alluding to the fact that the Columbia Basin Project was comparable in size to Connecticut or Rhode Island.

Within two years, however, Dunn, unable to secure loans or otherwise make a living on 80 acres, sold the farm and moved back to the Midwest.

As Paul Pitzer points out in an article for the *Pacific Northwest Quarterly* (January 1991), Dunn was not alone in his failure. “Of 725 units sold by the government from 1952 through 1956, 16 percent changed ownership during that period; another 106 parcels went unsold.”

Increasingly, farmers rented additional land or consolidated land by registering it under the names of other family members. In 1982, the Reclamation Reform Act legalized that consolidation by allowing each project owner 960 acres.

About the same time as the Farm-in-a-Day was being built, Orman Johnson’s father started growing potatoes near Othello, though his Washington roots are much older. His grandfather Reaugh graduated from Washington State Agricultural College in 1906 and wrote his senior paper on irrigation, then helped develop irrigation around Chelan.

His father’s family, originally from Sweden, moved to Washington from California the same year Reaugh graduated from Washington State.

With his brother Gavin and nephew Nick, Johnson ’69 farms 6,000 acres, irrigating from deep wells, just outside of Othello. The big “Go Cougs” potato storage shed east of Othello belongs to the Johnsons.

“We got our first well permit in 1964,” says Johnson. “The assumption was that the Columbia Basin Project would be finished in a few years.”

Under that assumption, that the wells would be temporary until the project was completed, many wells were drilled in the 1970s.

And the water level started dropping, he says.

In the 1980s, the Johnson wells could pump 10,000 gallons a minute at the beginning of the growing season and 8,500 by the end of the season.

“Now,” he says, “they start out at 6,000 gallons a minute and end with some wells not producing in August or September.”

The Johnsons plant late-season crops like onions and potatoes according to how much water they think they will have left in August and September. Over the last decade, they have reduced the amount of onions and potatoes they grow simply because they don’t have enough water left by the end of the season.



Orman Johnson '69 (left) and brother Gavin, who farm near Othello, irrigate from deep wells.

In addition, says Johnson, echoing Bailie, “The deeper you go, the poorer quality the water is.”

The Johnsons’ wells are 2,200 feet deep, and they are pumping from 900 feet.

In spite of the shortage, “We’ve decided not to drill deeper.”

“My dad was on the irrigation board in the ’60s and ’70s,” says Johnson, who himself is currently on the board of the East Columbia Basin Irrigation District. “He thought we were going to have expansion back then.

“The situation is getting scary,” he continues. “We’re losing production every year, which affects all the industries. If a number of these farms went dry, processors would have to find their crops from some other acres.”

Not only are communities such as Connell and Othello concerned about their water supplies, they are also nervous about losing their businesses and livelihood.

Like others in the Basin, Johnson does not see expansion of surface irrigation as optional.

“Look at what we can grow here,” he says. “There is no place in the world that can grow as many tons of potatoes per acre.”

Besides its rich soil, the Basin has a long growing season, far enough north that it has more hours of daylight than, for example,

southern Idaho. Other potato growing areas, Maine and Michigan, have the same hours of sunlight as Washington, but have a shorter growing season because they cannot get into their fields as early.

“So this is the place to have water,” he says.

Among the alternative scenarios offered by the Bureau of Reclamation to offset the decline of the Odessa aquifer was one that is required of such reports: that of no action.

In typical projects, says irrigation district manager Simpson, a “No Action” alternative would simply mean that the situation does not get better, that somebody does not get something they want. But in this case, he argues, it’s pretty easy to document how bad things can get if there is no action.

No action would have a huge cost, he says. If the expansion of surface water irrigation were put off, landowners would go out of business and the local economy would take a huge hit.

“If you go talk to the processing plants, they’re concerned,” he says. “They’re not doing expansions because of the uncertainty of what’s going to happen.”

{ WATER to the PROMISED LAND }

Regarding the bureau's proposal, Simpson says, "Maybe I drank from the goblet too long, but it just seems common sense to me."

Agricultural revenues in the Columbia Basin, largely made possible by irrigation, totaled \$1.44 billion in 2008, according to the Columbia Basin Development League. Even so, critics have argued that the balance sheet simply doesn't balance. Revenues will never match expenditures in a project so grand, say some economists, who narrow the difference to a benefit/cost ratio.

Critics of expansion note two main problems. One is whether the benefits of the projects will outweigh the costs. The other is the matter of who pays.

Jonathan Yoder, WSU professor of economics, has reviewed economic analysis by the Bureau of Reclamation and questions the very basis of their results. "Their *modus operandi* seems to be to start with that cost and figure out ways to get the benefit estimates up."

He also questions how water is valued in the bureau's analyses. In an earlier review, bureau economists valued water at \$21,000 an acre. "The average difference in eastern Washington between irrigated land and dry land value is around \$4,000," says Yoder. "The value of ag land rental rates and market prices reflect the value of water for production, so [the bureau analysis] is overstating the value by about \$17,000."

Norm Whittlesey and Walt Butcher, professors emeriti of agricultural economics, have a long history of questioning the value of expanding the Columbia Basin Project. In general they base their criticism on the fact that in order for a project to be justified, bureau rules dictate that it must show a benefit/cost ratio of at least 1.0.

Although the Columbia Basin Project was officially authorized in 1935, its development was interrupted by World War II. The Grand Coulee Dam provided an opportune source of the massive amounts of electricity necessary for two key parts of the war effort: the aluminum industry, essential for production of airplanes, and Hanford, where plutonium was produced for one of the two bombs dropped on Japan.

So it was not until the late 1940s that the dam's original purpose, irrigation, was revisited. By the mid-1960s, the first half of the project, the funded half, was essentially finished.

Toward the late 1970s, Washington's powerful senators, Henry "Scoop" Jackson and Warren Magnuson, "greased the skids" for federal funding for the second half of the project. However, both the Carter and Reagan administrations insisted on the state's contributing to the project, and Carter actually tried to kill the project altogether.

In the early 1980s, the Washington legislature gave Whittlesey a grant to study the benefits and costs, assuming that the results would come out heavily in favor of more irrigation. With no reason himself to think otherwise, Whittlesey designed a study, involving a number of colleagues both at WSU and the University of Idaho.

"By the time we finished," says Whittlesey, "it became apparent that costs, even that the state was asked to contribute, far exceeded the potential benefits."

In 1984, the state senate published a budget to provide state money that would allow the federal money to be spent on expanding the project.

Approval depended only on the passing of the House version.

"To make a long story short," says Whittlesey, "I presented my side of the story to the House budget committee."

Whittlesey finished his testimony about 8:00 that evening and rushed to catch a plane, fully believing that his testimony had been ignored. After all, the house already had the funding written into its budget.

Much to his surprise, however, the chair of the House budget committee called him the next morning to tell him that the House had pulled the funding out of its budget.

The uproar was immediate. The federal government announced it could not fund the project without state participation, and proponents of the project leveled their anger at Whittlesey, to the point of trying to have him fired.

"It wasn't just me," he says. "I always made sure we had peer review... Fortunately, I had tenure."

"Most of what I did around here," he insists, "was favorable to agriculture."

Indeed, Whittlesey, who retired in 1996, enjoyed a long productive career in agricultural economics, with many accolades.

It just happened that his concentration was water, a most troublesome subject indeed.

Whittlesey's critique of the current proposal is no less withering than his testimony in 1984. But this time, it's been effectively ignored. Which has him exasperated.

"They're not going to get federal money," he says, "the state doesn't really have the money and shouldn't be funding it, and the farmers can't afford it."

Regarding Whittlesey's first point, federal funding would require a GAO benefit/cost analysis that would figure in lost hydropower involved in pumping the water to Banks Lake.

Lost hydropower will, says Whittlesey, amount to \$300 worth of energy cost per year per acre.

"That's more than the net revenue coming off land," he says. "That's another tax on you and me through utility rates. Nobody talks about that."

The question of who would actually pay for the Columbia Basin Project was a problem from the beginning, argues Pitzer in *Grand Coulee: Harnessing a Dream*.

"Without the link to power and its direct subsidy," he wrote in 1994, "plus additional subsidies from the government, such as its assumption of interest charges, the project could not exist."

In short, whereas the Bureau of Reclamation figures the benefit/cost ratio at just over 1.0, Whittlesey and Butcher, once they corrected what they perceived as erroneous figures, estimate the ratio at 0.1.

{ WATER *to the* PROMISED LAND }



Supporters of the project's expansion, however, insist that benefits far outweigh the costs, because the costs have been overstated.

"The Bureau puts in things way too high," argues Orman Johnson, "which is why it is difficult to get the benefit/cost ratio."

As an example, he points to the Weber Siphon project a couple of years ago. A siphon is simply a pipe that will enable a canal to cross a lower level of land without diverting from as straight a course as possible. Although expensive, they are much less so than building a canal according to the landscape.

The Bureau's estimate for building the siphon under Interstate 90 as \$57 million, says Johnson. The bid was actually \$22 million, and the cost ended up in the low thirties.

Farmers will also have the option of taking the new surface water or continuing to pump, he says. Not including all lands on the pipeline makes the ratio higher.

Simpson agrees that the costs have been overstated. Also, he strongly disagrees with Whittlesey and Butcher's inclusion of lost power generation.

"How do you figure lost power generation when they [Bonneville Power Administration] don't have a right to it?" he asks.

"I think this is a fairly balanced approach."

"The economics of the Columbia Basin Project involve an intricate mix of hydroelectric power, irrigation, recreation, wildlife, navigation, conservation, agricultural surpluses, and Native American rights," wrote Pitzer in 1994. "Furthermore, these aspects of the project do not exist in a vacuum." Indeed, these interactions and needs have become even more complex over the last 20 years and will only increase in complexity with growing power needs, agricultural needs, and so forth. Add to this the approaching

reassessment of the Columbia River Treaty between the United States and Canada, which will surely lead to changing flows and power needs. And then there is climate change and the possible effects on river flow and agriculture and many other factors.

The Water Research Center at WSU produced a report in conjunction with the Washington Department of Ecology in 2011 that assesses projected water needs in the coming decades, including effects on agriculture. One of the most interesting projections, based on computer modeling, is that the Columbia Basin will become a little wetter. As a result, director Michael Barber argues that the return of some areas, particularly in the Odessa Subarea, to dryland wheat will be far more cost-effective than the \$11,800 an acre price tag attached to Alternative 4A.

On the other hand, says Barber, even if we accept the high cost of taking water to the Odessa Subarea, he worries the approach is self-perpetuating, that fluctuations in Banks Lake will lead to outcries from recreational users, leading to a proposal to build another reservoir, with a price tag in the billions. Indeed, that reservoir has already appeared in alternative proposals, with no suggestion of how it might be paid for.

John Sirois, chair of the Colville Business Council in Nespelem, 20 miles north of Grand Coulee Dam, condenses tribal concerns over the project's expansion to possible fluctuations on Lake Roosevelt and effects on cultural resources, the effect of changing flows on the tribe's new salmon facility at Chief Joseph Dam, and the general effect on what he calls the Columbia's "integrity." Besides, he says with a wry smile, wouldn't it be nice if we got some irrigation up here?

The extent of the controversy over the project's expansion and the accompanying complexities exemplify issues regarding the future of water use and availability in Washington and throughout the West and raise many questions: What is the best use of this extraordinary resource? What is the greater good? How shall public expenditure be allocated? And *who*, exactly, pays? ⊗



Opposite page, left to right: Jonathan Yoder (photo by Shelly Hanks). Walt Butcher and Norm Whittlesey get a drink at the Pine Street Plaza fountain in Pullman. *Historical photos, top middle to right:* The 350-foot fall over the Grand Coulee Dam spillway. A farmer outside Pasco brings a portion of the Columbia River to his crops. *Additional photos, this page:* Irrigated fields near the Weber Siphon outlet east of Moses Lake.



 Additional photos for “Water to the Promised Land” by Zach Mazur can be found at wsm.wsu.edu/gallery.

More information on the Columbia Basin Project:

 Read more about the Columbia Basin Project’s past and present at wsm.wsu.edu/extra/Columbia-Basin-Project.

 View an interactive map of the project at wsm.wsu.edu/extra/Columbia-Basin-map.

 View the entire *Digital Initiatives* collection of historical photos: lib.uidaho.edu/digital/crbp.

Last August, before starting classes, before even really getting to explore campus, the 4,000-some members of the freshman class were required to take an hour-long clinic designed to improve their behaviors.

THE BOOZE, SEX, AND REALITY CHECKS program came during the Week of Welcome. Amidst the moving in, concerts, picnics, and open houses, WSU's new students ducked into cool classrooms for versions of a seminar on drinking and sex.

"We don't normally have firsthand interaction with students," says Leah Hyman, a human development graduate student who broke form to assist a WSU drug and alcohol counselor in the workshops. In a field rife with papers and surveys, Hyman was intrigued to work with the subjects directly. At the same time, it was frustrating, says Hyman. Some students made it clear that they didn't drink at all, and didn't plan to. Others announced they were already experienced and educated about alcohol. Many said the mandatory meeting was a waste of time.

Freshman Ashley Guarino had learned about alcohol and its effects at high school. The grounding was reinforced by her dad, who works for a beer distributor. He gave her a detailed lesson about the difference between shots and beer. "I knew pretty much everything they were saying," she says of the workshop.

"They were trying to treat us like freshmen," she says, then pauses. "But I guess that's exactly what we are."

A few students said they found it useful. "Especially women," says Hyman. Judging by their responses, "We shocked them." She showed them that all drinks are not created equal, that there are different sizes of shot glass and how minute a single shot looked in a plastic party cup. "Where they were thinking they were only having one drink, they were actually drinking two," she says.

National statistics show that academic failure, sexual assault, and risky sexual behavior are linked to excessive drinking. According to the National Institutes of Health, about four out of five college students drink alcohol and about half of those who drink also binge drink. Each year, more than 1,800 college students between 18 and 24 die from alcohol-related unintentional injuries.

"You want to say to these students, don't do it. Don't drink. You want to scare them," says Hyman. "But we know that's not going to work."

