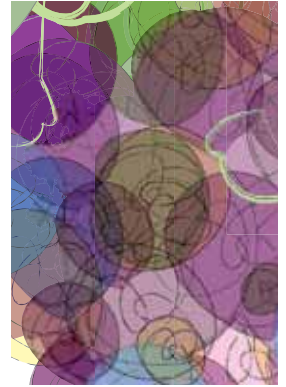


NDSU NORTH DAKOTA STATE UNIVERSITY FALL 2005 magazine



Prom Night, Casselton, N.D.
By Dan Koeck



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NDSU Volume 6 Number 1 FALL 2005 magazine



on the cover

This photograph of prom night in Casselton, N.D., is part of Dan Koeck's "ongoing exploration of what it means to live in North Dakota." He says he always thought a high school prom would be a good subject, but he also knew he might wait all night and not get a good shot. "There's a lot of instinct and reacting to a scene. In a situation like this, I try to blend in, let things happen and wait for the right moment." As he recalls, this shot was taken during a break in the dance, and the girls were reviewing the details of their dresses.

Koeck is a photographer at North Dakota State University. His work has appeared in exhibitions at the Poynter Institute, St. Petersburg, Fla., Plains Art Museum, Fargo, the Rourke Museum, Moorhead, Minn., the Northwest Art Center, Minot, N.D., and the Federal Reserve Bank, Minneapolis. He recently was profiled in Photo District News.

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Volume 6, number 1

NDSU magazine is published twice a year, in spring and fall, by North Dakota State University, University Relations, PO Box 5167, Fargo ND 58105. *NDSU is an equal opportunity institution.*

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editor's note

I have always loved shoes. It started when I was two with some red patent leather Mary Janes I stuffed my feet into long after they were much too small. Loved the shoes from Woolworth's, the black and white faux Converse, the criss-cross-strap wedgies. One new pair of shoes for school and one for summer seemed like a bountiful closet full. I remember getting some tennies on a Friday, and then getting the flu in the night. Wore them all weekend anyway. They looked good with pajamas.

In high school I made a lot of money as a waitress. Unaware that someone else in my house was thinking I'd be saving for college, I came to see every payday as a shopping day. High-heeled sandals were my favorites until those rubber-soled wave shoes came along. I had some in every style. Sandals flat-, medium- and high-heeled; oxfords that tied, a pair of slip ons; suede boots. I actually wore out the sensible ones as a waitress, though I didn't have a chance to wear out one pair of wooden slides. They were the kind that had only a little strap across the front, so every step produced a loud slap. My dad abruptly offered me \$20 for them one night. Apparently I'd been walking up and down the hallway annoying the heck out of him. Anyway, twenty bucks was fine by me, I'd paid \$9. No surprise to see them go out in the trash. (Many years later, on my wedding day, I again had slappy shoes on. He grimaced a little and suggested another deal, but I knew he wouldn't survive the reality inflation had wrought, much less the price of my better taste. Even if he'd had that kind of cash on him that day I was in too good a mood to bilk him again.)

I often combine shopping with sightseeing, and so I have a fun pair of slides from Chicago, and blue sandals from Boston. Oh, and the olive green pumps from San Francisco. Souvenirs of good times. Nothing takes the dull out of a day like slipping on some Cinderella.

In this my husband is very similar. (In that he has many shoes, not that they make him feel like a princess.) We haven't counted, though the assumption is that he has more shoes but I have more invested. We give shoes as gifts. The young women who work in my building were flabbergasted the year he had a pair shipped to my office for my birthday. I didn't have the heart to tell them if their husbands didn't

understand about shoes, they probably wouldn't be keepers. It seemed a little harsh, and possibly not a fair litmus test for all marriages, only for mine.

One of my colleagues stopped short of calling me shallow when he heard I'd bought red slingbacks at a lovely shop in Paris. His careful phrasing was along the lines of it never occurring to him to go into a store (tiny bit of emphasis on "store" and a somewhat aghast expression) while in Europe. Fine for you buddy. No question you're a more serious person. I'm ok, you're ok. Plus, we went to the museums too.

A few weeks later, in a visit with Catherine Cater, professor emerita, an intellectual if ever there was, I mentioned the excursion to the shoe shop, though I carefully framed it as part of exploring the city, masking my lust for the shoes. She nodded as if she knew the place. I looked at her closer, described the little *rue* and how we found it, just past the Louvre. Yes, she said. I was there last time I was in Paris. Isn't it lovely.

Catherine didn't buy any shoes at the pretty shop, but that she felt it worth seeking and savoring is enough for me. Girl, vindicated.

As you read this issue, you may observe that we have both an essay by an alcohol awareness educator (p. 44) and an article about a winemaker (p. 18). After a fair bit of discussion, we concluded the two stories do coexist. NDSU is working to educate its students about the dangers of underage drinking and alcohol misuse, that alcohol can be enjoyed when understood and used safely. Let us know what you think.

Thank you for reading.

Laura.McDaniel@ndsu.edu

letters

Your article on A.G. Arvold in the NDSU magazine brought back many memories. I graduated in 1941 and had spent my last two years as a student assistant at the Little Country Theatre. I have always felt that A.G. selected me after seeing how I cleaned up the Log Cabin after one of our productions. I very, very neatly lined up all of the coffee cups in the kitchen with all handles pointing in the same direction.

So much for that. I had a role in most plays produced in my junior and senior years. Never a lead role, not my thing, but some minor role since I was to remain at the theater until the last soul left every night. My various duties included playing a recording over the tower speakers every noon during Lilac Days. The recording was the voice of Ruth Piper singing the song “Lilac Days” — if you have ever heard the song you know I must have suffered through it. To compensate, once in a while I would sneak in some “hot number” when I knew A.G. was off campus. I might add that with the cooperation of Lloyd Collins who played the organ at the Powers Coffee Shop, I also arranged that Peggy Lee sang “Lilac Days” frequently.

My duties included anything that A.G. wished. I reviewed requests for plays from communities and selected what I thought appropriate. (We live in a retirement home now and I carry on by producing a monthly Play Readers play.) I was also the student manager for the Lyceum series and besides managing the ticket office also paid off the performers. Never will forget when Grace Moore tore up her \$300 check — a big check in my eyes. In my senior year I taught a class on Robert’s Rules of Order.

A.G. offered me the post of graduate student assistant if I would go to the University of Wisconsin for the summer following my graduation. He also said that as soon as I had my master’s he would put me on the faculty. A very exciting offer and off I went in the summer of 1941. During that summer, as an ROTC graduate, I received orders to report for active duty in October for one year. WWII changed the plans for my future and after the war I accepted a regular army commission.

I saw A.G. a last time when I returned from overseas and he could not believe that I would not be coming back to HIS department. He truly was a memorable figure. An inspiration to a boy from Hazen, North Dakota.

Helmuth Froeschle
Colonel, U.S. Army Retired

Mike Olsen and Carol Renner, both of whom I know very well, are excellent story tellers and writers. I really enjoyed their works in this issue. I was also amazed to see the quality of the Best of Show pieces featured in the magazine. Where were those talented young artists when I was at NDSU? Kudos to you and to your team of eloquent writers, designers and photographer.

Leo Kim

I started at NDSU in the fall of 1940 and enlisted in the U.S. Army Air Corps in February 1942, shortly after Pearl Harbor. I returned in January 1946 and got my degree in ’47. I then went to the U. of Illinois Medical School in Chicago and was graduated in 1951. I retired from practice in Anesthesiology in 1989 and have lived in Florida since. That’s all by way of introduction.

I only took one course from A.G. Arvold and have vivid memories of him. I worked as an usher for Arvold, along with Howard Leikvold and Gwen Stenjhem. We had a lot of laughs.

I did meet Fred Walsh several times and thought very highly of him.

Rudy Froeschle, M.D.

I do not know who put me on your mailing list, but I certainly do appreciate it. I spent four of the best years of my life in North Dakota, one in Hillsboro and three at NDSU. I was a police officer during this time. Hindsight is definitely 20-20. I should have never left either one of these places.

Ted Grafel



Laura Oster-Aaland (*alcohol and its effects*, pp. 44-47) is director of orientation and student success at North Dakota State University, and, in a career of many accomplishments, has a stellar recent success, having secured a \$783,000 grant from the National Institutes of Health to study ways to reduce high risk drinking in college students. She lives in the country with her husband, two sons, four horses and two dogs. She loves riding horses in the grasslands near Kindred,

because it reminds her of growing up in western North Dakota. “I am passionate about women’s issues, politics, horses, and working with college students,” she says.

contributors

Gretchen (Greeno) McClain (*Getting Edi*, pp. 8-11) puts to rest any assumptions one might make about English teachers. She’s an energetic type, so even in a traditional lecture, she’d be fun. Plus she teaches interesting electives, like Baseball and the Novel, which of course includes time spent playing catch and attending a professional baseball game, along with reading and writing. Her students even come to her for lessons in their off time, as she also is known to knit, so during study hall or after school, in her room where the wall of Shakespeare is next to bundles of donated yarn, students come to knit. She has lived in Wisconsin for many years, but still misses the prairie.



Christopher Vaughan (*The world in a grape*, pp. 18-23) has lived in California most of his life. In addition to having a degree in biophysics from the University of California, Berkeley, he is a wine lover. When not sampling wines or sailing, he enjoys writing books and articles about science. In writing his story about winemaker Victor McWilliams, Vaughan was able to combine two out of three of these passions. Combining that background in biophysics with a talent for writing also has served Vaughan

well. His book with Professor William Dement, *The Promise of Sleep*, was a national bestseller and named one of the best books of the year by Publishers Weekly, and he has won prestigious awards for science articles written for the Stanford alumni magazine.



getting **E** di

She points to the remote put away high up on the bookshelf and makes a little noise, “Eh, eh.” This translates to “I want to watch the Edi movie.” We watch it again. It’s seven minutes, scenes that changed my life in ways no amount of kids-will-change-your-life warnings prepared me. It’s a movie about getting Edi.

Edi loves watching her movie. She is the star. I think she must think all movies are about her; after all, this is about the only movie she has seen. Supporting roles are played by Dan, her daddy; me, her mommy; and various Chinese citizens and merchants who were willing and eager to be a part of our amateur film.

The movie begins with scenes of Changsha, China, where ancient ways still permeate the modern world. An old man carries baskets on his shoulders as he walks along the traffic-leaden city street. The background music is a song by a Wisconsin folk singer who also adopted. My heart knows no distance, travels miles every day to an ancient land so far, far away ... I’d go half way around the world to hold you. A fitting refrain for Edi, whose sweet face stops strangers on the street or in stores, and they never fail to mention how cute she is.

The Edi movie alternates between her tear-stained face on “Gotcha Day” to her smiling self as our days together in China passed and we grew to know each other better.

The movie itself highlights our first weeks with our daughter, but the adventure had begun long before the trip.

