GROWING UP IN A STATE THAT FOSTERS BELONGING

ALSO

:: MA CHINE IN THE CLASSROOM
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State of Wonder
GROWING UP IN A STATE THAT FOSTERS BELONGING
FEATURES
24 :: State of Wonder—Growing up in a state that fosters belonging
A childhood spent in Washington has never been better. Our abundant natural resources, our trove of teachers and volunteers, and our commitment to child development make this a great state to grow up in. by Hannelore Sudermann

31 :: Machine in the Classroom—New tech tools engage young scientists
Teaching with new technology may involve a microscope app for an iPad or an affordable circuit board for a budding engineer. School children have some exciting new tools with which to conduct experiments and explore their worlds, but now teachers have to decide how to use them. by Larry Clark ’94

37 :: Lost Highway—John Mullan closed the last link of the Northwest Passage and vanished from history—until now
More than 150 years ago, a contingent of road builders and a military escort set out on a rugged pilgrimage to build a wagon highway across the Rocky Mountains and into the west. Historian Keith Peterson ’73 has traced the tumultuous life of the lead engineer John Mullan and, in the process, uncovered some fascinating facts about what is now known as Mullan Road. by Eric Sorensen

PANORAMAS
9 Charting the course of a globe-trotting pathogen
11 Sex, drugs, and differences
12 The time in between
13 A matter of taste
18 The scoop on Ferdinand’s murals
19 100 years of the Bookie

DEPARTMENTS
3 FIRST WORDS
6 POSTS
7 WHAT’S NEW?
14 IN SEASON
30 A salmon runs through it
44 CLASS NOTES
46 IN MEMORIAM
54 NEW MEDIA
56 LAST WORDS

TRACING
45 Tom Norwalk ’75—Visit Seattle
47 Tim Mills ’93—Hotels and history
48 Cori Dantoni ’93—Art and whimsy
50 Allison Helfen ’89—A crush on local wine
53 Alumni news: Lewis Alumni Centre “re-barn”

On the cover: Milky Way galaxy over Mount Rainier from Sunrise Point—meteorites show up as streaks of light. This image was a winner in Smithsonian magazine’s 30th annual photo contest. Photo by Chris Mierau. See the entire image at wsm.wsu.edu.
As spring surrenders to summer, so must we yield our state to its youngest residents, approximately 1.15 million children and teens who will soon take over our communities, yards, pools, beaches, and parks.

One of my early memories is of exploring a campsite on Mount Rainier. I remember roaming around the spot on a cool June morning, exploring a paved road dusted with pine needles and peering into the wet shadows of the woods. Laced into my first hiking boots, I followed my parents along the Sunrise Nature trail, an easy 1.5 mile loop that took us through lush alpine meadows and gave us views of our state’s iconic mountain.

My fellow editor Larry Clark grew up on the opposite side of the state. But he has similar memories of exploring the woods around Newport with his dog Sport, fishing and rafting along the Pend Oreille River, and hunting for huckleberries, contending with stinging nettles and a mad badger.

Though we spent our childhoods on different sides of Washington, one of us in a city and the other in a rugged rural community, we’ve had similar experiences and feel similar attachments to this most amazing state. What a great place Washington is to grow up in!

“You sort of belong to a place and the place belongs to you,” says John Lupinacci of the College of Education. His expertise is in place-based learning, but he has expanded his inquiries to reflect on how Washington’s unique landscape fosters a deeper connection to the natural world.

In this issue we try to recapture the promise of a long summer ahead, new places to explore, and the wonder that is Washington. We do that through our University, at once a microcosm of the state with students and alumni from every corner, and a conduit to it with the extension of its research and education throughout. As the magazine’s new editors, we accept the challenge to tell the stories of our faculty members’ passion for their fields, the pride in their students. We also promise to follow our students and alumni on their adventures into the state, region, and world.

Eric Sorensen introduces us to an alumnus historian and transports us back more than a century to tell the story of the man who built the first wagon road from Montana into Washington.

In his feature story, Larry Clark focuses in on several alumni entrepreneurs who are creating new tools—like a device to tie a microscope to an iPad—to help students see more deeply into the world in front of them. And with kids’ constant state of wonder in mind, our newest writer Nick Deshais brings Dr. Universe, our intrepid feline guide, back to WSU to continue her important work finding the answers to their intriguing questions.

After working in California, living in Washington, D.C. and Belgium, and finishing graduate school in Illinois, I was delighted to come back to Washington for a job in journalism. Larry’s path took him to New Mexico, Oregon, and Japan. But he, too, moved home to Washington, where he and his wife Jenna would start their family. “We’ve been gone long enough to appreciate how amazing it is to live here,” he says. “This is where we want our children to grow up.”

Whether you’ve spent your life in Washington, or were settled here for your years at the University, you must share this feeling of belonging.

Hannelore Sudermann, Content Editor

wsu.edu
BECAUSE THE WORLD NEEDS BIG IDEAS

When you support scholarships, you enable first-generation graduates to dream big.

I am: Jairo Torres, a May 2014 graduate in biological sciences.

My dream: To educate people about health. When I become a physician’s assistant, I hope to develop personal relationships with my patients and encourage them to maintain healthy lifestyles.

Next step: Now that I’ve graduated, I’m focusing on getting into a physician’s assistant program. I will forever be grateful for how WSU embraced and prepared me for this.

Read Jairo’s full interview: campaign.wsu.edu/impact/jairo

Three Great Ways to Belong to One Great Organization.

There are over twice as many members of the WSU Alumni Association (WSUAA) today than there were just a few short years ago. They joined to support student scholarships, take advantage of all the incredible member benefits, and connect with other Cougars. We extend our thanks to all the alumni, students, friends, faculty, 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 now Platinum Life Members.

New: Platinum Life Membership.

Platinum Life Membership is the newest way to belong to the WSUAA. It was suggested by and created for Cougs who want to help the WSUAA do even more for WSU. Platinum Life Members enjoy all the same great benefits and services as Annual and Life Members, plus 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—regardless of which type—is vital to the continued success of the WSUAA and WSU.
Recollecting Washington’s Landscape

Tim Steury’s article “Mountains and Rivers and Prairies Without End—Recollecting Washington’s Landscapes” is a great read for this student of all the arts about. But the narration also brought back fond memories of places and people significant to me. As a WSC freshman in 1956 I hitched a ride with Ed Chapman, who was a senior at that time. From our farm near Port Ludlow back to Pullman after the between semester’s break. Then in 1988 my wife Louise (Morse), WSC ’59, and I took a class in anthropology of the North Cascades taught by Bob Mierendorf. That class in anthropology of the North Cascades taught by Bob Mierendorf. Morse, WSC ’59, and I took a class in anthropology of the North Cascades taught by Bob Mierendorf.

To get to Stehekin, where Bob taught the class, we hiked over Cascade Cascades taught by Bob Mierendorf. Bob affirmed our assignment of the class in anthropology of the North Cascades taught by Bob Mierendorf. Morse, WSC ’59, and I took a class in anthropology of the North Cascades taught by Bob Mierendorf.

At Cottonwood. Bob affirmed our assignment of the class in anthropology of the North Cascades taught by Bob Mierendorf. Morse, WSC ’59, and I took a class in anthropology of the North Cascades taught by Bob Mierendorf.

We also welcome your letters and comments at wsm.wsu.edu/contact and at the bottom of every article online.
Charting the course of a globe-trotting pathogen

by Eric Sorensen

For more than half a century, West Nile virus was someone else’s problem. The mosquito-borne pathogen was first isolated from a feverish human in 1937 in northern Uganda’s West Nile district. It then lay low for a decade before emerging in an actual epidemic in Israel in 1951. With several Egyptian outbreaks in the early ’50s, researchers started to see the disease infect non-humans, particularly crows and horses. Mosquitoes of the Culex genus appeared to be its chief transmitter, or vector.

By the time the virus hit the United States, in 1999, it had taken on a more sinister character. Where before it mostly struck children, giving them feverish symptoms, it was now hitting older people. About one in 150 of those afflicted got central nervous system maladies like encephalitis and meningitis, and more people were dying.

Its arrival was like a sequel to Alfred Hitchcock’s The Birds. Birds started showing up dead in New York, and eight people in a 16-square-mile section of the borough Queens were diagnosed with encephalitis. By summer’s end, 53 people had acute cases. Only three years later, North America saw the largest outbreak ever recorded of West Nile meningoencephalitis, the form that invades the brain and swells the brain lining. The virus reached the Pacific Coast. An infected human in Washington state was reported in 2006, after which only a few people were diagnosed each year, with the exception of 2009, which had 38 cases. But a curious trend appeared in the detection of infected mosquitoes, birds, and horses: Almost all were in Yakima County and its surrounding agricultural counties.

Enter Jeb Owen and David Crowder, Washington State University entomologists and, in the parlance of a Pacific Science Center exhibit, “disease detectives.” Owen is also a disease ecologist, tracking infection through the living landscape.

Until now, researchers have had a hard time charting the interplay of West Nile’s hosts, victims, and the worlds they inhabit. But one day, Owen and Wade Petersen, ’09 MS, were looking at several maps when something jumped out. There is a U.S. Department of Agriculture map of irrigated agriculture in the Pacific Northwest—Petersen was looking for water sources that could support juvenile mosquitoes. They also have a map of West Nile virus cases.

