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Also inside: Racism · Feminism · Concussions  
Sierra Leone · Papal Earth · The streets of Philadelphia

# NOTRE DAME

## M A G A Z I N E

Rediscovering the West



## GATHER 'ROUND

They entered the kitchen singly, arriving randomly, while I was getting some coffee at work. A writer, a photographer and a videographer. They had all been to Milk River, Montana, on assignment for this magazine. They had landed there separately, too, coming from three directions, three cars along miles and miles of unmarked, dusty dirt roads, convening at a point on a vast, treeless landscape where humanity is scarce. And today they had stories to tell.

So they laughed and told more. Others stopped in the kitchen to listen. A smart-phone was pulled out to show video; a laptop was perched on the table to show photos. Images of students doing field research. Fossils, night skies and the remnants of Native American societies. And stories to share.

Storytelling is as old as human communication, human culture. Tales have been told around campfires, told in taverns, at homecomings, at reunions, told to get through winter. They are told to entertain and to enlighten — and to reinforce those qualities, principles and ideals most valued by a group or tribe, a religion or a family. Stories enable us to tell who we are, what we stand for. They perpetuate traditions, convey what we think is true.

This magazine is a storytelling place. It is our campfire circle, our reunion tent, the family hearth — a quarterly gathering place where people come to speak and listen. Four times a year people come forward to tell us about themselves, about their beliefs. They share their experiences, their deliberations and doubts, and talk about what has happened to them or to others they know — just like we have done in residence halls, over pizza, on a football weekend.

This time around it's a band of students learning about the American West and the artisans building a new organ for the basilica and an attorney helping to heal prostitutes in Philadelphia. An African-American editor addresses the nation's racial divide. A scholar discusses feminism, her place in academia and challenges facing women today. A journalist ponders the long-term impact concussions have not on individuals but on the game of football itself, and a theologian reflects on the pope's encyclical on planet Earth. And in a riveting narrative, a doctor takes us into a field hospital as he fights Ebola in Sierra Leone. It tells an extraordinary tale of risk, charity and sacrifice in a magazine issue of unusual heft and grace.

What these stories have in common is Notre Dame. They may seem wide-ranging and diverse and far away from campus, from institutional matters, but they speak of our shared heritage, our educational mission, those ideals and principles, truths and hopes we'd like to give to the world. And when we talk about what's important to us, what has deeply influenced us, we share our human natures, we build a community of believers, seekers and friends.

I've long thought that Notre Dame eludes definition; it does not fit into a formula, doctrine or box. But you get a keen sense of the place, its people and its values when you listen to the stories told on these pages.

— Kerry Temple '74

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# NOTRE DAME MAGAZINE



BARBARA JOHNSTON

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**OUTLINED AGAINST A CLEAR BLUE SUMMER SKY** the steel skeleton of the Crossroads project rises above campus, elevating the sightlines surrounding Notre Dame Stadium. Corbett Family Hall, being erected by SCI/Steelcon between the Joyce Center and the stadium, will house a digital media center, the departments of anthropology and psychology, premium seating, hospitality space and press box (with completion expected in August 2017). Photograph by Matt Cashore '94.

STILLPOINT

AUTUMN 2015 3



## LETTERS

### LETTER FROM CAMPUS

*Robert Sedlack '89, a professor of graphic design, died from amyotrophic lateral sclerosis on May 30. An obituary is on page 18. What follows is a letter from a former student.*

Dear Robert,

The other day I was driving, thinking about you, and tears began to stream down my face. So I turned the radio on, and, much to my surprise, the Beastie Boys' "Fight for Your Right (To Party)" came on. I laughed because I knew at that moment you were there, trying to bring a smile to my face.

When we spoke not long after your ALS diagnosis, it was one of the worst days of my life — next to the day I found out you had died. I've never felt my heart sink the way it did when you told me you had ALS. We talked, we cried and we laughed. You faced ALS like everything else in your life, with all the strength you could. I will always be in awe of the passion with which you approached life.

When I came to Notre Dame in 2001, I knew I was in a place to do great things, but I had no idea what those great things were. I was lost. I spent my freshman year taking a variety of classes, hoping something would spark my interest, but it didn't. So that spring I asked my parents for advice, and my mother asked me: "Erin Marie, what have you enjoyed since you were little, what makes your heart race, what above everything else keeps you occupied for hours?"

I knew the answer she was looking for was drawing. Since I can remember I have drawn everything I could see. I would go to the grocery store and stare longingly at the markers and pencils and the paper — oh, the paper. But surely this couldn't translate into a career, right? But my parents told me to check into the art department.

So I registered for my first graphic design class, and when I returned in the fall of 2002, it sealed my fate as a graphic designer. Now granted, it was just a foundations class, but the supply list was right up my alley: pens, pencils, paper, X-Acto knives. For the first time at Notre Dame I felt like I was moving in the right direction.

Now, Robert, you knew you were like a celebrity in that department, right? I would hear your name in passing. I would see you hauling ass down the hall, moving at 90 miles an hour, with purpose. When I attended your GD1 class, I was so amped up I swear I almost threw up the first day. You knew almost everyone in the class, but not me, yet. As you took attendance you looked up and said, "Prill, are you here?" and I responded, "Yeah, Sedlack, I'm here." I knew then you were going to be someone special in my life. Little did I know the magnitude.

You were always there for me, encouraging me in all the right ways. Like when I failed all your written tests with flying colors, and you said, "Well, we now know you aren't a test-taker," and we laughed. You made it okay. You saw the best in me, that I could be a designer without

### FROM READERS

*The letters we publish here are edited for space and are representative of those we receive. We print only those letters referring to an article in the most recent edition of the magazine, not those responding to letters or commenting on topics not addressed in the recent issue. For a fuller presentation of letters visit our website at [magazine.nd.edu](http://magazine.nd.edu).*



#### Studebaker

While I enjoyed the inspirational story about the rebirth of former Studebaker Building 84, "Rising from the Ashes," the author repeats the myth that Studebaker went out of business in December 1963 when it closed most of its South Bend plants. By that time Studebaker, through acquisitions, had become a diverse holding company whose brands included Gravely lawn mowers, STP fuel additives, Clarke floor equipment and more. Studebaker consolidated its rapidly shrinking, unprofitable automotive division at its more modern and smaller Hamilton, Ontario, Canada, facility from which it exported cars back to the United States into March 1966, when it finally exited the auto business. Studebaker kept its foundry open in South Bend until 1964 and exported engines to Ontario for assembly then sourced GM engines for the 1965-66 model years. Through a complex series of mergers and acquisitions it became Studebaker-Worthington, with a modern headquarters in New York and revenue of \$1 billion in 1973. The Studebaker name finally disappeared when Studebaker-Worthington itself was acquired in 1979 by McGraw-Edison.

TOM BURKE '83 MBA  
FOX RIVER GROVE, ILLINOIS

#### Family counselors

Your man, Terrence R. Keeley, in his item "Family Counseling," is quite mistaken when he stated that "doctrinal evolutions" occurred in the Catholic Church regarding slavery, usury and ecumenism. The only thing that ever changed about what the Church expressed on these matters of morals was the historical context, the facts that pertained.

The Church abided slavery as an

incident of the right of conquest by one nation over another. For example, the Roman Empire employed slavery as an alternative for prisoners of war to the annihilation of an entire *gens*. Slavery was the ultimate effective way for The Empire "to keep its enemies close," not the slavery leading to commercial slave-trading into the Americas.

Likewise, the kind of usury condemned by the Church in the monolithic feudal social economy of the time in which money was neither conceived nor functioned as it does today in a modern democratic republic remains properly condemned. And the basic goal and intention of the Church immediately after the Protestant Revolution and the goal and intention of Vatican II ecumenism are the same. Ecumenism is dialogue as a form of evangelizing the immutable truths of The Faith, nothing more, nothing less.

What is actually Catholic Church doctrine has never evolved. References to slavery, usury and ecumenism are misleading and not helpful to pursuit of the truth in the doctrinal facts about marriage and life in the sacraments of Our Lord Jesus Christ. There is no "wiggle room" on these matters.

KEVIN B. MCCARTHY  
INDIANAPOLIS, INDIANA

There is a crisis in the family but the more relevant crisis facing the Synod on the Family is a crisis in the authority of the church. Many jobs carry with them authority (e.g. parent, teacher, bishop, pope) but it is easy to lose that authority. The author of the article indicates he has already decided the important issues and the only problem remaining is to get the faithful to accept what he has decided. That is not the way either of Vatican II or of Francis and is not the way to restore the teaching authority of the Church.

JOHN CANTWELL '62  
ST. LOUIS, MISSOURI

#### The rich and the poor

Brendan O'Shaughnessy's accurate, if somewhat depressing, catalog of the rise of the rich in America comes ever so close to the truth. The underlying reality, which he did not state, is succinct, simple and unequivocal. In the United States, when the top rate of income tax goes up inequality goes down. When the top rate



of income tax goes down inequality goes up.

The current situation in America should surprise no one since it is the easily predictable outcome of a deliberately chosen political policy that favors the wealthy at the expense of everyone else.

GUY WROBLE '77  
DENVER, COLORADO

I appreciate Brendan O'Shaughnessy's attempt at striking a balance between conservative and liberal viewpoints, and I consider them fair. Aside from that, O'Shaughnessy has done an excellent job of grasping both the problem and the solution. I especially enjoyed his comments about Gannett because I started *Muncie Voice* because of the poor journalistic quality at a local Gannett newspaper. I see the lack of journalism across the country as one of the primary components of why the problems have come about, and why the right and left cannot agree on the problem.

Quite frankly, the journalism industry — the Fourth Estate — is at fault for the corruption of the systems they were meant to monitor. A free and independent press is the cornerstone of democracy, but this country allowed it to become the property of the richest Americans and corporatists. Once that happened, the press served their needs, not ours.

TODD SMEKENS  
MUNCIE, INDIANA

On a campus where the Ten Commandments are debatable, it may come as a shock that some things are immutable — one of which is the proper set-up of a chess board. Although I get the symbolism of the illustration accompanying "A House Divided" (i.e., the principal pieces versus the pawns), it is axiomatic that the square in the lower right-hand corner for each player should be light-colored. "White on right" is the term. Sent by one who attended Notre Dame when it was Notre Dame. I wish you all the best on your road to adulthood.

JOHN ABBOTT '67  
SAN MATEO, CALIFORNIA

#### The police

The summer edition is outstanding yet again, but I particularly enjoyed John Rudolf's article, "Police in the Streets." With the media's continuing siege on law enforcement, it is refreshing to read about ND grads who have dedicated

their lives to the noble profession of enforcing the laws that form a society out of chaos. By blaming police, those who have no respect for laws and for those who enforce them have been empowered, and lawlessness is the result. In most of the current incidents, if the suspect had followed the officer's lawful instructions rather than initiating a confrontation, the incident would not have escalated. Blaming the police for the suspect's personal transgressions and failures is simply wrong. Those who carry a badge deserve our respect and support for they are frequently all that stands between us and evil.