Instead the trainers followed an intervention designed by Patricia Maarhuis, coordinator for WSU's Alcohol and Drug Counseling, Assessment, and Prevention Services. Using proven science-based practices, she created a clinic to help students limit their drinking and to stay safe when they do drink.

BOOZE, SEX, *and* REALITY CHECK

by Hannelore Sudermann :: photos by Taylor Michelle Rose White '14





The Booze, Sex, and Reality Checks program prompts the freshmen to think about why they drink and how it makes them feel. While first reminding them that underage drinking is illegal, the counselors urge the students to drink responsibly, to opt for beer in bottles, and to avoid mixed drinks.

“If it’s fruity, you have no sense of how much alcohol you’re getting,” says Hyman. “That was a knockout statement. That’s when I saw their eyes light up.”

It may have been useful to some, says Guarino. She liked the wallet-sized BAC (Blood Alcohol Concentration) chart that shows how a number of drinks over a certain amount of time affect people at different weights. “They approached it in an adult manner, saying there are ways to make sure you don’t get harmed and keep things in moderation,” she says.

In spite of this mandatory class, last fall a number of WSU students suffered dangerous consequences from binge drinking. Several had to be taken to Pullman’s emergency room. In October freshman Kenneth Hummel died from acute alcohol poisoning, a heartbreaking event for his friends and classmates.

“It was so disheartening,” says Gitanjali Shrestha, another graduate student who helped with the workshops. “We talked about how we could have prevented it. We wondered what else we could have done.”

It also left many connected with WSU—faculty, families, and alumni—wondering: Why does alcohol consumption seem to be such a problem now? And it triggered a campus-wide review of student drinking and other behaviors.

But maybe there’s evidence that the workshop did in some ways work. Shrestha, Hyman, and WSU’s behavioral scientists are evaluating whether it caused the majority of the freshmen to think about consequences to over-indulging, to be more aware of what they’re drinking, and to consider how they feel when they have had too much. They’re hoping through their research, application, and assessment to enhance this intervention, and take other steps to alter the drinking culture that affects not only WSU, but college campuses around the country.

“Our objective is not to eliminate drinking,” says Laura Griner Hill, professor in the Department of Human Development and associate director of health promotion and research for WSU. “It’s to minimize the harm that comes from it.”

Preventing bad things before they happen

Using tools like BAC cards, plastic cups, motivational questions, and health care surveys, the University is addressing the problems with student drinking.

The theory behind it is “prevention science,” a new field involving many disciplines and devoted to the scientific study of theory, research, and practice related to the prevention of problems. In short—it’s the science of preventing bad things before they happen. Antisocial behavior, drug and alcohol abuse, marital discord, and academic failure are just a few of the issues prevention science has addressed so far.

Last fall WSU introduced a doctoral degree in prevention science with the support of faculty from nursing, human development, kinesiology, health and wellness, education, and communication. “We are the first prevention science PhD in the world,” says Hill. In other schools it is often tied into another discipline like public health or education. The first WSU graduates, among them Hill’s students, are expected to complete their degrees in 2015.



LAURA GRINER HILL BY SHELLY HANKS

Hill herself started graduate school with a plan to become a clinical psychologist, but she found herself drawn to this new field. “My heart was not in trying to fix a problem that existed, but in trying to prevent a problem before it occurs,” she says.

A hundred and fifty years ago our biggest health concerns were cholera and typhus, says Hill. “Now most of what kills us is tied to behaviors we can change.” Smoking, hygiene, diet, and physical activity are some of the most basic concerns. With prevention science, you can focus on the factors that lead to the development of unwanted behaviors and then by changing those factors, change the outcomes.

For example, in colleges where alcohol is not allowed to be sold on campus, drinking goes down, says Hill. Where there are higher taxes on alcohol, drinking goes down. Where there are more classes on Friday mornings, drinking goes down.

Then there are protective factors which, when introduced, can prepare someone to make a better choice when a challenge arises. Individual students often perceive that their peers are drinking more than they actually are and then drink more themselves, says Hill. By revealing the true numbers (which are almost always lower), the student may want to conform to the actual majority and as a result have healthier behaviors. They may decide to avoid drinking games, and might pace their consumption to one or fewer drinks per hour, she says.

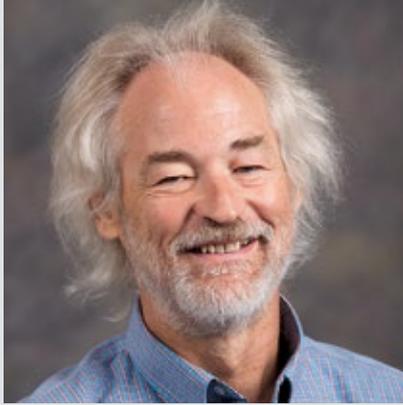
The WSU prevention science program involves generating research-based understanding of an issue and putting that knowledge into practice in real programs for families, children, communities, and, lately, WSU undergraduates. “We’re using evidence-based approaches,” implemented by a number of different units on campus, says Hill.

With students the research focuses include drugs and alcohol, risky sexual behavior, health, and academics. “So my role on campus, in part, is to apply a public health approach using risk and protective factors,” says Hill.

In most universities the areas connected to students’ health and well-being are fragmented into separate services. “Here we have buy-in from all different units on campus to pool our data and pool our resources to improve health and well-being,” says Hill. The Booze, Sex, and Reality Checks program is administered by the drug and alcohol counselors, but it is augmented with other resources by University Recreation, student life, athletics, Health and Wellness Services, the Dean of Students, and the prevention science program itself.

Often the instinct is to lecture the students about alcohol and its impact and offer cautionary tales. But that doesn’t work, says Hill. Instead, the key is to motivate the students to think more about their behaviors and





BRUCE WRIGHT BY ROBERT HUBNER

make their own decisions. Beneath it all is “self-determination theory,” the idea that humans are motivated by three basic psychological needs: competence, relatedness, and autonomy. Consider the freshmen who are experiencing their first independence from their parents. They feel in control of their own decisions (competence), free from their parents’ influence (autonomy), and they connect with a group of friends (relatedness).

While it’s probably not kosher to say it, an example of relatedness is that partying with peers can enhance a student’s feelings of affiliation and strengthen his or her connection to campus, says Hill. That in turn can help make the student more likely to stay and graduate.

In many of their projects, Hill’s students make the Pullman campus their scientific locus. The population they’re working with are the very people they walk past on Glenn Terrell Mall, stand in line with at the Todd Hall Atrium café, and even sometimes teach in their human development classes.

A few of the graduate students are exploring ways to improve the student experience, to enhance the undergraduates’ feelings of connectedness beyond partying. One is looking at how students may enrich their ties to WSU through Multicultural Student Services. Another is addressing student retention by helping freshmen make friends and connect with faculty and staff through supper clubs. Paula Adams, one of the first students to pursue a doctorate in prevention science, has a \$300,000 Department of Justice grant to implement programming to reduce violence against women on campus. Gitanjali Shrestha, who is also working on a prevention science doctorate, is evaluating substance abuse prevention programs. And for her master’s degree, Leah Hyman is working on student retention.

“Now we have this academic and scholarly link where we can apply practices and study the results,” says Hill.

The age of reason

After the alcohol-related incidents last fall, WSU President Elson S. Floyd formed a task force to look at what the University was doing to address student use of drugs and alcohol and see what new strategies could be pursued. He put Bruce Wright, psychologist and executive director of Health and Wellness Services, in charge of the group, which had representatives from around Pullman. They looked at student conduct, hospital data, and a National College Health Assessment survey where students reported on their own behaviors.

“We don’t really seem to be having more students in terms of gross numbers drinking,” says Wright, noting that WSU’s numbers aren’t markedly different than other campuses’ around the country. Those who binge drink seem to be the same percentage as in past years and as on other campuses. But what seems to be different is the behaviors of that small segment of higher risk drinkers. Though their number was about the same as in past years, their risky behavior seems to be growing riskier. “We were seeing extreme blood alcohol levels of 0.3, 0.4, and in one case 0.5,” says Wright.

These students may come to WSU with an underlying level of alcohol tolerance, which then allows them to consume more than their classmates, drinking to the point of poisoning, coma, or even death, he says. “We’re trying to sort out why this is happening.”

Contributing factors include prefunctioning before events and online drinking games, he says. And there’s a shift away from beer and wine to hard liquor and to drinking more in a shorter period of time.

Then there are energy drinks, which can mask some of the symptoms of alcohol intoxication, says Wright. Where normally a drinker would pass out, the energy drink allows him or her to stay awake and drink more. This too, seems to be a problem for the high risk drinkers. “There has been plenty of focus on documenting the problems,” he says. “But not enough on best practices” for addressing or even avoiding the problems. “We can’t just focus on risk factors, we also need to increase protective factors.”

Understanding how to help young people develop healthy behaviors has evolved in the past 10 to 15 years. It’s not just one factor, but a variety, including age, that should be considered. “One thing we know about the brain is that it doesn’t mature completely until about the age of 25,” says Wright. The prefrontal regions of the brain, the parts that anticipate consequences for behaviors, planning ahead, and controlling impulses, are the last to fully develop.

“They’re not wired well to control their impulses,” says Hill of the students. In some instances, particularly under the influence of alcohol, “they don’t have the inhibitions that help us not make that bad choice.” But there are ways to prompt the young person to pursue more healthy behaviors.

The route to Wright’s office runs through the front lobby of the Health and Wellness clinic where, one day last spring, five or six students wait to see a doctor or nurse. As each student steps to the counter to check in, he or she is asked a few questions including “Do you use alcohol?” If the answer is yes, then the student is asked “In an evening, do you exceed a certain number of drinks?” If a woman says four drinks or a man says five, an audit is triggered. In the examination room, that student is briefly left alone with a computer questionnaire with ten questions. “By leaving them alone to fill it out, we feel we get a more honest response,” says Wright.

Next the health care provider comes in and asks some brief, open-ended questions. Prevention scientists call this the brief motivational interview. When Wright is seeing a student, he’ll review the questionnaire and note the answers. “Then I say, ‘Can we talk about that?’” If the student responded that he has drunk to the point of passing out, says Wright, “I ask, ‘OK, what do you think about that?’ Sometimes I open with ‘OK, what do you like about drinking?’ And then I follow up with ‘Do you see any downsides to that?’ Then ‘Do other people in your environment see any?’”



“It’s mainly a pause and reflect,” he says of the interview. It doesn’t seem like much. But for students who may have been ambivalent about their drinking behavior, just those questions can trigger healthier behaviors, he says.

The way the questions are phrased reinforces the student’s autonomy, allowing them to decide for themselves what to do.

Best of all, based on the results from other practices and studies, “We know it works,” says Hill of the brief interview. “If every student is getting that when they come in for their flu shot, then we’ve changed the culture. We’ve managed to stimulate the intrinsic motivation to more beneficial behavior.”

In place of parents

All these efforts should happen early in a student’s college career. For many freshmen that fall semester is the first time they’ve ever gone 48 hours without parental supervision. “A huge amount of what we ask students to do is suddenly become responsible,” says Melynda Huskey, dean of students. Many come from highly structured, highly supportive home environments and they aren’t offered much autonomy to make decisions for themselves. “They get here and we flip a switch,” she says. “They are suddenly independent.”

Sure, maybe they had alcohol when they were in high school, but they still had to go home, and still had to face mom and dad the next day. And this generation of parents is much more hands-on, says Huskey. “That can work against us. When you’ve had people make decisions for you, [when you’re away from them] you’re apt to experiment with just how far you can go.”

Yes, college is where you should experiment and explore. “But our goal is helping students stay focused on ‘What do I really want out of life?’” she says. “College is a place where that can happen.”

There’s another side to her office. When students develop problems, when they’re failing classes, have issues of conduct, are arrested, or injured, they go see the dean. “And sadly, when a student dies, our office handles that, too,” says Huskey.

Those in the prevention science program are investigating and actively trying to reduce those negative experiences. Hill and associate professor Matt Bumpus, who co-direct the Project Healthy Campus research lab, are seeking ways to a healthier campus by looking at factors such as the relationship of physical activity to student retention, the roles of peers and mentors in the freshman experience, and the importance of communication between young adult children and parents.

There’s a beauty to how things are fitting together, says Huskey. With their help, research and science are being put to practical use in student affairs right here on campus. “We’re doing what research-based institutions are doing in all the other fields,” says Huskey. “We’re working on evidence-based protocols and evaluating their success.”

Last spring, while evaluating Booze, Sex, and Reality Checks, Hill’s students reviewed a National College Health Assessment survey of students’ health, safety, drug use, alcohol use, sexual health, and issues with academic performance. The survey asked the students whether they had five or more drinks at a sitting in the last two weeks, and how

many drinks they had in how many hours the last time they socialized. After the unfortunate events of fall semester, Hill and her team were expecting to see that the drinking reported was the same or higher than the previous year.

Instead, the results surprised them all. They thought they’d failed to alter behaviors, but “the data told us different,” says Shrestha. The

If the student responded that he has drunk to the point of passing out, says Wright, “I ask, ‘OK, what do you think about that?’”

students reported drinking less than those in previous years and the amount they thought their peers were drinking was down too. Thirty-four percent (up from 28 percent the previous year) reported that they do not drink at all. And significantly fewer reported having suffered harm or danger related to their use of alcohol: fewer blackouts, fewer injuries, and fewer occasions of unprotected sex.

Even more remarkable was the differences between this year’s Greek system residents and those in previous years, says Hill. This year’s freshmen in fraternities and sororities were significantly less likely to binge drink or experience harm from drinking, they drank less frequently, and they were more likely to avoid drinking games.

Hill re-ran the data, then changed the variables and ran it again. Still it came out showing a significant change in behaviors from the freshmen surveyed a year earlier. Finally, here were data that the Booze, Sex, and Reality Checks program worked.