As the disease progressed, Owen and Crowder noticed a pattern. Mosquitoes infected the fields, and the virus hitched a ride on the birds that ate the insects. But why did this happen in Yakima County—and nowhere else? Owen and Crowder decided to find out.

The road to a solution

The mystery of how a pathogen with a simple life cycle could multiply in such a controlled environment has puzzled researchers for years. Owen and Crowder believe they have identified the key: a pathogen that can “play it safe” in its vector and then go on the offensive in its host.

Owen and Crowder are working with an army of volunteers to get a better understanding of West Nile’s behavior in the Pacific Northwest. Their research has been validated by the Washington State Department of Health, which has repeatedly cited the outcome of their work as a driving force in reducing the impact of West Nile virus on public health.

The challenge of West Nile virus is far from over. But with better understanding comes hope for a brighter tomorrow.


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THE POWER OF CRIMSON.

Highly ranked academic programs.
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Just a few reasons why some quarter-million students in the past 124 years have achieved future success by earning a degree at WSU.
They are, in Owen’s words, “totally congruent.”

Right then I thought, “There’s something going on with regards to agriculture.” This has been seen in other parts of the country. But paired with this, it becomes something else. If you looked at all the patterns in the other states, you would have predicted the virus would quickly sweep the state. But it never did. It would flare up and then flame out. It never really became established, until the last few years, which was always perplexing.”

The species of mosquitoes and birds that can be affected are found everywhere in the state, but they tend to carry the virus in just four counties.

“So there was something special about those counties that we were trying to explain,” says Owen.

Owen asks undergraduate Emily Martín ’13 to plot the average of irrigated land against the prevalence of infected mosquitoes. He also pondered three pools of data on mosquitoes, infected horses, and infected people. The data on infected people is notoriously unreliable, though, as the numbers are small, only one in five infected people show symptoms, and they could be getting infected outside the county where their illness is reported to health officials.

The datasets confirm that counties with more land dedicated to irrigated agriculture have more infected mosquitoes. But lots of different types of agriculture are irrigating. To get a more congruent. “When we read his study,” she says, referring to Owen, “It was really intriguing and I think it worked really well with what we’re trying to show, the current science of what people are doing out there in the field.”

The notion of disease detectives is a “fun overlay different Washington state maps to see the connections between farmlands and the virus. TheOne Health approach, a focus of WSU’s Center for Current Research, the display, which runs through June, features a large photo of a smil ing Owen among a group of fellow “disease detectives.” Visitors to the interactive exhibit can overlay different Washington state maps to see the connections between farmlands and the virus. The notion of disease detectives is a “fun

Owen and Crowder speculate that a nexus
did there is in clusters of orchards and vineyards, mostly around Yakima County, with infected mosquitoes and birds and consistently warm temperatures.

“All of that is in perfect stomes of actors that allow the pathogen to get amplified and quickly transmitted into people and horses,” says Owen.

Owen and Crowder speculate that a nexus of water, warm temperatures, orchards, and vineyards provide key resources for birds and mosquitoes to live near each other. The water is necessary for larval mosquitoes, the flowering plants support adult mosquitoes, and the fruiting crops attract and feed birds. The habitat becomes a focal point for the virus as female mosquitoes pick it up from bird blood and thrive on nectar long enough to transmit the pathogen when they feed again.

“The findings, one of the most finely scaled, at the interplay of land use and the virus’s activity in key birds, were published last year in the journal PLOS ONE and are now part of an exhibit in the Pacific Science Center’s Portal to Washington State.”

The Pitz, 1249 C.E., discusses medicinal use of cannabis. Courtesy Wikimedia

Sex, drugs, and differences

by Nicolas Drake

After decades of researching gender differences in the effects of drugs, Rebecca Craft has found that females using marijuana are likelier than men to become dependent on the drug and suffer more severe withdrawals.

At the same time, females seem to be more sensitive to the drug’s pain-relieving qualities.

Craft, a Washington State University psychology professor who studies the effects of psychoactive drugs on rats, has reported these findings most recently in journals such as Life Science and Drug and Alcohol Dependence. Her work, funded in part by the National Institute on Drug Abuse, focuses on the medical side of can nabinoids, the class of drugs found in marijuana.

“We shifted to cannabinoids just in the last five years, in part because of the expanding medical use of marijuana in this country, and really in many places in the world,” Craft says.

The medical use of marijuana goes back centuries, and was first recorded as therapeutic 2,000 years ago in the Chinese pharmacopoeia commonly called Taeowin, which also described euphoria.

But about a hundred years ago in the UK, we went through this purge and it became illegal, says Craft. “And we’ve been gradually tipping our way back to, ‘OK, maybe there are some medical uses here.”

Among other things, cannabinoids have an ability to alleviate chronic pain. This is of particular note since research has shown that women suffer more chronic pain throughout their lives than men, both in frequency and intensity—even if we disregarded the experience of childbirth. Craft hopes to find another way to alleviate chronic pain using cannabinoids, which have potentially fewer side effects than drugs already approved by the federal government, such as opium derivatives like oxycodone and morphine.

The difference between male and female response to cannabinoids is as shocking as it seems. In fact, just don’t know the sexual differences in drug responses because most bio med research excludes women. A 2006 study in the Journal of Women’s Health showed that women made up fewer than 10 percent of medical research volunteers in 46-examined trials that took place two years earlier. A 2008 study published in the Journal of the American College of Cardiology found that women comprised between 10 percent and 47 percent of the subject pools in 29 separate health-related trials, even though more women than men die from heart disease every year.

This paucity of women subjects in drug trials translates to medical research, Craft says. “We shifted to cannabinoids just in the last five years, in part because of the expanding medical use of marijuana in this country, and really in many places in the world,” Craft says.

Craft, for one, thinks this is bad science. "One thing we do routinely is manipulate hormones and see if their drug sensitivities change," she says. And they do. Very frequently. What we’re finding with THC is you get a very clear spike in response just in the female hormones.

Regardless, the simple truth in cannabinoid research is there’s just not enough of it. Years

Above, left to right: Entomologist Job Owen and David Crowder. Photos courtesy Job Owen, emily Nichols, Curator, Disease detectives” exhibit, courtesy Pacific Science Center.
of political warfare over the drug, and its rela-
tionship compared to harder drugs such as
opioids, methamphetamine, and alcohol. The
feudal aristocracy was literate and eager to be
informed about these issues. The drug has
been around for thousands of years, and its
effects have been documented in various
ways. This documentary covers the history of
the drug, its uses, and its effects on society.

The documentary features interviews with
experts and archival footage that provide
insights into the drug’s history. It highlights the
complexities of the drug’s use and its impact on
society. The documentary also explores the
cultural significance of the drug in various
countries and how it has been perceived and
used over time. It provides a comprehensive
overview of the drug’s history and its
continued relevance today.

The documentary is
produced by
Panoramas
WSSM  Summer 2014

Consider the dragon
by Larry Clark ’94
With his fierce gaze
and well-built physique, Chinese
American martial artist and actor
Bruce Lee inspired John
Wong and a generation of Chinese
people in the 1970s. Lee embodied
the new image of martial arts
in Asian cinema and transformed
the perception of martial arts
in the West. His films, such as
"Enter the Dragon," "Game of Death,”
and "The Big Boss," have become
classics in the martial arts
movie genre and have had
a lasting impact on the
world of cinema.

Born in California and raised in Hong Kong, Lee moved back to the United States as a
teenager, living in Seattle for several years. While
there, he attended college, taught martial arts,
and met and married his wife Linda Emery. He
also started blending his traditional training in
kung fu with his own philosophy and belief in
fitness and nutrition to form what he would
eventually call "Bruce Lee's Way of Life.

In 1972, Lee released his first
feature film, "Enter the Dragon,"
which became an instant
success. Lee's films
quickly gained
popularity, and
his influence on
the world of
martial arts
continued to
grow. He is
remembered as
a pioneer of
modern martial
arts filmmaking,
and his legacy
continues to
inspire people
around the
world.

Bruce Lee's philosophy
of life and training
emphasized discipline,
focus, and self-improvement.
He believed in the power of
thought and the importance
of mental strength.

Lee's influence on the
world of martial arts
extends beyond his films.
He also wrote several
books and articles on
martial arts philosophy,
and his teachings have
inspired countless people
around the world.

His influence on
the world of
martial arts
remains significant,
and he continues to be
a source of inspiration
for people of all ages.
Douglas Thomas, ’87 president and CEO, Bellingham Cold Storage: In 2020, we had a sockeye fishery out of the Fraser River around the corner from us and it was the second-highest sockeye fishery catch since 1913. That was big. This year they’re predicting an even larger amount. We’ve been doing a better job as a society of taking care of our rivers and streams and creeks and storm water. And we’ve been doing a better job of fisheries management. That’s why we’ve seen the health of the fishery come back, because we’ve been more responsible with the resource.”