JOHN W. NELSON '64,  
'67 J.D.  
MONTROSE, COLORADO

I threw out the latest issue of *Notre Dame Magazine* as soon as I saw the cover announcing an article glorifying the New York City Police Department. I just saw the latest video showing New York cops dragging a man from his car, throwing him to the ground and beating him. Need I mention that he was a black man? We who live here know that the NYPD is one of the most racist organizations north of the Mason-Dixon Line. The fact that you would glorify it, when you recently devoted an entire issue to a man who fought racism all his life, Father Hesburgh, is truly a disgrace. New York police are nothing more than playground bullies with guns.

THOMAS HOOBLER '64  
NEW YORK CITY

#### Kalaupapa

I want to commend Tara Hunt for her insightful and inspirational article "Gifts So Ordinary," regarding her group's recent pilgrimage to the Kalaupapa leper colony. Her story faithfully captures the realities of Kalaupapa, from the rugged natural beauty to the heart-wrenching stories of forced family separations. Walking about these hallowed grounds drives one to silence in homage to the thousands who lived, worked and died here.

I was most touched by Hunt's realization that it was, and continues to be, the ordinary that best captures the spirit of Kalaupapa — ordinary people doing extraordinary things.

WILL FRIESE '73  
HONOLULU, HAWAII

being a great test-taker, and that was just fine.

You saw the best in everyone, Robert, even when we couldn't see the best in ourselves. And you always made me laugh. Like hysterically. I don't think I will ever laugh like I laughed with you. You are the only person I know who could bounce a minivan off a parking garage in downtown Chicago on a class trip and laugh about it.

Thank you for being my thesis director. I don't think I could ever thank you enough for guiding me through that defining path to becoming a designer. That whole year was one of the most incredible of my life — from trying to explain to my parents why I needed a fifth year at one of the country's most expensive universities to you not calling me crazy when I showed up with a power drill and told you I could build my senior thesis window installation myself.

I grew as a person and as a designer under your guidance. You were more than a thesis director. You made me think about the person I wanted to be in this life.

You know, every person who spoke to you or became your friend, and every student who walked into the Art, Art History & Design Department is better because of you. You created a little army of well-educated, passionate people, and that legacy will continue always. I want you to know you will always be in my head, pushing me to do better, to be better, to fight for what I want because anything that is worthwhile in this world is worth fighting for.

Sometimes I would calculate how much sleep you got by when your last email was sent at night and your first email was sent in the morning. You worked so incredibly hard for all of us — making sure we succeeded, making sure we were making connections and attending the right events, making sure we weren't out at the bars too late to make our thesis meetings in the morning. You became family when a lot of our families were far away.

I remember when I met Matt, and when he met my family and my friends, but he hadn't yet met you. When I came back in 2011 to lecture and go to the ND-Navy game, I think I was more worried about your meeting Matt than my lecturing. We walked into your office, and after you hugged me and shook Matt's hand, you immediately got out your grade book and showed Matt my grades. We still laugh about that. I'm so happy you met the man I married, and I'm so glad you approved of him.

Robert, thank you for everything. I will miss you every day, but I know that every day in my life is possible because of something you did for me, something you said to me. And I know I will see you again someday, and you'll want an update on my career. So I better get to work.

Erin Prill '06  
Red Lodge, Montana



# Magnum opus

Paul Fritts & Company is building a pipe organ for the basilica — and for the ages.

BY JOHN NAGY '00M.A.

## Prelude

The shop floor beneath Greg Bahnsen's sneakered feet is littered with coils of silvery metal barely more substantial than the tinsel on a Christmas tree. With each *schwwwip* of his hand plane, another wispy sliver of metal curls, dangles and falls to the ground.

Bahnsen, smiling, picks one up to display its delicacy, holding it the way a child might hold a butterfly caught by its wing, then lets it drop, shimmering, to the floor. When he breaks for lunch, he'll sweep up the lot and throw it back into the melting pot. "Precious little," he says, is wasted in this workshop.

Bahnsen is making languids, a poetic name for the thin, soft, circular pieces of metal partly responsible for some of the most majestic manmade sounds the world has ever heard, the notes played on an elegantly crafted mechanical action pipe organ.

It's about a quarter past noon in Tacoma, Washington, on a placid day in mid-July. Bahnsen will make a few dozen languids today for pipes more or less an inch in diameter, his thought all in his hands as he fastens each short strip of this special alloy of tin and lead into a jig, planes its front edge at a precisely calibrated angle, scrapes it smooth and cuts it into squares.

The pipe-making for the current project began in 2012 and is nearly complete. By the time they finish this autumn, Bahnsen and Erik McLeod will have fashioned more than 3,000 languids for the flue pipes in the organ they and their six fellow craftsmen at Paul Fritts & Company Organ Builders are creating for the Basilica of the Sacred Heart at Notre Dame. They'll make almost 2,000 reed pipes,

*John Nagy is an associate editor of this magazine.*











*"He can keep more in his head than anybody I've ever met," Bruce Shull, an old friend and longtime collaborator, says of Fritts (above, and overleaf, standing in the case of the basilica's Murdy Family organ as it appeared in Fritts' Tacoma workshop back in July). Fritts shakes off any notion of genius, pointing to all he's learned from the craft. "Tradition often has a dirty connotation," he says. "You have to create. But the really smart artists, I think, steal from the past, make it their own."*



too, which function more like giant clarinets in the way they create music from narrow streams of wind than the flue pipes, which work like giant whistles.

With four manuals, or keyboards, 70 stops and 5,164 pipes rising to the height of a four-story building, this will be the largest and grandest organ the company will have produced since 1979, when the 28-year-old Fritts took over his father's business. They will build it using methods and materials that guild craftsmen in the Netherlands and northern Germany three and four centuries ago would recognize and understand, but with the benefit of tools and technologies those Baroque organ makers could only envy. The masterpieces they created, however, represent what Fritts calls the high point of his art.

In spring, Fritts will host an open house for this organ. Visitors will gather at his workshop a few miles from the blue waters of Puget Sound, the distant, snowcapped heights of Mount Rainier peeking at them through the branches of titanic redwoods. But the true marvel of the day will stand just inside the open front doors of the massive postmodern log cabin that houses the Fritts organ works. The building's "set-up room" required a special permit, its steep roof making the structure by far the tallest in this semi-rural neighborhood of modest homes and evergreens, but still it will not be tall enough to house the finished instrument, 40 feet and 1 inch high.

What those visitors will see is a towering but untopped organ case of poplar and oak, painted to match the Notre Dame basilica's white walls and columns, and worthy of Europe's most glorious cathedrals. Pipes as small as a No. 2 pencil or as tall as mature trees will rise in gleaming tiers, framed by some 60 gilt, handcarved decorative screens of leaves and berries fashioned by a woodworker nearing his retirement rest in eastern Germany.

To date, the Fritts shop has produced more than 40 world-class instruments for recital halls, private residences and churches in 14 states. These organs lead worship, inspire seasoned musicians and raise goosebumps in the Oberlin Conservatory, Princeton Theological Seminary and the prestigious Eastman School of Music; the Catholic cathedrals of Rochester, New York, and Columbus, Ohio; mainline Protestant churches from New York to Seattle; and Fritts' own home across town.

This pipe organ will top them all. This, in short, is Paul Fritts' magnum opus.



■ See more photography, view a short film by Notre Dame videographer Tony Fuller and keep up with our ongoing reporting on the organ project at [magazine.nd.edu/basilica-organ](http://magazine.nd.edu/basilica-organ).

## A still, small voice

But today, Monday, July 13, as Greg Bahn- sen makes languids in tranquility, the open house, the next project and the Notre Dame delivery all seem far away.

Ask how long he's been at Fritts and he answers without pause. "Tomorrow it'll be 21 years and four months."

What keeps them focused, if he may speak for his colleagues on this point, is their determination to construct the finest pipe organs in their power. "No two instruments are the same," he says, trying to explain his zeal for the work. "There's visual satisfaction; there's aural satisfaction."

And: "There's the satisfaction of seeing the client's jaw drop to the floor when they walk into the room and see what they're getting."

Try to imagine one of those 17<sup>th</sup> century Dutch or German pipe-makers in modern clothes and you might well be able to picture Bahnsen: fine white hair that falls past his ears, a nobly sharp nose, an impressively shaped white beard. Colored pens line the bib pocket of a denim apron he wears over his dark gray T-shirt. A choral singer, a glider pilot, an amateur photographer and cutter of precious stones, he's worked as a jailer, a baker, a nurseryman, a printer. He leads a rich life that helps him manage the more tedious aspects of his day job, but it's those greater rewards that keep his slender fingers working toward the collective, beautiful goal.

He walks over to a set of shelves and pulls out little drawers of the kind in which you'd keep penny nails to share examples of his workmanship. The scent of melting flux, fatty and metallic, reaches over his shoulder from Erik McLeod's workbench about 20 feet away. Bahnsen picks up an unfinished pipe-squeak pipe and blows through it, producing a shrill sound like a frantic piccolo. Just a leftover, he says. "We could have put it in the project."

"We call it the museum," McLeod explains. Legs crossed on a chair upholstered in duct tape and cushioned by old, folded bath towels, McLeod is hard after his own task this afternoon, making pipe mouths.

Flue pipes are like whistles. Personified, they are said to have a "body" — generally, the longer cylindrical part — and a "foot," the upturned, conical part on which the whole pipe stands. The narrow opening cut into the seam joining those two segments, within what McLeod playfully calls a "controlled dent," is the pipe's "mouth."

Put in these terms, the languid is a tongue. Fixed horizontally inside the mouth,

it defines the flue pipe's windway, constricting the air flowing upward through the foot into a narrow sheet and directing it toward the mouth's upper lip, where it excites the column of air in the pipe body above. The length of each pipe determines the sound waves that come out, producing notes.

But pipes are also said to speak, and each one has its own voice, that combination of volume and timbre that makes the textures of organ music so varied, layered and rich. Most of them are principal pipes, which don't sound like any other instrument but a pipe organ. Others, especially on an organ of this scale and complexity, receive the names of flutes, trumpets, bassoons, clarinets, oboes and violins — even the human voice and *voix celeste*, the voice of heaven — for a reason. When playing on an instrument such as this, a skilled organist is both a proficient instrumentalist and the conductor of a choir and symphony orchestra. The great pipe organs were the original synthesizers.

It's often noted that pipe organs — even those historical precedents far smaller and simpler than this one — were the most complex of all inventions until the creation of the telephone switchboard in the late 19<sup>th</sup> century. Climbing into the case with Fritts to examine a set of windchests, I can see why. What I'm looking at is an incomplete but bedazzlingly layered network of levers, rods and fixed and sliding pieces of wood with precision-cut grooves and holes, as unintelligible to me as a motherboard.

Fritts does his best to interpret this weird "sandwich" for me. Windchests, he says, hold the pipes in place and contain channels that correspond with each key on the keyboard. When the organist plays a note, the key opens a valve in the windchest called a pallet that allows pressurized air to travel through a channel to its corresponding pipes. Ranks of pipes, each with its own sound or voice, are arranged on the windchest so the same notes are located along one channel. If the stop for the rank isn't pulled, a pipe cannot speak. But when the organist pulls the stop, the wind streams into the pipe and it plays.