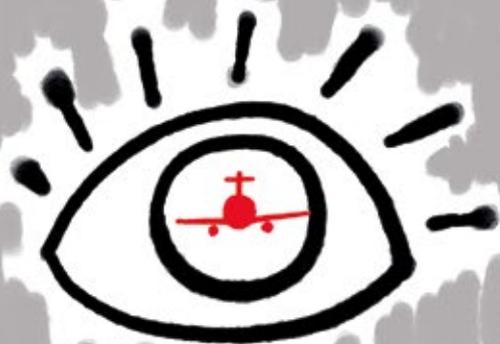
As this issue of the magazine reaches mailboxes around Washington, a new group of freshmen are about to step into their own mandatory Booze, Sex, and Reality Checks. Hill and her team are also working on parent interventions. With researchers at the University of Washington, they’re developing a program to start this fall to guide parents to talk with their students about drugs and alcohol before they even get to Pullman, encouraging the parents to explore scenarios and talk about how the student plans to respond. So far, it all seems to be working.

“We’ve had multiple years of data for comparison,” says Hill. Over the past few years, “It has been very, very consistent with regards to drinking and harm. Then this year’s data was completely different.” For now, Hill and her team are cautiously optimistic. “We’ll be much more confident about that after we do it again this summer and measure it again next year.” ⊗

Taylor Michelle Rose White '14 is a senior studying art history and apparel and textile design.



Watch a video of the Booze, Sex, and Reality
Checks program at wsm.wsu.edu/extra/BSRC.



{ *If You Don't* SNOOZE, YOU LOSE }

by Eric Sorensen :: illustration David Wheeler

ABOUT AN HOUR before sunrise on August 27, 2006, Comair Flight 5191 was approaching 120 miles per hour on its takeoff from the Blue Grass Airport in Lexington, Kentucky, when co-pilot James Polehinke noticed something strange about the runway.

"That is weird," he said in a conversation captured by the flight recorder. "No lights."

"Yeah," said Capt. Jeffrey Clay.

Sixteen seconds later, their 50-seat commuter jet ran out of runway. Polehinke just managed to get airborne but not enough. The plane hit an earthen berm, clipped a fence and a clump of trees, and went down in a ball of flames.

The pilots had gone down the wrong runway, a secondary, general-aviation strip 244 feet too short for the nearly full jet's liftoff. Forty-nine of the 50 souls perished. Only Polehinke survived.

Eleven months later, the National Transportation Safety Board ruled the crash was caused by pilot error. By a 3-2 vote, the board declined to blame the flight controller, who was busy with administrative work as the plane taxied and took off.

Greg Belenky, a research professor and director of WSU Spokane's Sleep and Performance Research Center, has yet another suspect: fatigue.

In the previous 24 hours, the flight controller had only two hours of what he called "not real good" sleep. He was at the tail end of his fifth shift in four days.

Belenky didn't have sleep records for the pilots, but they acted tired. They started the day boarding and powering up the wrong airplane and did an incomplete pre-flight briefing. They overlooked various clues that they were going the wrong way. Rested people tend to see a problem and look for a way around it; tired people tend to blow past the problem and persevere, redialing the wrong number, pushing the wrong button harder, or, perhaps, continuing on the wrong runway.

Using a model that weighs one's performance against sleep cycles and circadian rhythms, Belenky estimated the air traffic controller was operating at 71 percent of his maximum effectiveness.

If he had had more sleep and been less fatigued, Belenky testified to a U.S. Senate subcommittee in 2011, "he might have detected the error in runway choice prior to the attempted takeoff and in time to avert the disaster."

Few of us have 50 lives at stake as the claws of fatigue tear at our minds and bodies. But it's safe to say a lack of sleep is making us less than our full selves.

On average, Americans get six and a half hours of sleep a night, significantly less than the recommended seven to nine. Between 50 and 70 million Americans "chronically suffer from a disorder of sleep and wakefulness," according to the Institute of Medicine of the National Academies. The institute estimates the lost productivity and mishaps of fatigue are a \$150 billion-a-year drain on the economy.

The Centers for Disease Control and Prevention calls our lack of sleep "a public health epidemic." Well over one-third of people surveyed report falling asleep at work at least once in the past month. Nearly one in twenty say they've nodded off while driving just as often.

Sleeping at the wheel alone accounts for an estimated 1,550 fatalities a year and 40,000 injuries. But sleep loss and fatigue exact other costs as well: increased hypertension, diabetes, obesity, depression, heart attack, and stroke, as well as the more immediate woes of broken concentration, weaker memories, and greater difficulties keeping up with hobbies, financial affairs, and work.

"Even mild sleep loss affects conscious experience and working memory," says Belenky, who spent 29 years as a psychiatrist and sleep expert at the Walter Reed Army Institute of Research before starting the WSU sleep center in 2004.

When he arrived, the center was anchored by a \$4.5 million appropriation secured by then-Congressman George Nethercutt Jr. '67. In the last five years, the center has raised another \$32 million. It now has nearly a dozen principal investigators and associated laboratories.

It is the rare soup-to-nuts operation, ranging from basic, molecular-level science to real-world simulations and policy. In one lab, James Krueger can see sleepiness triggered by the release of ATP, or adenosine triphosphate, a finding that *Discover* magazine listed among its "top 100



stories of 2010.” Across East Spokane Falls Boulevard, Hans Van Dongen can study the brain waves of sleeping and awake lab subjects, or juggle billions of data points pulled off truck drivers and rigs as they go through a two-week field study.

In the Deadly Force Judgment and Decision Making Simulator, Bryan Vila, a former Los Angeles County sheriff’s deputy, can watch a tired cop weigh a split-second decision Vila knows only too well: to shoot a suspect, risking a faulty rush to judgment, or wait for just a little more information, risking your own demise and the lives of bystanders.

The center is guided by a principle that Belenky discovered in his earliest days of psychiatry. If you can help people with their sleep, you will clear the way for them to make good judgments, to better help themselves.

“Lifting the fog of fatigue,’ we call it,” he says. “The art and science of antifogmatics.”

I’M SURROUNDED BY PEOPLE in white coats and blue nitrile gloves. There’s Mike Winser, a research assistant, four Spokane-area college students, and Amy Bender. She’s a registered polysomnographic technologist, trained and certified in attaching wires to sleep subjects and recording and interpreting changes in their physiology as they sleep.

Over the next hour and 39 minutes, the team takes turns measuring, marking, and attaching 13 electrodes to my head and collar bone. When Winser at last leads me into the dimly lit, apartment-like suite of the center’s Human Sleep and Cognition Laboratory, I sport a ponytail of fine, colored wires that meet in a purse-like junction box. Winser shows me

how to snap the box to a printer cable, at which point the lab’s machinery can record some of the fundamental workings of my sleeping mind and body. Then it’s lights out.

For decades, researchers have for the most part been in the dark about the inner workings of sleep. Van Dongen, the head of the sleep lab, compares the science of sleep to astrophysics, his original field of study. Just as we can’t visit deep space to look at a massive, dying star, we can’t look directly at a sleeping human brain.

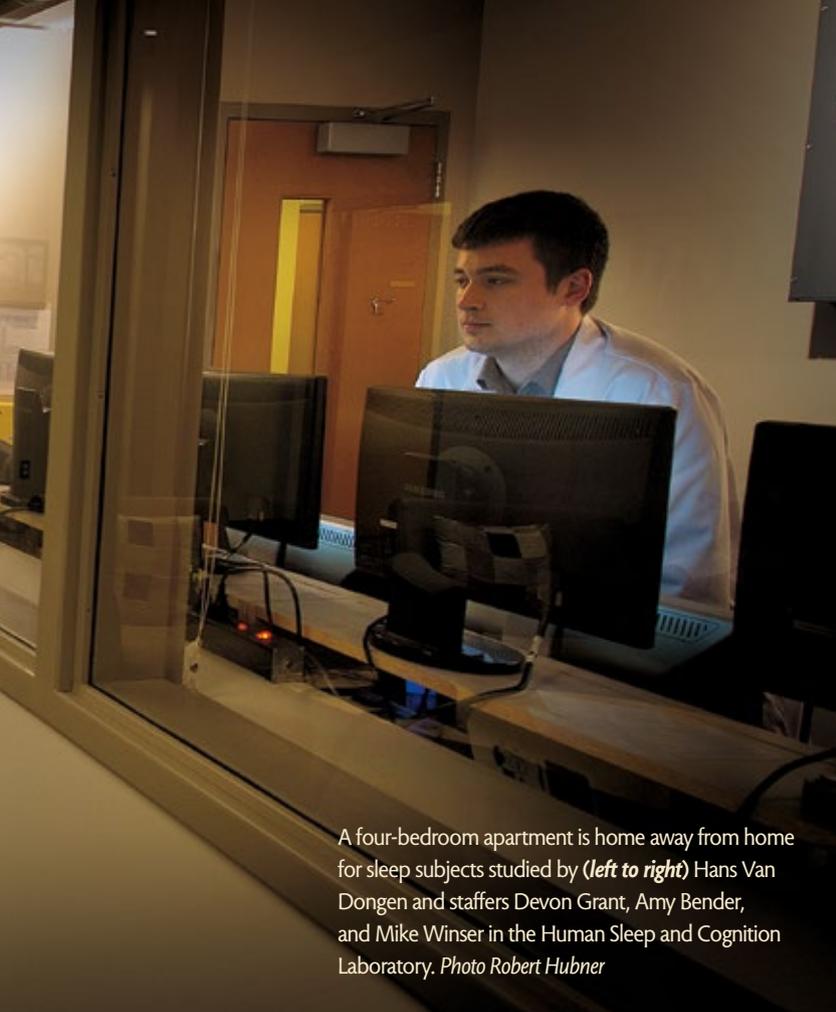
“We have really advanced technologies,” he says one day in his office, “but they’re all indirect measurements. There’s nothing that you can just directly observe.”

In the ’90s, as a doctoral student in a Dutch physiology lab, Van Dongen sought to figure out what makes an early-rising morning person versus a late-rising night owl. At the time, they were considered personality traits with moral implications, the morning people being industrious and the evening people being lazy.

Van Dongen placed subjects in a “constant routine” environment in which they were kept semi-recumbent and awake and fed small meals every hour. He then monitored changes in their body temperature.

Over 24 hours, one’s temperature can swing three degrees Fahrenheit, peaking in the late afternoon and hitting a trough in the early morning hours. It’s the circadian cycle, or biological clock, and it turned out that morning and evening people, in effect, live two or three time zones apart.

“That changes the whole debate about whether people should get up early or stay up late,” Van Dongen says. “If it’s a biological trait and you’re an evening type, you don’t want to have these people get up early to be more productive, because they’re not going to be more productive.”



A four-bedroom apartment is home away from home for sleep subjects studied by (left to right) Hans Van Dongen and staffers Devon Grant, Amy Bender, and Mike Winsler in the Human Sleep and Cognition Laboratory. *Photo Robert Hubner*

A traveler's guide to the land of ZZZs

Greg Belenky, director of WSU Spokane's Sleep and Performance Research Center, has no trouble sleeping.

"I usually take a book to bed and sort of hold it in my hand and say, 'I'm too tired' and put it aside," he says. "I don't even crack it."

But he knows well the struggle of those who can't sleep and offers the following bits of advice:

- If you don't exercise regularly, don't do it right before bedtime. But if you are used to it, exercising before bed can raise your core body temperature, prompting sleep. A more leisurely alternative: a warm bath.
- Avoid caffeine after noon, especially if you are older.
- Avoid a big meal before bed.
- Alcohol may help you get to sleep, but its sleep-inducing effects wear off, leading to a rebound in the form of disturbed sleep.
- Many insomniacs lie in bed ruminating on why they can't sleep. In the process, the bed can become a trigger for insomnia. Get out of bed and do something else until you're tired. Some sleep clinics also offer cognitive behavioral therapy that can decouple the association between being in bed and being unable to sleep.
- Be consistent about when you go to bed and get up to maintain the light exposure of your circadian rhythms.
- Avoid television and electronic devices, whose light can signal the brain that it's sunset, shifting circadian rhythms and making sleep more difficult.
- Have a calming ritual before bed, even if it means holding a book and saying you're too tired to read it.

While at the University of Pennsylvania between 1998 and 2005, Van Dongen restricted the sleep of several dozen young adults to four, six, and eight hours a day for two weeks. Another group didn't sleep for three days.

Those who had six hours a night or less had cognitive problems as severe as those up two nights. It was as if sleep was a daily medicine with very specific dosing requirements to avoid cumulative cognitive shortcomings.

"So the less sleep that you got," says Van Dongen, "the worse it got, but also the more days in a row you got less sleep, the worse it got."

Moreover, subjects short on sleep were largely unaware of their mental shortcomings, suggesting that chronically sleep-deprived people might think they're operating on all cylinders when they're not. Their baseline of acceptable performance has shifted, says Van Dongen.

"You're performing worse overall, but it's stable," he says. "That becomes the new norm. It's similar to people who are in chronic pain. They don't notice it anymore and it takes a pain reliever for them to recognize what it was like to be normal."

Around the same time, work by Belenky and colleagues at the Walter Reed Army Institute of Research found that shortening a good night's sleep by just 40 minutes could affect one's performance, and as Van Dongen saw, the less sleep one got, the worse things get. It also takes more than a weekend of sleeping in to recover.

"Even after three days of recovery sleep," says Belenky, "with a normal eight hours in bed, people were still not back up to their baseline level."

One of the key ways to measure a sleepy subject's cognitive decline is the Psychomotor Vigilance Test. In the sleep lab, it involves little more than pushing a button as fast as I can when a stopwatch readout appears at random intervals on a computer screen. It looks super easy. Devon Grant, the center's senior study coordinator, knows better.

"You won't want to do it for more than 10 minutes," she says, smiling mysteriously.

As the numbers roll and I hit buttons, the screen reports my speed, which is typically less than three-tenths of a second. I manage to hold this through the exercise, but Grant proves to be right. Near the end of the 10-minute session, it grows exceedingly, almost painfully boring. That's the "vigilance" part of the exercise being tested. It takes a lot of effort, but I hang on and keep my times low.

That's typical for well-rested subjects, says Grant.

"All bets are off when they're sleep deprived," she adds.

My eight-hour night in the lab is uneventful save for the quarter-million data points streaming from my head into the lab's computers every second. I sleep self-consciously, and lie awake for what seems like 45 minutes after an early-morning bathroom break.

The following week, Bender says it took me 12 minutes to get to sleep, that I awoke 34 minutes later, and after being awake eight minutes, I had a long, deep short-wave sleep, the deepest, most impenetrable phase. My early-morning sleepless spell lasted nearly an hour. I then slept on and off until Samantha Riedy, another research assistant, woke me around 6:20.