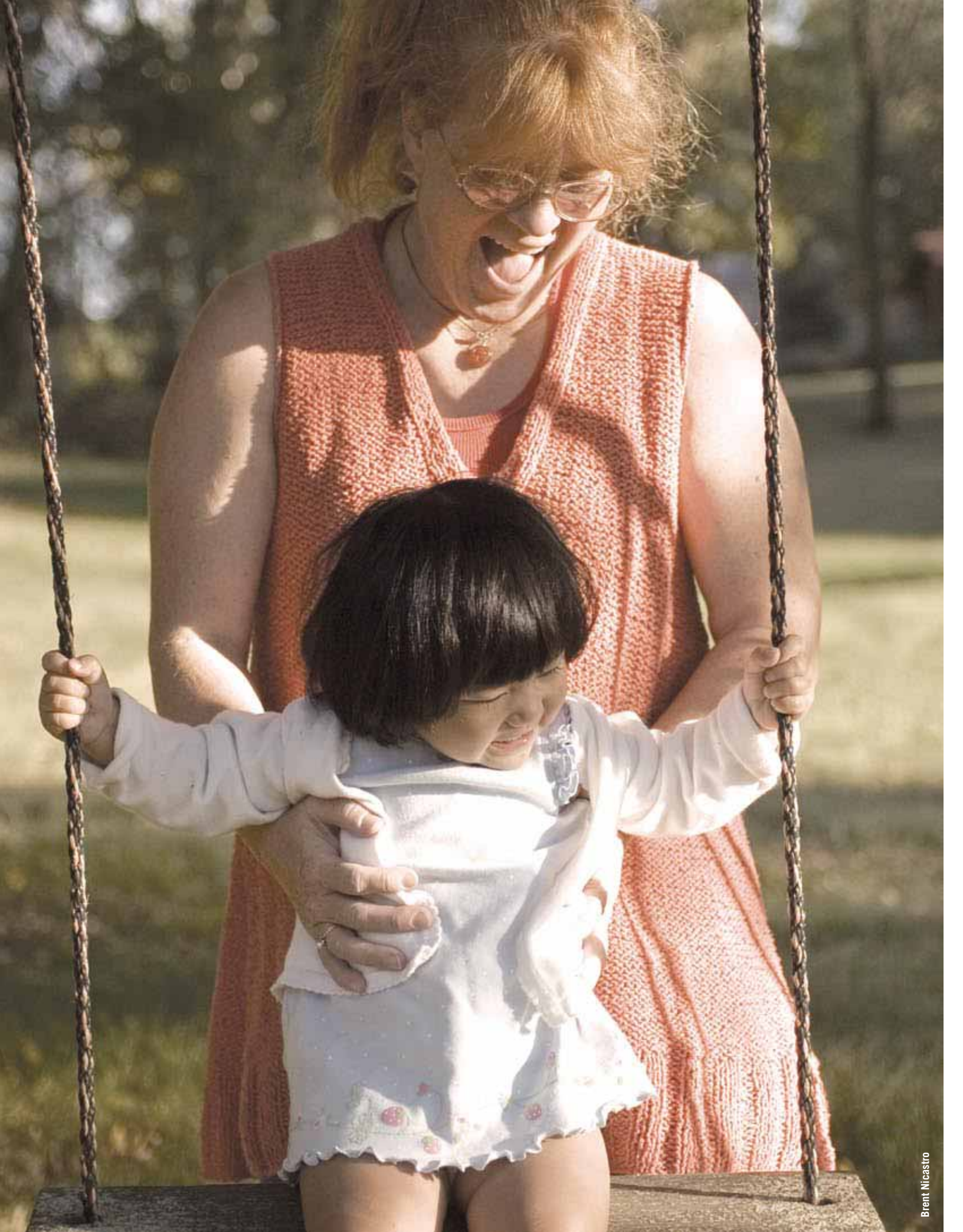
The fall of 2002, my older brother Gregg called. We’re by no means estranged, but we seldom call each other. My “what’s wrong?” radar set off. After a few minutes of niceties, he got to his news: “Jeri’s pregnant.” I said in a Seinfeld-esque way, “Shut up!” He said, “No. Really.” I was shocked, and I realized that asking, “Is this a mistake?” is kind of a rude question to ask someone who has just told you that their family was expecting a bundle of joy. He was nearly 50; his

wife was mid-40s; and their two teenage boys were, well, teenagers. This reeked of mistake. But far from it, they had wanted to add to their family. And although I was happy for them, another feeling had gripped my heart and surprised me. I was inconsolably sad because it wasn’t me who was adding to her family.

I was also in my 40s at the time, and I had accepted that I would not have children of my own. I had a husband who raised four children and who had been honest with me from the get go that he was done having kids. I had four grown stepkids with whom I had good relationships. Why would I want to add a child, a.k.a. expenses, no more time for self or husband, untold reasons to worry. Why? That night as I lay sobbing in bed, my husband next to me said (and I will never forget it) “I guess we’ll have to do something about this.” “This” meaning my sadness or perhaps our joint childlessness. That night I had to get honest with myself, too, that what I wanted more than anything was to be a mom. I was so relieved to finally let that wall come down.

It took a little over a year to get through the misery of trying to get pregnant — no easy task for a 40-something woman. Thankfully, there are alternatives. We looked into adoption. We bypassed the domestic route as too risky in all the wrong ways. We were both too old to spend years on waiting lists only to end up on the losing end of a biological mother changing her mind. So international adoption with its added expenses of travel was, to us, worth the money. Thus, in January 2004, we began gathering information about adoption.

Our first thought was to adopt from Korea. I have a friend who was adopted from there in 1968, and Dan has a nephew who was adopted from there as well. It was a sense of the familiar. At our first informational meeting, we learned that different countries have different limits. Korea has an age limit of 45 that we did not meet.



The emotional blow only lasted about 10 minutes as there were couples with their Chinese children who were there to speak about their experience of adopting from China. (China's age limit is 55.) There were three adopted girls at this meeting, and they were so lively and beautiful. We left that meeting knowing that we would try to adopt from China.

Right then, we started loving our daughter, not knowing that she was being born, right then.

As Edi was spending the first year of her life in an orphanage and in foster care, we were busy gathering documents to represent ourselves to the Chinese government. The creating of our dossier took about six months, and it was sent to China in July 2004. Then the wait with nothing to do was on. Finally, on January 6, 2005, we received our referral. This included photos of and information about the child the Chinese government had chosen for us. We had ten days to either accept or reject the referral. It took us about three minutes to check the "yes" box, sign it, and get it back in the mail.

About eight weeks passed between that day and when we left for China. Chicago to Beijing, a few days of sightseeing — The Forbidden City, The Great Wall, etc. — then on February 28, we were in Changsha, Hunan Province, China, to meet our daughter. We traveled in a group of 10 families, and we all received our daughters that day. I wish that that day were more strongly implanted in my mind, but it was too emotional. Thankfully, we have pictures.

Prior to going to China, we were educated about this — our "Gotcha Day." Our social worker cautioned that we shouldn't expect a magic moment. Although this would be the day we had been anticipating for a very long time, our daughter would be experiencing the worst day of her life. Imagine being these kids: they are taken from the only good life they've ever known and given to strangers who look nothing like anyone who has heretofore been a part of their lives. Then the people they do know and love go away, leaving them with these strangers. It was true. The Provincial offices where we picked up the kids was full of the sound of crying babies and at least a few crying grown-ups. Remarkably, some of the kids were laughing by the time we got back on the bus and headed for our hotel. I do remember that we had brought a sippy cup of water and some Teddy Grahams for Edi, and these things were a comfort to her. We returned the next day to finalize the adoptions.

OK, I'll admit that living out of a suitcase in a hotel (albeit a nice one) in a crowded Chinese city is not my ideal place for an introduction to parenthood. We spent eight days in Changsha waiting for Chinese passports so our daughter could travel. These days were intense. I would never trade any bit of the experience for anything, but, really, what a gamut of emotions. My husband Dan is more adventurous than I am — he encouraged outings every day when we weren't sightseeing with the group. Looking back, it was the best

way to spend our time. But I was stressed. Chinese cities are crowded places. The best part of those eight days was spending time with Edi in her native province. We spent playtime with the other families and bonded with them for all time. We were immersed in each other — no phones, no jobs, no other concerns of any kind — just priceless time to focus on our young child and to help her feel safe and loved.

Our next stop was Guangzhou, Guangdong Province, where we spent four days basking in the warmth of Southern China. We were in an isolated part of the city where several foreign consulates are located, and we were spoiled. Much of that community is set up to cater to adoptive families. We bought squeaky shoes and cute little outfits. We drank strong coffee. We ate in restaurants that served American food (although not as good as the Chinese you could get) and offered silverware. We were granted our daughter's visa and took flight for home.

Guangzhou to Hong Kong. Hong Kong to Chicago. Twenty hours later, we were on I-90 heading home when we ran out of gas just south of Janesville. Were we ever going to get home?

That was almost six months ago, and my life has changed — duh — in ways I certainly wouldn't have thought to imagine. My schedule used to be determined by my job or my whims, especially during summers; now my schedule is ruled by naptime. I used to run through town unencumbered and inconspicuous; now I push a jogging stroller with a beautiful baby and sing my ABCs. I used to read novels during summer afternoons; now I read "Toad Eats Out," "The Mitten," "Early Bird," and others like it many times in a row. I used to rent movies; now I watch Baby Einstein or the Edi movie. I will still cry sometimes when we get to the part where Edi is in the arms of her caregiver. She doesn't know that her life is about to change, too, in ways that she would never imagine.

After these six months, here's what I think: A few years ago, my mom died after suffering from Alzheimer's for years. I bring this up because I'm not sure that I would've pursued this adoption without what that experience taught me which is this: a person can live her life trying to control and manage and working for a certain thing, like retirement or travel or peace and quiet — it could be anything, really. But there are no guarantees that what you're shooting for will still be there when you get there. We brought Edi into our lives at a time when I was beginning to feel like it was time to coast. We're not coasting any more. Inviting Edi into our lives invited the expected: more expense, less time, more worry. It also invited the unexpected: more music, laughter, joy. Edi is the pith of all. She is her own person, even now when she is only a year old. People see her and say, "She is lucky to have you."

We are the lucky ones.



A CITY ON STILTS

Standing beside a slick, black pit in the middle of Fargo, North Dakota, the veteran engineer from New Orleans is amazed. He's engineered major construction projects in the wet, weak soils of the Mississippi Delta — supposedly the most notoriously unstable geology in the nation. But this Red River Valley mire is something else. "I've never seen anything like this s***," he says as he views the future site of Fargo's Water Treatment Plant.

The North Dakota State University geology students clustered around the Southerner laugh. So does their professor, Donald Schwert, but for different reasons. Schwert knows exactly why this engineer's expertise is required so far from the Delta.

It's the smectites. Clays that love to swell and love to shrink. Clays that in the Red River Valley extend more than 100 feet



Clay County (Minnesota) Historical Society

beneath the region’s famously rich topsoil. Clays that mean it’s impossible to erect so much as a water tower or a highway bridge without standing it on a steel piling or concrete pier sunk through 105 feet of muck until it hits a firm layer of glacial drift.

The story behind the smectites dates back about 12,000 years, when the region was covered by Lake Agassiz, the largest freshwater lake in the history of the world. Formed by melting glaciers, Lake Agassiz receded into Canada over a 3,000-year period, leaving behind deep layers of sediment — made up mostly of smectites. The smectites were delivered into Lake Agassiz from muddy, glacial meltwater rivers cutting in Cretaceous shales, themselves rich in smectites. Exposed examples of these shales can be found today in the rolling hills near Valley City, 60 miles

west of Fargo. Here hillsides edged by twisted railroad tracks testify to the shale’s instability. Because the shale is packed with smectites, when hydrated it becomes plastic and loses strength.

It’s the smectite-rich sediments that help make the Red River Valley’s cropland so productive. They also are the materials upon which homes are built and streets are laid. It’s where water mains and gas lines are buried. The ground appears solid, but as the clays gain and lose water, the land rises and falls, causing pavement to buckle, water mains to break and basement foundations to crack and separate from the surrounding dirt.