He adds that key action comprises up to five changes of motion between key and pipe, which happen so fast in well-made versions of this "simple, early computer" that the pipe's speech may seem to anticipate the keystroke. Touch is important to organists. It's easy to marvel, harder to comprehend.

Fritts' late father, Byard, was a lifelong organist and Eastman-trained professor of music at Tacoma's Pacific Lutheran University, as

well as an organ builder and inveterate tinkerer who built the family house that still stands next to the company's much-expanded physical plant, and who restored a Model A Ford for fun. The younger Fritts helped his dad with everything, but he never played the organ. Instead, he was a violinist who dedicated himself to his music at a young age and developed an ear that has helped him earn a handsome and satisfying living.

Everything he's learned about his craft started at home, then grew through personal experience and relentless study of the best organs ever built, some of which date back to the 15<sup>th</sup> century. There's little room for innovation in this line of work, he says, but that has nothing to do with excellence.

"All of these things I could never come up with on my own. We draw upon history very, very clearly. I make no apology for that. A good idea is a good idea, no matter where it comes from. So my mission is not to reinvent the organ. It's to further the art form."

Over in the machine room, Joseph Green, in T-shirt and ballcap, new to the company and a boatbuilder by trade, grinds mortises into structural wood with the most ferocious power chisel I've ever seen. Ignoring the cacophonous fugue created by his cuts and the noise emerging from the massive shop vac that converts shavings and sawdust into bricks of firewood, Zane Boothby sits at his bench, dipping his index finger into a puddle of felt-and-leather glue. Boothby, a sophomore trombone performance major at Central Washington University, swabs the glue around holes of varying diameter cut into a sturdy plank of oak. Once felted with black strips four millimeters thick and mounted into the case, this board will become a rack in which reed pipes will stand.

Upstairs, Andreas Schonger, the company's lead woodworker, sits in Fritts' design office flooded with natural light. He strokes a brush over his short brown hair to pick up static, then lowers it to hover above a square leaf of gold foil the size of a Post-It note but only a few molecules thick. The metal lifts onto his brush as if gently inhaled, and Schonger places it on an uncovered section of decorative basswood screen, painted with a glossy red enamel that will intensify from within the brightness of the gold. He shapes each leaf into the wood with his fingers; a single carved piece of screen, about the size of an unfolded newspaper, might take him the better part of a day to complete. When not talking to visitors, he listens to NPR podcasts — *Serial*, *Invisibilia*, *This American Life* — to pass the time.



Small steps, one goal. No one seems concerned about the clock. To a man, Fritts' artisans are quiet and introverted, eloquent about their trade, confident in Fritts' leadership and free from interfering ego.

Like Bahnsen, they're also alert and active, living in the present moment. Raphi Giangulio, who makes the keyboards and fashions the keys out of heat-treated basswood covered with either cow bone or ebony, is away this week, climbing mountains in Colorado. Bruce Shull, a master builder in his own right who joined Fritts' company 10 years ago, flies small planes on the weekends. Schonger broke his collarbone in a mountain biking race, which explains why he's spending these days leafing instead of building the organ case. Together they take convivial half-hour breaks every morning at 10 to eat doughnuts, drink Fritts' home-made cappuccino, read the comics and shoot the breeze.

## Interlude

The question most people ask is why the Basilica of the Sacred Heart needs a new organ.

When the Holtkamp Organ Company of Cleveland, Ohio, designed, built and installed the choir loft's current occupant in 1978, this magazine predicted it would "play a central role in the renaissance of public worship and music education at the University." Father Ted Hesburgh, CSC, blessed it at a packed-house dedication Mass on April 2. That evening, after Vespers, Professor Michael Schneider of Cologne performed on it the much-celebrated all-Bach program that Felix Mendelssohn had played at Leipzig in 1840.

Consider what it's witnessed ever since; the thousands of people whose anxieties, prayers, elation and grief were carried to heaven on its music. How many Notre Dame weddings, baptisms and Sunday and daily Masses? The final vows and ordinations of so many Holy Cross priests. The funerals and memorials that convened multitudes in sorrow: Fathers Hesburgh and Joyce. Ralph McInerny and Sister Jean Lenz. Declan Sullivan. Emil T. Hofman. So many others, including Gail Walton, the long-time basilica organist and Liturgical Choir director who first proposed the idea of the Holtkamp's replacement and was its chief proponent until her death in 2010.

Among those moved by Walton's passing was Andrew McShane '93M.M., her understudy and successor and the inheritor of the

organ project. "I've played this thing half my life," the 49-year-old says of the Holtkamp, with its geometric modern case and its horizontal Spanish trumpet pipes arrayed overhead like the guns of a battleship. "It's served the University really well over 40 years."

McShane came to Notre Dame as a graduate student at age 24. He played two recitals as a master's degree candidate on the Holtkamp, performed three more on it in pursuit of his doctorate at Northwestern, then returned to campus for good to assist Walton and supervise the practical training of students in the organ program that Walton's husband, Professor Craig Cramer, was cultivating in the Department of Music. No one is in a better position to appreciate the Holtkamp, or to understand the extent to which it has fulfilled its original mission.

In later years, maintenance and mechanical reliability became problems, McShane says. Repair bills exceeded \$1,000 per month. But the larger issue, he says, is how people drain sound. At 40 stops and just under 3,000 pipes, the Holtkamp doesn't produce enough of it to fill the church and its chapels at those times when it's needed most, such as the crowded high feasts of Christmas and Easter.

The Fritts organ will be the fifth to accompany prayer inside the University's main house of worship since the completion of the original Sacred Heart Church in the early 1850s. In each case, the need for a larger instrument to keep up with the school's growth and ambitions drove the decision for a purchase or new commission. Before he stepped down from the presidency in 1865, Father Edward Sorin, CSC, oversaw the replacement of a small reed organ with a hand-pumped organ of 1,500 pipes better suited to the existing wooden church. A decade later, with the north end of the current church bricked off behind the main altar as the University raised money for its completion, Sacred Heart boasted a 2,000-pipe organ commissioned from Derrick and Felgemeker of Erie, Pennsylvania. That instrument carried campus Masses well into the era of Hesburgh, when a 1961 renovation added some 300 pipes.

The Holtkamp was long overdue in 1978, but Notre Dame didn't yet have the organ program that Cramer and music department chair Calvin Bower would begin building in the 1980s. Nor was the basilica yet the basilica. Pope John Paul II bestowed that designation in 1992, making Sacred Heart a national church — one of 82 in the United States so acknowledged as an important center of

pilgrimage and devotion. Notre Dame's liturgical reach and influence grew. Today, six choirs use the organ year-round. McShane counts four full-time organists and as many as six graduate-student organ assistants in a given semester. The 10 a.m. Sunday Mass reaches a national cable TV audience and the basilica frequently hosts liturgical conferences and workshops.

"Visitors to the basilica come and go forth throughout the world," notes Rudy Reyes '03MTS, '07M.A., Notre Dame's theology-trained director of foundation relations who has taken the basilica organ project under his wing. "They take their experience with them. So we better do it right."

## Approaching the Infinite

In this case, "doing it right" entails an irony. The church organ at an institution aspiring to global pre-eminence as a Catholic research university will be, in one important way, essentially Protestant.

Once upon a time, American artisans sought to build lavish organs that would serve all audiences, a kind of musical approximation of the now-discarded metaphor of America as Melting Pot. The more egregious examples of these "American Classics" wound up monstrous and loud, an egalitarian "pop puree of different styles," in Fritts' description, that played almost nothing very well.

Fritts designs organs foremost to lead congregational singing, which means he and Bruce Shull, his second-in-command, study the organs of Protestant Germany and the Netherlands for historical precedent, to understand both how they were made and how they supported the compositional literature that flourished in the hands of such great church musician-composers as Sweelinck, Buxtehude and Bach. The other prominent organ-playing countries tend to be Catholic, he says, and their tradesmen made organs primarily for instrumental performance and the accompaniment of vocal soloists.

Rather than lump these traditions equally into a single instrument, sacrificing quality in the pursuit of inclusion, Fritts privileges what he calls the "liturgical organs" of northern Europe, selectively adding sets of pipes from other cultures to "broaden the horizons a bit." The approach will make the new organ both a worship guide to the Infinite and a superior teaching instrument for master's and doctoral level students at Notre Dame, where the present need for a versatile, small "c" catholic organ — capable of





leading hymns and accompanying basilica cantors as well as playing the sacred and secular works of leading German, Dutch, French, Spanish, British, Italian, Portuguese and even Lithuanian composers — was little more than a dream until the emergence of the thriving Program in Sacred Music over the last 10 years.

Just how versatile will the new organ be? “If you were to play all stop combinations on the . . . organ [in the DeBartolo Performing Arts Center] there would be 34.3 billion combinations,” Professor Cramer says. “If you played each of those stop combinations one time and for one second, it would take almost 1,100 years to play all of them. If you applied the same calculation to the [new] organ, it would take around 1.6 trillion years to play all of the stop combinations.”

Building an organ with 70 stops, it turns out, is about more than impressive numbers or some kind of grand musical exhibitionism. It’s about creating an instrument capable of training 21<sup>st</sup> century masters, as Cramer is doing at Notre Dame in one of the few growing programs in the country. In the right hands, this pipe organ will be able to play just about everything.

#### *Everything?*

Bruce Shull, as expert and patient an organ builder as they come after 40 years in the business, qualifies that statement. The basilica organ, he says, will be able to play each repertoire *authentically*.

“‘Everything’ is an unreasonable, unattainable goal,” he explains. One limitation is tuning. You can’t retune an organ like a guitar to fit the many different systems of the European literatures that took shape around the instruments available to composers at

the time. So while this organ won’t be *ideal* for playing every organ composition ever written, a master organist would be able to play most anything on it well.

In the end, Shull says, “we’re after making pipes that people want to listen to. Pipes that are soothing and exciting at the same time to hear. Soft sounds that draw you in and some big sounds that can really get your attention and everything in between.”

Therein lies the challenge for Paul Fritts and his shop. How to craft an instrument that will soar all the way to the basilica’s north altar and fill each transept and side chapel, yet is tuned and voiced so sensitively that its sounds float downward and land beautifully on all the listening ears.

It’s something that at Notre Dame has never happened before. This Fritts organ, a gift from Diana and Wayne Murdy, Notre Dame parents and grandparents, is an offering for the community today as well as for those who will sing God’s praises through the years accompanied by its music.

While the organ builders believe in their core that they will meet that need, no one will know for sure until their handiwork is assembled in the fortified basilica choir loft, painstakingly voiced to the church’s unique acoustical environment and played as a complete instrument for the first time in December 2016.