I slept a total of 6.5 hours: 11 percent in Stage 1; 65 percent in Stage 2; 9 percent in the slow-wave stage, or Stage 3; and 15 percent in the rapid-eye-movement, or REM, phase.



What's at stake when a cop is tired? Watch a video of research in WSU Spokane's deadly force simulator at wsm.wsu.edu/extra/fatigue-police.



Read about Naomi James, who contended with overwhelming sleepiness in her bid to be the first woman to single-handedly sail around the world, at wsm.wsu.edu/extra/Naomi-James.



“It’s really unclear what the significance of the stages mean,” says Bender. For overall recuperation, she adds, “a lot of people think it’s the total amount of sleep that matters.”

Indeed, as the following day unfolded in a drive to Seattle, I encountered one of the chief byproducts of sleep deprivation. For all the ten-dollar words experts have at their disposal, they call it “sleepiness.” And after a light lunch on Capitol Hill, I sought out the elegantly named antidote to sleepiness: a nap.

IT’S THE EARLY ’70s and Bryan Vila, on patrol for the Los Angeles sheriff’s department, is approached one morning by a newspaper carrier in South Central LA.

“There’s a crazy man around the street with a gun on the porch,” he says. “Third house.”

Vila unlocks his shotgun, radios a dispatcher to say where he’s going, and pulls around the corner.

He finds a large man in a bathrobe. He is holding a very large handgun. Vila figures it’s a Ruger .44 Magnum single-action revolver, “the seven- or eight-inch barrel version.” As handguns go, it’s a cannon.

“Drop it,” Vila says.

The man turns towards the officers, bringing the gun almost directly in line with them.

Vila repeats the command, with added emphasis.

“Put ... the ... gun ... down. Now!”

The man really doesn’t want to put the gun down. He seems alert but perplexed, not angry or delusional, but he says nothing and does not comply.

Vila carefully aims at him. He’s on the edge of shooting and well in the zone of being justified, but something doesn’t add up.

“I’m going to kill you,” he says, “if you don’t put that gun down.”

At last the man puts the gun down.

For years, Vila second-guesses himself. If the man decided to shoot, he almost surely would have gotten a round off before Vila could have processed and acted on a decision to fire in self-defense.

It turns out the man was a postal worker who was coming off a night shift and lying in bed when he heard two men breaking into his house. Threatening them with his gun, he held them against the wall of his entry way and shouted for a neighbor to call the police.

Vila did not know this. What’s worse, in the tunnel vision of a deadly confrontation, he did not hear a voice to the side saying, “Don’t shoot him. It’s his house. I called you.”

Vila got lucky. Now, armed with a doctorate and years of research, he wonders how the tunnel vision and adrenaline of that moment would have mixed with a serious case of fatigue. Tired people can feel threatened more readily. They’re less open to new information or solutions. They have trouble making sense of complicated sensory information, and may be more likely to act, not wait.

With state-of-the-art driving and shooting simulators, Vila is trying to get as good a view as possible of fatigue in the field.

“We don’t know anything about arousal and fatigue really to speak of,” he says, “especially in an operational environment, especially in people who are used to dealing with things when they’re tired.”

Vila often voices the untested assumption that one never falls asleep in combat. But even if that’s true, there’s a lot to suggest much of the brain can be notably absent.

While at Walter Reed, Belenky helped with a study in which researchers did brain scans of sleep-deprived people while they performed a series of rapid-fire addition and subtraction problems. As the subjects endured 24, 48, and 72 sleepless hours, the researchers saw decreasing levels of activity in the thalamus, which controls attention and alertness, and the prefrontal cortex and the parietal association areas, which combine to make our working memory.

“This is the basis of anticipation, planning, doing things,” Belenky says. “It’s the core of the perception-action cycle and it is *slammed* by sleep loss.”

THIS TIME, I have the gun.

It is a standard-issue semi-automatic handgun with the firing mechanism modified and the barrel replaced with a laser. If I fire at an image projected on the wall, sensors will detect where I was aiming and when I fired. There will also be a loud bang.

I’m in the Deadly Force Judgment and Decision Making Simulator. I’ve already seen Vila go through one scenario. Steve James—a former British Army officer turned doctoral student in criminal justice—has given me a crash course in acting like a cop in a potentially deadly encounter. Basically, use clear, strong, simple commands, much like you do with a dog.

There are times to use a soft voice, like trying to calm a drunk down, says Vila, “But when you use the command voice, it brings you right into it and you’re focused on what you’re doing.”

This is no county fair shooting gallery. Decades after being a cop, Vila will be so engrossed in a tactical simulation that his heart rate will double. One of the scores of working police officers to go through the simulator had his heart rate triple in the span of one beat.

I’m called to a domestic disturbance call from a distraught person who says their spouse is being abusive. There are weapons in the house.

The room gets loud with the sounds of a man and woman screaming and swearing at each other. I see a man and woman in a narrow kitchen. The man is holding the woman in his outstretched hand.

The moment I say, “This is the police,” the man turns and fires. In less than two seconds, I fire back, hitting him first in the groin—“you probably got the femoral artery,” says Vila—followed by the chest and the head.

What I don’t know is if he shot me first. Were this a full-bore simulation, my assailant’s bullet would have been in the form of a 10-millimeter nylon ball fired from above the screen at half the speed of a paint ball. The actual simulations are also using real Northwest police undergoing driving situations and vigilance tests after a full work week, then again after three days off. Forehead sensors measure their brain activity.

In a chapter for the book *Holding Police Accountable*, Vila notes just how much they lose to long hours, disrupted circadian cycles, and poor sleep. The hand-eye coordination and motor speed of someone awake for only 17 hours is similar to a person with a .05 percent blood-alcohol level. After 24 hours, the equivalent level jumps to .10 percent, above the U.S. standard for drunk driving.

Officer discretion is built into many of their decisions, from arresting people to driving in emergencies to using deadly force, but a lack of sleep can compromise the prefrontal cortex’s capacity to make such decisions.

However, writes Vila: “Officers whose frontal lobes are out of service even though they themselves are on duty are less likely to think about consequences or to be able to analyze a situation correctly and apply complex rules to their behavior. They are also less able to manage the anger and frustration that often accompany confrontations in the field.”

Meanwhile, he says, “Almost no police agencies have comprehensive policies and procedures in place to manage fatigue.”

TWO YEARS AGO, you would have thought an epidemic of narcolepsy was sweeping across the nation’s airport control towers. Air traffic controllers were caught dozing at Seattle’s Boeing Field, at Reagan National Airport, and in Knoxville, Reno, and Miami. The head of the air traffic control system resigned.

Belenky, testifying to a Senate subcommittee chaired by Maria Cantwell, D-Wash., said the problem was a systemic shortcoming of night-shift work, of “trying to work when one should be asleep and trying to sleep when one should be awake.”

He described the Comair 5191 disaster, noted the problem of the fatigued Lexington air traffic controller, and offered a suggestion: “I expect that an effective way to sustain operational performance and well-being in air traffic controllers working the night shift is sanctioned, scheduled on-shift napping.”

It was a suggestion backed by science, including a study of cross-Pacific pilots and the general knowledge that naps count on the daily ledger of sleep needed to recuperate.

The proposal did not fly. The White House reportedly said it failed “the Leno test,” implying that the suggestion was too ripe for ridicule on late-night television. Then-Transportation Secretary Ray LaHood vowed to add an hour to the time between shifts but made no allowance for naps.

“We expect controllers to come to work rested and ready to work and take personal responsibility for safety in the control towers,” he said in a widely quoted statement. “We have zero tolerance for sleeping on the job.”

“Zero understanding,” says Belenky, “is usually the basis for ‘zero tolerance.’”

But WSU sleep researchers are seeing movement in other areas. Van Dongen is in the middle of an extensive study that could more closely align pilot schedules with periods when they’re less likely to be fatigued. An FAA regulation in effect early next year sets pilot hours by factors like how many trips they take in a day but also leaves open the possibility of a new schedule-specific rule if researchers can provide data justifying it.

“That’s the sort of enlightened rule-making that we’ve been hoping for,” says Van Dongen, “and that’s starting to happen now.”

Vila talks of developing a “risk metric” with which policy makers and administrators can weigh the real costs of fatigue-inducing practices like overtime. Paying time and a half is often seen as a good deal because non-payroll costs, like training and equipment, remain stable. But if the sleep lab can calibrate the added cost brought on by fatigue—crashed equipment, lost work hours, property damage, civil liabilities—it will have gone a long way in underscoring the value of a good night’s sleep, and the occasional snooze. ☒



Opposite: Bryan Vila hopes his *Deadly Force Judgment and Decision Making Simulator* can give a clearer view of how tired police react in dangerous situations. *Photo Robert Hubner. Above:* WSU Sleep and Performance Research Center Director Greg Belenky testifies on Capitol Hill at a hearing on air traffic control safety oversight. *Photo Manuel Balce Ceneta/Associated Press*



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» CLASS NOTES

1950s

Carol Severin ('51 Rec.) was recognized by the California Park & Recreation Society for her lifetime of outstanding contributions at the local, state, and national levels for a multitude of recreation and parks organizations over her 63-year recreation and parks career.

1960s

Gary Petersen ('65 Comm.) was inducted into the Edward R. Murrow College of Communication Alumni Hall of Achievement for his work in the field, especially his years with Battelle and the Hanford site in Eastern Washington.

Dick Colf ('66 Civ. Eng.), a retired construction executive, was recognized with the Washington State University Alumni Association Alumni Achievement Award on April 26, 2013.

Steven VanAusdle ('66, '68 MA Ag. Econ.), president of Walla Walla Community College, was one of two recipients out of the nation's 1,200 community colleges to receive the 2013 Aspen Prize for Community College Excellence. Under his leadership, the college repositioned itself for the economic needs of its region: nursing, wineries and hospitality, and alternative energy.

Bill Gaskins ('69 BPh) instructor, mentor, WSU Athletic Hall of Fame inductee, and director of Pullman Regional Hospital Pharmacy, was honored with the establishment of the Bill Gaskins Pharmacy Scholars Fund for students training in rural pharmacy.

Dennis Hefner ('69 MA, '72 PhD Econ.) was appointed as interim president of the State University of New York (SUNY) Potsdam.

1970s

George Murdock ('70 Ag.) won a special election in May for the post of Umatilla county commissioner.

Patrick D. O'Neil ('72 Psych.), assistant professor of aviation and public administration at the University of Nebraska at Omaha, recently received the Alumni Outstanding Teaching Award from the university's alumni association in honor of distinguished teaching in the classroom.

Stan Sherer ('74 Rec. and Parks Admin.) has been hired as the new parks and recreation director in Wilsonville, Oregon.

Dennis Franklin ('75 Comm.) was inducted into the Edward R. Murrow College of Communication Alumni Hall of Achievement this year for his work in the communication field, especially his work at Goldman, Sachs & Co, and the founding of his own business, Siena Global Securities.

Ric Peterson ('75 Arch.), a partner with Suyama Peterson Deguchi, has been elected to the College of Fellows of the American Institute of Architects (AIA).

Adolfo Benavides ('77 MA, '82 Ph.D. Econ.) has been named provost and vice president for academic affairs at Texas A&M University-Commerce.

Richard Duval ('77 Comm.) has opened his own photography business, capturing the vineyards and other landscapes around Washington, Oregon, and California, and overseas in Italy and Austria.



Kathleen McChesney '71 outside the FBI's Los Angeles field office. Photo Jon Rou

Kathleen McChesney '71

Agent of change

by Hannelore Sudermann :: One day during Kathleen McChesney's senior year, an FBI recruiter came to campus. Everyone was impressed with the smart looking fellow in the three piece suit. His pitch dazzled the class. "We all wanted to apply," says McChesney. "But then he passed out the applications. He gave one to each student until he got to me. Then he said, 'I can't give you one. The FBI doesn't have women as agents.'"

It was an inauspicious beginning for the girl from Auburn who would eventually become the highest ranking woman in the agency. The next year J. Edgar Hoover died and the policy was changed. But by then McChesney had a job with the King County police that she loved, as a fingerprint examiner, a civilian position with duties including fingerprinting, photography, and evidence collection.

She was good at her job, fast, focused, and efficient. Her supervisor encouraged her to apply for an opening for a policewoman. "He said, 'This has you written all over it,'" says McChesney over coffee last spring at her home near Los Angeles. "It was really nice in the workplace to have someone recognize your abilities."

She thanked him for the encouragement, but noted that she didn't meet the job condition that she be 5' 4" and at least 110 pounds. "I was neither." Her boss was undeterred. "He said, 'Why would you let the requirement stop you?'"

So McChesney applied, and took the civil service exam and scored very well. But the sheriff resisted hiring her. She appealed to the county's civil service commission, which instructed the sheriff to hire her. He acquiesced, saying he could take her on, but that she couldn't be insured because she was underweight. So the commission gave McChesney one month to gain seven pounds. "I did it," she says. "I ate a lot of carbs and wore a lot of jewelry."

It was the early 1970s and women were showing they could be effective police officers, valuable in ways their male counterparts weren't. She trained at the police academy, with five other women in her class. Then, in 1972, she went on patrol. "It hadn't exactly been my goal," she says of the beat work. "But it was an extraordinary experience."

Posted to the sex crimes unit, she joined the task force investigating serial killer Ted Bundy. McChesney's particular duties included interviewing the women in his life. She was able to learn things his friends and girlfriends were less likely to share with a male detective, she says. A former girlfriend of Bundy's told McChesney that he kept crutches, bandages, and medical plaster around, which helped the team realize he faked an injury to lure his victims. "We got tremendous information from so many people," she says. "We picked up key pieces that led us to Bundy as a suspect."

"Her zest for detective work was unending," former detective Robert Keppel '66, '67 writes

about McChesney in his book *The Riverman: Ted Bundy and the Hunt for the Green River Killer*. “Her ability to handle the small details and enthusiasm for a difficult investigation helped us solve the Bundy cases.”

After seven years with King County, at a time when it looked like she was headed back to patrol work, McChesney reconsidered the FBI. “When you like investigating, that’s what you want to do,” she says. As an officer she had worked with agents. “They were doing investigations all the time,” she says. “The downside is that you would have to move a lot. That’s also the upside. But I didn’t know it at the time.”