Every city built on the banks of the Red River today is affected by Lake Agassiz’s soil legacy. Cities and towns up and down the North Dakota-Minnesota border — Fargo-Moorhead, Wahpeton-Breckenridge, Grand Forks-East Grand Forks and on up to Winnipeg, Canada — all ride on top of this problematic soil. “Geographically it was inevitable that cities would be established where railroads crossed the Red River. But geologically,” Schwert says, “it’s been a mistake.”



“IF I WERE THE CZAR OF FARGO, I WOULDN’T ALLOW ANYONE TO BUILD BASEMENTS. BASEMENTS HERE ARE PRONE TO SEEPAGE, SHIFTING AND FLOODING, PLUS THEY OFTEN HAVE ELEVATED LEVELS OF RADON.”



Schwert has spent 26 years being alternately fascinated and frustrated by the substrate upon which these Red River cities are built. He’s fed his curiosity through study and by crawling into every big hole he can find. And when he was invited to give NDSU’s prestigious Faculty Lectureship, he chose “A City on Stilts: The Geology Under Fargo” as his topic.

It’s quite an image. A city on stilts. But if Fargo could be hoisted up for a view, every structure of any weight or height would look like it had grown legs. Lots of legs. Fargo’s Water Treatment Plant is supported by at least 350 concrete piers. The FargoDome rests on more than 300. Work on the massive, multi-storied Scheels All Sport store — now under construction on Fargo’s 45th Street — couldn’t begin above ground until 103 concrete piers were installed below. Even Fargo’s minimal downtown skyway system stands on stilts.

Drawings of concrete caissons, photos of compromised buildings, maps and graphs flash on a screen in NDSU’s Century Theater, mesmerizing the standing-room-only audience who came for Schwert’s lecture. Who knew geology could be so interesting? Obviously Schwert did. The award-winning teacher, and interim dean of the College of Science and

Mathematics, has the crowd on the edge of their seats.

Having made the case for “stilts,” Schwert shows what can happen without them. The year is 1913. The place is Winnipeg, Manitoba. The project is the Transcona Elevator. It will be Canada’s largest grain elevator. The structure is simple: several tall cylinders erected on a raft of concrete. The result is magnificent. The day finally arrives when it’s time to fill the elevator with grain. First bin No. 1, then No. 2, then No. 3. “And somewhere around lunch time,” Schwert says, “Workers hear this terrible groan, this moan, and the elevator starts to topple over and then stops. There’s 23 degrees of tilt.”

It’s funny now; it wasn’t so funny then. To salvage the elevator, laborers had to tunnel under the structure and construct caissons.



Crews then excavated around the elevator and finally eased it down onto the caissons. The elevator still stands today, 12 feet below its original level.

The near catastrophe in Canada was big news in soil mechanics literature of the day. But somehow the lesson got lost. In 1955, investors built the same type of elevator at what is now the intersection of Main Avenue and I-29 in Fargo. This time, as they began to fill the 125-foot-tall bins, the elevator collapsed beyond rescue. So much for learning from others' mistakes.

These days engineers, architects and contractors know big and tall projects in the Red River Valley require special underpinning. Even so, there can be problems. A few years ago, engineers didn't like what they were seeing in Neumaier Hall, a 15-story residence hall in

the center of the Minnesota State University Moorhead campus, across the river from Fargo. Cracks in the brick walls led them to believe the 29-year-old building was failing. In 1999 Neumaier was razed by implosion. Engineers now think one of the caissons shifted or that concrete in the caissons supporting the dormitory had deteriorated over time, causing the building to shift and begin to break up.

♦♦♦♦

Enjoying the view from a tall riverbank in north Fargo, one tends to forgive the region's geology for its tricks. Silhouettes of purple thistle, yellow clover and cockleburs are sharpened by a brilliant blue sky. Goldfinches dart along the russet-tinged current as it shimmers by green trees on the opposite shore. It's an idyllic scene, and a perfect example of how nature has its way with man.

No one knows for sure how far this bank once extended toward the river. What is known is that there used to be a poor farm nearby. And there was a pauper's cemetery. In 1985, people began seeing exposed coffins and human bones jutting from the bank. The river's current was



gradually unearthing the graves. Schwert arrived to document the scene, parting sheets hung by workers to give the dead their dignity before relocating their remains to a new county cemetery.

Twenty years later, there are still some bodies buried there, but precautions have been taken to stabilize the area. A million dollars worth of rock has been dumped along the outside edge of the u-shaped meander loop of the river to impede erosion. Trees have been removed and the grade of the bank made less steep. A road has been closed, partly because there's no ground to support it and partly to reduce pressure on this vulnerable geology.

Unfortunately, seemingly sublime settings like these have lured many Red River Valley homeowners to the riverfront. The view from tall banks. The romantic bend of the river. The distance from the flood plain. But houses bordering the outside edge of the Red River's meanders often do not fair well. The combination of river dynamics, unstable soil, the extra weight of the house and the fill used to develop the lot, plus extra moisture from watering or septic systems can be a recipe for disaster. "When water increases the plasticity of the clays, the weight of the house itself simply adds to the overall problem," Schwert says.

Ultimately everything starts slipping toward the river. Schwert — often called upon to share his expertise — has seen river property go from perfect to perilous in as little as two years. "By the time I'm called in," he says, "it's usually too late to do anything about it."

Even though as a scientist he's interested in viewing evidence of what he calls geo-vandalism — like bike trails mutated by the Earth's heave — in his heart of hearts Schwert is on the side of the humans who live in the Red River Valley. The catch is not everyone is thrilled with his prescription for living well above ancient Lake Agassiz's silt.

"If I were the Czar of Fargo," Schwert says, standing on the banks of the Red, "I wouldn't allow anyone to build basements. Basements here are prone to seepage, shifting and flooding, plus they often have elevated levels of



Donald Schwert

“GEOGRAPHICALLY IT WAS INEVITABLE THAT CITIES WOULD BE ESTABLISHED WHERE RAILROADS CROSSED THE RED RIVER. BUT GEOLOGICALLY, IT’S BEEN A MISTAKE.”

radon.” But Schwert knows people want basements — his house has a basement — so they’ll probably build them anyway.

A more crucial edict — if Schwert had the power to make one — would require Fargo builders to follow setback guidelines that he and city and county officials have developed. The guidelines are under review, and some real estate developers are not pleased. There’s a market for riverfront property and these guidelines would impact sales.

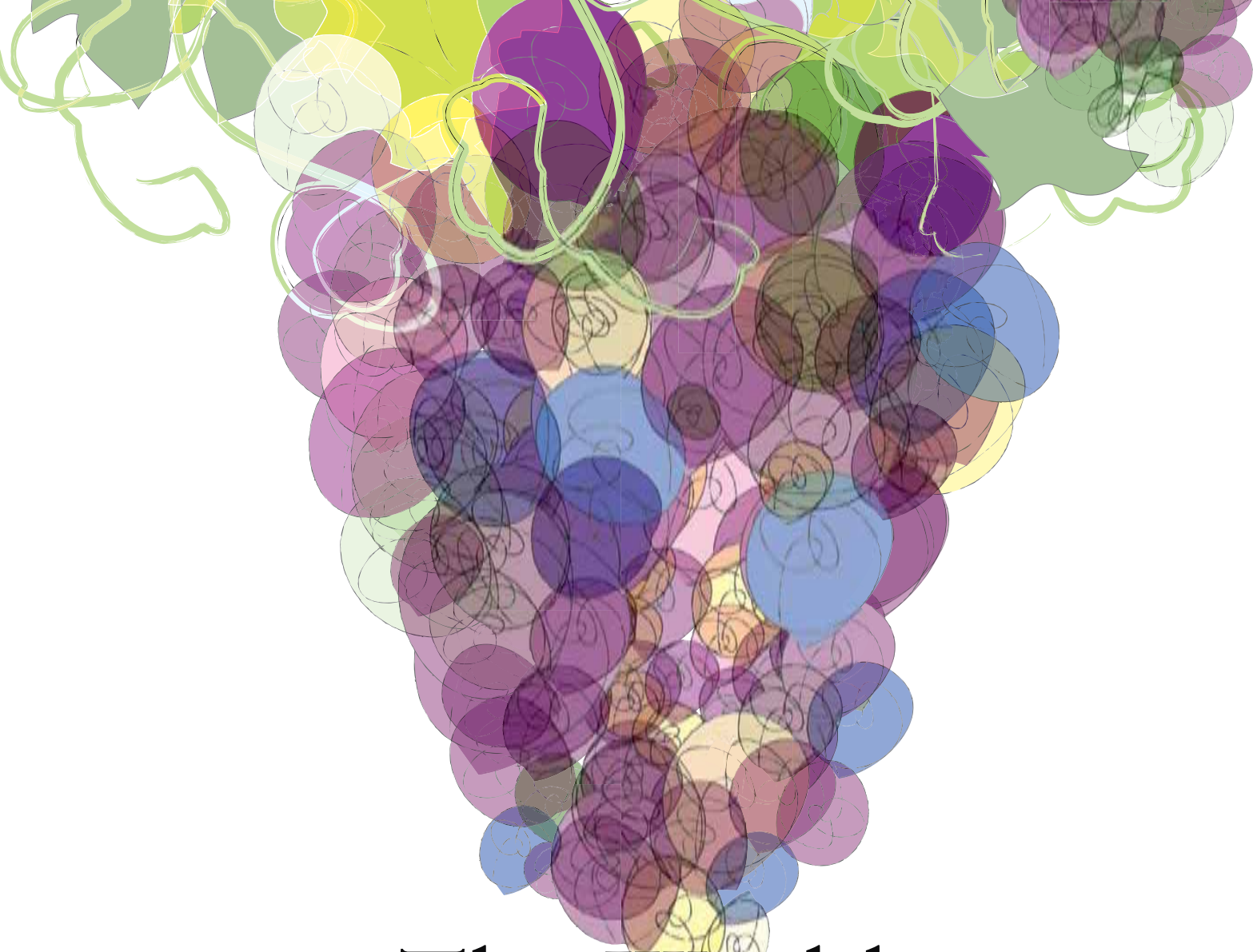
So, Schwert cloaks consumer cautions in amazing tales of “a city on stilts,” in hopes of helping people think twice about where

they decide to build their dream homes. In his mind, an ounce of prevention is worth a thousand times the cure.

“In the end,” Schwert predicts, “mortgage lenders will be the ones who put a stop to this kind of development. All it will take is for one homeowner to walk away from one of these properties and for the mortgage owner to be left holding the bag. That would lead to some very sudden education on the part of the mortgage lending community.”

With some wise planning, and a little more green space, homes in the Red River Valley can be nearly as safe from the sway of the smectites as those structures standing on stilts.

C. Jelsing



The World in a Grape

Vic McWilliams' Creative Obsession

Vic McWilliams spends his days entralling people with his enticing and pricey syrahs, cabernets and zinfandels. He travels around the country talking about his wines, and offers tastings in a bungalow just off the town square in Sonoma, California. But when the visitors have cleared out and gone off to the four-star restaurants, when the limousines have taken the swells back to San Francisco, McWilliams drives his truck back to the center of his world: a little farmhouse in the middle of a vineyard. Although McWilliams' business is selling what is essentially a luxury product, he is at heart a farmer and a scientist, beginning work at dawn, toiling among the vines and working the soil, experimenting with new viticultural techniques, all to create grapes that will become great wine.

