



NDSU MAGAZINE

NORTH DAKOTA STATE UNIVERSITY *spring* 2013





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LEADERS**
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NDSU

MAGAZINE
NORTH DAKOTA STATE UNIVERSITY *spring 2013*

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EDITOR'S NOTE



I bet we all have memories from our youth, which, when viewed with a little more maturity, we regret. Maybe you pestered your little sister a little too

keenly, or weren't quite as kind to that odd neighbor kid as you would be now. One of mine is about a roll of masking tape I borrowed from my dad. In high school, we liked to make big posters to hang in the gym at basketball games, but we always had trouble getting them to stay up. Dad had some super good tape, extra wide, extra sticky. When he handed it to me he said, bring the rest back if you can. That poster did stay up during the game in the sweaty gym, but of course I was too wrapped up in my own little high school life to remember to bring the rest of the roll home.

This incident of self absorption stuck with me, so one year I wrapped up a nice new roll of that same kind of tape and gave it to Dad for Christmas. He drew a blank when he opened the box, since he'd long forgotten all about it. Now that he's gone, I rely on that exchange to remember what he taught me, and that he at least got a glimpse of his goodness coming back. At first I was worried that I wouldn't remember enough about him, but it's been almost three years, and his sweet, quaint ways appear often at ordinary moments. For example, Dad was the king of driving an extra block to take advantage of a stop light versus making an unprotected left, and I never face that choice without a smile.

Much has happened since our last issue of NDSU magazine. In my immediate circle, though we lost Dad, we gained a lovely niece who married our swell NDSU computer science graduate nephew, and they have a puppy. Our NDSU English education graduate is teaching in western North Dakota. There's a wedding on the horizon. Another child, I so hope, is planning to enroll in college, somewhere. We all savor these same bits of family news, and thanks to social media, we are ever more up to date on one another.

But we also are part of another bigger community, my fellow Bison fans. Who knew we would celebrate back-to-back national championships, and show the country how real fans travel. And even more significantly, though shod in less flashy school colors, (have you seen those green and yellow fake fur leg warmer things they have at the Bookstore?) we joined the top ranks of universities in the nation in the Carnegie Classifications since our last magazine was issued. We celebrated the 150th anniversary of the Morrill Land-Grant act, the visionary legislation that opened the gates to higher education and literally transformed the country. Best of all, our students studied and learned and grew, and walked through graduations and ever more well-prepared people marched into the state and nation and world to be the next generation of leaders and problem solvers.

Thank you for returning to the magazine. We took a break from publishing, but not at all from appreciating you.

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JESSICA WACHTER, 2012
*HALFWAY CROSSING -
 INTERCEPTING BYSTANDERS*
 OIL ON CANVAS, 60" X 26"

Every work of art contains a journey, but not every work has a particular destination.

This painting is special because it encapsulates my feelings from a particular experience in lake country. In the field of the painting, I offer a colorful emotive response to that unique part of the country. I find lake country extraordinary in that it feels both boundary-less and comforting.



ABOUT THE ARTIST

Jessica Wachter grew up in Bismarck, and now lives in Fargo. Her show, *Beyond Convention*, is on view in the second floor Art View space at the Plains Art Museum. She graduated from North Dakota State University with a bachelor's degree in art and a minor in interior design. Wachter is a member of the NDSU Bison Arts Board, assistant curator and events coordinator at ecce gallery, and teaches the after school art class, CHARISM Faces program. The artist has shown in numerous exhibitions in the region, including the NDSU Juried Student Exhibit at Memorial Union Art Gallery, where she received the People's Choice Award and was featured in the NDSU Magazine in spring 2009. Many pieces reside in both public and private collections. <http://jessicawachter.com> [photo: Lance Thorn]



SEAN PLOTTNER lives in South Strafford, Vermont, with his wife and two children. He is the editor of Dartmouth Alumni Magazine. He is a recent member of The Friends of the Morrill Homestead, which works to preserve the legacy of Justin Morrill and his Gothic pink palace. The Homestead regularly hosts students from Land Grant schools across the country and hosted a Symposium last year to celebrate the Sesquicentennial of Lincoln's signing of Morrill's legislation. Vermont's oldest state historic site, the Homestead also offers a wide range of fascinating public programs, from garden restoration to watercolor workshops to the annual 19th century apple festival. For more information, go to www.morrillhomestead.org.