She trained at the FBI Academy in Quantico, Virginia, for several months before her first assignment in San Francisco, where she arrived just days after the murders of City Supervisor Harvey Milk and Mayor George Moscone. From the Oakland office she ran an undercover operation involving money laundering and drugs. Her other work included monitoring wiretaps, making arrests, and catching a kidnapper. In the last incident, the suspect was hiding in a room at a hotel, and McChesney approached and knocked on the door posing as the maid. He opened the door allowing her and other agents to make a quick arrest.

In 1978 she and her colleagues helped review evidence in the case of cult leader Jim Jones after the charismatic leader and his followers had poisoned themselves in Guyana. Before moving to Jonestown, his group had been headquartered in San Francisco.

From there she went back to Quantico to work with an undercover special operations unit, becoming the first woman in that unit. She helped develop undercover operations around the country, training and placing agents as well as developing a screening program to determine which agents were suitable for the work. This was the time of ABSCAM, an FBI undercover public corruption sting that nabbed one U.S. senator and five members of the House of Representatives for taking money in return for political favors. In the aftermath, Congress held hearings to review the FBI’s undercover endeavors.

Each move brought more responsibility. McChesney’s next assignment was in Los Angeles as leader of the squad in the Redondo Beach office, another first for a woman agent. Much of her work focused on government fraud, particularly with defense procurement, but the most prominent case was the kidnapping of a one-year-old boy and his babysitter. The agents rescued the pair in the middle of the night, after the kidnapper

tried picking up a ransom near the LA airport. The victims were found tied up in a truck camper.

Then McChesney headed back to Quantico to work in administration. In 1988, the agency faced a lawsuit charging that it discriminated against Hispanic agents in hiring, promotion, and discipline. McChesney’s duties included developing a promotional system for agents that was fair, equitable, and transparent. Generally, the process hasn’t changed from her design. “Having an issue to deal with and then be part of fixing the problem, identifying processes and procedures to make things better in the future, that was rewarding,” she says.

From there she went to Detroit as the second highest agent in the office. “It’s one of the major organized crime cities,” she says. Kidnapping, public corruption, and civil rights work kept her office busy. “We also dealt with counter intelligence.” There were, and still are, foreign spies looking for government and business secrets, she explains.

She then returned to LA, where as associate special agent she was, at that time, the FBI’s highest ranking female field agent, directly supervising about 500 people. Then to Phoenix, and then Portland, Oregon, where she was head of the bureau and oversaw several high-profile eco-terrorism cases. As special agent in charge of the Chicago division, she oversaw the investigation of the town president of Cicero, Betty Loren-Maltese, who in 2002 was convicted of helping steal \$12 million of the city’s funds. There were also the cases of the former chief of detectives in the Chicago Police Department who ran a jewel theft ring, and Illinois Governor George Ryan, who was convicted of bribery, racketeering, and fraud.

“I was working every day in one way or another,” McChesney says of her career. “I didn’t take very many vacations.” She had also managed to finish a master’s degree in public administration at Seattle University, and a doctorate in the same field from Golden Gate University in San Francisco.

In her twenty-fourth year with the FBI, she made a final return to Quantico to serve as one of three executive assistant directors under FBI Director Robert Mueller. Her responsibilities included overseeing the training academy, engineering, internal operations, special operations critical incidence response, and the lab. She was 51 and close to the mandatory retirement age.

When members of the Catholic Church’s national review board approached her to help work through the child sex abuse crisis, McChesney accepted. Her task as director of the United States Conference of Catholic Bishops Secretariat of Child and Youth Protection was to help the church

Larry Hill (’77, ’82 MS Ed.), head coach in the Sequim School District, was inducted into the Washington Interscholastic Basketball Coaches Association Hall of Fame.

Jan Hiller (’77 MA Home Ec.), former WSU Extension 4-H specialist, will be inducted into the National 4-H Hall of Fame in Chevy Chase, Maryland.

Laurie Cayton (’79 Engl.) reconnected with her friends and former roommates Teena McDonald (’80 Ed., ’13 EdD) and Michelle Nelson (’82 MBA, ’89 PhD) at the 2013 commencement ceremonies.

1980s

Larry Mollerstuen (’80 Elem. Ed.), assistant coach in Centralia, was inducted into the Washington Interscholastic Basketball Coaches Association Hall of Fame.

Herbert Berg (’81 EdD), who has been superintendent in school districts in Washington, Virginia, and South Carolina, was honored by the American Association of School Administrators with the Distinguished Service Award. Berg and his wife Paula live most of the year in Alexandria.

Jeffrey D. Cawfield (’81 Civ. Eng.) was recently appointed vice provost for undergraduate studies at Missouri University of Science and Technology.

Matthew Tripp (’81 PhD Bact.) was appointed chief scientific officer at Nature’s Sunshine Products, Inc., a natural health and wellness company engaged in the manufacture and direct selling of nutritional and personal care products.

Mark Shackelford (’81 Business) has joined NCM Associates as an executive conference moderator for the 20 Groups division.

Kim Roberts (’82 Arch.), owner of Westport Winery, celebrated that three recent releases earned medals at the 25th Annual Florida State Fair International Wine Competition in Tampa.

Nancy Hindman (’84 Business), chief operating and financial officer at Schweitzer Engineering Laboratories, Inc., retired from the company after 24 years of service.

Eric Johnson (’84 Comm.) was inducted into the Edward R. Murrow College of Communication Alumni Hall of Achievement this year for his work as a news anchor, including 20 years at KOMO-TV in Seattle.

Lisa Shaffer (’84 Bio.) is launching Paw Print Genetics, which specializes in DNA diagnostics for dogs, in Spokane with her husband Jeff (’84 Land. Arch.). The company will provide tests for canines to owners, breeders, and trainers to help with health predispositions.

Col. Dennis LeMaster (’87 Forest & Range Mgmt.) is the new commander of MEDDAC-Alaska, overseeing U.S. Army medical activity in the state.

Ann Marie Yasinitsky (’88 MA Music), principal flutist with the Washington Idaho Symphony, recently performed “The Appleville Musician,” a work composed by her husband Greg Yasinitsky, director of the WSU School of Music, and featuring narrator Laura Yasinitsky, her daughter.

Heather L. Karabeika (’89 Crim. J.) has been appointed judge in the Clackamas County Circuit Court by Oregon Governor John Kitzhaber.

1990s

Grant Buckingham (’90 MS Civil Eng.) was elected to the Board of Directors at DCI Engineers in Seattle. He has been a principal at the firm since 2003 and is also a member of the executive management team.

Russell G. Golden (’92 Bus.) has been named the next chairman of the Final Accounting Standards Board in Norwalk, Connecticut.

Yong Wang (’92 MS, ’93 PhD Chem. Eng.), WSU Voiland Distinguished Professor, was elected as a fellow of the American Institute of Chemical Engineers in May, only months after being named a fellow of the Royal Society of Chemistry.

Linda Howell ('93 Theat. Arts) has begun her three-year appointment to the Federal Transit Administration's advisory board for the National Rural Transit Assistance Program.

John Roll ('94 PhD Psych.) is the new senior vice chancellor for academic affairs at Washington State University Spokane.

Tawnie K. Bailey ('96 Zoo., '04 DVM) has launched her debut novel *She Smiles*. The novel, which is about a student who works two additional jobs and struggles with her alcoholic father and drug-addicted brother, was published in March.

Susana Reyes ('96, '07 EdD) is one of the four new appointees to the Washington Student Achievement Council.

Laura Woodworth-Ney ('96 Am. Hist. and Pub. Hist.) is provost and vice president for academic affairs at Idaho State University in Pocatello, Idaho.

2000s

Brothers **Mickey Mahoney** ('02 Ed.) and **Duffy Mahoney** ('03 Lib. Arts), owners of MickDuff's Brewing Company in Sandpoint, Idaho, announced plans to expand the brewery, allowing operations to double and distribution to outside markets.

Michelle Widner, IIDA, ('02 Int. Des.) has joined BernardoWills Architects as an interior designer. Widner serves on the Advisory Board of the WSU interior design program and the International Interior Design Association's Northern Pacific Chapter.

Adam Orth ('03 Comm.) has been appointed as the Pac-12 Enterprises advertising and sponsorship sales executive in the Washington and Oregon regions.

Kyle Jordan ('05 MED), director of member engagement at Synergos Association Management Company in Fort Collins, Colorado, has been recognized as an industry leader in *Connect* magazine's "40 Under 40" feature in its May/June issue.

Josh Gana ('06 MED) received the prestigious David B. Stephen Award from the Northwest Association of College & University Housing Officials (NWACUHO). This award recognizes a member who, over their years of service, has provided outstanding and distinguished contributions to the association.

Gwen Perkins ('07 Hum.), an author and education specialist at the Washington State Historical Society, has been awarded the John M. McClelland Jr. Award for her *Columbia* magazine article, "Dreamland: The Lost Worlds of James Tilton Pickett," by the Washington State Historical Society Board of Trustees.

Catherine Giudici ('08 Comm.), an Amazon.com, Inc. graphic designer, won on the ABC-TV series "The Bachelor" and plans to move to Los Angeles to be with her fiancé. Giudici worked at Amazon for most of 2012 before filming "The Bachelor."

Lt. Cmdr. Seth A. Green ('09 PhD Psych.) recently received the 2012 Junior Scientist Officer of the Year Award from the United States Public Health Service for his work with elite soldiers in the U.S. Army Special Operations Battalion.

Trista Harvey ('09 Nat. Res. Sci.) has been chosen to receive the John and Jenny Barnett Memorial Prize at the University of Melbourne in Australia for her work in animal welfare.

Nicole Sanford ('09 Choral Conducting and Jazz Studies) will be instructing a vocal jazz ensemble this fall at Flathead Valley Community College in Kalispell, Montana.

Navy Lt. Junior Grade Daniel J. Landerholm ('09 Bus.) has been designated as a Naval Aviator while serving at Naval Air Station Kingsville in Texas, and presented with the coveted "Wings of Gold" for his training.

respond to victims and follow up with its Charter for the Protection of Children and Young People.

After three years, she moved over to the Walt Disney Company to be vice president of global security. With hotels, cruise ships, and ABC offices, not to mention theme parks, she oversaw issues like workplace safety, technology security, health, training, and crisis management, be it man-made or natural disaster. In 2007 she left Disney to finish a book titled *Pick Up Your Own Brass*, in which she and another retired FBI agent share lessons in leadership they learned at the FBI, and a collection of essays titled *Sexual Abuse in the Catholic Church*, which looks at the issue from a variety of perspectives, including those of scholars, psychologists, historians, and victims.

Today, McChesney lives in southern California and consults for nonprofits and private businesses, often travelling the country to work on projects for several months at a time. And now, she says, she manages to work in a few weeks of vacation as well.

Jennifer Merschorf '96

A young survivor

by *Hannelore Sudermann* :: Fresh from an early morning TV appearance, Jennifer Merschorf '96 grabs a seat in the lobby of her Seattle hotel and pulls out a phone to check in with the office in New York. Next on her schedule is our interview, then lunch with her mother, and then time to meet up with a few old college friends. This day is a balance. Some work, some family, and some fun. It's all at the threshold of an intense few days of the national conference for Young Survival Coalition, a not-for-profit organization for young women facing breast cancer.

As CEO of the coalition, a cancer survivor, a doting daughter, and an avid home restorer, Merschorf is most happy doing several things at once, a skill she learned as a business student at Washington State University. Then it was primarily about harmonizing school work and a social life. After school she moved to Washington, D.C., for a demanding job coordinating career conferences for high school students.

Then she moved home to Oakland to be closer to family and start a career in advertising. It was just in time for the dot-com collapse, she says. Her firm closed and, at 26, she had to rethink her goals. Merschorf found temporary work with the Sierra Club, and "it was a game changer for me."



COURTESY JENNIFER MERSCHORF

She liked the people, enjoyed learning about donor giving, politics, and the environment, and figuring out how a giant nonprofit worked. She enrolled at the University of San Francisco for an MBA and to pursue "this passion for nonprofit management." Her position was made permanent and she was promoted to senior director of operations and finance. It was through the Sierra Club that she met her husband Jeffrey, who worked out of the New York office.

With Jeffrey's encouragement, Merschorf decided to move east. "It has always been a dream of mine," she says. "I think I have an East Coast soul." She quickly found a job with New Yorkers for Parks, a 100-year-old park advocacy organization. It was a crash course in New York living, she says. "It was all about politics and it helped me learn the city." After three years, she moved to a nonprofit focused on developing cross-cultural relations with young people through technology. It gave her experience in using social networking and computer technology to serve a nonprofit's goals.

Then came 2010. "That's my year," says Merschorf quite seriously. In January, her mother Linda Merschorf '65 was diagnosed with breast cancer. In April, her employer lost its biggest funder. In May, while downsizing the organization, Merschorf laid herself off. It gave her time to travel to California and help her mother who was going through treatment. Then, two months later, she learned that she herself had cancer.

She was on the phone with her mom when she felt a lump. "I thought, you've got to be kidding me." She waited for it to go away. It didn't. She showed it to her husband. Then she went to her doctors asking for a sonogram and a biopsy. Because of her age, they were less inclined to look. But because of her insistence and her mother's diagnosis, they looked anyway. There was cancer, in several places. "It was way over here," she says, touching beneath her arm toward her back.

That first weekend after her diagnosis she and her husband wrote an email asking their friends to reach out to find anyone else who had dealt with breast cancer at an early age. “I just couldn’t believe I was the only one,” says Merschdorf. “That first weekend was the hardest.”

But then the emails started coming back. There were other women in her community dealing with the same or similar issues. They also pointed her to the Young Survival Coalition, an organization for young women with breast cancer founded in 1998 by women who were diagnosed in their early 30s. “For the first time a nonprofit was helping me,” she says.

Meeting with her oncologist, she learned that her type of cancer couldn’t be treated with chemotherapy. The main way to address it was to “take all the estrogen out of my body.