McWilliams' Castle Vineyards and Winery started as a hobby that became a sideline and then a full-time business. At the root, what keeps McWilliams going is the relationship between wine and the senses, between wine and life. "This is about creation," McWilliams says. "Being in the vineyard, watching things grow, through fermentation to the final bottle of wine — this is about bringing about new life."

Castle is not one of the larger wineries in the valley, but McWilliams' wines are carefully crafted and well respected. At his vineyards in the Sonoma Valley, which lies just to the west of the Napa Valley, McWilliams has become known for working with a broad range of grape varieties and continually experimenting with new methods of cultivating the fruit, extracting the juice and fermenting and bottling the wine.

McWilliams is living what is a dream for many: building one's own winery in one of the oldest and most prestigious wine-growing regions in California, where palm trees may sway over the cabernet vines and perfect weather washes over the chardonnay grapes every day. Many multimillionaires and billionaires have found the dream attractive enough to spend up to \$175,000 per acre for the best land in the Napa-Sonoma region, put in another \$50,000 per acre to develop it, then have enough left over to plop a mansion down at the entrance to the vineyard.

The now-retired pharmacist from North Dakota didn't use wads of cash

to create his winery. Instead, Castle was a product of McWilliams' pursuit of the good life, and a tendency to wade fearlessly into his passions until he is forced to swim.



McWilliams was born in Devils Lake, North Dakota, where his father was an officer in the National Guard at Camp Grafton. When he was 11, his father was promoted to the regular army, and the family moved to Bismarck. McWilliams didn't think a lot about wine when he was a teenager in Bismarck. His father was an amateur who created wines from native plants like dandelion, chokecherry and rhubarb, but the closest Vic got to the process was stealthily filling a Mason jar from his father's supply on the odd Friday night.

When he went to NDSU in 1970, he never had a question about what he wanted to study. "A lot of people don't know what they want to do, but as far back as I could remember, I wanted to be a pharmacist," McWilliams says. He had seen how a cousin and her husband, both pharmacists in Bowman, were able to live, and how everybody in town knew them. McWilliams set his sights on becoming a pharmacist and "never looked back."

After college, McWilliams also knew where he wanted to go. During high school, he had a girlfriend whose sister and brother-in-law lived in Sebastapol, California, a then rural town which lies to the west of Sonoma and is famous for its apples. "I came out here in the

'60s," McWilliams says. "I remember sleeping under the redwoods, selling for a dollar a crate in San Francisco the apples that we had picked that morning. I realized that this bohemian life was what I wanted."

In the early '70s, McWilliams got a clinical pharmacy residency in the Veterans Administration hospital in Palo Alto. "There were a lot of NDSU pharmacy students in the VA system at that time," he says. "They liked North Dakota students because they were very hard working, they had a good work ethic." McWilliams demonstrated his own work ethic by pursuing additional training as a physician's assistant in a tough program at Stanford Medical School, which was just down the hill from the Palo Alto VA.

McWilliams got in touch with an old friend from North Dakota who was a tour guide at the Sebastiani Winery in Sonoma. He went up to visit and fell in love with the place. Despite the glamour, "Sonoma is basically a small town," McWilliams says. "Residents would walk down the streets and know everyone, and people would leave their doors unlocked and their keys in the car." McWilliams found a doctor originally from Williston, N.D., to sponsor him in a clinical rotation as a physician's assistant in Sonoma, and he moved as soon as he could.

For four idyllic months, he and his friend would hang out daily in the Sebastiani Winery tasting room, imbibing free wine for hours. "We would help close the place down every day," McWilliams says. Ultimately, family

patriarch August Sebastiani took a dim view of the locals using the tasting room as a bar, and put an end to the drinking club. By that time, however, McWilliams was hooked on good wine. He needed to find another source. The answer seemed to be to make it himself.

Amateur winemaking is not uncommon in Sonoma, McWilliams says. “A lot of people have a barrel of homemade wine in their backyard.” He and a friend would beg or buy grapes if they had to, but the preferred method was to ask vintners if they could glean the passed-over grapes from vineyards

What he learned was that among all the factors he dealt in making a bottle of wine, the quality and source of the grapes was the trump card. “Grapes are number one in importance,” McWilliams says. “It all starts in the vineyards. If you don’t have good fruit, you aren’t going to have good wine.”

He also learned to handle the fruit carefully. Instead of crushing the grapes, McWilliams used an ancient technique of simply destemming them and allowing them to begin their fermentation in the skins. His signature style of wine became what it is today: a “fruit forward” taste that preserves

used to create wine that first established him as a talented winemaker among connoisseurs. Pinot noir grapes hate heat and are highly sensitive to soil conditions.

Luckily, Sonoma Valley is the perfect location for cool climate grapes. Sonoma Valley is warm enough to grow grapes, but as the land warms up, it draws in cooler air from the ocean through the Petaluma Gap to moderate the temperature. “Every day at 3 o’clock the breeze comes up and cools the grapes, which keeps them longer on the vine so that their flavor components mature,” McWilliams



“It all starts in the vineyards. If you don’t have good fruit, you aren’t going to have good wine.”

that had already been picked.

He learned that winemaking is basically a simple process — allow yeast to ferment the juice from ripe grapes, filter out the solid elements, then let the fermented juice mature in a barrel or a bottle. But the difference between expensive elixir and vinegary plonk is found in all the myriad variations that can be used during each step in the process. From his first batch of homebrew wine, McWilliams was experimenting, trying different grapes, varying fermentation times and temperature, using different kinds of oak in the casks.

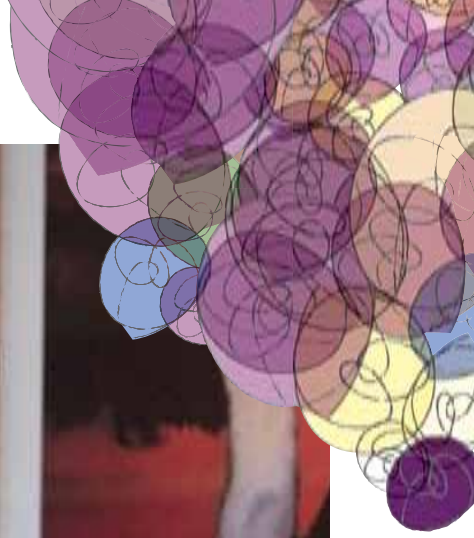
the fruity qualities of the grape and balances tannins and alcohol. The result is a soft wine that is drinkable early but that also improves with age.

In order to learn about and control every step of the winemaking process, McWilliams bought land and began planting many different varieties of grapes. “I learned that what I like are the cool climate grapes like zinfandel, syrah and merlot,” McWilliams says. “Hotter climate grapes like those that are used to make Napa cabernets require very intensive vine-by-vine management.” McWilliams especially loves pinot noir grapes, which he

says. “The strong fruit component and the high acidity creates the basis for a wine that pairs well with food.”

Through an analytical approach and an insatiable drive to improve, McWilliams began making some good wines. Soon he was making very good wines, and winning every amateur winemaking award there was.

In order to control how the grapes were raised, he decided he had to buy some land and grow them himself. With his investments in land, equipment and labor, somewhere along the way McWilliams stopped being an amateur.





Being a vintner is basically an agricultural job. McWilliams leads the simple life of many farmers. He drives a truck. He spends most of his time tromping about the soil, getting dirty and sweaty doing whatever job needs to be done that day. He shares the small clapboard house in the vineyard with his long-time girlfriend and business partner Erin McClary, who oversees sales and marketing for Castle. Nearby is a guest cottage that they rent out to visitors. Each building is dwarfed by the five-car garage with a soaring roof across the yard, where he has done most of the fermenting, barreling and bottling of the wines.

McWilliams decided to stop being a pharmacist and devote himself to winemaking full time. “I decided I was through practicing — it was time to do it for real,” he says.

The decision to be a serious businessman has created its own new demands. Realizing that they couldn’t get the foot traffic and recognition they needed selling out of the garage, McWilliams last year bought the Sonoma bungalow near the town square, where people can walk in after shopping or eating. With sales in many other states, including North Dakota, he spends time traveling to promote the wine and lectures on food and wine.

up is the gentle handling of the juice during and after fermentation. “The challenge is to take the small-scale philosophy and techniques and put them into effect on a much bigger scale,” McWilliams says. He also is set on keeping and expanding the direct-to-consumer interactions and sales as a cornerstone of the business.

McWilliams remains excited by the challenges of creating a great wine and a big winery, but as he moves through his 50s he also is thinking ahead to retirement of some sort. “I can’t see doing this into my 70s,” he says.

Yet even as he muses about retirement, a faraway look settles into his

“The challenge is to take the small-scale philosophy and techniques and put them into effect on a much bigger scale.”

In 1993, McWilliams officially opened Castle wines, making 250 cases of wine in the first year. By the late 1990s they were making 10,000 cases of wine a year, selling some under the Castle label and some under other wineries’ labels.

By 2000, something had to give. McWilliams was doing three jobs: pharmacy, farming grapes and making wine. Every day he was up at 5 a.m. to work in the vineyards, then off to the hospital at noon to be a pharmacist until 8 p.m., then back home to work well into the night on winery business. On weekends, they opened up the garage as a tasting room, pouring for the few visitors who made their way out from town. At that point,

The pressure to grow also is pushing the winemaking out of the garage. It used to be that every fall, McWilliams would do the fermentation and pressing on the cement pad out in front of the garage. McWilliams’ father would also come out every year to join in the work, delighted to slip a glass into the stream of fermented juice and raise it to his lips, perhaps taking back with interest the jars of dandelion wine his son borrowed decades before. Now his father has found that age makes the work too wearing and doesn’t come out at harvest any more. The wine-making process itself has moved to a nondescript warehouse.

One thing that McWilliams is determined not to relinquish as he scales

eyes and he talks about a certain corner on the county road. Right now the corner is surrounded by vineyards, bare fields, and a dumpy little gas station and deli. But this little corner sits at the gateway to Sonoma Valley. It lies directly on the road that leads up from San Francisco, and thousands of people drive past it each day. McWilliams has secured land right on that corner and envisions building a sleek new Castle Vineyards tasting room, the first Sonoma Valley wine tasting room that these thousands of daily visitors will see. “That’s the dream,” McWilliams says.

Christopher Vaughan



D. Koeck

the
Guitar
Guy



Bill Brunton was born into a family of instrument makers. His grandfather had started making a violin, his dad finished it years later, and his own interest was sealed. He came to North Dakota State University in 1969 to teach in the anthropology department, and retired in 2001. Now he spends his days in his shop.



SCIENTIST HUSBAND ENGINEER WIFE

RESEARCHERS COLLABORATE TO UNDERSTAND STRUCTURE OF SEASHELLS

A distinct, unmistakable smell wafts through the doorway. North Dakota State University professors Kalpana Katti and Dinesh Katti survey the landscape. Look down — yards and yards of sawdust litter the concrete floor. Look up — stacks and stacks of boards and plywood strewn across rafters weave a haphazard wooden tapestry. Picture a cavernous bunker brimming with leftover carpentry projects.

Some people might merely see a woodworking shop and storage shed. But as the Kattis pick among the mismatched pieces of wood and layers of sawdust, they imagine what it can become. Sort of like the ebullient real estate agent who shows a “fixer-upper” to a hopeful client in search of a dream home.