The fresh season is an exciting time around here. We’re working 24/7 and it’s literally all hands on deck. I’ve been in the industry most of my life and I just love being down here at 2 o’clock in the morning with boats coming in across the bay and everybody’s smiling. Sometimes people will work for six or eight weeks at a time without a day off but it’s exciting times. I’m an operations kind of guy at heart so I like getting out there, jumping on a forklift and helping out sometimes just to be in the mix. If you come in the middle of August and you come down in an afternoon or morning when all the boats are coming in, it’s a really neat experience to watch all the action going on. There will be days where there’s a million pounds of product presented to us at the dock. We’ve got to take care of that product and then the next day, another million pounds.

Bill Young, ’97 PhD, project leader, Nez Perce Tribe Department of Fisheries Resources Management: One of my main duties is to go out and survey salmons spanning areas. I’m amazed that these fish swim so far. They start out as these little tiny juveniles that we collect as part of our monitoring. They’re 3 or 4 inches long. They go out and shadepop into the stream and when they come back they’re 10, up to 20 pounds. Big. They swim hundreds of miles. Some of our sites are 6,000, 7,000 feet in elevation, these little streams where there’s not enough water to cover their backs. They make a lot of displaying early in the season and they’ll be around and try to look as big as they can. They stick their dorsal fin up and display to each other, and the water is so shallow they look like stars. In 95, there were actually less than 1,200 wild salmon that came into lower Granite Dam for the entire Snake River. That’s when I think everybody thought they were probably not going to make it. But things turned around. The ocean turned around. I think the hydro system is better at getting fish through now. And this year they’re predicting 40,000. Things are getting better but we still have a long way to go.

Jeff Vervoort, commercial fisherman, professor, WSU School of the Environment: Each summer I go up to Bristol Bay, Alaska, and work my fishing boat. What I like about it is that in my normal university job I’m thinking about countless different things at once—different projects, different collaborators, university stuff. It’s just an amazing thing to do. When you’re on the boat, there’s one thing you’re focused on and that is catching fish. And I’m by nature a very competitive person. It’s not because I want to make more money. I just like to catch more fish than anyone else, especially my friends and the people that I fish with. That is what their main priority is. I just want to catch more fish than anyone else—different projects, different collaborators, university stuff. It’s just an amazing thing to do. When you’re on the boat, there’s one thing you’re focused on and that is catching fish.
Lee epitomized a bodyscape theory that was primarily muscle in a smaller frame.

Lee's innovative, high-speed fighting technique also shook the martial arts world. Not only did he break the taboo against teaching foreigners kung fu, Lee emphasized fighting effectively over form, as typically practiced. "For Lee, it's not enough to just practice the form. He was bucking hundreds, thousands of years of tradition. He thought those forms were just fluff," says Wong. "He would argue that if you go in a street fight, these forms aren't going to help you at all."

Even though he was a successful martial arts teacher, Lee was called to Hollywood. "The film was a medium played into his entrepreneurial spirit of spreading his art to a much wider audience," says Wong. When Lee couldn't find the roles he desired in American film or television, he moved to Hong Kong. There his film struck a sympathetic chord with audiences. The movies showed Lee defeating enemies of Hong Kong Chinese: exploitative Chinese bosses, Japanese invaders, and Westerners. The films rocketed Lee to stardom at a critical time in the thawing of relations between China and the West.

Wong says Lee's films were part of the cultural exchange, with China reentering international sports competitions and the post-Cultural Revolution "ping-pong diplomacy" of the early 1970s. At that time, Lee offered a very physical embodiment of Chinese strength and national pride, but with a Western connection.

This was especially true of Lee's full-length film Way of the Dragon, says Wong. It was the only complete movie that Lee directed, starring in, and in which he choreographed the fight scenes. The movie features Lee visiting Rome and fighting the Mafia, and offered a dose of humor when Lee made fun of his own heritage to show how Chinese people needed to adapt.

Even though social change is often unbearably slow, says Wong, Lee's films serve as a powerful cultural instrument. After seeing the movies, people might find their preconceptions challenged and come away with a different view of what Chinese people are like. For Asians, he says, Lee offers an example of adapting beyond tradition, patterns, and expectations.

One example of this subtle adoption, says Wong, is Lee's switch in fighting technique in Way of the Dragon. "When he started fighting Chuck Norris in the Colosseum, he was using traditional fighting techniques, stances, and routines. And he got struck. You saw after he got struck a couple of times, he started dancing—sort of Muhammad Ali," says Wong. "He changed and in the end he beat Norris."

But there it is. And here I am in Room 150 of the Food Science and Human Nutrition Building on the Pullman campus, one of eight panelists who was tested to see how we'd rank the plastic and the burnt rubber. We were trying out "control" scents, attempting to agree on how to rank the plastic and the burnt rubber components, just two of ten parameters we'll smell and taste for. McMahon tells us he has been trying out "control" scents, attempting to agree on how to rank the plastic and the burnt rubber components, just two of ten parameters we'll smell and taste for.

But there it is. And here I am in Room 150 of the Food Science and Human Nutrition Building on the Pullman campus, one of eight panelists who was tested to see how we'd rank the plastic and the burnt rubber. We were trying out "control" scents, attempting to agree on how to rank the plastic and the burnt rubber components, just two of ten parameters we'll smell and taste for. McMahon tells us he has been trying out "control" scents, attempting to agree on how to rank the plastic and the burnt rubber components, just two of ten parameters we'll smell and taste for. McMahon tells us he has been trying out "control" scents, attempting to agree on how to rank the plastic and the burnt rubber components, just two of ten parameters we'll smell and taste for.

And in this sensory lab, my fallible tongue, nose, and mouth try to communicate my subjective perception to the e-tongue's France-based manufacturer. "The human tongue can tell you if something is citrus, but the e-tongue can tell you if it's fruity," says McMahon.
The small group has a rare opportunity to explore the empty halls and rooms. Some of the project’s planners and designers and I start our tour in the first-floor room where Ferdinand’s opened in the 1940s, and where a few rare glimpses of the first Ferdinand’s murals can be found. We can see disoriented patches of images straight from the children’s book illustrations of The Story of Ferdinand.

Simply painted in brown and white, an image of a baby bull named Ferdinand and a list of text on a tan background peek out from one wall. Several emails, phone calls, and a look into the University’s archives suggest that in 1941–1942, the first cow left the painting of the second artist. We also have to agree on them, just as Ross was saying. We all have to agree on the design of the training, getting people to agree on what an attribute is and its perceived intensity.

Still, with every sip I can’t help but feel I’m competing with the tongue, that my favored human tongue will never win against the machine next door. Dioko doesn’t discount that thought. If we have objective measurements of what we are looking at, then this can be disseminated into industry, for the farmers and grape growers so they can tailor their activities to what they want to optimize,” he says. “That way we can also get authentic information. I’m not saying the sensoryhuman isn’t authentic, but...” He laughs without finishing his thought.

The first Ferdinand’s Ice Cream Shoppe in Troy Hall with its original murals featuring images from the popular children’s book The Story of Ferdinand. Courtesy WSU Creamery.

Putting the paintings on panels made it easier to clean and manage the walls in the small shop in Troy. They served their purpose into the early 1980s. But when Ferdinand’s moved from Troy Hall to the Food Quality Building in May of 1982, there was no room for them. Instead, an even smaller, newer version of the Ferdinand story was put up. And the old plywood paintings were stacked away. But not forever.

In 2000, the current manager of the creamery found the panels in the basement of the Food Quality Building. “I thought it would be a real waste for people not to see them,” says Russ Salvaha. “Then three or four years ago as I was waiting past the Food Science office I noticed these big empty spaces on the walls. So I talked to the School of Food Science and asked them if we could put the panels up there.”

Three of the four walls were once covered with the murals, but then they were all but erased thanks to a remodel of Troy Hall during 1970–1973. According to Marc Bates, who managed the creamery from 1974 to 2000, “parts of that remodel caused new pipes and conduits to be routed through the ceiling area of Ferdinand’s, causing damage to the original murals.” To mask the damages, a false ceiling was built, which then covered more of the murals. Rich Brim ‘77 took photographs of what remained of the original murals before they were nearly covered over with further improvements. These images were the inspiration for yet another painter to transfer the story onto the pieces of five large panels of plywood.

The old Bookie’s coffee shop, with its soda fountain and high-backed booths, attracted droves of students seeking coffee or Cokes and company. It was a de facto student union before an official one, the CUB, was built after World War II. A 1914 Dresses store reported the shop sold 600 cups of coffee an average day.

The original store sold pennants and other spirit gear, just as the current Bookie sells Cougar clothes and paraphernalia. The Bookie also continues its tradition as a coffee and meeting place, only now with a Starbucks inside the bookstore.

Around a table were Leslie Martin, Bookie manager and an employee for 17 years,íflects with the SBC board chair and doctoral student Richard Liu and undergraduate director Lindsey Elihart on what the Bookie means for WSU’s students. “With its books and online stores, the role of the college bookstores changes all the time,” says Martin. But the Bookie has always been focused on giving the students money by finding the lowest-priced textbooks and, now offers a textbook rental service, she says. Students also still receive a 10 percent discount on all textbooks. Even though book seller Barnes & Noble, Inc., now manages the store, it has always been owned by students. The Bookie returns a 10 percent dividend to the student body, says Elihart, a senior in finance. Last year, the SBC gave $80,000 to the Associated Students of WSU, which used the money to install traffic lights and decorate the campus. At Auburn University College, the Bookie is the students’ student-owned bookstore which is run by students. It has the most students students of WSU with $80,000. The Bookie also continues its tradition as a coffee and meeting place, only now with a Starbucks inside the bookstore. In honor of a hundred years of service, the student-run SBC board presented a $100,000 dividend to the WSU’s student body. And in April, the Bookie staff handed out free ice cream, baseball caps, baseball caps, and baseball caps, fancy fountain pens, and frozen treats. But many former students remember best those iconic Bookie bags, the Cougar gear, and the coffee. Even though the Bookie doesn’t hand them out any longer, many also remember those crisp Bookie bucks that filled their wallets at the end of each semester when they sold back their books.