TOM ISERN is professor of history and University Distinguished Professor at NDSU. He earned his doctorate from Oklahoma State University. He is the author or co-author of six books about life on the Great Plains of North America, including *Dakota Circle: Excursions on the True Plains*. He is best known across North Dakota for his weekly feature, *Plains Folk*, on Prairie Public radio. He has received five major grants from the National Endowment for the Humanities, and also has won the Peltier Award for Innovative Teaching and the Fargo Chamber of Commerce Distinguished Professorship. He is president of the Western Social Science Association and is founding director of the NDSU Center for Heritage Renewal.



BRIANNA MCDANIEL graduated from NDSU in 2011 and is teaching English and speech in Beach, North Dakota. As you'll read in her essay about the transition from student to teacher, she grew up in Bismarck, not always as outgoing as she has become. These days, she is well known among her wide group of friends for her acumen as a grammarian, and for being a good sport with her students, as shown in this social media post from a few weeks ago: "... got my face covered in whip cream at a pep rally at work today, then received a round of applause for taking dead last in the contest. Seems like a fairly typical work day for an adult."





DONATED BISON STATUE IS A BIG HIT

The first thing President Dean L. Bresciani said when he learned this statue would be given to NDSU: Everyone's going to want a picture taken with it. And he was right.

As soon as it was installed on Albrecht Boulevard between Minard Hall and the Library in 2012, they started coming. Groups of students, bunches of alumni, people with their babies – photos and more photos.

A hearty thank you to Jim and Sandra Roers, Ron and Kaye Olson, Bernice Pavek in memory of Les Pavek, Julie Barner in memory of Mike Barner, and 2011-2012 NDSU Student Government.

EXCERPTS

DEAN L. BRESCIANI, North Dakota State University's 14th president, for all his public appearances and maximum exposure, is a pretty low key guy. He's something of a workaholic, deft with a smart phone, so you'll usually see him working away no matter where he is. He also is a genuinely nice guy, a softie with students, a hunter and a hiker, at one time a reasonably fast marathon runner, and a pretty good cook. Here he talks about his life's work, working in the kitchen, and his lessons in leadership.



There are so few things I'm able to just experiment with in my life and career and just try just for the heck of it and so what if it doesn't work out. Cooking's very rewarding because most of the time I'm on a pretty good path and so my experiments work out.

Everything else I do in my life, before I can imagine what the benefits would be of it working out I have to imagine the consequences of it not working out. That's a complicated analysis because it has consequences for me, for the institution, for the department of x for the employees of y, endless constituents. If I burn dinner, I burn dinner.

I've got a fairly unique background because of the role and visibility of the vice presidency at Texas A and M, which was the second most visible position there. The president and vice president live on campus, and have involvement in a broad range of activities. Bob Gates once said to me: you're the only one with a worse schedule than me. Because I was at the events he was plus going to a lot more student events.

There isn't much about the role I didn't anticipate. The added advantage I bring is having a finance background, not having to develop a grasp of business operations at a research university.

The president is perceived to be the institutional final word. You have to be aware of that and conscious of that.

I have developed over the years the capacity to be very extroverted for long periods of time. The truth is I've learned that to do the job well and do it effectively those are skills you need to develop and portray. But the reality is I'm an extremely introverted person.

The farthest I get in a grocery store in Fargo without being stopped is the second aisle. Usually somewhere around the cart area is where I get stopped.

I love college athletic events and I love being around people who are sharing that experience.

In some senses you get numb to crisis, and fewer and fewer things truly are a crisis. What you learn, there are two things — one is that there are very few things that are truly a crisis. The second is the old saying never let 'em see you sweat. People look to institutional leaders to be calm under duress.

One of the greatest lines I ever heard was when I worked at Texas A and M was at a big awards dinner where the speaker was a three star general and the person getting the award started to run up to get the award and he said, "Don't run. It makes the troops nervous."