In the unkempt and forgotten woodworking shop in Ehly Hall, the professors envision distinct possibilities. There is no basement under the concrete floor, they recall later, almost gleefully — a crucial feature if it is to house sensitive electronic equipment. It cuts down on the possibility of vibration which could affect the capabilities of the half-million-dollars worth of specialized instruments used in their research. Not that they had yet acquired the equipment they envisioned.

“We will clean it up,” says Dinesh, remembering their determination when the couple

first saw the space four years ago. Move wood, clean, scrub, sweep out sawdust and clean some more. Get rid of dust, the enemy of sensitive electronic equipment. Students scurry to prepare the space. Elbow grease and hours of work turn it from a carriage house into a castle — at least if you’re a scientific researcher looking for equipment, bright lights and a space to conduct experiments. When the Kattis walk through the doorway, the brightly-lit space is punctuated with splashes of red cupboards, sinks, mismatched yet functional steel desks, and 24-inch diameter red spiral metal stanchions topped by a gray-speckled granite counter. “This

is a homemade table,” notes Dinesh, as he points to what’s officially known as a vibration isolation table that students helped to build.

Today the lab hums with electronic equipment and students conduct experiments using an atomic force microscope and infrared spectrometer in the woodshop-turned-laboratory. “Now this space is as good as any lab in the country,” says Dinesh. “Our students practically live here. It’s like their home.”

Both Dinesh and Kalpana speak with passion and enthusiasm about their research in detailed, yet understandable language. To emphasize the “science of the small” or nanotechnol-

ogy, Kalpana describes herself as 1.6 billion nanometers tall, or about 5'3". As an associate professor at NDSU, Kalpana is a materials scientist. Professor Dinesh Katti is a computational mechanics expert. Both are part of the civil engineering department at NDSU. The Kattis have received more than \$1.5 million in research awards from the National Science Foundation and other groups — awards that have funded tools and equipment for the former woodshop-turned-laboratory.

What is unique about the Ehly Hall lab, say the Kattis, is the marriage between science and engineering. The blending of these disciplines

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also brought about an exceptional discovery by the husband and wife research pair. “In the summer of 1999, Dinesh and I were sitting and having lunch,” recalls Kalpana. Casually munching sandwiches, Kalpana posed an idea that might later be characterized as a fluke or as serendipity. Or maybe as a summer to-do list by one scientist to her fellow scientist who also happens to be her spouse. “I had just finished some research on seashells and was invited to submit a journal paper. The subject was fresh in my mind. I told him, ‘you know, we should look at this.’”

UNSOLVED MYSTERIES

What intrigues the Kattis is the structure nature painstakingly builds on the inside of abalone shells. The pearly, white layer is often used to make jewelry. Known as nacre (pronounced nay’ ker) to scientists, astute jewelry buyers know the iridescent gleam as mother-of-pearl. Although recognized for its beauty, scientists have spent decades and tens of millions of dollars to study it for other reasons. The shells are the real estate of choice for the oysters, mussels and other mollusks that live inside them. The organisms probably have no idea that their homes are of potential interest to the Department of Defense and NASA.

“Nature has made this as the best armor material,” says Kalpana, tapping on the outside of a red abalone shell. “The outside layer is very hard. The inside layer is very tough. That means the outside layer will take impact. The inside layer will absorb energy if the outside layer breaks. That’s exactly how armor works.”

Seashells’ strong, tough structure captivates scientists. “Strong means it can take a lot of load before it breaks. Tough means it will give a little.



This is very unique,” explains Kalpana. “Most engineered composites are one or the other.”

Studying nacre — a complex and densely-layered substance at the nanoscale — involves many disciplines, including chemists, marine biologists, material scientists and others. The Kattis bring engineering to the mix of people working in biomimetic nanocomposites. *Bio* meaning biology. *Mimetic* meaning mimicking nature. *Nano* meaning extremely small and *composites* meaning a material made of distinct components. Nacre displays extraordinary mechanical responses. What began as a breezy summer lunch conversation for the Kattis grew into gale force intellectual curiosity.

In addition to lab experiments, the Kattis examined scientific literature on the structure of nacre. “Let’s build the structure on the computer and try to see what aspect of the structure makes it so strong and tough,” recalls Kalpana. Using a personal computer, Dinesh built the first computer model of the nacre — a simple structure with little detail. It was a start. “And then we put in more and more detail which people hadn’t done,” says Kalpana. “We ran simulations on this model. Instead of taking the sample of nacre and

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doing mechanical tests, we did it in the computer model.”

Other research groups had previously determined that nacre’s strength and flexibility were due to a variety of factors, including an internal brick-like structure held together by a pliable mortar of proteins that are nanometers thick. The miniscule “bricks” are made of calcium carbonate — the same substance found in antacids or chalk or limestone. The orderly brick-and-mortar is meticulously arranged with organic and inorganic layers. The Kattis’ computational model of nacre showed the organic material contained a soft material of properties with a magnitude much higher than expected. “The first time I presented this at a Materials Research Society meeting,” says Kalpana, “at least 10 people stood up in the audience and

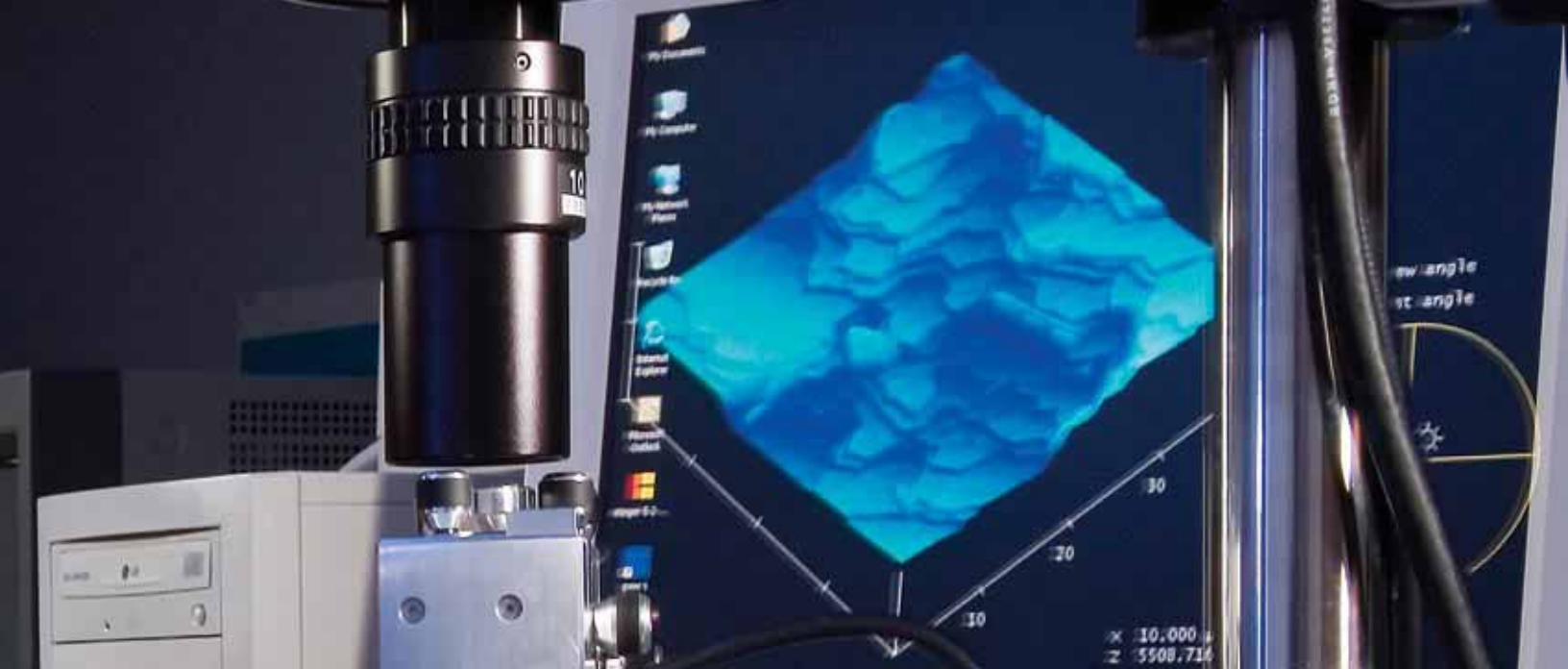
said, ‘There’s no way.’ These people were like the ‘who’s who’ of biomimetics.”

SECRETS UNFOLD

Over the years, other researchers have made different incremental discoveries about nacre. But perhaps the beguiling beauty of polished jewelry had resulted in a scientific bias. A summer afternoon in one of the Kattis’ labs yielded something new. Other studies used polished pieces of nacre to study its properties. Kalpana and Dinesh Katti and their research team milled samples of nacre into approximately 1" x 1/8" dogbone-shaped samples with pinholes at each end. They then used machines to pull the nacre samples apart, fracturing them in the process.

“There were four or five of us in the electron microscopy lab that day in 2002,” recalls Kalpana. “Dinesh and I saw it at almost the same time. We jumped out of our chairs because we couldn’t believe that nobody had seen this before. And the reason they hadn’t seen it was because they always looked at a nice, clean, polished cross-section. They never looked at a fracture sample.” By using a “diamond in the rough” rather than a polished sample, the nacre yielded some secrets. “What you could see was that these platelets are penetrating into each other. They are interlocking. This is a simple concept that nature uses and this was not observed by anybody before.” Another feature the Kattis observed and reported — the structure of the material is built like hexagonal bricks and mortar. “If they are rotated and penetrated, that’s nacre interlock,” says Kalpana.

But the Kattis and their student research team didn’t want to simply report their discovery. They wanted to determine its significance. Dinesh’s expertise in computational modeling was crucial. This type of modeling is the same modeling used for standard engineering to design a bridge, a car, an airplane. It became evident, though, that a PC couldn’t provide



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the computational horsepower equivalent to the power of a Mack truck needed for their research.

While the nanoarchitecture of nacre represents the science of the extremely small, the computations to model them were at the extreme other end of the scale. To illustrate all the intricate detail contained in nacre’s structure, Dinesh’s models became more and more computationally intensive. Think of millions and millions of math problems rolled into one. So complex were the models that NDSU’s Center for High Performance Computing, as well as the National Center for Supercomputing Applications at the University of Illinois in Urbana-Champaign, were used for the work. With more than two million computer nodes and each node completing an extremely large calculation, the models took hard-core computing power to create. That aspect of the work took approximately one year.

OTHERS TAKE NOTE

In some ways, by creating their own lab from scratch and by developing the detailed computer models, the Kattis engaged in a scientific version of “build it and they will come.” Others took note of the research being done at NDSU. The Kattis’ discoveries led to numerous invited presentations at scientific meetings in Boston, San Francisco, China, Italy, Brazil, as well as serving as guest lecturers at the Massachusetts Institute of Technology. They have published more than 20 articles on nacre, most recently in the May 2005 issue of the *Journal of Materials Research*. Another article has been accepted for publication this fall in *Material Science and Engineering C*. As for the doubters at the scientific meeting where Kalpana first reported on their research, “Now we’ve established ourselves. People know that we’re about the only group that has looked at nacre from a mechanics point of view.”

Nacre research continues around the world, with some labs creating artificial nacre. But scientists aren’t trying to make seashells. “We want to use other materials and understand how seashells are made. Just like nature has taken calcium carbonate and made it 3,000 times tougher, we can take other composites and make them 3,000 times tougher,” says Kalpana. “It could make possible lightweight armored aircraft, body armor, artificial body parts, and protective coatings that are strong and flexible.” She points out that their research has shown that nacre’s interlocking bricks, platelet size and organics are important. “If we can play with those, we can engineer materials that are much better than what we have now.”