“How does it feel to go into menopause overnight? Not fun,” she says. A monthly shot in the stomach suppressed her estrogen production and “shut down my ovaries completely. My husband likes to call me a science experiment.” Some days, “I feel like I’m 90.” She gained weight, lost hair, and endured a lengthy treatment.

Not long after starting treatment, Merschdorf learned that Young Survival was looking for a new CEO. The organization had been without a head for six months and needed to modernize and enhance its focus on younger breast cancer patients and survivors. The organization had aged, along with the women who had created it and made it great, says Merschdorf.

With her background working for nonprofits and the tech-based youth organization, Merschdorf had the experience to take on the job. “So I applied.” Her breast cancer came up during the interview process, but “they made it very, very clear they were not giving me the job because I’m a young survivor,” she says. While starting a new, very personal experience with cancer, she also embarked on a very public one.

In her first days with the YSC, she traveled around the country to meet as many young survivors as she could and figure out how to better serve their needs. “It was very eye opening. We needed to be more tech savvy, a place for young women that they want to be a part of.” Less pink, more empowerment, she says. “When the doctor says you’re too young for breast cancer, you can say, let’s check this out.”

Breast cancer is so much seen as an older woman’s issue. But young women with this diagnosis have their own set of issues, she says. “Fertility, dating, no breasts, no hair, no career,”

she says. “And there’s the loss of the illusion of immortality that young women have.”

So now she leads the organization, advocating for research, fundraising, pushing for education, and developing awareness and support for cancer patients and survivors. “I am lucky,” she says. “When I am in a meeting and I burst out in a hot flash [because of her treatment], everybody knows it’s OK.”

She finds her balance by making time on weekends for a rural life in the Hudson River Valley. “My husband and I have a crazy infatuation with restoring old structures,” she says. In 2006 they bought a 150-year-old home and started stripping wallpaper and pulling out old chimneys and fixtures.

“It was more than we should have taken on,” she says, only partly meaning it. With help from her family, including her parents, they have managed to restore and update much of the property. The project is on-going, but a great diversion to her busy city life.

Eugene Rosa 1942–2013

Working for people and the planet

by *Eric Sorensen* :: When you fill out a career pushing the limits of knowledge, rising to “pioneer in your field” status, things are bound to get pretty technical.

Gene Rosa, environmental sociologist, lived that reality, penning papers with terms like “biosociology,” “post-normal risk,” and acronym-rich analytical tools like STIRPAT. In spite of the technical thicket of his work, say friends and colleagues, Rosa kept his eye on the increasingly threatened natural environment and the people in it.

“Gene was not just interested in the environment for its own sake, but rather he had a deep desire to see a better world, one with greater quality of life and well-being, and fewer environmental impacts,” says Kyle Knight, ’08 MA, ’12 PhD, a Rosa student and now assistant professor of sociology at the University of Alabama in Huntsville.

Rosa died last February at 71, prompting an outpouring of praise for an influential scholar who deftly bridged the social, ecological, and physical sciences.

One of Rosa’s first publications, written with his Syracuse University doctoral advisor Allan Mazur, looked at reducing environ-

IN MEMORIAM

1930s

Jeanne B. Ostrander (’36 Bus. Admin.), 97, May 11, 2013, Redmond.

Ebert M. Giberson (’37 Ani. Sci.), 97, April 8, 2013, Renton.

William W. “Wild Bill” Siceloff (x’37), 93, March 9, 2013, Pullman.

Elsie Mae Casey (’38 Home Ec.), 96, February 16, 2013, Spokane.

Harold A. Del Ponte (’39 Forest & Range Mgmt.), 96, January 20, 2013, Crescent City, California.

Patria Iris Kobervig (’39 Speech Comm., Alpha Gamma Delta), 95, May 12, 2013, Burlington.

Kathryne E. “Kay” Ringo (’39 Office Admin.), 95, January 25, 2013, Moscow, Idaho.

Martha C. Weitzel (x’39, Delta Delta Delta), 94, May 3, 2013, Petaluma, California.

1940s

Amy E. Brandon (’40 Sci.), 95, February 24, 2013, Port Townsend.

Lester B. Brown (’40 Bus.), 96, April 3, 2013, Kennewick.

Cecil R. Flint (’40 Mech. Eng.), 97, April 23, 2013, Logan, Utah.

Patricia A. Hastings (’40 Ed.), 93, January 12, 2013, Vancouver.

Genevieve D. Leitch (’40 Bus. Admin., Alpha Gamma Delta), 95, April 15, 2013, Olympia.

Donald E. Morton (x’40), 94, February 6, 2013, Lamont.

William E. Roberts Jr. (’40 Civil Eng.), 97, August 22, 2012, Corvallis, Oregon.

Elaine H. Brownell (x’41, Alpha Gamma Delta), 90, March 8, 2013, Walla Walla.

Helen J. Schafer (x’41), 90, April 15, 2013, Spokane.

Gail Close (x’43, Pi Beta Phi), 87, January 5, 2013, Spokane.

Donald E. Ferguson (’43 DVM), 93, April 7, 2013, Kennewick.

Shiro Okazaki (’43 Bact.), 92, January 3, 2013, Pullman.

Douglas M. Albee (x’44), 86, February 24, 2013, Bellingham.

A. William Gough (’47 Bus.), 91, November 27, 2012, Seattle.

Marjory F. Johnson (x’47), 85, March 13, 2013, San Luis Obispo, California.

David H. Knight (’47 Elec. Eng., Gray W Charter Member), 90, March 20, 2013, Seattle.

Parmalee Jean Brouillard Moos (’47 Psych., Chi Omega), 88, March 13, 2013, Wenatchee.

J. Edwin “Ed” Faris (’48, ’51 Econ.), 85, February 26, 2013, Charlotte, North Carolina.

Dix Gedney (x’48), 82, February 28, 2013, Seattle.

Billy Vernon Cade (x’49), 96, April 25, 2013, Edmonds.

Charles B. Clizer Jr. (’49 Ed.), 85, May 17, 2013, Walla Walla.

Richard “Dick” Dale Largent (’49 Ag.), 84, May 7, 2013, Colfax.

Joe Lehman Jr. (’49 PhD Chem.), 91, April 23, 2013, Fort Collins, Colorado.

Charlotte McKinlay (x’49), 81, February 19, 2013, Lacey.

Marian H. Schafer (’49 Soc.), 85, February 5, 2013, Juneau, Alaska.

Robert E. Underwood (’49 DVM), 95, March 20, 2013, Lafayette, California.

1950s

George W. Carpy ('50, English), 88, March 18, 2013, Harrington.

Eldon Engel ('50 DVM), 89, March 26, 2013, Sun Lakes, Arizona.

David A. Leach ('50 Lib. Arts), 86, April 4, 2013, Vancouver.

Sherry Lou McManus ('50 Ed., Alpha Chi Omega), 85, March 31, 2013, Palm Desert, California.

Lionell J. Janeczek ('51 Chem. Eng.), 83, January 20, 2013, Spokane Valley.

Janet E. Lydig (x'51, Kappa Alpha Theta), 80, May 3, 2013, Spokane.

Kitty R. O'Neill (x'51, Alpha Delta Pi), 84, February 23, 2013, Vancouver.

Carol S. Rose ('51 Ed.), 87, March 26, 2013, Des Moines.

Esther Top Wetzel ('51 Cloth. & Text.), 78, March 19, 2013, Honolulu, Hawaii.

Ronald J. Fenich ('52 Ag.), 85, March 25, 2013, Spokane.

Joyce Ann Finnell ('52 Home Ec.), 82, March 13, 2013, Campbell, California.

Richard "Dick" Douglas Ford ('52 Pol. Sci.), 83, May 5, 2013, Seattle.

Nola Claire (Whetsel) Fullner ('52 Food & Nut.), 82, February 1, 2013, Kent.

Stanley Morgan Miller ('52 Animal Sci., Lambda Chi Alpha), 83, January 20, 2013, Bellevue.

Gloria K. Park ('52 Zoo.), 82, March 23, 2013, Anchorage, Alaska.

James A. Tonder ('52 Elec. Eng.), 87, March 9, 2013, Vancouver.

Arlene Jean Wyche ('52 French), 83, January 17, 2013, Salt Springs, Florida.

Kenneth A. Boettcher ('53 Bus. Admin.), 84, February 1, 2013, Centennial, Colorado.

Jasper Tom Brighton ('53 Ag.), 84, May 13, 2013, Wenatchee.

Alice Marie White Forth ('53 Ed., Delta Kappa Gamma), 81, June 22, 2012, Chehalis.

Arlan Kronfus ('53, '55 MED), 82, March 2, 2013, Marysville.

Damon Smith ('53 Ag. Econ.), 85, February 6, 2013, Sela.

Earl Philip West ('53 MS Psych.), 85, April 9, 2013, Grand Junction, Colorado.

B. Jim Barner ('54 Phys. Ed.), 80, April 12, 2013, Puyallup.

Janet Gayle Ljubich (x'54), 80, April 20, 2013, Port Angeles.

Harold "Chick" C. Seeber II ('54 Pharm), 83, May 4, 2013, Post Falls, Idaho.

Joseph Jones (x'56), 75, April 2, 2013, Houston, Texas.

Judith G. Jones (x'56), 75, April 29, 2013, Spokane.

Milton Odell Wallace ('56 Pharm.), 81, May 1, 2013, Lakewood.

Loretta "Lori" Jean Ward ('56 Liberal Arts), 78, April 12, 2013, Monitor.

Eleanor Jean Kaake ('57 Elem. Ed.), 79, December 24, 2012, Tigard, Oregon.

Maurice E. "Mory/Moe" Bottemiller ('58 Pharm.), 82, April 3, 2013, Ridgefield.

F. Richard "Dick" Bruya ('58 Pharm.), 79, March 28, 2013, Langley.

Bennie "Ben" Burton Cook ('58 Comm.), 80, February 4, 2013, Vale, Oregon.

Bev Forbes ('58 Phys. Ed.), 77, April 2, 2013, Blaine.

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mental demands without sacrificing people's quality of life, says Knight. He returned to the topic repeatedly, writing several articles on ways to improve human well-being with a smaller environmental footprint.

Rosa also looked at the effect of modernization on the environment and the question of whether new technologies harm the environment or fix its problems.

"A common theme of Gene's career was critiquing the techno-fix optimism," says Richard York '02 PhD, another Rosa student and collaborator who is now a sociology professor at the University of Oregon.

Rosa, he says, took the view that, "we as a society tend to overly conceive our problems as principally technical in nature when a lot of them really have social, political dimensions. So, it's not so much the technology itself per se that creates problems or ameliorates problems. It's how [it's] used in a social context."

In some situations, we not only lack the technology to fix problems, we lack the ability to see problems to begin with. Rosa gave voice to this in one of his favorite papers: "Metatheoretical foundations for post-normal risk."

"Normal risk," says York, involves things we can gather data about, like cigarette smoking or air travel. But there are other risks that we are trying to figure out in a scientific way, but can't. They're so new, we don't have data on them, putting us into a gray area where science matters but lacks the information to make a clear answer. This is called "post-normal."



EUGENE ROSA BY ROBERT HÜBNER

"Recognizing those post-normal situations," says York, "you really are in a case where experts do not necessarily have better judgment or better knowledge than lay people."

Late in his career, Rosa led more than a dozen scientists in a piece for the journal *Science* urging the White House to make more room for public

opinion in how it disposes of nuclear waste. The approach ran counter to the world of experts who will work to solve a problem in technical terms and view the public as an annoyance.

"Gene was saying we have to recognize those as political, social struggles," says York, "and we have to take that into account as real phenomena and address them in social terms."

Charles Argersinger 1951–2013

Equilibrium

by *Jana Argersinger* :: Charles Edward Argersinger, emeritus professor of music at Washington State University and a resident of the Palouse area since 1988, died April 16, 2013, in Pullman, after a long illness. He was 61.

Charles was born October 15, 1951, in Schenectady, New York, and his family traded snow for sun a few years later, moving to Phoenix, Arizona. After graduating from Central High School, he attended Arizona State University, earning his bachelor's and then, in 1977, his master's degree in music. During his college years, he played saxophone in a rock band called Christopher Blue. In 1977, Jana Jennison, who fell in love with him and his music while both were at ASU, became his wife.

In the late 1970s, Charles and Jana moved to Minneapolis so that he could study at the University of Minnesota with composer Dominick Argento. After completing his doctorate, Charles went on to teach at Cal State Bakersfield, DePaul University, and finally Washington State University, where he served as coordinator of composition and theory as well as professor of jazz keyboards until 2009. The WSU Festival of Contemporary Art Music, which he founded in 1989, reflects his commitment to the continued life of classical music. Along the way, he held residencies at Yaddo and Wolf Trap, traveled to the Montreux Jazz Festival as the first director of jazz studies at DePaul, and spent summers teaching at the Interlochen Center for the Arts.

In his classical compositions, Charles aimed for, in his own words, "an equilibrium of intellect, emotion, and intuition," and he identified Bartók and Stravinsky as key influences. Among recognitions of his music were first prize for a brass fanfare for the fiftieth anniversary of the United Nations, a commission from the king of Thailand, a recording of his *Concerto for Piano and Chamber Orchestra* by members of the Chicago Symphony Orchestra

Roberta M. Smith-Kosin ('58 MA Home Ec.), 89, April 13, 2013, Seattle.

1960s

Leonard H. Blinn ('61 Fine Arts), 73, April 5, 2013, Seattle.

Barbara D. Rathbun ('61 Soc., Pi Beta Phi), 73, March 13, 2013, Olympia.

Ernest F. Smith, Jr. (x'61), 74, March 12, 2013, Salinas, California.

Patricia A. Bauer ('62 Psych., Kappa Alpha Theta), 72, March 2013, Spokane.

Mary S. Drummond ('62 Soc. Stud.), 72, March 5, 2013, Hayden Lake, Idaho.

Lacey Ebbert ('62 Ed., Kappa Kappa Gamma) 72, March 23, 2013, Porterville, California.

Fred A. Kalal ('62 Phys. Ed.) 72, April 18, 2012, Longview.

William D. McFarland Jr. ('62 DVM), 77, March 8, 2013, Fort Benton, Montana.

Dorothy Jean Reid ('62 Ed.), 71, June 5, 2012, Mesa, Arizona.