Not by great wisdom and forethought — you could call it dumb luck — but very early in life I decided what type of role I wanted. It rang clear as bell to me what I wanted to do. To get out of working with my dad's firm another summer I got a job as an orientation peer group counselor and saw the impact I had on freshmen who when they walked into a room were scared to death that they'd never be successful and walked out high fiving each other. I never felt like I'd done something important, something that had an impact on other people, something that had true value before that. I was raised in a very conservative blue collar working environment where digging a ditch faster than the guy next to you would have been a great accomplishment.

I see so much potential for NDSU. From day one learning about this opportunity, I saw this place as having massive, massive untapped potential.

It's already become easy for people to forget that within the last decade we were a small regional master's institution. We've accelerated at an incline that I'd be hard pressed, as a student of higher education, to come up with many, if any, parallels to, at a time when the state has a unique economic advantage over literally any place else in the nation and a time when our civic and legislative leaders have perhaps a first ever but certainly emerging and maturing sense of the value of research universities.

Nobody in my family had gone to college. There was nobody telling me how important it was to take classes to study and graduate. The only motivation to graduate was so my dad wouldn't be mad at me. Toward the end of my undergraduate career, the light came on through the career path that was suddenly illuminated for me and required me to dive into my academics.

The smart person surrounds himself with and creates an environment where people feel at liberty to tell him things he doesn't want to hear. They're my go-to people who will always tell me "no you can't do that."

Talk less and listen more. Study people in environments that aren't good. Analyze environments and people's interactions. Whether it went well or not, analyze, analyze, analyze. There isn't a speech I make that I don't run through my head how I could have done it better.



The
Morrill
of the story

by Sean Plottner

THE ORIGINS OF THE UNIVERSITY CAN BE TRACED TO A TINY VILLAGE IN VERMONT AND THE EXTRAORDINARY MAN WHO LIVED THERE — IN A HOUSE HE PAINTED PINK.

There once was a man who lived in a pink cottage on his medium-sized estate. He had it built as a home for his retirement — at age 38 — and lived there with his wife, son and a dog, Trump. The gentleman farmer planned to kick back, read and collect his precious books, and tend to his gardens and greenhouse, paying special attention to his experiments with trees and flowers from Europe and Asia.

But politics and Washington came calling, and so much for retirement: Off he went for a 43-year career in Congress. There his visionary work completely and permanently altered the scope of education in the United States by creating hundreds of colleges and universities — including the university that calls Fargo home.

The man, Justin Smith Morrill, today is known as the Father of Land-Grant Colleges.

As poet and fellow Vermonter Robert Frost once declared, there is “no greater name in American education.” The Congressman and Senator pushed the Morrill Act of 1862 through Congress, granting 30,000 acres of federal lands to any accepting states, who in turn were charged with developing or selling the land to raise funds to establish and endow “land-grant” colleges. (Almost 30 years later a second Morrill Act expanded the original bill.) More than 22 million people have now graduated from the more than 100 land-grant schools that resulted from the acts.

Morrill’s homestead still stands. It operates as a state historic site and National Historic Landmark in Strafford, Vermont, where visitors can tour the house, gardens and outbuildings. Morrill’s more critical legacy is all those colleges and universities. His distinguished career found him working with 11 presidents, but it was his yearning for learning, his desire to broaden the reach of higher education and make it available to more than just the Eastern establishment of white

privileged males, that led to his most lasting achievement.

All this from a guy who never even went to college. Born 200 years ago in Strafford, Morrill was one of four sons to a blacksmith father who couldn’t afford to send all of them to school, so he sent none of them. Justin received only a “country education,” as a 1980s PBS documentary calls it, but he was bright and motivated. Books, painting, agriculture — all became devoted interests. Instead of going to college, in 1828 Morrill moved to Portland, Maine, where he plunged into the life of a shopkeeper, thanks to a mentor (Judge Jedediah Harris, a prominent Strafford country store owner) who saw promise in the young man, in the busy stores of the thriving port city. “It was a wonderful experience in watching how people handled their money,” says Coy Cross, a Morrill biographer. Morrill’s astute business acumen impressed, and Harris made him a partner at 21.