### **A mighty fortress**

Notre Dame already owns two Fritts organs. The first, a more purely German-style instrument, was designed for the Reyes Organ and Choral Hall at the DeBartolo Performing Arts Center and finished in 2004. The second



*Bahnsen (left) started at the Fritts shop before Boothby (above right) was born, but the latter has learned patience along with technique: “Where it’s rewarding,” says Boothby, working with Andreas Schonger (above left), “is when it all comes together and everyone’s work is equally important.”*

Fritts, a seven-stop studio organ installed last year, anchors choir rehearsals in a room of the Campus Ministry building named for the late Gail Walton.

It was back in 2004, as Fritts’ crew tidied up at DPAC, that talk about a new basilica organ got serious. Walton formed a committee that did its homework, attending concerts and visiting workshops on a nationwide organ crawl to scout the four or five builders in the country capable of creating mechanical action pipe organs in the grand eclectic style.

In 2006, they drove to Columbus, Ohio, for the dedication of the Catholic cathedral’s new Fritts organ. “This was the one that sealed the deal,” McShane says. Fritts’ three-manual, 66-stop jewel proved his shop could build the organ that would outlast the basilica itself.

“We felt comfortable that Paul would deliver what we envisioned: a monumental instrument in a landmark building,” Cramer says. “An instrument of rare beauty, coherence and depth.”

But if the courtship was swift and the match obvious, the marriage took longer to consummate. Six years passed before the contract was signed. The 2008 recession took its toll. Then, in 2010, Walton died. The committee redoubled its determination. And well before the ink dried on the agreement in 2012, Fritts took an unprecedented step and began to design. He told his pipe shop, ahead of schedule on other projects, to get busy.

So the pipe casting began. The specification calls for five divisions of pipes to correspond with the four keyboards and pedalboard. Ranks of pipes within each division will reflect the instrument’s primarily





Green translates Fritts' case design into oak. The finished organ and its 5,164 pipes will stand 40 feet and 1 inch high, weigh about 15 tons and represent an estimated 38,000 hours of craftsmanship.

German yet pan-European lineage: *Rohrflöte und Rauschpfeife. Baarpijp. Flûte Harmonique. Vox humana.* "Trumpets" in four different languages.

When Fritts set up his own pipe shop in 1984, it was a big deal in the organ world. Even some of his high-end peers still outsource this work, but for him that wasn't good enough. "Our experience back in the '80s was they would only do certain things we asked," he says. "And they didn't want to do a high lead alloy because it burned up their table."

Fritts first solved the heat problem by switching out the linen on his stone casting table for a synthetic Dupont fabric called Nomex, found in military flight suits and NASA spacecraft. Later the shop moved to sand casting. Plain ol' beach sand sucks the heat out of the metal 15 times faster than cloth, so as the metal hardens — almost instantaneously — it forms smaller crystals, which Fritts has found enables his pipes "to behave more musically." Mixing the sand with a small amount of peanut oil helps it bind better as a casting surface

— and leaves the scent of roasted peanuts in the room, even when the table is cold for days. It's messy and requires more time to prepare a casting, says Fritts, but the pipes' improved sound quality and quicker speech justify the extra effort. He learned the age-old technique from contemporary European builders; his is the only shop in the United States that makes pipes this way.

Work on the case began in December 2013, once Fritts completed his design. Now, in the warm summer of 2015, with the largest finished pipes lashed to the walls of the pipe shop and storage room, and the little ones nestled in blue cloths and tucked away in wide, wooden drawers, progress on the case is more dramatic. Its stout oaken bones rise out of the mounted cornice of its bottom tier. Inside it, the organ's lungs, the bellows, looking like six heavy cornhole boards, are still visible at ground level to visitors who drop by the workshop.

Designing for the basilica presented serious challenges, Fritts says. First he insisted the carpet be removed for improved acoustics, a \$500,000 flooring renovation completed

in 2014. He took laser measurements of the church vaults and loft to ensure precision for the acoustics and dimensions of the case. The bell tower was not available for the blower and bellows that generate and govern windflow, so he put the blower in its own box to the right of the organ and placed the bellows inside the case the way he would for a small studio piece. That decision forced him to rely on a ladder access into the organ's upper-level walkboards, which for construction, tuning and maintenance crews will be like climbing a fire escape to get into an apartment building.

Structural pillars in the basilica's back wall required additional sacrifices of desirable space in his final design, he says. Architects ruled out an extension of the loft to accommodate both the instrument and choirs of up to 75 people, so Fritts customized the design to fit snug within an inch of the wall.

Then there were the wide, Midwestern swings of temperature and humidity to address. Pipes aside, mechanical action organs are mostly wooden structures.





*Like children nestled all snug in their beds, the organ's smaller pipes lie in wooden drawers awaiting their basilica debut by Christmas 2016. "Some of the best work in this country is being done in this shop," says Shull, above, and Notre Dame Magazine will cover it in video, photography and text as it unfolds at [magazine.nd.edu/basilica-organ](http://magazine.nd.edu/basilica-organ).*

Fritts called for heat-treated wood to prevent warping in the case, key action and stop action, and to ensure a consistent seal in the reed pipes' boots and blocks. Plans also call for an air-conditioning system to help the upper pipes stay in tune as heat rises, especially during the warm, damp northern Indiana summers.

Inside the woodshop, another finished cornice lies flipped on its back. Its rounded centerpiece, which will cap a semicircular wall of front pipes on the finished case, looks like a thick-staved beer barrel sawn in half across the middle. "It's a very complicated piece," Fritts says of the carpentry.

Nearby, Joe Green works on the framing of the Rückpositiv, a separate division of pipes that will sit behind the organist, built

into the hip wall at the front of the choir loft. There it will preside over the basilica nave like a gorgeous cluster of stalactites.

No, this will not be like any organ Sacred Heart has seen or heard before. Not at all.

## Postlude

"I stay up nights being terrified," McShane deadpans over coffee with Rudy Reyes back in South Bend one morning in July.

The organ must start its cross-country journey in late July 2016. There is no moving the deadline. If it's not done, Reyes points out, "we can't just change the calendar. The way the basilica works, as you know, first week in March we book for the next year." Football weekends. Weddings. The academic calendar. Non-negotiables.

Never mind. Reyes' face brightens. "I can't believe we're getting this thing," he says with the excitement of a kid on Christmas Eve. Still, he has a long wait ahead.

To meet the deadline, the Fritts crew must finish the organ by next summer, take it apart and pack it carefully in two full-size moving vans, then fly to South Bend. They'll unpack those vans outside the basilica every bit as carefully. But back up a moment: A lot has to happen on campus before they get here.

On the day after Christmas 2015, workmen will unlock the basilica and begin the work of removing both the Holtkamp organ

and the choir loft. The organ will eventually move to the new St. Pius X Catholic Church under construction about five miles east of campus in Granger, Indiana. The loft, dismantled, will be rebuilt with enough fortification to support the new organ — Rückpositiv and all.

For one year, the basilica choirs will relocate to the west transept, the small cross-arm of the church nearest where the priests vest for Mass. A Fritts studio organ will be used throughout the year. It will be amplified, a solution everyone seems to regard as a necessary evil.

When the organ builders and moving trucks reunite in South Bend in August, the organ will explode — delicately, so delicately — into the closed basilica, its parts filling the aisles and pews until they're selected and placed piece by piece. Erecting the organ will take two full weeks with all hands on deck. Then, four-plus months of pipe voicing begins. Bruce Shull, Erik McLeod and Fritts himself will do most of this work. Masses will continue throughout the fall semester, but don't expect to hear the new organ before Christmas. By tradition, the organ may not be played publicly until Paul Fritts, director of the organ building company that bears his name, says he's done.

"What I hope is that the organs make friends with those who encounter them," Fritts says. He means that Notre Dame's professional organists will instantly feel at home. Students will have a high-quality experience relative to what they'll encounter in the best European cathedrals.

For the rest of us? Well, maybe it's a matter of feeling the intensity of transcendence while finding harmony within the soul.

McLeod first touched a Fritts keyboard as a teenager practicing the organ in a church in a small logging town about an hour west of Tacoma. The instrument was one of the first the Fritts shop ever built.

"It was just a tremendous shock," recalls the musician, who had started out on a factory-built electric organ. "Everything's so immediate. But I responded incredibly positively to the sound," he adds, slapping his chest as he speaks. "It struck me to the core."

Now in his 30s, his light brown hair showing gray, McLeod has worked every Fritts installation since he joined the company 14 years ago. Nothing beats the feeling, he says, of making something that will last, of working with a team toward a shared goal, of building a great instrument.

"That's the hope. And I think we'll succeed. I cannot wait to hear it." □



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... a look back at campus past ...

## Bound volumes, illicit lit



BY ALEX CATON '15  
AND GRACE WATKINS

Notre Dame librarian Father Paul J. Foik, CSC, took to his typewriter in October of 1922 to chastise Father John F. O'Hara, CSC, who would go on to become University president and a cardinal of the Church. "I question . . . the right to destroy without at least an interview with the librarian on the matter in question," Foik wrote. "I know that no offense was intended to me personally, but I feel that I could not let the matter go without protest."

Father O'Hara had prompted Foik's disapproval when he removed a library copy of Alexandre Dumas' *The Count of Monte Cristo* from the dorm room of a freshman and destroyed it. Dumas' 1844 novel was one of several thousand works then on the *Index Librorum Prohibitorum*, a Vatican-issued list of books deemed morally offensive. Reading *Index* books without the express permission of a specially designated priest constituted a mortal sin.

Hoping to "protect the faith and morals [of] our students" while preventing the further destruction of University property, Foik proposed a solution that would govern access to Notre Dame library books for most

of the next half century: Copies of prohibited works were locked in a metal cage in the basement of the Lemmonier Library, known today as Bond Hall. Its 1,500 volumes, among them foundational texts of Western philosophy and science, were accessible only by permission of an appointed priest.

At a school whose administration saw moral development as equal to, if not more important than, academic research, that cage full of books represents a rarely discussed relic in a decades-long story of a community's self-censorship and a larger debate in Rome over how Catholicism should reckon with ideas that cut against its teachings. It came to be known as The Grill.

The *Index* included such authors as Descartes, Voltaire, Rousseau, Hugo, Milton, Hume, Kant, Locke, Defoe, Diderot and Sartre. By general decree and under penalty of excommunication, Catholics were further banned from reading all books deemed heretical, anti-religious, immoral, blasphemous, lewd, obscene, suicidal, Masonic, Socialist or sympathetic to divorce or dueling. This broad ban stretched to any book dealing with religion that hadn't secured the prior approval of a bishop — the official imprimatur.

Notre Dame was not the only Catholic university in the country that caged its *Index*

literature. Boston College, Stonehill and others did as well. Though established primarily to protect undergraduates, even graduate students and professors had to obtain permission to read books on the *Index*. At the time of Foik's letter, six campus priests could dispense such permission, although the University president later became the sole person authorized to do so.

No priest more zealously monitored the literary choices of the Notre Dame Man than O'Hara. He possessed a nearly single-minded devotion to the campus' spiritual well-being and an unrivaled rapport with the students. "The kids called him The Pope," says Father Tom Blantz, CSC, '57, former vice president of Student Affairs and a professor emeritus of history at Notre Dame.