She remains intrigued by nature’s perfection in creating nacre. “For us to manufacture it at this level of detail, we need fancy equipment in a very controlled environment with a clean room. And nature does this in the ocean, at ambient temperature, pressure, in a dynamic environment.” Things like the rotation of the “bricks” were originally thought of as defects by scientists. But the Kattis’ research and other studies now show differently. “They are there for a reason. Even the defects are engineered,” says Kalpana.

STYLES AND SUBSTANCE

Observing the Kattis during a recent television news interview under the bright lights of the lab they built, their complementary styles as research colleagues become apparent. Kalpana, animated and factual, talks in rapid-fire cadence about their work until the interview time is nearly over. “She’s doing all the talking,” chuckles Dinesh. “She’s doing great. It happens at home too,” he admits.

By contrast, her research partner Dinesh speaks with more deliberate reserve. He summarizes the implications of their work for the reporters and videographer as they wrap up the interview. “Scientists talk to other scientists. We should also talk to the public and get out of our scientific jargon,” he says. “If you look at the type of research being done in nanotechnology, we need this type of research to remain competitive globally and to improve quality of life. When you do research like this, you can spin off industry and attract companies to the region.”

Through the Kattis’ research thus far, the exotic nacre has revealed some — but not yet all — of its secrets. Science, like a good detective novel, remains a mystery that awaits a final ending.

Never a dull dog tag

*Each litter named with a theme in mind,
and they're all pretty clever*

A handful of veterinary technology students troop into the animal science barn, scanning the corrals for their patients. Guided by a chorus of nervous bleats, the young women wind their way toward a band of Russian Romanov sheep. Nervous, the animals try to disappear, bunching together and leaning against the far side of the pen.

The women hush the sheep, cooing and patting and offering bits of hay. When their patients are calmer, the students begin checking for symptoms of ill health. Each sheep bears a numbered identification tag, but the vet tech students can't bring themselves to croon, "Oh, Number 43, you're such a sweetie." So they start thinking up names. Pretty soon they've christened the whole bunch.

Routine sheep checkups continue throughout the semester, the students ever vigilant over their woolly charges. Then one day, vet tech student Amy Ellwein sees something she doesn't like. So she calls up the sheep herdsman, introduces herself and reports, "Luna's eye is all gooey. I think you should have it checked out."

A long silence on the phone is followed by a question, "Who the hell is Luna?"

Ellwein has to look up the animal's ID number.

Dressed in a pet-print tunic, her long hair pulled away from her face, Ellwein — now a vet tech instructor — rests her elbows on the half door separating the beagle kennels from the rest of Robinson Hall. She watches as a student sorts a cluster of hungry pooches into individual wire pens, using bowls of food as bait. A slip of paper bearing each dog's name is tucked into each dish. This way the student knows who's been fed and who has not.

A non-descript brick building on the campus of North Dakota State University, Robinson Hall is home to parakeets, a mouthy parrot, rabbits, mice, gerbils, a chinchilla, hamsters, 19 beagles and some 30 cats. And every last one has a name.

The highly specific — some say weird — naming practices in Robinson Hall pre-date Ellwein's involvement in the vet tech program by nearly 20 years. In 1976, Drs. Tom and Joann Colville launched the program with a brand new building, a handful of students, a dozen donated cats and four beagles.

While cats in need of care were easy to come by, dogs — at the time — were not. The plan was to breed the two male and two female beagles and develop a dog colony so the students could practice their skills.





Daphne tattoo # (none yet)

White on left shoulder only, no collar
Dark marks on temples.



Electra tattoo #124

Thick solid white collar from: center line toward right shoulder



Jar Jar tattoo #11

White mark above collar fills out on neck.
Face is starting to



Kilida (Dot) tattoo #130 (not on there yet)

Her brown is lighter almost red. She is really short and long!





That first quartet of adolescent dogs was so eager to procreate, they couldn't keep their paws off each other. So Tom Colville decided to name them for the controversial 1969 sex comedy "Bob & Carol & Ted & Alice."

Over time, the rules of naming evolved:

Rule No. 1. Each new litter of puppies or cluster of cats that arrives in Robinson Hall must be named by a theme. Typically, those present at the birth/arrival have first naming rights. Faculty have veto power.

Rule No. 2. Animals can't be given "normal" human names. This rule came about when the program had a beagle named "Sarah" and a student named "Sarah." Sarah got pregnant. The dog, not the girl. It was just too confusing.

The newest beagles on the block are the crazy-names-celebrities-give-their-children litter: Apple (Gwyneth Paltrow), Hazel (Julia Roberts), Tallulah Belle (Bruce Willis and Demi Moore) and Pilot Inspektor (Jason Lee).

The "Scooby-Doos" are namesakes of cartoon characters Scooby, Scrappy and Daphne. Dyna, Electra Glide, Road King and Duce make up the Harley Davidson motorcycle gang. Dharma and Greg, named for the TV sitcom couple, are actually half brother and sister ... it's a long story. Larry's brothers, Curly and Moe, were adopted. And the new breeders are all loners: Bauer, Clyde, Jazzy and Kilida.

Since not everyone — certainly not new students — can distinguish one beagle from the next, there's a beagle directory. Each dog has its own page in a large, three-ring binder. Here you'll find vital statistics on each canine, including a mug shot and a hindquarters portrait documenting each one's unique markings.

The arrival of the "celebrity" pups this summer means four of the senior generation — Mercedes, Camry, Kia, Beamer and Lexus — soon will be eligible for adoption. With the exception of Chuck — an epileptic beagle that lived his entire 15 years in Robinson Hall — most of the beagles spend less than four years in the program.

The breed's modest size and even temperament earned the beagles their place in Robinson Hall. "They aren't the sharpest tools in the shed," Ellwein says, "but they are the sweetest dogs to work with. When students go in to get a dog for a physical exam, it's like they're all jumping up and down saying, 'Pick me! Pick me! Stick a thermometer in me! I don't care!'"

Today's beagles don't spend as much time playing patient as their forbearers. The beagles earn their keep, but the real clients often are visitors to the Robinson Hall Veterinary Wellness Clinic.

Ellwein's brainchild, the student-run, instructor-supervised clinic provides physical exams, vaccinations, heartworm tests, cat neutering and other wellness services. Clientele is restricted to Humane Society and Red River Zoo animals and pets belonging to faculty, staff and graduate students in the Animal and Range Sciences Department. "This way," Ellwein says, "a dog that really needs its toenails clipped gets its toenails clipped."

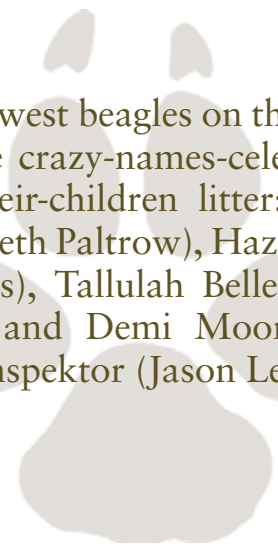
If it's a challenge getting on a first-name basis with the Robinson Hall regulars, keeping track of the transient cats is nearly impossible. Collected from area pounds and the Humane Society, up to 30 felines are de-wormed, de-fleaed, de-ear mited and de-sexed by NDSU vet tech students each year. As soon as the cats are fixed up, most go back to the Humane Society or find homes with families. A select group of the gentlest creatures, however, are pressed into higher service.

Because the anatomy of a cat's throat is similar to that of a human baby, some vet tech program cats are used in pediatric advanced life support labs. NDSU vet tech instructors and their students transport a few felines to local hospitals and ambulance services, then administer anesthesia while EMTs and physicians practice inserting life-saving tracheal tubes into the cats' tiny throats. As with all creatures used in the program, the animals' health and safety always

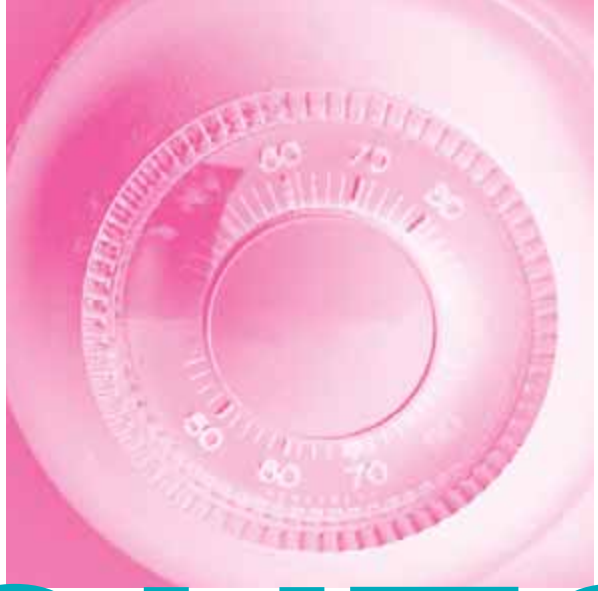
take priority over science.

Despite the considerable cat turnover, Ellwein revels in remembering clans like the wine kitties — Merlot, Zinfandel and Chardonnay; the Halloween cats — Spooky, Raven, Boo and Ghost; and the "Lord of the Rings" felines — Boromir, Pippin, Theoden and Lady Galadriel.

Domestic or wild, every animal that crosses Ellwein's path will get a name; even baby squirrels brought to her for mending. The squirrels she names for national parks. She has tended and released Denali, Jasper, Arcadia and Hudson. "Well," she says, "I guess Hudson was after a bay, not a park."



The newest beagles on the block are the crazy-names-celebrities-give-their-children litter: Apple (Gwyneth Paltrow), Hazel (Julia Roberts), Tallulah Belle (Bruce Willis and Demi Moore) and Pilot Inspektor (Jason Lee).



52 FIGHTS

A NEWLYWED'S CONFESSION



“The title is eye-catching, but it’s not entirely accurate. They’re not knock-down, drag-out fights. It’s really about the issues that arise in every marriage.”

Jennifer Patterson and Matt Samuel live in an affluent development in St. Louis Park, Minnesota. It’s the type of neighborhood where you could imagine well-toned homemakers power walking their purebred dogs in the middle of the day and the 1960s-era houses are roomy and vigilantly tended.

Their cocoa-colored split-level fits the image of suburban perfection. Its interior reflects a 1969-vintage affluence that now seems charmingly retro: a sunken tub with swan fixtures, a built-in bar in the basement, a dramatic front-room window that gazes out at the velvety greens of the Minneapolis Golf Club.

Amid these posh surroundings, Jennifer is a bit of a paradox. She answers the door in a raggedy no-name sweatshirt and jeans. Shiny, plastic baby toys fill the front room and luxurious dog hair — courtesy of Mika, the family’s fine-boned Golden Retriever — speckle the entryway.

She is soon joined by Matt, dressed in perfectly pressed khaki trousers and an impeccable burnt-orange polo shirt. At first glance, the two appear — as they say — as different as night and day. Jennifer is quiet and introspective. Matt is the sort who will chat up a stranger in the airplane seat next to him. She jokes she has two hours of ambition a day. Matt is high energy. She doesn’t mind a little clutter. He favors a well-tended house where paperwork is stacked at tidy right angles.

In practice, though, the two seem ideally matched. They speak to each other with a respectful assertiveness that many couples would envy. They finish each other’s sentences, either to complete a thought or gently clarify what the other person said. And they genuinely seem to like each other.