Morrill accumulated enough wealth to return home, retire and set in motion his plans for the gothic revival cottage of his dreams. After it was built, a middling interest in politics grew as he was drawn to local debates, where he met up with some members of the local Whig party. When the party succeeded in convincing Morrill to run for Congress in 1854, he abandoned his retirement plans and went on to serve long runs in both the House (1855-67) and the Senate (1867-1898).

In the Capitol, Morrill became known for his thriftiness and practical nature. He

even reused the red binding used to bind official documents (which led to the phrase “wrapped in red tape”). His experience as a merchant and shopkeeper made him one of Congress’ most learned financial types — Harris had also taught his protégé a fair bit about banking and investing — and no doubt today Morrill would be a leading voice in debates about the economy, Wall Street and stimulus packages. He was also a great champion of the underdog, in part because he represented one of the smallest states in the nation. He also carried that yen for education and learning. Morrill viewed education as the key to peace and prosperity. He wanted to make it accessible to the rural population as a more industrialized nation began to emerge in the wake of the Civil War.

In the middle of the 19th century the nation’s rural population hadn’t fully kept pace with the Industrial Revolution and its technological advances. Morrill championed their cause, and in doing so came up with a bill that not only enhanced their opportunities in farming, engineering and mechanics, but also helped the government resolve what to do with the land bonanza available in the form of the former Western Territories.

Morrill first proposed a National Agricultural School, an idea that failed. President James Buchanan later vetoed Morrill’s land-grant idea in 1860; southern interests soured on any expansion of the federal government. Morrill resubmitted the bill two years later, and President Abraham

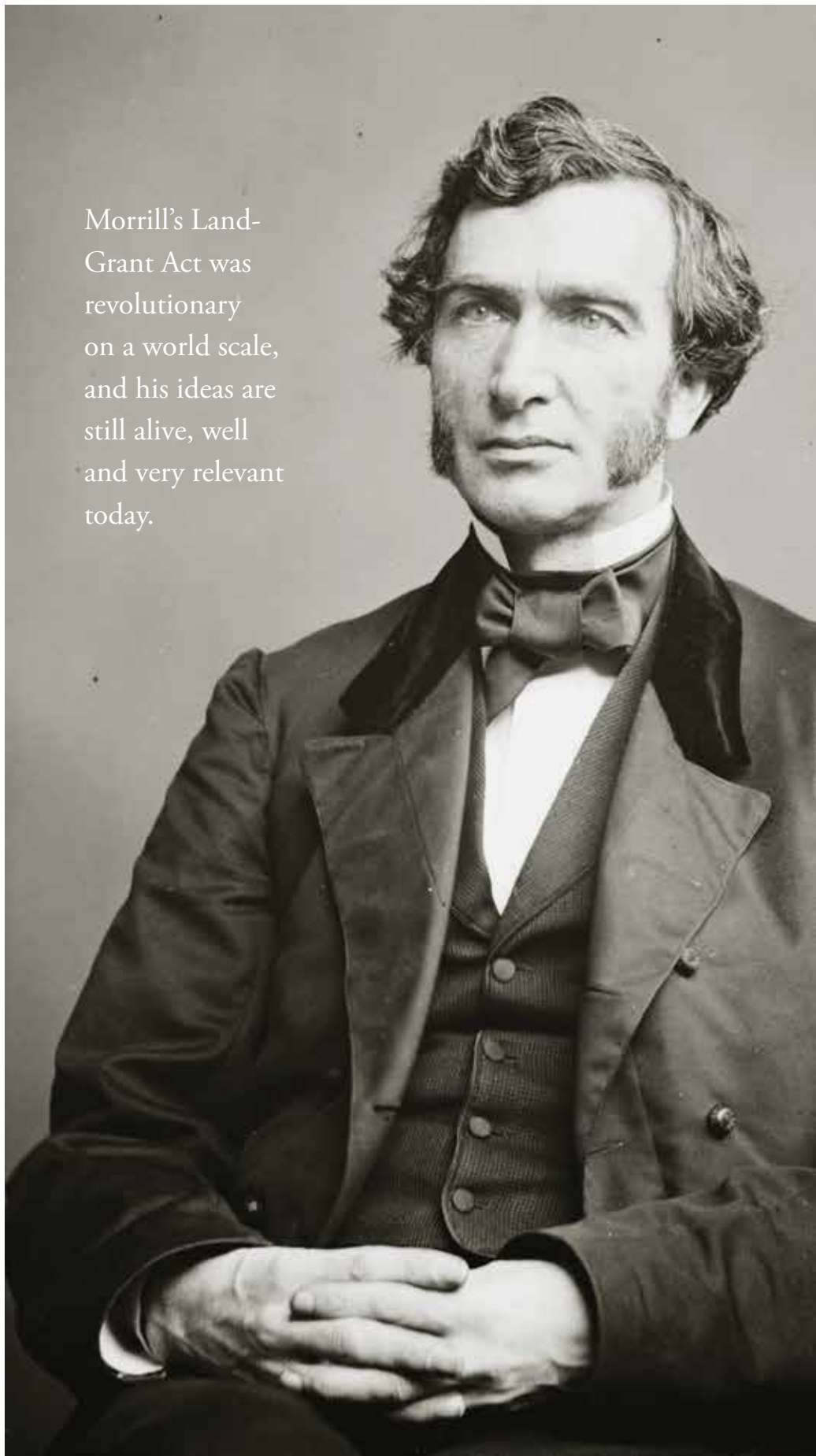
Lincoln signed it into law. The purpose was straightforward: To open up education to rural populations and the middle class, and to focus on the teaching of agriculture, science and engineering.