O'Hara, who Blantz says spent hours each day hearing confessions in the Prefect's Office in Dillon Hall, wanted Notre Dame to be cloistered from worldly temptation and vice. To him, censorship was both a logical and necessary part of religious living, and literature a front in the fight for students' Catholic character. There, the *Religious Bulletin* became his most effective mouthpiece. Founded in October 1921 with O'Hara as its editor, the one-page newsletter was slipped under the door of each student's dorm room daily. It listed statistics on Mass attendance

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ILLUSTRATION BY JOHN S. DYKES



and Communion distributions, answers to student-submitted questions, prayer intentions from the Notre Dame community and general spiritual advice.

The *Religious Bulletin* also allowed O'Hara to snipe at sinful literature and to warn students of the ultimate consequence of forbidden reading: "If you *must* read books on the *Index*, please go somewhere else to do it and don't be taking up good room that should go to an honest-to-goodness Catholic boy who wants to save his soul. Go to hell from Harvard, if you like, but not from Notre Dame."

On Ash Wednesday, 1924, O'Hara announced a three-week series called "A Critical History of the Development of Nasty Literature." Adapted from 1906 lectures by Catholic author John Talbot Smith, the series held tight to the thesis that no one could read a book without internalizing some of the author's personal philosophy and named authors to avoid. George Bernard Shaw's fame was a passing "fad," Ralph Waldo Emerson's works were "a single pebble on the literary beach of America" and Walt Whitman "had absolutely no sense of verse." O'Hara reiterated this position some years later, asking, "But why flirt with Indexed books at all? When you have the truth, why investigate every passing error?"

On occasion a student would write to ask if a specific work was "on the *Index*." In its replies the *Bulletin* would not even deign to print the title of the book in question. "As a matter of policy the *Religious Bulletin* refrains from advertising by name the lower class of *ex professo* enemies of God," O'Hara wrote in 1931. This policy was rarely broken, once to denounce Nobel Prize winner Sinclair Lewis as a part of students' baptismal promise to renounce Satan.

O'Hara's campaign against "best smell-ers" and "dry rot" did not stop at panning *Index* works in the *Bulletin*. In the hour after lunch he would often walk through the library scanning the shelves for books that didn't belong. He'd then tear out the title page and hand it to the librarian so the title could be stricken from the library catalog. Citing lascivious photographs, he saw to it that *Life* magazine was removed from all campus magazine stands. When the editors of *Life* approached the Board of Lay Trustees about doing a piece on the University in 1938, he quietly shut down the story. "Confidentially," he wrote the board's president, "I don't like to see the Blessed Virgin's school appearing in a magazine that specializes in nudity."

O'Hara's colorfully caustic remarks sound dated, if not anti-intellectual, to the

Notre Dame student today. But in his years as prefect, O'Hara spoke to a receptive audience. According to his annual *Religious Surveys*, an outgrowth of the *Bulletin*, 96 percent of students read the newsletter daily. And when asked in 1933, "Do you ever feel that you *have lost intellectually because you cannot read books on the Index*?" more than 80 percent of students said "no."

Prior to his departure from Notre Dame in 1945 to become the bishop of Buffalo, New York, O'Hara appeared to have subdued students' interest in prohibited books. Many did not know of The Grill's existence. But certainly by the time O'Hara was appointed archbishop of Philadelphia in 1952, as the student body swelled with veterans from World War II and benefited from the presidency of Father John J. Cavanaugh, CSC, The Grill had become common knowledge among underclassmen and was more of an advertisement for prohibited works than a deterrent.

A certain mischievousness peppers recollections of The Grill. Judge Michael Brown '55, for instance, compares the unintended effect of placing books in The Grill to the National Legion of Decency's list of prohibited films: "They were 'must see' movies, and I believe the books were similarly held in great esteem."

Father Theodore Hesburgh, CSC, who became president in 1952, upheld the permissions system required to obtain access to books held in The Grill but differed from past presidents by greenlighting every request brought to him. He did not discipline professors who began to assign prohibited texts on their syllabi, and he allowed the sale of prohibited books at the campus bookstore, only a couple quads away from the library's copies, which remained locked in The Grill.

Hesburgh spoke out on academic freedom often in his 35 years as president and in his first year in office even risked his position over it. In 1952 he was ordered by the Vatican to cease selling the book adapted from a speech delivered on campus by John Courtney Murray, a controversial Jesuit theologian. Hesburgh refused to comply, citing academic freedom, threatened to resign his presidency and awarded Murray an honorary doctorate at that year's commencement — and the Vatican eventually recanted its demand.

In his autobiography, Hesburgh explained his position on censorship and the role of a Catholic university. "Freedom will always be a problem for everyone, especially so in the

university world. Whenever we get troublesome, which is almost always when we are doing our critical best, someone gets the bright idea of imposing controls." He reflected on an early trip to Chile, soon after the military government that deposed President Allende had installed admirals at the head of every university. "When I met the one who was trying to run the Catholic University in Santiago, I asked him, 'Since you would be upset if I tried to tell you how to run the navy, what makes you think you know anything about running a university?'"

The admiral responded, "It was out of control. I am just purifying it."

"Purify us, and we die," Hesburgh later wrote in response. "Long live academic freedom."

In June 1966 the Vatican ceased threatening penalties for reading books on the *Index*, and Notre Dame's tradition of caging prohibited books went with it. Years later, Hesburgh spoke of The Grill. "I thought the sooner we got rid of it the better. Thank God we got rid of it sooner."

These days there is little information about and no known photograph of the cage that sat in the basement of Bond Hall for decades. But nothing can better illustrate the evolution of intellectual freedom at Notre Dame than looking back to a time when padlocking books felt normal and when The Grill existed largely unchallenged.

Today, even though certain books can occasionally be found defaced and damaged on the library shelves, most recognize the intrinsic worth of reading even controversial literature. As the head librarian stated in his letter of protest to O'Hara in 1922, "You must remember that in a university collection there is much that cannot bear scrutiny for orthodoxy or morality. For instance, it may be necessary to study the literature of Karl Marx in order to refute his doctrine."

Pursuing academic freedom means first agreeing to have the courage of conviction, a sense of curiosity and a willingness to accommodate and adapt to new intellectual developments. Notre Dame is an experiment in whether a wholly Catholic worldview can meet this test. It seeks to be a place where religious devotion does not breed insularity and where unrestricted, fearless inquiry leads its students to God. Past efforts have been at different times backwards or brave, restrictive or uplifting. But we do well to not give up the experiment. □



## DEATHS IN THE FAMILY

# The legend who never stopped

**T**housands of Domers from the “Deliver Us from Emil” era will readily remember beginning each freshman chemistry class with a brisk recitation of the *Our Father*. Some may also have a hazy memory of an attention-getting prelude to the opening prayer. Amid the zip of winter coats being removed, the stomp of boots shaking off snow or the chatter of a freshman feeling nervous, the professor would command, in a most sonorous bass voice (but somehow still lyrically): “Alllllrrrrright. Settle down.” Only then came the most-oft repeated words of Jesus. And then 49 minutes of chemistry.

Over the last decade of Dean Emil T. Hofman’s life, as I enjoyed opportunities to spend a fair bit of time with him, “Alright, settle down” became an occasional mantra of mine — sometimes in his presence. My little tease was probably not always appreciated by the legendary professor, who died in July at age 94, but it was my only retort to the antics of a man who in his 80s and then 90s just would not stop. And I doubt Hofman ’53M.S., ’63Ph.D. had ever settled down. Life — whether family, work or vacations, service or social calendar, religious meditation or daily Mass — was to be carefully planned so it would be lived to the fullest.

World War II bombing runs during which he took shrapnel, studies at Seton Hall, Catholic University of America, Miami University and Notre Dame, then research and a doctorate and teaching chemistry to tens of thousands over four decades: Most folks would be satisfied with that career’s worth of accomplishments. But not Emil T. Hofman. He went on to design innovative science lectures, programs to train high school science teachers and Notre Dame’s groundbreaking Freshman Year of Studies.

He helped Father Hesburgh, CSC, usher in coeducation at Notre Dame and mentored thousands as dean and adviser, not to mention frequently representing the University on the road as a speaker.

In the 1950s, he had returned to northern Kentucky to woo Joan Sherron, the hospital nurse who — five years earlier — had helped care for him after he was injured in a car accident during a trip to New Orleans. They married and raised Mike, Tom and Jim, and enjoyed a bevy of grandchildren. Life for Emil T. was about having an impact on the lives of others. And this man never stopped. He didn’t even slow down during his so-called retirement.

In 2004 the retired Dr. Hofman had sought me out to chat — a former student of his, then in my mid-40s — and to invite me to deliver the annual Emil T. Hofman Lecture the following year. But he also had a plan to get involved with the University’s commitment in Haiti (where I was working on strategies to eliminate elephantiasis). Hofman wanted to set up opportunities to encourage his legions of former students to conduct medical and other mission work in one of the poorer countries where the Congregation of Holy Cross was active. Haiti fit the bill.

As our initial discussions moved forward, I felt oddly apprehensive by this re-engagement with my old professor . . . even though a quarter century had passed since I took freshman chemistry, and I had become a professor myself. But as Emil began regular trips leading his former students to Haiti as head of “Emil’s Army,” I came to know better his incredibly playful sense of humor and to realize that any “intimidation” was the projected bravado of an impish teddy bear of a man.

It became routine for the irascible Hofman to play practical jokes while in Haiti: feigning sleep or even that he had expired while waiting for delayed appointments; scaring children with a glare and then embracing them with a laugh. He was notorious for generously supplying friends, patients,

his translators and even nuns with some extra cash . . . or a bottle of rum. When he was feeling good, he would push his walker equipped with wheels around, giving gleeful orphaned children rides — even as he might risk further injury to his aged, sclerotic spine.

Such was his enthusiasm and rigor in maintaining his routine of pastoral visits to villages and schools, and to our patients and Catholic clergy and sisters that he would weaken himself and end up sick on the return home. At age 88, after fortuitously leaving Haiti just days before the devastating January 2010 earthquake, he landed in the hospital and under nursing care in South Bend for nearly two months.