In April 1914, the Associated Students at the college voted to invest $1,000 into a co-op bookstore on campus which would sell books, supplies, and, as an Evergreen ad from that year noted, “hot chocolate, milk-shakes, ice cream, soft drinks, and sandwiches.” The Students’ Book Corporation (SBC) became an instant hit for students who saved 10 percent on all student supplies. The original Bookie operated in a small wood-frame building on the present site of Wilder Hall until 1923, when a new brick building was constructed next to the music conservatory and financed by the Associated Students for nearly $30,000. Larger two-level red brick bookstore was erected in the same location in 1954. The Bookie remained there until 2008, when it moved into its present location in the remodeled Compton Union Building. Now there are also branch Bookies at WSSU, The Cities, Spokane, and Vancouver.

The scoop on Ferdinand’s murals

by Bailey Badger ‘14

Visible clouds of breath hang about as we look upon the remnants of the original murals of the Ferdinand’s ice cream shop once located in the now deserted Troy Hall. The first home of the dairy department, Troy is in the middle of campus and in poor condition. Roped off for safety, this 1920s brick structure has been on the University’s capital planning radar for safety, this 1920s brick structure is in the middle of campus and in poor condition. Roped off for safety, this 1920s brick structure is in the middle of campus and in poor condition.

While the students and designers and I start our tour in the first-floor room where Ferdinand’s opened in the 1940s, and where a few rare glimpses of the first Ferdinand’s murals can be found. We can see disoriented patches of images, “Three of the four walls were once covered with the murals, but then they were all but erased thanks to a remodel of Troy Hall during 1970–1973. According to Marc Bates, who managed the creamery from 1974 to 2000, “parts of that remodel caused new pipes and conduits to be routed through the ceiling area of Ferdinand’s, causing damage to the original murals.” To mask the damages, a false ceiling was built, which then covered more of the murals. Rich Brim ‘77 took photographs of what remained of the original murals before they were nearly covered over with further improvements. These images were the inspiration for yet another painter to transfer the story onto the pieces of five large panels of plywood.

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sports

WSU hosts three major volleyball camps in June and July. The first brings in girls from first to sixth grade and introduces them to the basics of volleyball before starting them in team play. "If it’s their first time over, they look at it and they’re like ‘we have to do that,’ you’re talking about,” says Katie Hinrichs, director of operations for the volleyball program as well as camp coordinator and former camper. “The student athletes break it down for them. It’s really fun to watch, and really good for the student athletes as well.”

The second camp is an overnight experience for middle and high school students. They live in the dorms, eat at the cafeteria, and over three days have 27 hours of instruction in morning, afternoon, and evening sessions. They also attend “chalk talks” where the coaches explain the recruiting process and offer some basic ideas about nutrition, strength, and conditioning. They may not be destined for Pac-12 play, but there are schools for everyone, says Hinrichs. “We tell them out to reach out to different schools.”

The camp focuses on basic ideas of hydration and a healthy lifestyle, including getting plenty of fruits, vegetables, and protein, says Hinrichs. “We teach them how to be learning something.”

The third camp is for high school girls. Nearly 200 students from Washington pour into Pullman for the team training and tournaments. Plays from specific high schools come together to work on not only their individual abilities to spike, set, block, tip, dig, and serve, but to build their teamwork. Nearly 220 teams from Pullman, Moscow, Montana, and the west side of Washington pour into Pullman for the team sessions. “It’s a great experience before the start of their high school season,” says Hinrichs. “We give them tools they can take home and use at their high school athletics.”

Greeny, the excitement of being a high schooler around the college players was unbelievable. “It was just such a fun experience to watch them demonstrate the skills and have them coach us,” she says. That first year, she landed on the top team, was led by assistant coach Melissa Fairbanks, was ushered to consider pursuing volleyball in college, and even talked with her dad about it. “That was my first time imaging that volleyball would even be an option,” says Greeny. She was highly recruited in both volleyball and basketball, but had played basketball a really long time and volleyball was sort of new to her. It was an exciting sport and she enjoyed the coaches, she says. So her first college decision was volleyball, and her second was to pick WSU. “We got four years with the Cougars,” she says. Then, smiling slyly, “I got four years with the volleyball team,” she says. Then, smiling slyly, “I got four years with the volleyball team,” she says. 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Our State of Wonder

A MILKY WAY PANORAMA NEAR WATERVILLE

— PHOTO JOSH TARR

WSM  Summer 2014
Growing up in a state that fosters belonging.

Do you remember the Wheedle on the Needle? Or watching Bill Nye the Science Guy? Did J.P. Patches wish you happy birthday through his cardboard TV? Maybe you hiked in a rain poncho. Or busted a mutton. Or learned to ski in the sleet at Snoqualmie or on the waters of Moses Lake. In spite of the cold, you swam at Nat Park, in the Sound, or Lake Roosevelt, or Lake Chelan? Do the words Orkila, Kiahanee, Seymore, or Na-Bor-Lee conjure up memories of shouted songs around campfires?

Then you grew up in Washington.

Consider yourself lucky. Wild, storied, and wonderful, our state is a great place to grow up. Our abundance of natural resources, our great cultural offerings, and our remarkable capital of teachers and volunteers make Washington the perfect place to explore and play.
PLACES TO PLAY
Alex is the second to arrive at the Child Development Program classroom on the Pullman campus. The five-year-old doffs his coat, washes his hands, and beelines to the building blocks.

“Tin, you’re out!” he hollers, as he jumps out of his seat and runs to the blocks. “I’m going to build an airport. Will you help me?” he asks WSU student Erin Flanagan. She sits on the floor with him and as they line up the blocks, she adds to the game with questions like “How long will the runway be?” and “What will land here?”

Meanwhile, three-year-old Sam, the first arrival, is up to his elbows in a sand table that has been seeded with little plastic dinosaurs. Clementine soon strides through in pink boots, her ponytail swinging as she hunts down a book on shapes. Three other children have moved into a play area beneath a “Doctor’s Office” sign and put stethoscopes around their necks to examine WSU student Ashana Hitchens.

“This is free choice time,” explains Adair Lawrence, director of the center. “The children are making choices about what to explore and play.”

Using the fundamentals of child development as defined by Jean Piaget, Maria Montessori, John Dewey, and Lev Vygotsky, the student teachers are exploring their charges’ social interactions. They’re watching the three- to five-year-olds self-direct their learning and discovery. And, most importantly, they’re helping them play.

“At this age,” says Lawrence as Clementine zooms by again, “it’s all play.”

Play is vital to the developmental process, says Brenda Boyd, associate professor of human development who oversees the student teachers at WSU’s 70-year-old teaching classroom. “It’s really the quintessential professor of human development who oversees the student teachers at all play.”

“Most importantly, they’re helping them play. They’re playing with the children and helping them play, they’re interacting with them, they’re asking questions of them,” says Lawrence,

Play starts with the infant and toddler’s early explorations, evolves into pretending, and then becomes games with rules in middle childhood. Children today, particularly in certain environments and certain neighborhoods, may not have the time or ability to play freely, says Boyd. Joining teams or having structured play dates doesn’t fill the bill, either. They need time outside.

“I like to believe life in the Palouse is great for kids,” says Boyd, reflecting on where her own children liked to play. “Here they have the chance to be outside on their own and do what they do.”

The WSU child development program is a window into what has become a statewide governmental emphasis on early childhood, that time from infancy until school.

“Our state recognizes that early childhood is a critical period in terms of brain development and it cannot later be replicated,” says Jane Lanigan, an associate professor at WSU Vancouver. Besides needing good health care and optimal nutrition, children at this stage need a variety of learning experiences and physical activity.

“Washington even has its own Department of Early Learning,” she says. The state agency looks to prepare parents and child care providers as those first teachers. The director serves on the governor’s executive cabinet.

What’s more, Washington was one of the first states to win a federal Early Childhood Education and Health and Human Services to improve early learning settings. The practices of interactive play and the efforts to develop the mind and motor skills that take place in the classroom in Pullman are being used throughout the state in child care and Head Start through a program called Early Achievers.

Using the federal grant, Washington is taking its research-based program for rating and improving early learning settings statewide. “It’s a big deal that we got that money,” says Boyd, explaining that it will go far in improving the quality of life for our youngest citizens.

A big component of the program is ensuring that the children have plenty of free play and time outdoors. That does several things for children, says Lanigan. “It gives a connection to nature, it allows them to develop their gross motor skills ... and the physical activity allows them to explore what their bodies are capable of.”