Zane Walter Roth ('62 DVM), 82, January 31, 2013, Seattle.

Emmit Noel Routson ('62 Psych.), 78, March 14, 2013, Coeur d'Alene, Idaho.

Richard W. Becker ('63 Elec. Eng.), 72, April 27, 2013, Clyde Hill.

Peter L. Clary ('64 DVM), 78, May 25, 2013, Oak Hill, Ohio.

John Marvin ('64 Chem. Eng.), 71, March 24, 2013, Eugene, Oregon.

James K. VanLeuven ('64 PhD Soc.), 72, March 26, 2013, Seattle.

Patricia Carole Arney ('67 Elem. Ed.), 67, May 3, 2013, Everett.

Joyce E. Bradford ('67 Home Ec.), 67, March 16, 2013, Lumberton, Texas.

Richard F. "Dick" Buss ('67 Bus. Admin.), 67, February 8, 2013, Edmonds.

Larry Frank Grand ('67 PhD Plant Path.), 72, March 14, 2013, Raleigh, North Carolina.

James C. Mogush ('67 Hotel & Rest. Mgmt.), 88, March 8, 2013, Chicago, Illinois.

Dale Leroy Nish ('67 EdD), 81, May 26, 2013, Provo, Utah.

Bruce Leslie Wherry ('67 Pharm.), 69, March 9, 2013, Yakima.

Willard C. Becker ('68 Ani. Sci.), 70, March 25, 2013, Colton.

John Leslie Purcell ('68 EdD), 87, April 28, 2013, Ellensburg.

Donald L. McCormick ('69 DVM), 69, April 16, 2013, Sandpoint, Idaho.

Robert Edwin Nasburg ('69, '71 MS Elec. Eng.), 65, October 9, 2012, Palos Verdes Estates, California.

Linda Marie Williams Sheridan ('69 Phys. Ed.), 65, April 20, 2013, Spokane.

Steve R. Watson ('69, '72 MBA), 65, March 5, 2013, Celina, Texas.

1970s

George Carl Brown ('70 Elec. Eng.), 70, April 3, 2013, Vancouver.

Jeannie Reyburn Clough (x'70), 61, January 29, 2013, Seattle.

Ray R. Whitlow ('70 Pol. Sci.), 65, March 18, 2013, Kennewick.

Alice P. Wittenbecher ('71, '73 MED), 64, March 9, 2013, Spokane.

Diane Lynn Lorenzo Martin (x'72), 59, March 11, 2013, Seattle.

William M. Raisner ('72 Ed.), 63, April 9, 2013, Lake Stevens.

Anne Marie Mayton ('73 Fine Arts), 62, December 15, 2012, Seattle.

Jack W. Knapp Jr. ('74 Bus., Lambda Chi Alpha), 60, April 29, 2013, Tacoma.

Colleen Hazen ('75 Comm.), 60, April 13, 2013, Great Falls, Montana.

Robert Burns Murray ('75 PhD Botany), 81, May 16, 2013, Huston, Idaho.

James V. O'Fallon ('75 MS, '81 PhD Biochem.), 62, March 13, 2013, Pullman.

Linda Coe Nygaard ('76 Clothing & Text.), 58, March 2, 2013, Snohomish.

Scott Elliott Pierson ('76, '80 Pharm.), 61, April 10, 2013, Spokane.

Stephen DeBow ('77, '89 MA Pub. Admin.), 63, April 23, 2013, Olympia.

James K. VanLeuven ('77 PhD Soc.), 72, March 26, 2013, Seattle.

Genevieve Kay Bishop ('79 MED Psych.), 70, January 10, 2013, Ormond Beach, Florida.

Lawrence Marion Rushing ('79 Speech & Hearing Sci.), 61, April 28, 2013, Auburn.

Randall "Randy" C. Salisbury ('79 Lib. Arts., Arch.), 56, May 2, 2013, Vancouver.

Rick Thompson III ('79 Ag.), 57, March 2, 2013, Plano, Texas.

1980s

Kathryn Elizabeth (Bacon) Lacquement ('80 Clothing & Text.), 55, January 2013, Alexandria, Virginia.

David S. Lamb ('80 MS Env. Sci.), 60, March 14, 2013, Spokane.

Denise Marie Gariepy ('81 Speech & Hearing), 55, March 21, 2013, Spokane.

Lori J. (Sannes) Griffith ('82 Bus., Pi Beta Phi) 52, August 14, 2012, Cashmere.

Mike Monson (x'83), 48, April 13, 2013, Selah.

Sheila K. Batey ('85 Socio, '86 Anth.), 63, January 9, 2013, Winchester, Idaho.

Kevan John Burns ('88 Nursing), 57, April 14, 2013, Vancouver.

Brian Fleming ('88 Nursing), 44, May 3, 2013, Vancouver.

Micheline Gambriell ('88 Soc. Sci.), 48, April 11, 2013, Seattle.

1990s

Steven Kyle Skalabrin (x'91), 40, May 10, 2013, Port Orchard.

Kevin S. Weeks (x'91), 43, March 20, 2013, McMinnville, Oregon.

Mariko Hamano Peckham ('92 Nursing), 64, March 14, 2013, Everett.

Stephen Mark Setter ('96 DPH), 54, March 27, 2013, Spokane.

Kimberly Janae Smith ('97 Pol. Sci.), 38, April 25, 2013, Las Vegas, Nevada.

Adam L. Ahola ('98 Civ. Eng.), 40, March 12, 2013, Carrolls.

2000s

Candace A. Fields ('04 Psych.), 30, March 21, 2013, Phoenix, Arizona.

Russell Martin ('09 Soc. Sci.), 56, January 2, 2013.

2010s

Ashley Kay Cligny (x'10), 22, April 28, 2013, Pleasanton, California.

Andrew P. Duke (x'13), 23, April 5, 2013, Pullman.

John William Halstead (x'13), 23, April 9, 2013, Spokane.

and the Contemporary Chamber Players of the University of Chicago, and two CDs of his jazz compositions and arrangements. As a jazz pianist, he was a regular at Rico's in Pullman and other venues, both local and national.

Charles was immensely proud of his son Forest, relished family traditions and the Christmas season, appreciated the harmonies between music and math, and passionately loved teaching. The fun in his life spanned from hunting rocks as a child with his family to mining sapphires in Montana as an adult, from constructing a short-wave radio and a soapbox derby car with his mother to building a backyard observatory for star gazing, from gathering pollen samples for high school science class to collecting illuminated manuscripts of the Middle Ages. He enjoyed snorkeling in Hawaii and savored lavish breakfasts and Reine de Saba cake at every opportunity.

Charles was preceded in death by his father, Scott. He is survived by his mother, Helen; his wife Jana, a journal editor in the WSU Department of English; his son, a Seattle student pursuing a neuroscience degree; his sister, Nancy, a gifted oboist; a number of beloved nephews and nieces; and his shelties, Snow and Sophie. Family, friends,



CHARLES ARGERSINGER BY ROBERT HUBNER

and colleagues will miss his wit, generosity, and commitment to the musical arts. His life was rich and precious. <<

In late April, on a beautiful spring day, the procession to his grave in the Moscow Cemetery was led by a Dixieland brass band playing "Just a Closer Walk with Thee" and, of course, "When the Saints Go Marching In." —Editor

Listen to some of Charles Argersinger's music at wsm.wsu.edu/extra/Charles-Argersinger.

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Ten years of teamwork

In September 2003, Tim Pavish '80 left Seattle and a 20-year career in advertising to return to Pullman and become the executive director of the WSU Alumni Association (WSUAA). He was eager to do something more for his alma mater, after all that it has given him over the years.

"I owe a lot to WSU, not the least of which is it's where I met my wife, Carin (Hull) Pavish," he says. "I made many of my closest friends at WSU and through WSU. I received a great education here and learned valuable life lessons outside the classroom. And now my two kids are WSU students."

Taking charge of the WSUAA was no small task. "I knew then that the job would require leveraging the foundation laid by my predecessors, Pat Patterson and Keith Lincoln, two proud Cougars who served the WSUAA for more than a quarter century each," he says. Pavish knew he also needed a focused plan, a talented staff to execute it, and the backing of university leadership.

The WSUAA soon set out to craft a strategic plan that focused on achieving three key objectives: increasing membership, engaging more alumni, and strengthening the finances of WSUAA to better serve WSU.

The alumni association would also need the help of an army of dedicated volunteers and the support of thousands of loyal WSUAA members. And finally, the effort would benefit from the engagement of "the best alumni and university friends in the world," Pavish adds.

"This team and group of volunteers have accomplished so much," says Rhonda Kromm '86, '05, WSUAA past president and WSUAA volunteer for over 16 years, "They are remarkable people, great Cougs, and what they have achieved is truly astonishing."

Over the past 10 years, the alumni association has doubled membership, a feat unmatched elsewhere. It has grown the number of alumni events held across the country from 100 to over 500 each year. The WSUAA also developed and launched the new crimson Cougar license plate. With 17,000 WSU plates on the road and counting, the program now raises close to \$500,000 for scholarships each year for WSU students. For the past 10 years, the WSUAA has maintained a balanced budget, cared for the historic Lewis Alumni Centre, dedicated an Alumni Arboretum on campus, and launched new membership types to fit the needs of more Cougs: platinum life, student, recent grad, golden grad, and family memberships.

It has also started new ventures. The volunteer-led *WSU Impact* assists alumni and friends who want to be civic advocates for WSU and higher education. The *Wine-By-Cougars* wine club celebrates the vital roles alumni and the university have in the wine industry. The *Cougar Business Network* supports Cougar businesses by helping alumni find them and do business with them. And *WSUAA Career Support* helps alumni in their career development from writing resumes to finding jobs through a national recruiting network.

"We've done all this on a small budget and with a small, dedicated staff. The smallest in the Pac-12," says Pavish. Looking back, Pavish remarks that what the WSUAA has accomplished during the past ten years has been truly remarkable. "I am so grateful for the contributions of everyone, most especially my teammates, the volunteers, and the thousands of loyal members."

Looking forward, Pavish says the focus of the WSUAA will remain on recruiting more members and serving the needs of WSU and its alumni. "In the next few years, we'd like to report the WSUAA has tripled membership." A goal all Cougs can help achieve.

To join and learn more about WSUAA, visit alumni.wsu.edu.

Faculty and Staff

Charles E. Argersinger, 61, Music 1988-2009, April 16, 2013, Moscow, Idaho.

Katherine Batey, 89, English 1975-1985, April 23, 2013, Bozeman, Montana.

Sheila K. Batey, 63, English 1975-1985, January 9, 2013, Winchester, Idaho.

Willard C. Becker, 70, Animal Sci. 1968-2000, March 25, 2013, Colton.

Jennie Marie Strike Watkins Brown, 87, Computer Sci. 1967-1977, April 17, 2013, Pullman.

Kevin R. Byers, 31, Environment, April 8, 2013, Pullman.

Harry A. Cosgriffe, 92, WSU County Extension, March 23, 2013, Pullman.

Virginia F. Crumley, 84, Physical Plant 1977-1994, May 24, 2013, Moscow, Idaho.

Earl Philip Druker, 65, Language Center, May 28, 2013, Moscow, Idaho.

Andrew P. Duke, 23, Campus Espresso Bars 2008-2013, April 5, 2013, Pullman.

Robert H. Feasley, 87, Fine Arts 1958-1988, March 2, 2013, Lacey.

Gene Hansen, 81, Admin. and Small Bus. Dev. Center 1977-1982, May 17, 2013, American Fork, Utah.

Marv Harshman, 95, WSU Men's Basketball Coach 1958-1971, April 12, 2013, Tacoma.

Tom F. Hasenoehrl, 62, Meat Science Lab and Motor Pool 1976-2006, May 22, 2013, Garfield.

Arthur M. Holtorf, 87, Aerospace Studies ROTC 1965-1968, Dir. of Safety 1969-1979, March 5, 2013, Lake Oswego, Oregon.

Eugene L. Lister, 83, March 20, 2013, Spokane.

James Nielson, 91, Ag. Econ., Ag. Research 1965-1977, March 18, 2013, Lacey.

Susan Kaye Odenborg, 59, Student Advising and Learning 1991-2013, April 17, 2013, Moscow, Idaho.

James V. O'Fallon, 62, Animal Sci. 1975-2011, March 13, 2013, Pullman.

George J. Pinyuh, 81, WSU County Extension 1976-1994, February 20, 2013, Kent.

Stephen Mark Setter, 54, WSU Spokane Pharmacotherapy 1996-2012, March 27, 2013, Spokane.

Clyde I. Shay Jr., 72, Fac. Ops. 1973-2002, March 15, 2013, Garfield.

William W. "Wild Bill" Siceloff, 93, Midway Photo, WSU Campus, March 9, 2013, Pullman.

William "Bill" Thomas, 93, Mech. Eng. 1958-1980, May 14, 2013, Moscow, Idaho.

Robert W. Towse, 85, Beasley Coliseum 1984-1992, March 11, 2013, Shafter, California.

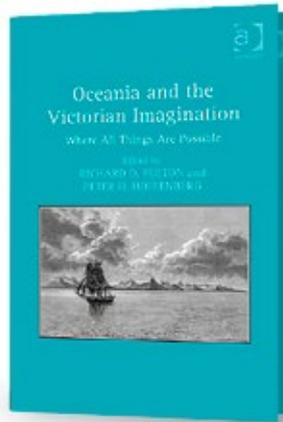
James K. VanLeuven, 72, Comm. 1987-1991, March 26, 2013, Seattle.

Steve R. Watson, 65, Admin. Computer Sci. 1967-1990, March 5, 2103, Celina, Texas.

Ray R. Whitlow, 65, WSU Tri Cities 2009-2013, March 18, 2013, Kennewick.

Leone Elizabeth Wilson, 87, Secretary 1950-1952, March 19, 2013, Lewiston, Idaho.

Janice M. Wright, 63, WSU Spokane 2000-2005, February 1, 2013, Spokane.