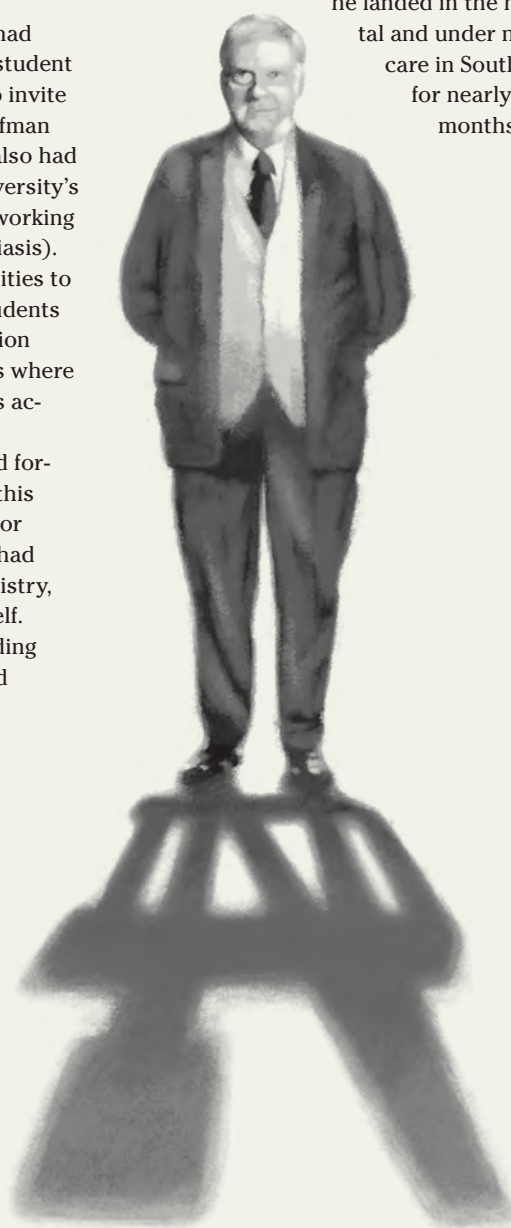


ILLUSTRATION BY MARCEL CEUPPENS



Energy and passion marked Hofman's life, and the professor always directed a portion of this energy to others. He wanted everyone to live this gift of life fully. As a great teacher, he expected much from his students. As a mentor to thousands, he was a demanding yet loving life coach. Whether planning details of each year's Emil T. Hofman Lecture, discussing the guest list for one of Joan's wonderful meals, having lunch with the grandchild of a former student, nearly getting frostbite from sitting on his "field office" bench too late in November or directing every detail of the latest video to entice those former students to accompany him on a mission trip, he just wouldn't relax. He never settled down.

Although his body was giving out, his will to be relevant in people's lives never did. So he persisted, often with abandon, to remain engaged. As I became comfortable enough to tease him, and ask him to "settle down" a bit when he would come up with too-ambitious plans and projects, he reacted with disappointment. I came to realize that the anxiety I had felt around the professor first as a freshman and later as a middle-aged professor myself was more accurately an awe — an awe of what he wanted and expected from me, which was my best.

As I started leading the rosary during the wake for Emil T. in the Basilica of the Sacred Heart last July, I felt that pang of awe once again. Would I pray this favorite prayer to honor Our Lady well enough here, and now . . . to Emil's standards? And then it was clear: there I was, before the altar of the Lord — the same Lord before whom we all must stand in life and in death — and Emil's model, his cajoling to do more and do it better, was still with me, this time, to pray well before the Lord God. The awe I felt at that moment was his awe for God, to whose everlasting embrace he had now moved. He just wanted to share it.

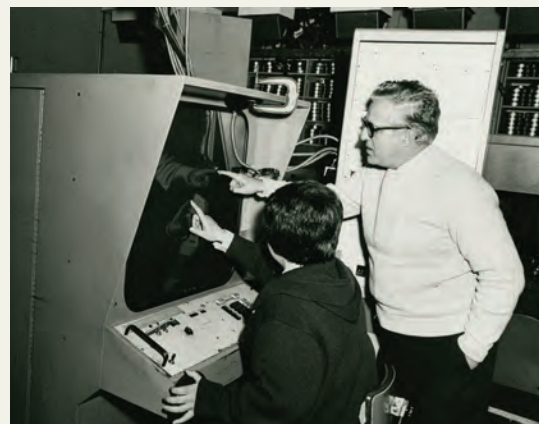
Rest there in peace, Emil Hofman, but may your spirit in all those many lives you touched, may it never, ever settle down.

— *Rev. Tom Streit, CSC, '80, '85M.Div., '94Ph.D.*

## Explorer of the universe

**V** PAUL KENNEY, who died July 18 at age 87, was brought to Notre Dame from the University of Kentucky in 1963 by University President Rev. Theodore Hesburgh, CSC, to start, along with colleague Bill Shephard, its High Energy Research Program. High energy physics explores the fundamental natures of matter and energy, space and time. Kenney — as captivated by subatomic particles as by the stars scattered across a black sky at night — led that program until he stepped down 31 years later. He was the author or co-author of some 170 publications on elementary particle physics. His efforts to track quarks through supercolliders led him to conduct experiments at the world's foremost accelerator facilities, including Fermilab in Chicago and CERN in Geneva, with multiple research appointments at the Max Planck Institute for Physics in Munich and the Cavendish Laboratory at Cambridge University. He also served in the High Energy Physics Division of the U.S. Department of Energy and was an adviser to the U.S. Conference of Catholic Bishops on energy and society issues.

Colleagues remember Kenney not only for his scientific contributions but also for the leadership, determination and humanity he brought to his research program. Every Monday Kenney's team met for brown-bag lunches to present and critique their works in progress. Their academic papers were group projects, and the director often put up other faculty for recognition and pushed them forward to speak at professional conferences when it was actually he who had been invited. "Paul was the kind of leader most people would pray to have," recalls one departmental veteran. "His leadership style was to lead by consensus."



UNIVERSITY OF NOTRE DAME ARCHIVES

That culture of collaboration and community made the high energy group "a social as well as a research group," celebrating birthdays together, eating together (monthly meals hosted by its "foreign foods gourmet club") and camping together along the shores of Lake Michigan, in Indiana woods and at Colorado's Rocky Mountain National Park.

But Kenney is also remembered as a tough and loyal administrator who built a stellar program, advancing its scope, its output and its reputation. "He had to work very hard to obtain the resources we needed to do our research," says a colleague. "We needed money, faculty positions and space in the department — and for each of these things, other people would not get the resources if we got them. He was a very tough infighter and negotiator, and he saved the rest of us from having to do the fighting."

His widow, Margaret, four children and 13 grandchildren knew Kenney, a native of New York City, as a devotedly loving family man, an actively involved Catholic, historian, teacher, debater and photographer, but not a swashbuckling pirate (despite the reports). The family enjoyed their travels from Big Sur to the Everglades, the outdoors and camping in the "Big Blue Tent," as well as lakeside gatherings for which Kenney offered cruises on a yellow Sunfish and pitchers of martinis. Throughout his life, his family attested, he "maintained the brass of the Bronx and his blue-collar childhood. Whether he was pushing for your promotion or battling benighted authority, it was clear that when he was with you, your force was mighty."

— *Kerry Temple '74*



## DEATHS IN THE FAMILY

# Enthusiastic infectious irrepressible

A night after one of his famous 1980s parties, where otherwise sane people donned costumes to resemble the likes of Michael Jackson and Madonna, Robert Sedlack '89 summoned me. Come help finish the previous night's keg, he said. The Notre Dame professor of graphic design was with friends and family at an only-in-South-Bend bowling alley/social hall/dive bar called the Maennerchor Club, which had peaked decades ago, if then.

Here's how infectious Robert's enthusiasms could be: Not only did I go, but I also dragged along my 9-year-old daughter *in her*

taught right through his final semester this past spring.

I knew him for only six years, far less time than I wanted or that many other friends had with him. But Robert Sedlack showed me this: The best people are not the ones whose souls burn so brightly it shines a spotlight on them, but whose light bathes those nearby in its glow.

At a standing-room-only funeral Mass in the Basilica of the Sacred Heart, his Grace Hall roommate Tom Schlegel '90 put it this way in his eulogy: "I'm more artistic, more driven, more outgoing and a better listener because of my 30 years with Robert. I can't think of any better legacy in the world — than to make the people around you better."

Once, when Robert, Steve Egan '93 and I took our kids camping on the dunes by Lake Michigan, we cooked steaks on skewers over an open fire. I forgot to bring silverware or plates, but Robert turned the oversight into an adventure. We held chunks of scalded meat in our fingers, tearing it with our teeth and letting the juices flow down our chins like barbarians at the gates of Rome. The kids wondered why we laughed so hard.

Everybody has a Robert Sedlack story. It usually isn't as good as Robert's version, though it might adhere more closely to the facts. Schlegel said he liked Robert's stories better than the truth, like the time Schlegel supposedly ripped up a pair of football tickets rather than sell them to an LSU fan who offered 50 cents. "After hearing his stories over and over, his stories became my memories," Schlegel said.

Former students still shiver recalling the exacting expectations Robert had for their first project, a simple three-dimensional drawing of a cube that set the tone for his class. But his relentless energy and wide-open personality won them over. One recalled a friend saying, "I didn't even have Robert as a professor, but I think he was my favorite professor at Notre Dame."

Born in Greencastle, Indiana, Robert earned a bachelor of fine arts degree from Notre Dame and, in 1993, a master of fine arts degree from Indiana University. He worked for several design firms before joining the Notre Dame faculty in 1998, and he kept fresh in the field by continuing his design work through his own studio, winning national acclaim for his book designs and posters. He is the only professor of visual design to have received tenure from the University. This past year he won the Ganey Faculty Community-

Based Research Award and the Sheedy Excellence in Teaching Award, the highest honor in the College of Arts and Letters.

Robert considered his teaching and writing projects to be collaborations, directing his students in courses that tackled social issues ranging from racial discrimination and gun control to xenophobia and immigrants' rights. He told students in his Design for Social Good course that "graphic design is a culture-shaping force that has the ability to powerfully effect change." His students regularly partnered with nonprofit organizations in South Bend as well as Haiti and South Africa.

Robert left too soon. But at least he never lost his ability to communicate or teach — two things so important to him. He was able to tell those he loved how much he loved them, and boy, did they tell him back. His parents (Bob '59 and Ellen) and sister, his wife, Theresa, and his children, Emma and Trey, felt tremendous support from family and friends during his illness and beyond.

Robert asked his high school friends Karen Seketa and Leah Foutty to tell some of the old stories "when I am gone." He told them: "I want you two to speak at my celebration, and I want it to be funny, I don't want it to be sad."

Father Tom Doyle, CSC, '89, '96M.Div., a classmate who celebrated Robert's funeral Mass, spoke of how ALS did not curb Robert's zeal for life. It was hard to watch the disease deteriorate the body of someone so competitive and athletic — he ran a 4:23 mile in high school and made the Elite Eight in Bookstore Basketball in his 40s. But after he could barely lift his arms, Robert would swing his torso in order to shake hands or hug his many friends. In true form, he organized a "Bring a Straw" pub crawl because he couldn't hoist his own glass.

In his homily, Father Doyle talked about Robert playing interhall football, making a spectacular leaping, twisting catch for a first down. "I witnessed perfection of competition, concentration and athleticism embodied in Robert," he said. "I had witnessed beauty. Suspend from your memory Robert's needing to swing his trunk to raise his hands and hold onto the image of Robert, outstretched and extended in the air."

— Brendan O'Shaughnessy '93



MATT CASHORE '94

*pajamas* to hang out with her friend Emma, Robert's daughter.

Robert could have that effect on people. You wanted to be a part of whatever he was concocting, and you always felt he wanted you to be a part of those plans. His great laugh and his energy were contagious. He organized parish picnics, St. Patrick's Day parade themes and green-firetruck tailgaters. Robert was the Pied Piper, the connector, the glue guy of every group he belonged to.