Recently, Lanigan’s research on healthy activity and eating in child care settings was used in expanding First Lady Michelle Obama’s Let’s Move campaign beyond its initial focus of school-aged children to include preschoolers and younger. We’re only now recognizing that “habits are formed in early childhood around being active or being sedentary,” says Lanigan. “And eating tends to carry through until middle childhood.”

The challenge is that the age group, which isn’t yet in school, is much more difficult to reach, she says. That is why efforts like our state’s early learning emphasis are so important.

Planes and trains: SCOTT VANDERWEY/WSU

NATURE IS THE BEST TEACHER
Beyond offering our youngest citizens a good start, Washington is striving to cover the full span of childhood. Scott VanderWey, WSU’s director of Adventure Education for 4-H oversees programs to get grade school- to high-school-aged Washingtonians outside.

Washington has three national parks and 117 state parks. People here grow up riding bicycles, climbing trees and mountains, canoeing, rafting, skiing, swimming, and sailing. Recognizing this, cities and counties throughout the state have, through their parks, programming, and funding, made great efforts to get Washington’s children outside to explore. Says VanderWey.

In 19 of the state’s 39 counties the 4-H programs include ropes courses in city parks, sailing in the San Juans, back country hiking in the North Cascades, and snowshoeing in Ferry County.

At Camp Long, a 68-acre Seattle park with forests and cabins, kids can not only get into the woods, but up in the trees. Comprised of high platforms and nests of ropes, the camp’s high and low ropes courses were built by WSU Extension, King County, and the Seattle Department of Neighborhoods. Last year, the courses served 2,500 children ages nine to 19. This year, it hopes to bring in 4,000.

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WASHINGTON'S classrooms are filled with museums, science outposts, festivals, zoos, and theater programs, all created with kids in mind. Seattle's scrappy city and volunteer-supported, child-focused Poncho Theater of the 1970s and 80s has evolved into a stunning Seattle's Children's Theater, one of the top five children's theaters in the country. It's just next door to the Pacific Science Center which for the past half-century has lured thousands each month to its wide array of hands-on science exhibits.

Tacoma's Point Defiance Zoo and Aquarium has spent 100 years at its current location and draws 700,000 visitors per year. And Vancouver's five-acre Esther Short Park, the oldest public square in the Northwest, is packed most summer weekends for outdoor concerts, a farmers market, and the picturesque wading fountain. Last year the American Planning Association named it one of the nation's 10 great public spaces.

Across the state, Spokane has the 300-acre Riverfront Park, its own children's theater, and the Mobius hands-on science museum. "But we are something if we are not a city of events," says Anne Wondishar Walter '87, a counselor at Franklin Elementary and member of the city library board. These events draw visitors from around the region, fill the streets of downtown, and are about being healthy and being outdoors.

Bloomday, the world famous spring-time running race through the city, has a "Marmot March" fun run for second graders and younger, and recently introduced a one-mile junior version of the race for third and fourth graders. There's also an annual Fit for Bloomday program where 6,000 area elementary students can, with the help of their coaches, teachers, and parents, train to walk or run in the race.

Spokane's Lilac Festival, not unlike Seattle's Seafair and Pierce County's Daffodil Festival, highlights both the community and the natural resources and, again, draws thousands of people into the city. Seven years ago, the city added bicycle-focused Spokefest, a family bicycling festival featuring rides from nine to 47 miles, with a much smaller one- to two-mile loop for the youngest bikers. During each of these events, Spokane surrenders its streets to the families who come to participate, says Walter.

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But what better city than Spokane for such an event? "It's the geography of the place and the mindset of the people," says Kelly. "We felt a lot of love coming from the smaller communities. And here in town we had so many willing volunteers.

Spokane is a good mix of neighborhood and city with just enough cultural and natural resources to provide children with rich experiences," says Walter. She and her husband, writer Jon Walen, grew up in Spokane. "We have chosen to stay where we are and raise our kids because of the quality of life," she says. "I wanted my kids to be able to play outside, to experience a community in a town where they can live and contribute. But it's large enough that they do experience the world here, too."
A STATE THAT FOSTERS BELONGING
Whether it’s in the woods, on the beach, or in the middle of downtown, place can play such an important role in development, says John Lupinacci, an assistant professor in the College of Education who researches place-based education. Time outdoors helps children become more attuned to the ecology around them and ultimately can help them care more for their environment. And by exploring their cities, museums, and cultural events, children are deepening their ties to the places around them, he says.

As we visit in his Pullman office, Lupinacci mulls how Washington might be different from other states and then lights up. “I know a great example,” he says. “Washington has so many farmers markets. These are great places for children for a multitude of reasons. There is an intergenerational connection, and they take place around food, around farming, and around place,” he says. “People in Washington are finding ways to address food and ecology issues locally. That has to have some effect,” he says.

Lupinacci works with students training to be teachers. He also focuses on reforming education to make it situational, local, and in support of living systems. He’s finding that the two parts of his work are overlapping in interesting ways. “It used to be that you grew up, you went to school, and then you moved away to find success,” he says. But now many of his students are intent on not just staying in Washington, but on returning to and serving the communities where they grew up.

“There’s a strong connection, not just to our nature, but to our cityscapes and beyond,” he says. “That relationship of belonging sort of claims you.”

WSU students are writing, designing, and illustrating their own children’s books. Read more about the Inga Kromann Book Award at www.wsu.edu/couta/KromannAward
A familiar classroom scene, lab partners take turns squinting into a microscope. They spy a wriggling parasite, if the organism doesn’t seem to move from the field of view. These days they also peer into an iPad to watch videos and access digital textbooks. Engineers and entrepreneur Jeff Stewart sees a happily marriage between these old and new technologies in science classrooms.

Stewart and his colleagues at Exo Labs have enhanced that connection with an accessory that connects any microscope to an iPad, where students and teachers can take pictures and videos, measure objects, and quickly share observations. The device could help teachers expand students’ ability to interact with the microscope realm.

“We wanted the iPad to be a center for creating content, not just consuming it,” says Stewart ’01. “Our simple idea is to go into places that have microscopes and iPads. We’re the glue that brings them together.”

While Stewart and others create technology for science classrooms, an old debate emerges for teachers, school administrators, and education experts. Once again—with film, television, radio, and computers in their times—the educators ask, “Will this new technology hinder or help teach students? Is the expense and the learning curve worth it?”

Ambivalence toward iPads in schools around the country, now at an all-time high, turns squinting into a microscope. They spy a new company is not for the faint of heart.

Jeff Stewart sees a happy marriage between these old and new technologies in science classrooms. He says he went into medical devices and worked on a tool to predict epileptic seizures, disillusioning him. “As a means of imparting instruction to the young, the microscope has been recognized early on. An 1882 guide to selecting a microscope noted, “To STEWART. At Washington State, he learned from his mentor and professor Clint Cole ’87, ’99 MS about developing educational technology. Stewart says Cole brought relevant, practical industry experience to the startup mentality is not new to Stewart. At Washington State, he learned from his mentor and professor Clint Cole ’87, ’99 MS about developing educational technology.

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“We wanted the iPad to be a center for creating content, not just consuming it,” says Stewart ’01. “Our simple idea is to go into places that have microscopes and iPads. We’re the glue that brings them together.”

While Stewart and others create technology for science classrooms, an old debate emerges for teachers, school administrators, and education experts. Once again—with film, television, radio, and computers in their times—the educators ask, “Will this new technology hinder or help teach students? Is the expense and the learning curve worth it?”

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So Cole and former student and Microsoft engineer Gene Apperson started Digilent Inc. to build their own circuit boards and sell them for $49 to $99, bringing them into the range of not only college students and universities, but also hobbyists and high schoolers.

“We started about 14 years ago, and within about four or five years we became the nation’s leading supplier of digital design kits,” says Cole. “We now have a broad range of kits that appeal to students who want to learn electronic or computer engineering.”

Cole pulls another device from the shelf. It’s a digital oscilloscope and logic analyzer, a combination of two basic measurement tools for electrical engineers. Like Stewart’s combination of iPad and microscope, the new device builds on old technology and makes the measurements accessible by using a computer as the interface. An oscilloscope displays electrical signals over time. The earliest ones were built in the 1870s. A logic analyzer does similar work with signals from digital circuits, registering multiple signals simultaneously. Both tools enable engineers to determine if circuits and electronic devices are working correctly.

“Together on a bench, this would replace a huge stack of devices that cost a couple of thousand dollars used on eBay or up to $20,000 new,” says Cole. “It takes thousands of dollars of equipment to see this 30-cent circuit works.”

Smaller than a DVD case, the new analyzer sells for $99. It connects directly to a computer, where an engineer or student can see the circuit working correctly.

More: Digilent, the company behind the oscilloscope, recently released a new model that monitors 128 signals simultaneously and can be used to analyze signals from multiple devices. The new device, called a logic analyzer, allows engineers to see how different parts of a circuit interact.

The key, says Lamb, is students learning and directly applying knowledge. Reflecting on his experiences teaching with the iPad and microscope connection, he says, “As a science teacher I can see giving students an unknown specimen they can examine together, and collaborate in their material. Children are natural scientists, because it’s about understanding the world.”

Technology provides the opportunity for “soft failure,” says Lamb. Consequences for missteps in scientific experimentation are not dire, but rather they work as educational opportunities.