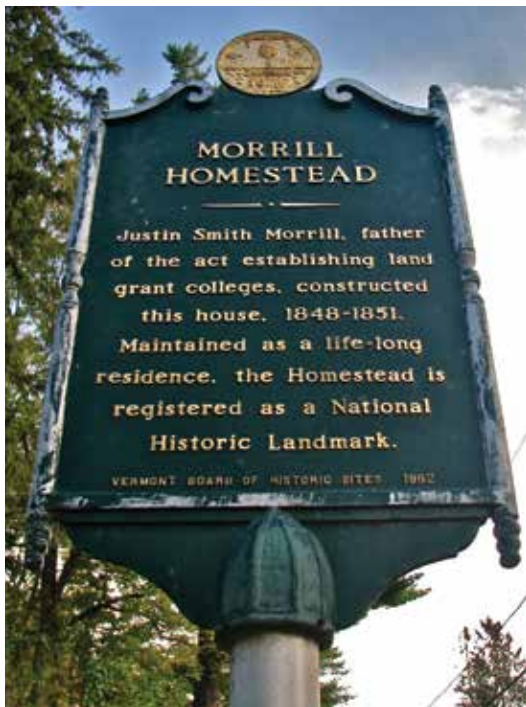
Iowa State Agricultural College was the first existing school to accept the provisions of the Morrill Act, in September 1862. The first institution created out of the bill was Kansas State University, chartered in February of 1863. Yale and other universities soon followed. By 1870, 37 states had accepted the deal.

Morrill's second bill passed in 1890, driven by the Senator's insistence that the former Confederate states eliminate race as a condition of college admission, or to otherwise designate a separate land-grant institution for blacks. Cash, not land, was granted to the states under this bill and led to the founding of North Dakota Agricultural College the same year. On October 15, Horace E. Stockbridge assumed the presidency, a board of trustees was formed, and six classrooms — rented from Fargo College — opened for business. Two years later came the completion of the College Hall, a home to offices, classrooms and a library for the four students then enrolled.

Morrill's bills were game changers (although a ridiculously unfair distribution of funds by many states led to a rough, long haul for many of the black schools). No longer would classical studies dominate the core of higher education studies. Some schools attached the letters "A & M," for "agriculture and mechanics," to their names. Soon land-grant colleges gave rise to a bevy of model farms, machine shops, and even home economics courses. Professors took on new specialties — one land-grant college employed a "Professor of Agriculture, Horticulture and Greek." Morrill's broader admissions policies opened up education opportunities not just for blacks, but also Native Americans and women, like never before. Today the land-grant universities, 16 of which are historically black institutions, and another 33 tribal colleges that became land-grant institutions in 1994, belong to the nation's oldest higher education association, the nonprofit Association of Public and Land-Grant Universities.