He died at home on May 30 of ALS (Lou Gehrig's Disease) at the age of 47, having



## seen & heard...

### WILLIAM SHAKESPEARE

**SCRIPTED** about three dozen plays, all written, reworked and refined by The Bard for performances throughout his lifetime. He didn't publish many of those plays and produced no authoritative version of them before he died in 1616. But in 1623 two of Shakespeare's fellow actors compiled 36 of his plays and published them in a 900-page volume, *Mr. William Shakespeares Comedies, Histories & Tragedies*, which has come to be known as the *First Folio*. It is believed that 750 copies were originally printed, of which 233 copies are known to exist. It is considered one of the most valued books in literature; a copy was sold at auction in 2001 for \$6.2 million.

The Folger Shakespeare Library in Washington, D.C., holds 82 copies, and to mark the 400<sup>th</sup> anniversary of the playwright's death is lending the *First Folio* for exhibit at 53 U.S. sites — including Notre Dame. "*First Folio! The Book that Gave Us Shakespeare*" will run throughout January at the Hesburgh Library and will include a multipanel display and other informational features.

At Notre Dame the book will be opened to the page where visitors may read one of the world's most quoted lines, "To be or not to be." . . . **IT'S CALLED A VIDEO BOARD**, not the dreaded J-word, but the electronic addition to Notre Dame Stadium for the 2017 season will be jumbo in size if modest in programming. Announced this summer, the new screen to be erected at the south end of the stadium will be 96 feet by 54 feet, with "ribbon" boards along the east and west sides. Fans will have a view of game information from those screens, allowing the north-end scoreboard to be removed for a better view of Touchdown Jesus. Officials say there will be no advertising associated with the video boards. Vice president and athletics director Jack

Swarbrick said the benefits of the boards include "the ability to support game-day introductions and presentations with video elements, additional opportunities to promote the University, plus replays." The video boards will be installed as part of the Campus Crossroads project, scheduled to be completed in August 2017. The \$400-million project will add research, academic and student-life space in three new buildings adjacent to Notre Dame Stadium as well as premium seating and a new press box. . . . **THE ARCHDIOCESE OF PHILADELPHIA** invited submissions from architecture schools across the country for a sanctuary and altar design to be used September 27 at the outdoor Papal Mass on the Benjamin Franklin Parkway. Notre Dame's James Lenahan '15M.Arch. won the contest with a vision oriented around the World Meeting of Families, which coincided with the pope's visit. Lenahan's design incorporated triangular elements to evoke the Holy Family and



cross-shaped supports that merged to represent a family united in Christ. "While no family is without challenges," he said, "a family rooted in God has great potential for love, joy and fullness of life." . . . **THERE WERE WALLABIES ON CAMPUS.** Australia's national rugby team spent two weeks in early September at Notre Dame preparing for the World Cup in England. The third-ranked team in the world (behind New Zealand and Ireland) practiced on fields



AP PHOTO/JOE RAYMOND

near Stepan Center and used the training facilities at the Compton Family Ice Arena. "The Notre Dame campus is huge and the facilities are world class," winger Joe Tomane told the Australian newspaper *The Daily Telegraph*. And Fighting Irish rugby coach Lonnie Heeter said the Australian team's world-class talent left Notre Dame players "in awe at the speed and size." The Wallabies' support staff included global leaders in sports science and medicine who shared insights with their Notre Dame counterparts during the visit.

Soon after the rugby team departed, the defending Stanley Cup champion Chicago Blackhawks returned to campus for three days of training camp for the third straight year. The National Hockey League franchise has built a dynasty with three titles since 2010 under general manager Stan Bowman '95. . . . **ON THE FIRST WEEKEND AFTER CLASSES** had started for the fall semester students received email alerts from the Notre Dame Security Police (NDSP). Two sexual assaults and one sexual battery — all three allegedly in men's residence halls — had been reported. But this time, in one of the cases and in line with a new protocol developed over the summer, campus police immediately contacted the county prosecutor's office, and a deputy prosecutor was dispatched to campus. NDSP still does the investigating, but the county prosecutor may confer with police and look for evidence to be used if the case goes to trial. In two

of the cases — one an alleged rape and the other an alleged sexual battery — the complainants chose to alert University administrators but not law enforcement. In such cases the University is required to investigate the incident as a possible violation of Title IX, a federal civil rights law, and there is no police investigation under way as this issue goes to press.

In the days following the reports, the student media carried a number of opinion pieces addressing the issues of sexual and alcohol abuse. And on the following Tuesday, September 1, students convened at the Grotto for a prayer service and spoke out against the continuing incidence of sexual assaults on campus.

. . . **STUDENTS FROM LOW-INCOME FAMILIES** may be able to put together a financial package that enables them to enroll at Notre Dame and meet their basic needs, but they often struggle to afford all that goes along with college life. So in early September the University announced a new program, the Fighting Irish Initiative, that will assist students from households with incomes of less than \$50,000 to fully fund tuition and fees, room and board, books and transportation. The program also will provide for needs most students may consider routine, such as laptop computers and study abroad expenses. The program was established with a \$20 million gift from Sean Cullinan '88 and his wife, Sue, of Glen Ridge, New Jersey. □





# ↳ REDISCOVERING *the* WEST ↳

A GREAT AMERICAN ROAD TRIP TAKES STUDENTS WHERE THE PAST  
IS PRESENT AND THE LAND BECKONS SCIENTIFIC EXPLORATION.



BY JASON KELLY '95

PHOTOGRAPHY BY BARBARA JOHNSTON



G

ary Belovsky '72 tied flies using his dog's hair and taught himself to cast in his suburban Chicago backyard, pretending to fish for trout in Montana's teeming rivers. A flatlander by birth, he could see the mountains only in his mind. They exerted a gravitational pull on his imagination.

On a family vacation when he was 13, Belovsky experienced the majesty of the peaks, the immensity of the sky, the purity of the water, the sheer square mileage between himself and everybody else. Someday he would live in Montana, he declared to his parents on that trip.

He had an inheritance coming to him then, not long after his grandfather's death, and a boy's impulse to spend a pocketful of money. Could he put it toward as much Montana land as it could buy?

His father said no, but Gary's interest in the place and its ecological treasures and mysteries only increased. The tale of his rebuffed real estate bid draws a nostalgic chuckle now, over dinner in Glendive, Montana, where the caravan of students he's leading west for the summer has stopped to make camp.

On the drive out he has told a few stories about working on the National Bison Range, his research home since 1978 during teaching stints at Michigan, Utah State and now Notre Dame. Mostly, though, Gary talks about historical forces — geological, ecological, cultural — that have shaped the terrain and the people who inhabit it. Those are much older stories, and the students sometimes wonder aloud about their relevance to the grasslands and grasshoppers they signed up to study.

*Jason Kelly is an associate editor of this magazine.*

In character as the grouchy professor lamenting the educational fundamentals of kids today, Gary insists the lessons inform fruitful scientific research. "The students nowadays, they think their meat comes from the grocery store wrapped in cellophane," he says. "They don't think about the fact that we are part of the ecology — certainly were more intimately a part of the ecology in the past — and people adapt to their environments and that's part of their culture. In fact, a lot of anthropologists would argue that it's the most important determinant of various cultures."

From the north woods of Michigan and Wisconsin, across the Minnesota prairie into the North Dakota badlands and through the mountain passes of Montana, he introduces the students to changing ecologies and the cultures that have lived and fought and died in them. It's not sightseeing. It's class.

Eight students representing schools from Arizona to Pennsylvania to Puerto Rico — including one each from Notre Dame and Saint Mary's — will spend 10 weeks in Notre Dame's Environmental Research Center summer program in Charlo, Montana (UNDERC-West). They were among about 30 who spent last summer in the prerequisite course at UNDERC-East on Notre Dame's property near Land O'Lakes, Wisconsin.

The first week of the West class involves day after relentless day on the road. Seven students — the eighth, Notre Dame's Zoe Volenec, is already in Montana preparing her research project — share two vehicles for about 1,500 miles and two tents for four nights. Most courses don't require that kind of test.

Cliques form, patience is strained and tempers bristle from time to time, but in such a small group, shared interests tend to paper over any personality conflicts. Period music and audiobooks curated for each day provide the soundtrack and a source of occasional groaning commiseration. Field research awaits at the end of the road, and the students are anxious to get to it, but Gary doesn't want their journey west to be wasted looking out an airplane window.





"Ecology programs tend to take somebody one place and turn them loose and say, do a study on something," he says. "And that's what they're going to do, they're getting that, but this adds something else on top of it."

## **JUNE 8: Land O'Lakes, Wisconsin, to Devils Lake, North Dakota**

Early morning sunlight filters through the dense forests of sugar maple, birch, hemlock and pine, dappling the narrow Wisconsin county roads away from UNDERC-East. The way west is laid out before us, paved and interspersed with all the necessary public accommodations. Three vehicles are packed and gassed up, the students split into a van and a Ford Explorer that's towing a trailer filled with camping gear and their suitcases stuffed for the summer.

Gary and his wife, Jennifer, an UNDERC senior research technician, lead the caravan in a University-owned Chevy Suburban with room to spare for a reporter and photographer. The Belovskys' two dogs and three cats share the far back with the bags in a feat of luggage and animal engineering.

Lewis and Clark's Corps of Discovery we are not.

A recording of Stephen Ambrose's book about the expedition, *Undaunted Courage*, comes later on the trip's syllabus, but I know their provisions did not include travel mugs full of fresh, Keurig-brewed coffee and a package of coconut chunky Chips Ahoy! cookies.

The thought of setting off with Lewis and Clark into the wild unknown thrills Gary, but this will have to suffice. For the 10th year, he's bound for Montana with a group of students in tow.

Bundled sage and braided sweetgrass on the dashboard serve as a traditional Native American offering for the road ahead. Sage drives away evil spirits. Sweetgrass attracts good spirits.

Its protective properties do not appear to extend to the car. About an hour into the trip, the Suburban's speedometer stops working. The needle flops to zero in an instant. After a few teasing flutters, it flatlines for good. The odometer and cruise control go down with it.

This problem lasts only as long as it takes me to find a speedometer app on my phone. By Tuesday morning, Gary will have downloaded a voice-activated version on his smartwatch, adding a dash of *Star Trek*

to this journey through an ancient glacier-hewn landscape.

Past Lake Superior, into the Minnesota Iron Range, U.S. 2 curls and then snaps taut-straight, like a fishing line being cast. We're now headed to Itasca State Park and the headwaters of the Mississippi River.

The name Itasca comes from fused syllables in the middle of the Latin phrase *veritas caput*, which means "true head." Explorer Henry Rowe Schoolcraft coined the word in 1832.

Whether the location was, in fact, the true head of the river remained in dispute for decades until historian, anthropologist and land surveyor Jacob V. Brower settled the question in the late 1800s. Brower also fought against logging in the pine forests, prompting the Minnesota legislature to set aside 32,690 acres as a state park in 1891.