Some teachers may hesitate to use a “smart board,” a giant touch screen whiteboard, she says. But it could show a math problem or a science demonstration video and allow students and teacher to interact without interfering with the lesson. She has also viewed computer programs where they make sense for lessons, says Susie Skavdahl, an educational technology instructor in the WSU College of Education.

Skavdahl, along with education professor Joe Eibert and others, teach aspiring teachers how to analyze technology and choose how to apply it in their teaching.

“We don’t want our teachers using technology as a crutch, going into the classroom and relying on the technology to teach for them,” says Skavdahl. Instead teachers can enhance their instruction with the machines.

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WELL AWARE of the need to keep teachers involved with the technology, Stewart and his colleagues created an online community of science teachers to share experiments, ideas, and applications of the iPad microscope camera and accessories. The videos and discussion can help instructors better use the device, and share their successes and struggles.

Even at the beginning, says Stewart, "local teachers from Mercer Island were instrumental in helping us understand the needs of teachers. We engineers tend to apply how we want it to work. The teachers helped us understand what a good day as a teacher looks like and how to engage students."

Teachers are even part of the development process for new devices through a Kickstarter crowdfunding campaign that grants devices to schools that might not be able to afford them. The teachers test the new equipment and give feedback. One successful project was time-lapse photography for the microscope camera. Stewart and Exo Labs are also working with WSU Spokane and their K-12 outreach program to get the cameras into classrooms.

Although Cole and Digilent’s products are often used in college classrooms to train engineers, having both students and their instructors find new ways to use the engineering education device is crucial.

Down the hall from Cole’s office, a large space houses cubicles and offices where WSU undergraduates, graduate students, and visiting professors design and build projects using the circuit boards, motherboards, and other tools. On top of a cubicle rests a large spider-like robot. A few feet from there, a student checks the signals from his circuits with the oscilloscope/logic analyzer device.

These projects will take you from your first touch exposure to electronics. This series of projects that you can complete on your kitchen table can guide you to acquire the skills you need if you want to be an engineer,” says Cole.

In a room downstairs, next to the warehouse, Cole shows the studio for filming instructional videos for teachers and other users. The company gives those videos, along with textbooks and experiments, to consumers for free.

“We have a liberal license for this material to let the educators of the world know it’s out there. ‘They can copy it and use it any way they want,’ says Cole. ‘We don’t put it out there for a cash flow but to build awareness and excitement.’

FOR TEACHERS AND EDUCATION EXPERTS, the peril and promise of technology and machines in the classroom present a familiar problem. Instructional time is limited, the pressure of the peril and promise of technology and machines in the classroom FOR TEACHERS AND EDUCATION EXPERTS, the peril and promise of technology and machines in the classroom present a familiar problem. Instructional time is limited, the pressure of the peril and promise of technology and machines in the classroom present a familiar problem. Instructional time is limited, the pressure of the peril and promise of technology and machines in the classroom present a familiar problem. Instructional time is limited, the pressure of

ON A MAY MORNING IN 1858, along a small creek on the northern edge of the Palouse, hundreds of warriors from several Inland Northwest Indian tribes closed in on 160 Army soldiers led by Col. Edward Steptoe. An Army retreat turned into a 10-hour running battle. Two company commanders were mortally wounded, panicking the men. At last, the troops took up defensive positions on a hillside in what is today Rosalia. As night fell, they were surrounded, outgunned, and down to two rounds of ammunition apiece.

More than a century and a half later, Keith Petersen ’73 is standing on the hillside, looking at a memorial to the battle. Frosted grass crunches under his feet. A set of displays illustrates Steptoe’s advance and retreat. “This,” says Petersen, whose grizzled beard could put him in the eighteen century as easily as the twenty-first, “came real close to being Custer before Custer.”

As it happened, Steptoe’s men muffled their horse’s hooves, buried their howitzers, abandoned their pack animals, and stole away under cover of darkness. Without a doubt, says Petersen, the Indians let them escape.

But as the spring of 1858 gave way to summer, a fundamental tension lingered like gun smoke in the morning air. The Indians did not want the U.S. government to build a road across their land. They had grudgingly agreed to the road as the 1855 Walla Walla Treaty negotiated by Isaac Stevens, Washington Territory’s first governor and supervisor of its Indian Affairs. But the treaty had yet to be ratified by Congress, making any road a tramp. Father Joseph Jpez, a Jesuit missionary who had tried and failed to head Steptoe off from his ill-fated battle, later speculated that had a road-building party been traveling across the Palouse instead of troops, it “would have been sacrificed.”

The road would come to play a pivotal role in the development of the Northwest, let alone the young nation’s aspirations. It would run from Walla Walla to Montana’s Fort Benton, an obscure-sounding route today, but the last link of the transcontinental Northwest Passage President Thomas Jefferson envisioned when he sent Meriwether Lewis and William Clark out west more than 50 years earlier. Stevens himself hoped it would be the route of a transcontinental railroad, positioning Puget Sound as the nation’s gateway to Asia.

“It’s always this drive of connecting, connecting the East and the West,” says Petersen. “That explains so much of nineteenth century American history, that connectivity between the East and the West. Well, you can say it still describes us.”

Leading the road’s construction was John Mullan, a brash, aspiring, indistinguishable 27-year-old lieutenant. The son of an army sergeant who worked at the Naval Academy in Annapolis, Mullan was educated at West Point.

Watch examples of student-produced videos with the Focus Microscope and iPad at wsm.wsu.edu/extra/microscope-ipad.

Know someone who might want to enter the 2014 Digilent international student hardware design competition? Visit digilentdesigncontest.com.

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career at Washington State University. In 1986, he jotted his first notes on Mullan, "thinking someone else would surely write a book about this guy."

But that someone turned out to be him. This May, WSU Press publishes John Mullan: The Transcontinental Life of a Road Builder. It’s the result of some five years of writing and research, including coast-to-coast travels and visits to more than two dozen libraries and archives. Woit literally had dreams about John Mullan,” Petersen says.

Along the way, he discovered a hard-edged embodiment of nineteenth-century habits and grit, a quintessentially Western tale of hubris and grit, a quintessentially Western tale of frontier logistics, leadership, brute effort, bureaucratic wrangling, and foutfulness. At which point he all but vanishes from the pages of history.

It’s hard to pick up a book about Northwest history that deals with the nineteenth century and not find something in the index about John Mullan and the Mullan Road,” says Petersen, “but it just ends. He just totally disappears from sight.”

Petersen first heard of Mullan as an undergraduate history major advised by David Stratton, now an emeritus professor after a 51-year

Mullan could have waited things out in Walla Walla but, true to his bone-deep sense of honor, the Mullan-Lockwood Company signed on as a pathfinder, and the Nez Perce, the first people to engage with the enemy. This is exciting stuff. He comes back and writes his field reports that day and says, ‘Well, I think I found a wonderful place to put my road.’ He doesn’t say anything about the battle. It’s amazing. This guy was just monomaniacal about his road.”

Wight soon made that possible. A week after their first battle, the Nez Perce and cavalry soldiers captured a herd of 800 Indian horses. Over the next two days, Wright twice slaughtered 700 of them. They also took to burning storehouses and caches and killing cattle in a pathology of destruction that anticipated Gen. William Tecumseh Sherman’s March to the Sea in the Civil War.

Then in 1877, he took the letters to President James Polk and personally secured one of the president’s ten at-large academy appointments. This included letting soldiers and settlers travel through the country under a flag of truce. He was right in the middle of it,” says Petersen. “He was leading the Nez Perce, the first people to engage with the enemy. This is exciting stuff. He comes back and writes his field reports that day and says, ‘Well, I think I found a wonderful place to put my road.’ He doesn’t say anything about the battle. It’s amazing. This guy was just monomaniacal about his road.”

Not three months after Steptoe’s humiliation, the U.S. Army sought revenge. Gen. Newman Clarke, commissioner of the Pacific Department, brought in troops from most every post west of the Mississippi River. Putting Col. George Wright in charge, he said, “You will attack all the hostile Indians you can find, killing 17 to 20 Indians and taking no casualties over four hours. Wright signed Mullan out in his official report, saying he “moved gallantly.” For his part, Mullan barely notes the battle.

after he graduated with a master’s in history, Stratton told him about a job

with state and federal agencies, helping with interpretations, exhibits, and written materials. He wrote a history of the University of Idaho and the book Company Town: Potlatch, Idaho, and the Potlatch Lumber Company. He married Mary Reed, a fellow public historian he met at a state judge social at McConnell Mansion, the Victorian home built in Moscow, Idaho, by William J. McConnell, an Idaho governor in the late 1800s. He spent most of the 1990s as an acquisitions editor for the WSU Press. With fellow Stratton student Glen Lindeman (’59 B.A. Political Science and History, 73 MA History), they put out a down or two titles a year.

When Wright set out to avenge Steptoe, Mullan had yet to see what would become of his road’s western section. So he signed on as the topographical engineer, or “tobjs.” This was no behind-the-lines clerk typist job. He was put in charge of 30 Nez Perce warriors. They wore Army-issue blue uniforms, Mullan, a model student at West Point but a free spirit in the field, wore buckskinics. The full force—600 soldiers, 100 packers and hawks, and 1,600 animals—were lined into battle by a confrontation of Indian tribes outside modern-day Spokane. This time the Army had long-range rifles, killing 37 to 20 Indians and taking no casualties over four hours. Wright signed Mullan out in his official report, saying he “moved gallantly.” For his part, Mullan barely notes the battle.