Still, both say married life wasn’t always so agreeable. Although the couple celebrated their third anniversary in June and have an eight-month-old son named Max, they recall the first year of marriage as a marathon of conflict. By the time the horrors of the first year were fading into memory, Jen had written a book, *52 Fights: A Newlywed’s Confession*. Or, as Matt and Jen prefer to call it: 32 Fights and 20 Negotiations. “The title is eye-catching, but it’s not entirely accurate,” Jennifer says. “They’re not knock-down, drag-out fights. It’s really about the issues that arise in every marriage.”

The book chronicles the disagreements and resolutions of the early months of marriage. Jen’s essays are light-hearted but perceptive, frank but never cruel.

Since *52 Fights* debuted, Matt and Jennifer have become poster children for the first year of marriage. They have been interviewed by the Chicago Tribune and the New York Daily News and were prominently featured in a series on newlyweds for Al Gore’s new channel, Current TV. They will appear on “The Montel Williams Show” this fall, and they are

currently in early negotiations to develop a television show.

“There’s so much stuff out there on how to get ready for your wedding, but we haven’t found anything like Jennifer’s book out there. There are no road maps for what to do when you return home from the honeymoon and the glow starts to fade,” says Matt.

He is a successful high-tech patent lawyer, and it’s easy to see why. If you had to go to court, you would want Matt beside you. All stereotypes about litigious sharks aside, he is friendly, optimistic and innately likeable. He speaks with an assurance that suggests quiet confidence; he carries an air of no-nonsense dependability.

Which begs the question: How does he feel about this book? He does, after all, figure prominently in all 52 essays. His personality, strengths and quirks are exposed, albeit lovingly, for all to see.

Matt doesn’t mind. The very qualities that Jen attributes to him in her book — his stability, good sense and draft-horse-style unflappability — have helped him weather any scrutiny.

Oh sure, there was some anxiety in the days before the book was released, as he wondered if *52 Fights* would affect his career as a partner at the Minneapolis-based firm of Fish and Richardson.

But besides some ribbing from his colleagues and buddies in his fantasy football league (“Man, I’m glad my wife didn’t write a book”), he has fared pretty well. As for career concerns, it hasn’t been an issue. If anything, he believes it helps him stand out. “To some degree, lawyers tend to be viewed as a dime a dozen. Like we’re all just cut from the same blue suit. And now people say: ‘Oh, you’re the guy the book was written about.’”



Baby noises down the hall prompt Matt to fetch Max from his crib. Max is a round-cheeked little boy, with Mom’s sweet smile and Dad’s light blue eyes and go-getter personality. “Everything is now, now, now!” Jen says, with good-natured resignation.

Jen’s anecdote about discovering her husband’s now, now, nowness goes back three

years. It’s 6 a.m. on a Saturday, and Matt’s alarm jolts her awake. She had hoped to sleep at least until the sun came up, then go for a jog to clear her head of workweek worries. Instead, her husband has showered, shaved and dressed. He is raring to go.

“Shall we start working?” he asks his bleary-eyed wife. He hopes to get a jump on their first home-remodeling project: scraping away the garish, pink-and-purple wallpaper that dominates the main floor. Jen realizes her days of lazy Saturday mornings are over. Her spouse has many plans, and he wants to get them done.

Now, now, now.



They met in the fall of 1999, on a blind date. Jen had never been on a blind date before, and almost backed out at the last minute. But when Matt showed up, she was glad she hadn’t. His charm and friendliness quickly put her at ease.

The two clicked, even if they had little in common. Matt grew up on a hobby farm near Fargo with five younger siblings, a veterinarian father and a mother who returned to North Dakota State University after her kids were grown to get a master’s in counseling. Jen grew up in a duplex in Ithaca, N.Y., with a lineman father and stay-at-home mom.

Matt received his electrical engineering degree at NDSU in 1991, then earned a law degree at the University of San Diego. Jennifer was a technical writer-turned-computer programmer with a master’s in creative writing from Columbia University.

They fell in love. Their wedding was June 1, 2002, a perfect summer day. Nearly 200 friends and families watched her walk down the aisle in a white satin gown with spaghetti straps and a gentle A-line skirt.

Both soon realized the differences that helped them fall in love were tearing them apart. The traits Jen once adored in her husband — his take-charge attitude, confidence and loads of energy — now drove her crazy. Everything became a source of conflict, from spending habits and different communication styles to in-laws and housekeeping standards. When Matt wasn’t flying across the country for busi-

ness, the two were bickering about their endless home renovation.

To Jen, the house itself was an issue. It represented middle-class affluence and conformity — two conditions she'd never imagined for herself. She had once dreamed of living in a loft in lower Manhattan with a fascinatingly sullen artistic type. Instead, she was married to a Midwestern idealist whose American dream included a great career, a big family and a house in the 'burbs. Jen feared her independence and identity were melting into his.

Frustrated and lonely, she began to journal. Her musings morphed into columns, which were picked up by her hometown newspaper, *The Ithaca Journal*, *Minnesota Bride* and *Lovetrip.com*, a travel Web site.

Jen grew so diligent at collecting material that she would whip out a notebook in the midst of arguments. It would bring any debate, even with the lawyerly Matt, to a grinding halt. "What did you write?" he'd ask.

"Nothing."

"I know it's something, and I know it's going to be public soon, so what did I do wrong?"

Matt never suspected where the notebook's contents would land. His wife may have scribbled notes now and then, but it was a long stretch to think her observations about his quirks, or their marriage, would wind up in bookstores across the country.

Yet it was Matt who encouraged his wife to take her career to the next level. Ever since they'd started dating, Jen had talked about becoming a "real writer," but had been too intimidated to carry it out. "Well, what are you doing about it?" her take-charge husband said.

And so, with Matt cheering her on, she sent an e-mail query to a number of New York literary agents. She took a deep breath and clicked on "send." Twenty minutes later, the first response arrived. Then a second, third, fourth, fifth. Jen couldn't believe it. For years, she had dreamed about a book contract with a major publishing house. Now five agents were reaching out through the anonymity of cyberspace, offering to represent her. It was crazy.



Since hitting bookstores in June, *52 Fights* has struck a universal chord. Their friends say it's exactly on target. Wives reported having to wrest it away from their husbands so they could read it. Interviewers told the couple they could relate.

“There’s so much stuff out there on how to get ready for your wedding, but we haven’t found anything like Jennifer’s book out there. There are no road maps for what to do when you return home from the honeymoon and the glow starts to fade.”

One chapter deals with a common complaint for new couples — the in-laws. As mothers-in-law go, Matt's mother Marguerite was strictly a non-meddling variety, but Jen still felt insecure. When Marguerite casually suggested the type of pans Jen could buy, her doubts ran wild. Was her mother-in-law still trying to control things? Did she see Jen as incapable of taking care of her beloved first-born?

In the end, Jen realized she was being overly defensive. Marguerite, for her part, showed great humor about the chapter. When Matt's parents attended the book launch in Minneapolis, Marguerite wore a T-shirt that prominently stated: "The mother-in-law, page 133."

Another chapter delves into the hot-button issue of money. Matt wanted to buy a \$1,300 icemaker, which produced perfectly square, perfectly clear ice cubes. Jen, the saver of the two, was horrified. Couldn't he just use a plastic ice tray?

At the same time, Jen wondered if she should allow Matt to splurge, as he worked hard for his paycheck and was typically so practical. They realized the real issue was their differing views of spending, which were shaped by their widely different backgrounds.



They never did buy the icemaker, although their debate over it became a favorite interview topic. When the couple appeared on the Current TV segment, the icemaker spat was prominently featured. A Chicago Tribune critic jumped on the example to skewer the new network as “remarkably clueless and elitist.” Some viewers vented too, although for odder reasons. “What a (expletive) idiot,” one blogger fumed about Matt. “You don’t need to buy an icemaker; you can just buy a filter.”

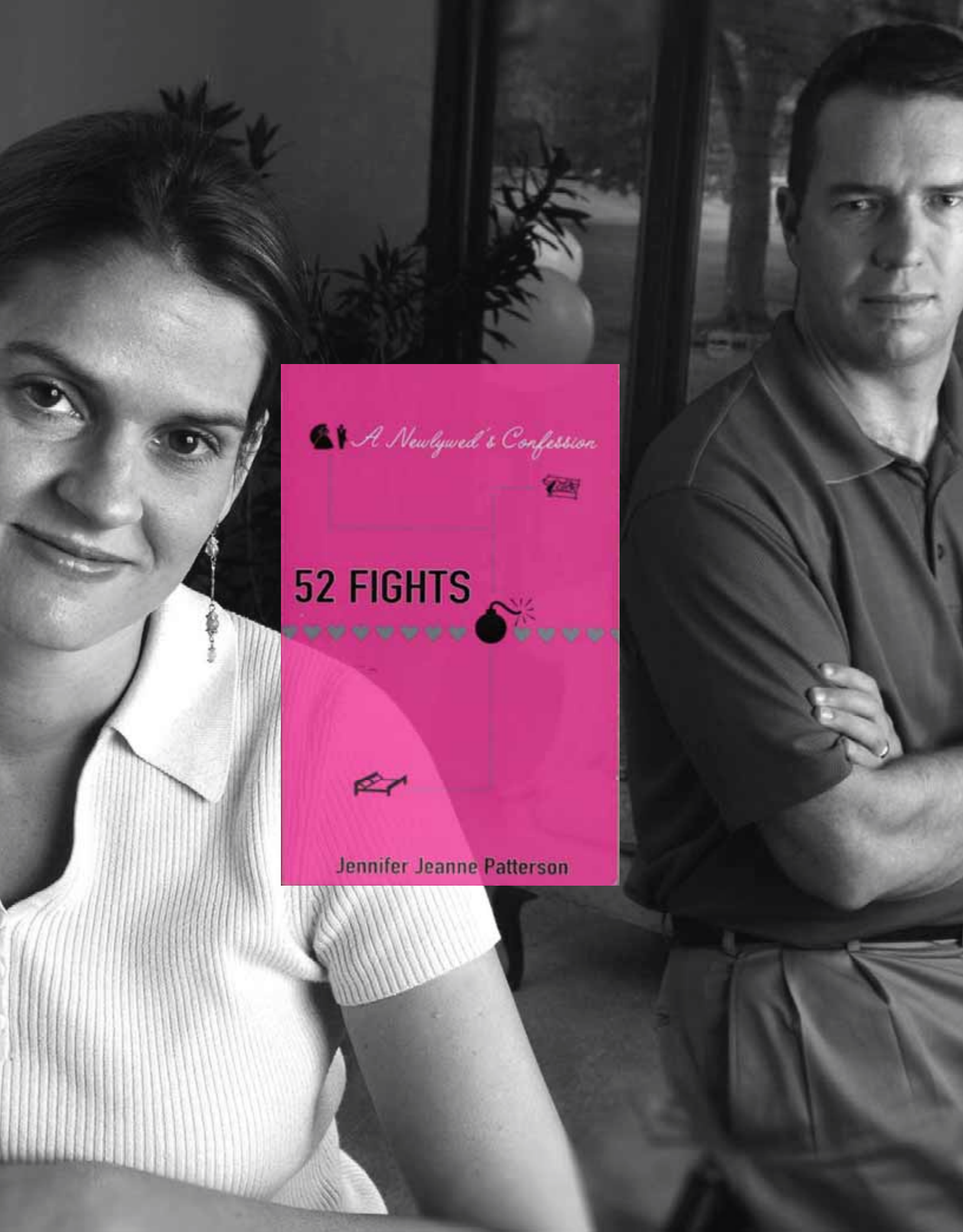
Matt laughs. “Well, first of all, he’s wrong. But that is really beside the point. I think you can read the book on a couple of different levels. There’s a superficial level: Oh, the ‘problems’ of wealthy, uptown people. How can they complain about any of this? But if you go deeper, it’s actually that we came from very different backgrounds, so what do you do when those backgrounds come together?”