Oceania and the Victorian Imagination: Where All Things Are Possible edited by **Richard D. Fulton '75 PhD and Peter H. Hoffenberg** ASHGATE PUBLISHING COMPANY, 2013 :: Review by **Hannelore Sudermann** ::

Devotees of Victorian-era writers like Robert Louis Stevenson, Jules Verne, H.G. Wells, and Joseph Conrad may well recognize the current of interest in Oceania, or the South Pacific, that runs through their stories.

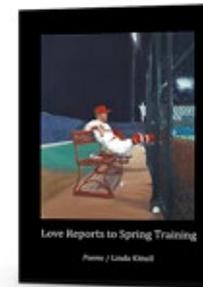
During that period, from the 1830s to 1901, tales, photographs, travel books, and essays all fed and informed the imaginations of the Victorian people, shaped their views of “Oceania,” and affected their home cultures. Given its small role in the imperial scheme, “the South Seas loomed unusually large in the metropolitan Victorian imagination,” write the editors of *Oceania and the Victorian Imagination*, Richard Fulton and Peter Hoffenberg. Victorians from all classes were fascinated by the exotic elements of the South Pacific, as well as the possibilities of finding or creating a

fortune and of reinventing oneself in a new environment. The editors write of Samoa, Hawai‘i, and Australasia “...those exotic and distant lands and people were central to Victorian identification.”

Historians and literature professors from around the world contributed essays to this tidy book, among them Ingrid Ranum '04 PhD, an associate professor at Gonzaga University, who explores domesticity and masculine identity in her essay, “At Home in the Empire.” She focusses on Joseph Conrad’s first novel *Almayer’s Folly*, the story of a Dutch trader in Borneo. She also looks at Robert Louis Stevenson’s short story “The Beach of Falesá,” a tale of a British man on a South Sea island. Both pieces were written in the 1890s. Ranum notes that both men moved to the “edge of the Empire” and took wives who were native to their new countries. She compares the two characters, one who can’t give up the Empire’s values for reality and the other who does.

Fulton’s own essay focuses on the South Seas in mid-Victorian children’s imaginations. While it did exist, Oceania was pretty much unknown to Victorian children save for stories in children’s magazines and the tales of returned missionaries. For them it was place of innocence, of adventure, of excitement and danger.

While this book is of interest to admirers of the Victorian period, particularly of literature, this book will be most useful to scholars and historians seeking to understand the Victorians. ☒



Love Reports to Spring Training by **Linda Kittell** TURNING POINT BOOKS, 2013 :: Review by **Tim Steury** :: Baseball lends itself as metaphor like no other sport. Boxing might come close, but its inherent brutality and changing cultural tastes have removed it from the public’s awareness.

But baseball endures and permeates our culture, and even a non-fan can appreciate the sport’s dramatic interplay of quietude and adrenaline. In *Love Reports to Spring Training*, Linda Kittell exploits this richness through a deeply satisfying blend of wordplay and allegory. (I’d better disclose right here that I’ve long admired Kittell as a writer and a friend.)

Love is a baseball pitcher, and this book examines his life from the mound and the dugout, moving through time and his life with grace and



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introspection. Throughout Kittell's imagination, the baseball conceit is playful, poignant, and rugged.

"Love Ponders Friendship" through his game relationship with the catcher Gonzalez: "We worked at it/ talked a lot, and never really worried/ where we'd end up."

In "Love's Resolve," Love is confronted by his manager Craft with the fact that he's getting old: "It's nothing new, nothing/ you don't already know. It's just/ in baseball/ it comes a lot faster."

A loving meditation on life and accomplishment and time, this book is never oppressive nor maudlin as it could well be. Indeed, the tone is set with Love's memory of summer evenings with his father playing pitch and catch. Even though in the present, "I can't just throw it past them/ anymore and the slider doesn't/ slip so quickly/under the bat," he remembers the advice of his father, like he was waiting for the last throw of that long-ago evening: "the one/ he shot straight above me,

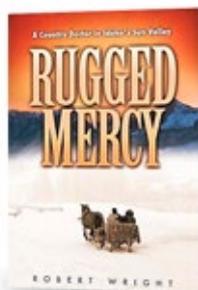
up past the street light's glow/and into the dark, me two-stepping a little under it, waiting/for the ball to come back down in my sight./and drop right into/ the pocket of my/six-finger/ Whitey Ford/glove." ⊗

Linda Kittell has, for the past 27 years, taught creative writing, research writing about sports, and mythology at WSU.

Rugged Mercy: A Country Doctor in Idaho's Sun Valley by **Robert S. Wright**

WSU PRESS, 2013 :: *Review by Julie Eckardt '13* :: When 13-year-old Robert Henry Wright was caught spying on a kitchen table appendectomy, he was pulled in to assist. Inspired by that experience, the Hailey, Idaho, boy spent his early 20s in medical school, at first struggling to memorize the complex anatomy of the human body. After graduating, he married his childhood sweetheart, moved home to Idaho, and became a successful doctor, beloved in his community.

It was a rough start, though. His first patient, a woman



having a difficult labor, died under his care. After that first fatal experience, Wright vowed to never lose a patient again and went to extremes, even risking his own neck in dangerous weather, to be where he was needed.

Rugged Mercy, written by the doctor's namesake and grandson, examines the life of a man of medicine in the early 1900s in the rugged, rural area that is now Sun Valley.

The book is half memoir and half biography. Much of the text is a third-person narrative that walks the reader through the challenges of the elder Wright's work. The author uses family stories and interviews with his grandmother, parents, and community members.

The rest is written from the author's own point of view, growing up in the apartment above his grandfather's office. Here we see the doctor's work from a perspective of worshipful adoration.

This book honors the author's grandfather, describes the sometimes difficult life of a doctor in the western frontier, and offers views into the early days of Idaho's Sun Valley, capturing much of its history and character. ⊗

new & noteworthy

Luna Sea by **Kim Roberts '82** 2012 :: Aloha Jones, harbormaster at Lahaina, Maui, investigates the murder of a local troublemaker in this mystery set in Hawaii and filled with sharks and funky characters on the dark side of paradise. ⊗

The Boys From Ireland: An Irish Immigrant Family's Involvement in the Civil War by **Neil W. Moloney '53** 2012 :: In this historical fiction, a group of dispossessed Irish immigrants find themselves embroiled in America's Civil War, enduring poverty, starvation, and the loss of family members. ⊗

Biodesign Out for a Walk by **Lowell Harrison Young '72** 2011 ::

After one student questioned the broader importance of dissecting a pig, high school biology teacher Young embarked on a revolutionary class to integrate biology with inquiry into the physical, mental, and spiritual nature of humans. The resulting explorations, which included following John Muir's path through Yosemite, led to insights for the teacher and a new kind of education on biodesign for the students. ⊗

Characterization of Biomaterials edited by **Amit Bandyopadhyay and Susmita Bose**

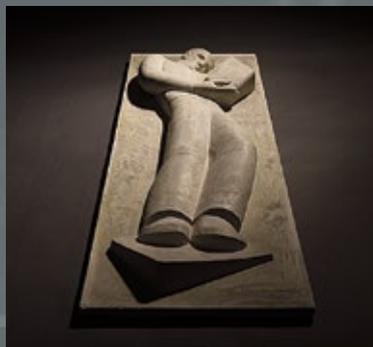
ELSEVIER, 2013 :: Biomaterials researchers come from a wide variety of disciplines: biology, materials science, tissue engineering, chemical engineering, mechanical engineering, chemistry, and physics. This reference book, edited by two WSU mechanical and materials engineering professors, offers a general guide to analyze and comprehend the characteristics of different biomaterials. ⊗

A small discovery

by Julie Eckardt '13 :: The giant limestone statue fondly nicknamed “Nature Boy” by Washington State students in the late 1940s was recently reunited with his four-foot-tall scale model.

The plaster maquette was created by sculptor Dudley Pratt as a preliminary step in carving the larger, 25-ton limestone statue that has hung on the west wall of the library since 1949. The model had been at the Cathedral of St. John the Evangelist in Spokane almost since the late 1940s when it was given to WSU Board of Regents member Charles McAllister. He was dean to the cathedral at the time and hung it on the wall of the library in the cathedral deanery where he lived, says Anna Wheatley, interim development director for libraries. When the cathedral was renovated in 2007, the maquette was put into storage, where it was recently found by a church employee.

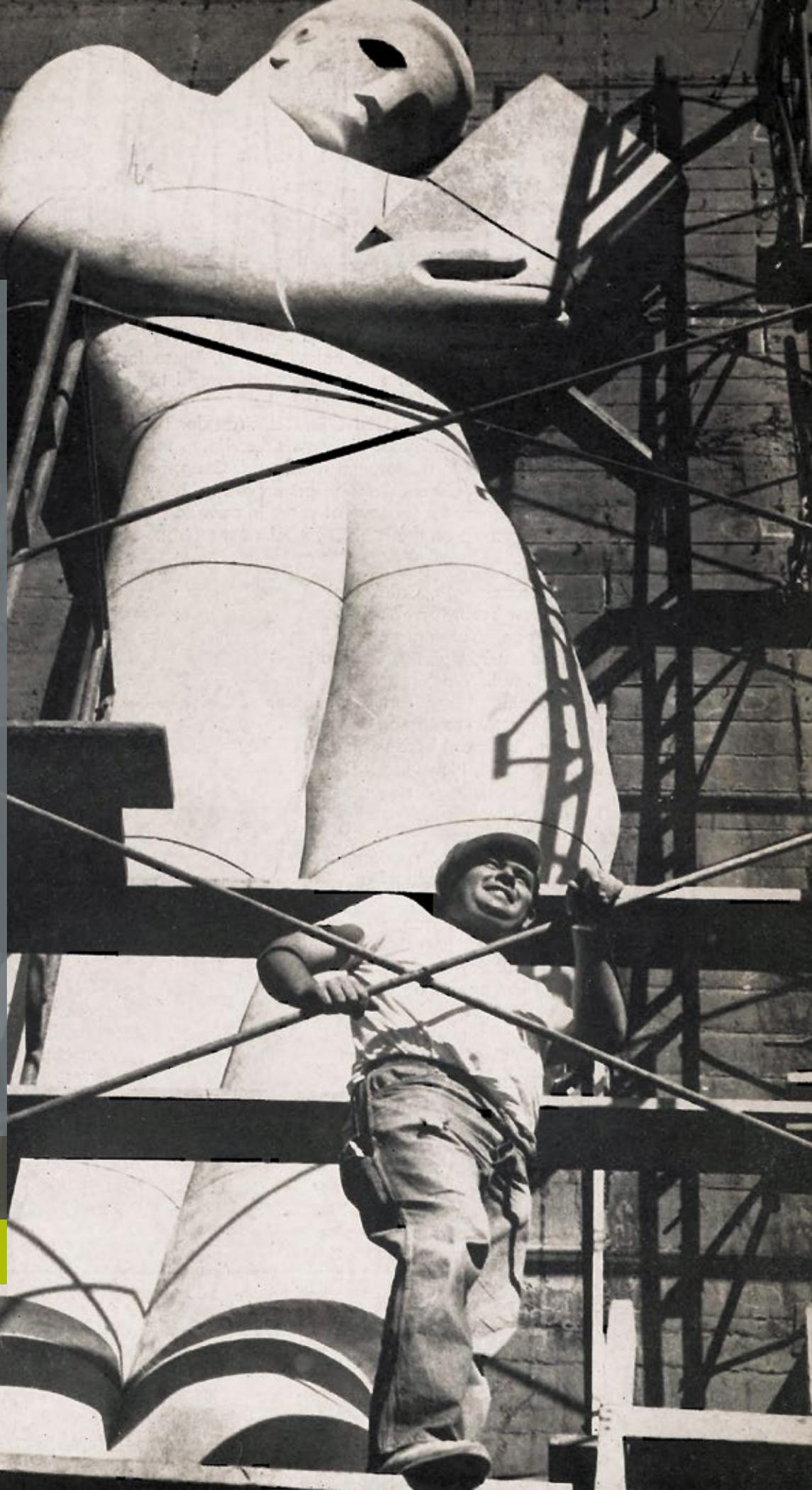
Wheatley brought the model back to campus, where it will be displayed in the Quiet Study Lounge, to the immediate right of the library entrance.



This page: The statue as featured on the cover of the November 1949 *Alumni Powwow*. **Inset:** Model for “The Reader.” Photo Robert Hubner



Read the original article about the sculpture at wsm.wsu.edu/extra/Nature-Boy.



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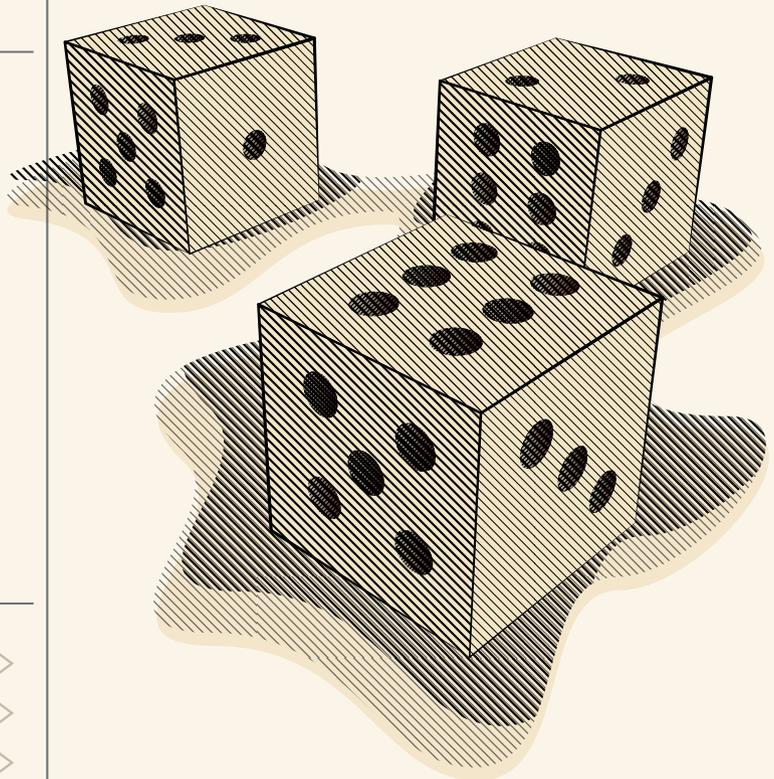
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