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Along the way, he discovered a hard-edged embodiment of nineteenth-century habits and grit, a quintessentially Western tale of frontier aspiration, courage, checked dealings, and bad luck.

Back in the late ’80s, Keith Petersen lived in Battle Ground, a town named for a battle that brewed but never quite boiled over. His high school history teacher, Bill Hill, in effect threw out the history textbooks, choosing instead to use local history to teach larger lessons.

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“That immense tract of splendid country over which we marched is now opened to the white man,” wrote Lt. Lawrence Rap afterwads, "and the time is not far distant when settlers will begin to occupy it.

Mullan immediately set about making his road happen. Taking an unauthorized leave, he traveled back to Washington, D.C., and won the support of Stevens, then a territorial delegate to the U.S. House of Representatives, to get an additional $100,000 appropriation from Congress. The following spring, he was back in the West, assembling a crew of 80 men and 180 oxen with a 140-man military escort.

An exultant Oregon C/O predicted the road, “will open up a direct communication between the valley of the Mississippi and Oregon.”

The word “communication” is not accidental. Before the transcontinental telegraph and railroad, let alone the telephone and airmail, roads were central to communications. While Mullan was working on his road, a letter sent from Washington, D.C., in September did not reach him until January. To be marooned in Walla Walla, thousands of miles from the news of the East, was an antiquated, months-long version of life without WiFi.

What actually constituted a road was open to interpretation. The word “communication” is not accidental. Before the transcontinental telegraph and railroad, let alone the telephone and airmail, roads were central to communications. While Mullan was working on his road, a letter sent from Washington, D.C., in September did not reach him until January. To be marooned in Walla Walla, thousands of miles from the news of the East, was an antiquated, months-long version of life without WiFi.

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In 1861, he set out on the road again, revising the early part of the route that was done with shovels, picks, saws, and black powder, according to a 1984 account from the Smithsonian Institution.

In December, as the temperature hit 40 below, the men built a garrison of log cabins and earthworks. They were 267 miles into their 242-mile effort and over budget. The Topographical Bureau wrote Mullan to say his expedition was disbanded.

But before he got the letter, Mullan sent Walter Johnson, a 23-year-old engineer, to Washington, D.C., by way of snowshoe, steamboat, and Panama crossing to appeal for more funding. Working with Stevens, he secured a second appropriation of $100,000. It helped that Mullan nonchalantly reported that some of his crew found gold, otherwise keeping the discovery secret for fear the entire crew would bolt.

Work resumed in the spring, and on July 18, Mullan reached Wallula Pass, he reported several weeks earlier. The end of the road was marked by a settlement in Walla Walla. On August 1, he set up shop, and on August 23, he set the crew to work again.

“Mullan could have met while scouting the Bitterroot Valley in 1854. He had helped reconfigure Washington’s territorial boundaries, hoping to become a territorial governor, and was outmaneuvered by William Wallace, who became the first governor of Idaho. A last-minute appeal to President Abraham Lincoln was fruitless. William Wallace, who became the first governor of Idaho. A last-minute appeal to President Abraham Lincoln was fruitless.

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The Mullans moved to San Francisco and John, having spent some five years reading the law, passed the California bar exam. Writes Petersen: "He would spend the next decade negotiating land deals that skirted both ethical and legal boundaries—a practice that brought him the prosperity he had long cherished, but at the cost of his carefully honed reputation."

He and his partner Frederick A. Hyde mastered the state’s byzantine and largely unregulated land transfer system. They hired surrogates to buy public land that they then sold at considerably higher prices. As a Democratic Party activist, he fought Chinese suffrage, claiming America’s laws were to be administered “by white men, for the benefit of white men.”

In 1878, California Governor William Irwin appointed Mullan to collect money the federal government owed the state for federal land transfers. Mullan was to get a commission of 20 percent. He returned to Washington, D.C. Hyde expanded his land dealings to Oregon and Washington, where he was later convicted of fraud.

Mullan outfitted a Connecticut Avenue home with European furnishings and servants. He was rich but overextended. Soon states started to renege on promises of payment. With hundreds of thousands of dollars at stake, Republican opponents and the press piled on Mullan as a money gruber; California’s Republican Governor Robert Waterman dismissed him. Mullan wrote a 580-page book to make his case and started legal proceedings that went to the state Supreme Court, which ruled against him.

Oregon and Nevada also withheld payments. With Mullan’s health in decline, his daughter Emma campaigned for payment, securing a fraction of what he was owed.

By 1905, Emma and May, young society women and, as one newspaper put it, “belles of many dances given in the most elegant ballrooms in the city,” had to open a laundry to make ends meet. When he died on December 28, 1909, John Mullan was broke.

“You can bet those engineers were out there trying to figure out where’s the best way through the mountains,” says Petersen. “It was Mullan’s route.”

While many people wrote the route off as a failure, says Petersen, “he was ahead of his time. The technology to keep a route through those mountains clean wasn’t available to people in the 1860s. Otherwise it would have been a success then.”

Today, the highway’s 75-mile stretch across Idaho, which Petersen calls “the most scenic and the most difficult passage,” bears the name “Captain John Mullan Highway.”

View more illustrations by Gustav Sohon that chronicle the Mullan Road and depict other scenes of the era at wsm.wsu.edu/gallery.

Opposite, left to right: Monuments to John Mullan by artist Edgar S. Paxson can be found at several trail locations in Idaho and Montana. Courtesy Idaho Arts Commission on the Arlo; Some of the markers in Washington indicating where the road passed left to right: Walla Walla, Lamont, near Cheney, Spokane, Monroe Prairie, Spokane Valley. Staff photos. This page: A section of “A General Map of the Mineral Region of the Northern Sections of the Rocky Mountains” that was included in Captain John Mullan’s “A General and Traveler’s Guide” published in 1865. The Mullan Road is highlighted. Courtesy Washington Secretary of State. Inset: Monument at Fourth of July Pass marking spot of white pine tree blaze now in the Museum of North Idaho. From Panoramio.
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a long-term funding model to support tourism in Washington state. And it has been a painful and, at times, process to get where we are. Right now, Washington is looking at a $500,000 grant and that’s just to keep the Washington Tourism Alliance going.

In downtown Seattle we see Montana billboards. They’re a great lure. It exactly what we shoot for. We want our markets to support our state. If we’re not competing for that business, we will eventually lose our market share.

What does that mean for Visits Seattle? We’ve taken on a role to support all of the state. We have six market reps around the world and spend $2.5 million a year just on marketing and, you know, it’s important because of the China, Japan, and Europe. We realize Seattle is the gateway. While we want to promote the city and King County, we always include the San Juan or the Peninsula or wine country. From an international and overseas perspective, we are definitely selling Seattle and the state of Washington.

Where are our visitors coming from?

Our number one overseas market at this point in Japan. Our number two, and growing at an enormous rate, is China. Then, would you, is the United Kingdom. We’re tracking now by credit card data from Visa. In 2012, for example, visitors from China spent $135 million in Seattle. We know that 65 percent of that was on retail. Another 14 percent was for lodging, and 11 percent spent $2.5 million a year just on marketing and sales promotion in places like China, Japan, and the United Kingdom. We’re tracking now by board. They’re a great lure. It is exactly what we should be doing in key markets to support our boards. It has been an important claim to fame.

With the Seahawks winning the Super Bowl and Macklemore winning a Grammy, Seattle seems to have grabbed some of the national spotlight this year.

Yes. It’s a dream come true to have a highly valued and cherished national champion football team that really did deliver on that promise. For us to go back to New York and to have Seattle on the news there every day and to be on every sports report, it has done an enormous amount for us. And for Macklemore to rise at this time in our country, it’s an incredible honor.

He’s the ambassador for Seattle.

 absolutes. Absolutely. Just look at the number of James Beard Award winners, the success of our startups, and the health of the industry here.

People come here to eat. And we’re just getting started. I think you’re going to see more and more that one of our strongest selling points is really our food and wine. But we can’t ever look the arts. Seattle has more performing arts per capita than most cities in the United States. Look at the 5th Avenue Theatre. It’s an incubator for Broadway-bound musicals. It’s really a unique claim to fame.

Do you run across Cougs in the wine country?

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Dantini began to lay down vintage paper and words. She sketched a pencil drawing over the paper and added ink and color. A month later, her self-taught art teacher Jon Aesoph followed. Whimsical and folk-arty, Dantini's drawings have gained an international following. Dantini's high school art teacher Jon Aesoph recognized her talent and encouraged her to pursue art as a career. “I just loved her because she would go out on a limb even at her early age that she wanted to be an artist,” Aesoph says. “The summer of 2010 had Dantini, one of four people selected in the emerging artist category at the Cherry Creek Arts Festival in Denver, preparing for her first big show. "I really started painting like mad because I knew I could only show originals," she says. "I made hundreds of paintings, and that’s how those ladies came about in the way that they are." Today, with more than 500 original paper ladies, a manager of birds, bunnies, bugs, and flowers, Dantini has sold thousands of original art pieces. Thanks to a growing number of loyal fans, her designs have gone exponentially further. For Dantini, it’s "not just something that I do, it’s who I am."