Visitors now walk a leafy path to the spot where Lake Itasca spills over rocks to form the Mississippi River, 2,552 miles from its mouth at the Gulf of Mexico. Here it looks like a creek, maybe 15 or 20 feet wide.

Across the rocks or through water shallow enough that toddlers splash in it, the students scatter for Mississippi selfies. In what will become a recurring theme, they notice much more than most tourists.

Where I see scenery, they scan for the metadata behind the postcard views, huddling and puzzling over whatever captures their attention. What type of grass is this? What kind of insect on that leaf? That looks like a nighthawk, doesn't it? With the white on its wings?

Bereket Mamo, a soft-spoken Augustana College student from Addis Ababa, Ethiopia, stands on the riverbank shading his eyes from the sun to track dragonflies hovering overhead like a battalion of drones. One after another, the students see what he sees and tune in to the hum above them.

Angela Laws, the assistant director of UNDERC, points out their staggered formation in the air and explains that different species fly at different altitudes. This tidbit ripples through the group, spreading infectious wonder at the nuances to be found in nature, if you look closely enough.

Not far west of the park, everyone's vision widens as the northern forests open into prairie. We're going to the Glacial Ridge tallgrass prairie preserve in western Minnesota. Preserved only because, unlike much of the surrounding land, glacial rock deposits made it unsuitable for farming.

Agriculture, Gary explains to the group, has made tallgrass prairie the most endangered ecosystem in the United States, if not the world. The Nature Conservancy owns this patch, which in early June doesn't yet live up to its tallgrass name. Later in the summer it will fulfill the old aphorism that you can tie the high grass around the horn of a saddle.

Gary peppers his mini-lecture with questions, like an improvised pop quiz: "What is the most important grass of the tallgrass prairie?"

Through several competing voices he hears the correct one. "Big bluestem, exactly."

Fire, he continues, keeps trees from overtaking the prairie. There are controlled burns now, every few years, but it's not a coincidence that railroad tracks run alongside this preserved prairie. Sparks from steam engines once started the occasional cleansing wildfire.

We're feeling hot enough to catch fire ourselves as the late-afternoon sun beats down on the dry ground. With a couple hours of driving still ahead, we retreat to our vehicles' air conditioning the rest of the way to Devils Lake.

## **JUNE 9: Devils Lake to Bismarck, North Dakota**

"OK, Google. Start speedometer."

Gary enunciates that command into his watch, and we're off on day two, past Devils Lake, on a short leg to the Fort Totten state historic site.

Legends about monsters and drowned warriors, and the unmistakable truth of the lake's unfit-to-drink salt water, led English-speaking settlers to mistranslate the name "Spirit Water" as "Bad Spirit," which evolved into the diabolical handle.

The internal drainage lake swells with destructive potential that could easily be taken as sinister if you're in its path. Sprawling for 200,000 acres with hundreds of miles of shoreline, Devils Lake attracts boatloads of anglers but menaces the surrounding land.

This sunny morning on the way to Fort Totten, it looks tame and controlled, but flooded pools on the side of the road reveal the water's toxic effects. Trees soaked in the saline have been left bone-white and barren, skeletal evidence that maybe the lake's English name wasn't such a misinterpretation after all.





At Fort Totten, echoes of human evil reverberate. A U.S. military post from 1867 to 1890, the fort then fell under the auspices of the government's Bureau of Indian Affairs as a Native American boarding school. A more accurate term would have been prison.

Children, often from the tribes most hostile to the U.S. military, were taken by force, purged of their Native American identity and customs, and indoctrinated into white American culture. "It was a way of basically treating the children as hostages," Gary says, "so that the parents wouldn't cause trouble."

Students were stripped of traditional dress, shorn of long hair and addressed by a Christian name. All this history is presented in sanitized museum displays, the unsettling events distant enough to render the relics

comically archaic, like the dunce cap on display in the corner of a classroom.

"Can someone get a picture of me with it?" asks Judith Lakomy, a student from California University of Pennsylvania, always interested in interacting with the displays, delving deeper than simple observation.

The same is true of Jose Carlos Wharton Soto from the InterAmerican University of Puerto Rico. Jose is a musician and opera singer, endlessly curious, another reliable volunteer at the hands-on exhibits.

Later in the day at the Lewis and Clark Interpretive Center, he models a garment of obvious historic necessity but well-suited to a modern performer, too: a buffalo hide robe. A guide lays it across the floor like a rug, expertly folds a thick collar and drapes it

over Jose's shoulders. Like Meriwether Lewis or James Brown, he looks comfortable in full-length fur.

Answering the workbook questions, on the other hand, makes Jose and his classmates a little uneasy. Displays at the Lewis and Clark center offer a few clues, but they hold informal group discussions to check their work.

Gary drops in on a few of them talking about commerce in the time of Lewis and Clark.

"What is the currency of the fur trade?" he says, repeating a question verbatim from the book.

"Oh. Fur."

"Which?" There's a little edge in Gary's voice, as if to say, no, the answer isn't right there in the question.







"Buffalo."  
He shakes his head.  
"Beaver."  
"Yeah."

The students stay quiet until Gary walks out of earshot. "We've got to fix that," Jose says with a laugh.

Lewis and Clark spent the winter of 1804-05 among the Native Americans near here, in what's now Washburn, North Dakota. The area had been a vibrant community and commercial center for centuries before the United States began its quest to settle the West. Beginning in the late 1400s, the Mandan tribe lived in earth lodge villages in the Missouri River valley. Late Tuesday afternoon we stop at Double Ditch, the site of one overlooking the Heart River near Bismarck.

An agricultural tribe, the Mandan raised corn, beans and squash for themselves and to trade with nomadic tribes in the region. The area also had abundant wildlife to hunt and cottonwood timber to build earth lodges. Each lodge, which ranged from 20 to 65 feet in diameter and housed from eight to 20 people, required 150 trees to construct.

By the late 1700s, 15,000 Mandans were living in the villages, making it a more densely populated area at the time than Philadelphia, then the largest city in the United States.

"Think about this in terms of people's impact on the environment," Gary says.

The earliest lodges, he notes, were rectangular and later became circular. Why? He waves away guesses about spiritual harmony and pushes the students toward the more practical answer: available resources.

"It takes less wood to make the round house to give the same area of living space," he says. "What's that telling you about what the people are facing? Shortage of wood."

Housing the expanding population had taken a toll on the amount of cottonwood timber available, Gary concludes. "They had to adapt."

Smallpox epidemics in the 1780s and again in the 1830s decimated the Mandans, killing the vast majority and dispersing the rest. The few Mandan survivors joined with their Hidatsa and Arikara neighbors to form the Three Affiliated Tribes. They have shared the Fort Berthold Reservation in western North Dakota since 1870.

Those sorrows linger in the mind, but the minor, immediate needs and discomforts of the road soon replace them. We're hot and tired and hungry, and there's a Space Aliens diner not far away in Bismarck that has, we're promised, better food than the name might suggest.

Although the restaurant goes all-in on the UFO theme, dinner lives up to its billing and the students arrive at their wooded, riverside campsite at Fort Abraham Lincoln State Park in good spirits. Setting up the tents takes 10 minutes, tops, like an REI-sponsored Amish barn-raising.

Nocturnal alliances begin to form over who sleeps in which tent, based on who wants a slumber party and who wants slumber. At dusk, at peace, pleasant weather and an orange corona of sunset over the Heart River seem to promise everyone a good night.

### **JUNE 10: Bismarck, North Dakota, to Glendive, Montana**

A photo from 1948, on display in the visitor's center of a traditional Mandan village, looks like a thousand others from government-signing ceremonies. It shows U.S. Secretary of the Interior J.A. Krug completing a transfer of land from native tribes for the Garrison Dam on the Missouri River. But just to Krug's right stands George Gillette, chairman of the Three Affiliated Tribes, glasses in one hand, head in the other, face contorted in grief.

"We will sign this contract with a heavy heart," Gillette said that day. "With a few scratches of a pen, we will sell the best part of our reservation."

More than 150,000 acres, a quarter of the Fort Berthold Reservation, would be lost, flooded by the dam, displacing 1,700 residents, 80 percent of its population at the time.

The reconstructed On-A-Slant Village outside the center depicts how the Mandans lived for hundreds of years before the smallpox diaspora, before the move to the reservation, before the washing away of distant and recent history. The village is a re-creation of the archaeological remnants we saw yesterday at Double Ditch. "Unless you actually see a real lodge," Gary says, "it doesn't click."

Inside the circular lodge, cooking, planting and hide-tanning tools are arrayed on the floor, and a cache of corn and beans leaning against a wall shows how they stored food. They dug bell-shaped pits and buried vegetables that had been dried for better preservation on cottonwood scaffolds.

"It wasn't all work and no play," our guide says, pointing out the buffalo ribs fashioned into a child's sled and the implements of a game called double-ball. Using Y-shaped willow branches they tossed the double-ball —

so called, the guide coughs, because it was made from part of the male buffalo — and attempted to catch it in the crook of the stick.

Adjacent to the village is Fort Abraham Lincoln, a former U.S. Army cavalry and infantry post, including the rambling manse of its commanding officer, General George Armstrong Custer. Inside the house it's 1875, the guide dressed in a period uniform, playing tunes of the era on a violin and guarding the modesty of "Mrs. General Custer" as the tour group passes within sight of her underclothes. Hunting, hosting socials, playing cards and billiards with officers, Custer lived here for three happy years until he rode off with the 7th Cavalry over the hills outside his kitchen door toward Little Big Horn.

We'll get to that battlefield in Montana tomorrow, but for the rest of the day we'll skip a little bit forward from 1875 and then a long way back in time. Douglas Brinkley's book *The Wilderness Warrior: Theodore Roosevelt and the Crusade for America* introduces the group to the conservationist passions and policies of the 26th president. Our next stop will be the national park named for TR.

Arriving in this territory in 1883, a sign at the park notes, Roosevelt at age 24 was just another "dude on the frontier" hunting buffalo for the first time. Because of the political inspiration from his experience there, spectacular formations like the North Dakota badlands that we're overlooking now remain unspoiled as national parks or forest and wildlife preserves.

Against the badlands backdrop, the students huddle for group selfies, but as usual their focus soon narrows. They're on their knees, noses in blades of grass or bushes, ecological detectives teasing out what grows where and why. Not for the first or last time, Cinzia Ballantyne, a senior at Simmons College in Boston and a telescopic observer (and Instagrammer) of the landscape, sighs with delight about a bird: "I just saw a yellow warbler, and it was majestic."

The majesty here has gripped us all. For the first time, there are hints of the elevation — of land and spirit — to come. This is a relatively short stop on the schedule, before riding a little farther to Roosevelt's cottage and a prairie dog town, but the students could explore the badlands for hours.

Like he does with his alert and inclined-to-dart Gordon setters, Murphy and Abby, Gary keeps a tight leash on the students. And, like Murphy and Abby, they often tug in another direction.

The tension reflects the strange experience of time on this trip. On the road, it