For some couples, the natural sequel to *52 Fights* would be *53 Fights* and *One Divorce Settlement*. But Matt and Jen have grown stronger. The writing and the self-examination it required proved cathartic for Jen. And the content forced husband and wife to talk through even the diciest issues. “I’d write a chapter and he’d read it and say, ‘You know what? That’s actually not how I see it,’” Jen says. “I think it really strengthened our marriage because you think your partner thinks the way you do and they don’t. It’s the first time I really understood our minds work very differently.”

Jen’s book deal allowed her to quit her programming job. She spends her days caring for Max, promoting *52 Fights* and, in those precious chunks of time when the baby naps, churning out a sequel. The premise: What happens when baby makes three? A lot, Matt and Jen learned. The arrival of a third party, especially one with many demands on their energy and time, changes the dynamic. Newlywed arguments seem petty. Now there are new issues, new negotiations, new resolutions. And that’s just the beginning. Still, one gets the feeling that Matt Samuel and Jen Patterson — who have survived in-laws, huge personality differences and one very expensive icemaker — will figure it out.





 *A Newlywed's Confession*

52 FIGHTS



Jennifer Jeanne Patterson



EXCERPTS

JACLYNN DAVIS WALLETTTE

Jaclynn Davis Walette is director of Multicultural Student Services at North Dakota State University. She came to NDSU in November 1999, and she previously worked for the Native American Pharmacy Program and in the Office of Registration and Records. Prior to coming to campus, she was registrar, admissions officer and the regional coordinator for the Rural Systemic Initiative at Turtle Mountain Community College, Belcourt, North Dakota.

Davis Walette earned her bachelor's degree at the University of North Dakota, Grand Forks, and is completing her master's degree at NDSU. She is a member of the Fargo Theater Film Festival Committee, Fargo's Native American Advisory Council, Training Our Campuses Against Racism Committee and the NDSU President's Cultural Diversity Committee.

This is a place where we assist multicultural students — African American, Asian American, Native American and Hispanic — achieve their academic goals.

We're gearing a lot of our tasks and a lot of our energies on assessing what we're doing for the students and what the needs of the students are. We did a little bit of that last year, trying to get data collection off the ground and it's telling us a little bit of a picture but we really have no background at this point to do any comparing and I think that that's important for this department. It's just to figure out what the needs of students are from their perspective. Sometimes I think we impose needs on students and I believe that it's telling when students don't respond, that sometimes our guesses are not accurate.

I was a registrar at the Turtle Mountain Community College, which is a tribal college in North Dakota, and while there I enjoyed the data collection that was actually occurring at the tribal college.

At this moment in time I wish I had more time to do some research and writing. I've got a couple of projects on my plate and I'm struggling with that skill to just carve out time.

As time goes along I would hope that at some point I could move on to hopefully a higher administrative position in higher ed.

I really don't like being the center. I think it's important for me to relate to the events, the people, the community that supported me along the way and for me just to say that 'I've done this and I've done that' without acknowledging that support, it's hard for me just to stand alone.

It's obvious that the students have the same goals as mainstream students have. The background may be dissimilar, but from what I've observed, the goals are similar. I guess that's the message I would like to put forward. I've worked in the Native American Pharmacy program, many of the students talked about returning to the reservation to work and to be back home with the Native community and so you know those notions are present and to be mindful that there isn't that much of a difference.

It's a huge undertaking to change people's mindsets about how they behave in public when diversity is in front of them. You know, where do you begin. It's just basic human interaction.

I'm just about done with a book on Chippewa history. I prefer history books, academic books. I'm also taking a class here at NDSU on equine studies.

It does take a lot of energy for a person to do the things that I do and I just feel so fortunate that I'm able to. There's a lot of things that can bring a person down.

I always reach back to those messages of how important it is to stay healthy, to be a good person, to enjoy life, enjoy what's been given to you and, it really helps to work to maintain what's been given to you. I think it's important to acknowledge that and to really say yes this does take a lot of work but also being grateful you have the ability to get the work done in order to maintain and to grow from it.

I think there tends to be — and maybe it's from both sides — this notion that 'mine is better than yours,' and I think that going through life with that notion can be detrimental in your own growth and your community's growth. I'm not sure what will help — communication or not — there may be just some cultures that would rather not be influenced and there might be others who want to do more influencing, so there are going to be some gaps there. I don't know what the answer is.



alcohol and its effects

In my family, being called a drunk was a compliment.

It meant you had the disease of alcoholism and that recovery was a day-by-day, minute-by-minute thing, and without it you could easily become the drunk on the street. It meant you had the humility to stay sober.

My father and my brother are recovering alcoholics, so I grew up attending open Alcoholics Anonymous meetings, Ala-teen and AA social events. Recovering alcoholics have great parties. There was the annual Labor Day bash with horseback riding, a bonfire, and a huge cast iron kettle of boiling water to cook the live lobster. And there were the New Year's Eve celebrations. These people had fun. Stone cold sober. They danced till they dropped, then attended an all night open AA meeting. I remember laughter, hugs, and adults engaged in deep conversation. Good memories.

Of course that was post recovery. Prior to that time there was fear, grief, and pain. And always the presence of alcohol. I did not know the definition of alcoholism at age twelve, but I knew in the pit of my stomach it was right when I was told that my father was in treatment. And I knew it was right when my brother sought treatment, at the start not willingly, but in the end resolved. It was relief. It was the beginning.

During the family days that were a part of the treatment programs, I learned about the disease of alcoholism. I learned that alcoholism is a life-long illness and that recovery is a spiritual path that requires daily surrender. I learned that surrender would bring freedom for the alcoholic. I also learned, not at age twelve, but ten years later, that alcoholism is a family disease and recovery is necessary for everyone.

I had my own work to do. Work that involved grieving, letting go and giving up the behaviors that helped me survive, but that no longer served me well. I learned the importance of honesty, faith, and self care. I realized that I needed to actively strive for my own recovery on a daily basis. And I learned that recovery from alcoholism is really a gift, without which my family, and I as an individual, would be less than whole.

In 1999, North Dakota State University was looking for someone to lead its alcohol and drug abuse prevention efforts. Students, faculty, staff, law enforcement, the liquor industry and alumni had just finished a process of self study about the impact of student alcohol use. They concluded that high risk drinking was a problem that


touched all aspects of the university. It kept students from succeeding. It put the university at risk legally. It threatened lives. Solutions were needed. A leader was needed to coordinate campuswide prevention efforts.

I was interested. As director of Orientation and Student Success I cared deeply about students. The goal of the department was to help new and returning NDSU students achieve success. High risk drinking was a student success issue. And if we framed it in that way, maybe students would be more open to our efforts.

I felt that my background as a child of an alcoholic helped me to understand the issue in a deeper way. My supervisors understood the connections I was making between student success and high risk drinking and they trusted me to give it a try.

I realized the magnitude of the task when I told my colleagues about my new role. They replied with similar responses, "College students will always drink. It's a rite of passage." Students responded similarly. "It seems like the university is out to take away our rights. Our parents did this, our sisters and brothers did this. Drinking is what college is all about!"

I argued with this line of thinking, "The university is not against drinking.



The university
is not against
drinking. Just
the kind of
drinking that is
dangerous.

Just the kind of drinking that is dangerous, and that leads to horrible consequences like drunk driving, sexual assault, poor grades, health problems and death." "Good Luck," they said. And the journey began.

At first, people on campus had difficulty understanding my role. I had difficulty understanding it! I was looking for the silver bullet.

Everybody had an idea. Teach kids to drink responsibly. Work with the K-12 system. Give them more to do on weekends. Create stiffer penalties. Get rid of alcohol advertising. I became frustrated with the multitude of phone calls I received wondering what I planned to do about various alcohol related problems on campus.


I knew we had turned a corner when people called me to tell me what they were doing regarding alcohol related

problems. And somewhere along the line, I began to realize that they were all right. How can we "teach" students to drink responsibly when everything around them tells them not to? When they are exposed to hundreds of hours of alcohol advertising? When they see adults drinking in risky ways? When they experience inconsistent enforcement or mixed messages?

There was no silver bullet. It would take multiple solutions to address the many causes of alcohol abuse.

NDSU has made strides in the past five years. It's just that those strides are somewhat smaller and slower than I first envisioned. Many times I am reminded of the twenty year struggle to eradicate smoking from the workplace, encourage seat belt use, or, to institute recycling programs. These social changes required persistence, passion, and hope. Most importantly, they required a belief in the power of people to change.

I am hopeful. I believe that North Dakotans are alarmed that our state is ranked number one in the nation for binge drinking, drunk driving, and alcohol dependence, not just for children, but for adults. I believe that



I want the students to know that they have the power to change their own lives and the lives of their friends.

college students are no longer willing to accept that the experience of a power hour (a tradition of attempting to down 21 drinks on the 21st birthday) is worth the risk of death.

There are positive signs of change. The new substance-free floor in the residence halls is full. We weren't sure if students would want to live in a place that required a "substance-free" lifestyle. They do. The floor filled up soon after room sign-up began. Though all residence halls are to be substance free, this floor will require a pledge to remain substance free on and off campus. And students will hold each other accountable.

Student organizations are actively involved in providing late night weekend activities on campus. The Greek community is adapting and growing under substance-free housing rules. A recent survey conducted on campus shows that more students under the age of twenty-one are choosing not to drink.

Despite these signs of change there also have been setbacks. The same survey indicated that high-risk drinking continues to rise at NDSU and is well above national averages. The recent death of a student at Minnesota State University Moorhead and near death of an NDSU student as the result

of power hours were shocking reality checks. They remind us that we are not immune to this type of tragedy.

It occurred to me that trying to teach college students to use alcohol in less risky ways is a lot like the first year of parenting. You get very little feedback. I think of those long days at home on parental leave. Don't get me wrong. I love being a parent. Especially now that my boys belly laugh at my jokes and ask things like, "where does the moon go when it is day time?" But those first two months were hard. No smiles, no "thanks mom," just lots of grueling work with little feedback. Yet, the work is monumentally important. And most parents would not give it up for any amount of money.

So why do I stay passionate about this work? I remind myself the answer to this question frequently. I do this work because I want students to know that more college students die each year of alcohol-related deaths than from all other drugs combined. I want them to know that a high tolerance is a sign of increased risk for alcoholism. I want them to know that when they drink in risky ways they are putting themselves at risk for accidents, sexual assault, legal problems, academic failure and paving the way for the lifelong disease of alcoholism to take hold. I want them to know that power hours are perpetuated by peers and that they can result in death. Mostly, I want them to know that they have the power to change their own lives and the lives of their friends.

I also am motivated more selfishly, by the image of my sons, now ages three and six, in the faces of today's college students. I am clutched with fear when I hear students joke about their weekend parties, running from the cops, babysitting a friend who passed out. I get physically sick when I listen to the stories of parents who have lost children to alcohol poisoning. I do this work for myself. And for my sons.

Laura Oster-Aaland

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