Stories all over them. Each thing that would trouble me I would throw it into one painting. It gave a lot of focus."

"My people have always been very sensitive, reflective and thoughtful," says Dantini. "I would make these paintings and I would write these stories all over them. Each thing that would trouble me I would throw it into one painting. It gave a lot of focus." Dantini says. She says the summer of 2010 had Dantini, one of four people selected in the emerging artist category at the Cherry Creek Arts Festival in Denver, preparing for her first big show. "I really started painting like mad because I knew I could only show originals," she says. "I made hundreds of paintings, and that’s how those ladies came about in the way that they are." Today, with more than 500 original paper ladies, a manager of birds, bunnies, bugs, and flowers, Dantini has sold thousands of original art pieces. Thanks to a growing number of loyal fans, her designs have gone exponentially further. For Dantini, it’s “not just something that I do, it’s who I am.”

Dantini’s whimsical drawings have gained an international following. Courtesy Cori Dantini

"I always drew... when you needed something painted on the window or a sign, I was always the kid that did that,” says Dantini. “It was the only thing I really cared about.” Dantini’s high school art teacher Jon Aesoph recognized her talent and encouraged her to pursue art as a career. “I just loved her because she would go out on a limb even at her early age that she wanted to be an artist.”

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50 tracking

been featured in Scandinavia, Israel, and Australia. It has also
Kleenex boxes. A couple fans have even tattooed
boards, clocks, mobiles, ornaments, and even
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during a darker period when she was the most
drawings. “I never know what is happening next,”
Dantini says with a laugh. “I just show up and see what happens.”

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blessings. They need shops like The Wine Alley to sell their wines outside of their winery. There are not a lot of any of those grapes out there," says Helfen. "They could make just 40 cases, maybe, of one in a year. And they come to us to help sell them."  

Right now, Helfen herself is in whites. But those too are changing. With sweet Riesling hocking court for solving, dry and off-dry Rieslings have moved into the Northwest palate. "They’re such great wines," she says. "They pair well with food." And, as we tour her little shop with her apricot-colored walls and small tasting space at the back, she has to mention the current rise of the dry rosé. "They’re so good. People used to us to find them year-round."

Helfen vances her customer’s preference at her weekly wine tastings. Even if people don’t sample at her shop, she urges them to seek out local tasting events. "You don’t have to spend any money," she says. "There’s 10 different wines every week. It can really expand your palate.

Her own opened parlor hailed her fate into blends, which they like for their complexity and harmony. "I pride blends in general. With whites you can get bright and fruity and then blend in a little chardonnay to add a bit more body. She points out a popular red blend called Powers Spectrum, which has five different grape varieties. "It’s amazing. You really can’t notice all the flavors," she says. The Helfen’s efforts are appréciated by their loyal customers—many of whom continue to nominate and vote for The Wine Alley as "Best Wine Shop" in the "Evening Magazine’s "Best of Western Washington" contest for six of the last seven years.

We are fortunate because we are a neighborhood store," says Helfen. "We support our neighborhood and our neighborhood supports us."

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**Phila**


Patricia A. Smith-Preiss, 77, PhD Social


Liselotte M. Due, 79 (Fr. Am.), 87, November 23, 2013, Pullman.


1980s

Dean John Butoni, 81 (Arch.), 57, January 7, 2014, Port Angeles, Washington.


Jim V. Hogy, 84, (Ag.), 54, April 22, 2012, Chico, Arizona.

Maddy M. Griffith, 84, (Hist.), 48, June 29, 2013, Missoula, Montana.

Michelle Maleser-Tripp, 87 (Hotel and Restaurant Admin.), 41, October 2, 2013, Seattle.

Scott D. Strotzman, 87 (Art), 52, February 18, 2014, Pullman.

1990s


Kevin Pulgust, 79 (Res. Admin.), 47, December 14, 2013, Long Beach, California.


Brederick Gar, 96 (Art, 1941), 45, February 20, 2014, Lewiston, Idaho.


2000s


2010s


Brett Lee Thompson, 91 (History), 24, January 29, 2014, Everett.

Faculty and Staff


Mary Kay (German) Portrait, 82, Dean of Student Affairs Office 1965-1987, November 14, 2013, Spokane.


Eccentricity and Madness in Early Modern Japan

The Aesthetics of Strangeness: Eccentricity and Madness in Early Modern Japan by W. Pack Brecher

“Viewing the Edo period through the lens of strangeness... highlights tensions between artistic correctness and strangeness, as well as the intellectual discourse surrounding those tensions,” writes Brecher. Like Tokugawa society realized, “the full aesthetic potential of eccentric art as well as its transformative contributions to mainstream Japanese culture.” Although this book discusses eccentric artists in a particular Japanese historical and cultural context, Brecher’s exploration offers some fascinating insight into art and strange artists for readers beyond specialists in Japanese studies.

Hunger Immortal: The First Thirty Years of the West Seattle Food Bank, 1983–2013 by Ronald F. Marshall

“Hunger Immortal: The First Thirty Years of the West Seattle Food Bank, 1983–2013” offers a detailed look at the history of the West Seattle Food Bank, one of the oldest and most successful food banks in the country. The book chronicles the growth and challenges of the bank over its first three decades, from its humble beginnings in a small storefront to its current status as a major source of food assistance in the Seattle area. By focusing on the experiences of the food bank’s workers and volunteers, the book provides a rich and moving account of the struggle against hunger in Seattle.

Legal Guide to Social Media: Rights and Risks for Businesses and Entrepreneurs by Kimberly A. Houser

This book offers a comprehensive guide to the legal issues surrounding social media. It covers topics such as copyright, privacy, and defamation, and provides practical advice for businesses and entrepreneurs looking to engage with social media. The book is written in clear and concise language, making it accessible to readers without a legal background.

What’s Social Media Marketing Success Really Mean? by Larry Clark

This book offers insights on what constitutes success in social media marketing. It discusses various metrics and goals that marketers can use to measure the effectiveness of their social media efforts. The book also provides practical advice on how to create and analyze social media campaigns that resonate with audiences and drive results.

For more reviews and sample tracks, go to wsm.wsu.edu
Ask Dr. Universe

Ever wondered how to build a suit to guard against lightning strikes? Or have you been curious about what you’d see if a black hole appeared between the Earth and moon? Dr. Universe has.

The intrepid scientist is back. She is relentless in her pursuit of knowledge, but not necessarily silence. She is a cat, after all, and cats like to nap. Join her on her quest. Send your questions to the Earth and moon?

lightning strikes? Or have you been curious about answers in her columns, blog, and comics at dr.universe@wsu.edu

No matter how difficult things became with a heavy workload, I always had somebody there to motivate me and keep pushing me forward,” Shon remembers. “They were there for me!”

Shon graduated in 2007 and today he is manager of an Albertsons pharmacy in Spokane. He has stayed involved in the college by giving a few lectures every year and precepting student pharmacists at his pharmacy. But he went even further recently when he teamed up with two professors and started a pilot project in Albertsons stores in Spokane to allow customers who think they may have strep throat to be tested by a pharmacist. Shon took the project through the proper corporate channels to get it approved and found a physician willing to sign off on the project, which means participating Albertsons pharmacists may prescribe antibiotics to customers who test positive. Shon was one of 20 Albertsons pharmacists who were trained by a WSU pharmacy professor and found a physician willing to make such a contribution to the advancement of pharmacy.

When Shon Volk first contacted the student services director at the College of Pharmacy at Washington State University his anxiety about getting into pharmacy school immediately disappeared. He had many more interactions with that person on his path to being accepted into pharmacy school and each time it was the same feeling that he was in good hands. After Shon was accepted and began classes he met other faculty and staff who also guided him and made him feel that they really cared about him.

No matter how difficult things became with a heavy workload, I always had somebody there to motivate me and keep pushing me forward,” Shon remembers. “They were there for me!”

many pharmacists do continue to dispense medications but it is no longer their primary role, Shon said. “We are educators,” Shon said. “We have a very specialized skill set and we are the most accessible health care provider. Whether it’s a question about Tylenol dosing for an infant or a skin condition for an adult, we have the answer or we can lead the public in the right direction for treatment.”

Shon discovered at an early age he had an aptitude for science and an interest in physical health, but he didn’t know how to combine those into a career until he had a discussion with a family friend who had just graduated from the WSU College of Pharmacy. It was a great experience and the right choice, and now he hopes to stay involved with other future pharmacists.

“When pharmacists are now referred to as health care providers, which is huge for our profession,” Shon said. “I believe we will continue to find ways to implement accessible health care. As a retail pharmacist, I am the first stop and the last stop in the health care process. Most patients will come to me first to inquire about an illness or condition, and armed with my recommendation they will self treat or go on to their doctors.”

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“I am a Cougar pharmacist

It is WSU College of Pharmacy faculty and staff that separates them from the rest,” Shon says. “I have a family at WSU that I can always count on.”

I am a Cougar pharmacist

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Shon found a physician willing to make such a contribution to the advancement of pharmacy.
MYTH #40 in the PLANNING YOUR ESTATE SERIES

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