Morrill's Land-Grant Act was revolutionary on a world scale, and his ideas are still alive, well and very relevant today.





MORRILL HOUSE PHOTOS COURTESY OF DON SHALL

Back in Vermont, the pink cottage stands sentinel on a shaded rise over the tiny village of about 1,000 residents. It's considered a fine example of Victorian gothic architecture and of an 1850s New England gentleman's farm.

The homestead is located about 15 minutes from the nearest interstate, making it a tough draw. But few who venture by can resist the draw of the unusually sharp-angled house on the hill. Rubbernecking makes the local 20 mph speed limit easily enforced. A low-key atmosphere pervades, from the small parking lot, minimal signage, and nothing at all that screams museum. Yet that's just what it is, an appropriate monument to the man whom a Harvard professor declared was "responsible for the democratization of education." The quiet, 17-room home looks pretty much as it always has. No ropes or security guards prevent visitors from getting close to the original 19th-century furnishings, including wall-to-wall carpeting, Morrill's poster bed, a magnificent stained-glass window from France, rare-for-their-time closets, and the recent acquisition of some dresses worn by Mrs. Morrill. Even the attic and its skylight beckon, not to mention the portrait of Trump that hangs in the music room.

A stroll outside offers fine views of the gothic windows and their canopies, as well as the opportunity to roam the six acres that are home to remains of the hothouse and gardens, as well as an array of barns that Morrill had built. (They're pink too, a common gothic revival color used to simulate freshly cut sandstone; the color here, to be precise, is a soft-gloss latex made by Benjamin Moore called "Ciao Bella.") A walking tour of the village takes visitors to the library next door and down the road past historic homes and buildings Morrill knew well to the home where he was born. Nearby stands the stately Strafford Townhouse, built in 1799, and the cemetery where Morrill and his family are buried. (He died in 1898.)

State budget cuts have limited visitation hours and thwarted additional restoration plans — particularly for the gardens. But local advocates do what they can. The Friends of Justin Morrill Homestead, a group of local volunteers, work to preserve the grounds, raise funds, and hold public events that include an annual 19th century AppleFest featuring period costumes and

activities, garden tours, and lectures on a wide range of topics. Recently the Friends installed a new bridge to make the ice house more accessible. While many who stop at the homestead are drop-ins, a few of the site's annual few thousand visitors include hardcore Morrill devotees. For example, the Morrill Scholars — students from the University of Nebraska-Lincoln, another land-grant institution — make annual treks to the site.

The Friends publish an annual newsletter to spread the word and solicit donations. A recent edition featured Morrill descendent James Morrill, a Nebraska farmer who had attended and worked at three land-grant colleges; another reported how the Friends had received an anonymous letter along with a key to the house that had been stolen 40 years ago. "Sorry," admitted the remorseful thief. The stories reveal a place that is greatly revered yet charmingly quirky.

"Morrill's Land-Grant Act was revolutionary on a world scale, and his ideas are still alive, well and very relevant today," says Friends co-president Marie Ricketts. "It is important to remember and understand the role that the Land-Grant Acts played in the development of our country." Once again the pink house and the homestead will burst with activity before settling back to its norm: as stoic, stately — and unheralded — as Morrill himself.

Thomas D. Isern
Land-Grant Summit, 12 June 2012

The Land-Grant University after 150 Years

His own formal education amounted to only three months, but Haile Chisholm was the epitome of the educated man. He delighted equally in the forge and the lyceum. He was a great teacher because he was a great, lifelong learner. Haile Chisholm taught blacksmithing, and wrote poetry, at North Dakota Agricultural College.

Born in 1851 in Chazy, New York, Chisholm was held out of school on account of poor health, but oddly, began helping his father in his smithy. Subsequently he apprenticed with another smith, got a job in the locomotive shops of the Central Vermont Railway Company, and cast his first vote for Ulysses S. Grant in the election of 1872. He held several other jobs, started a family, settled for a while in South Dakota, and came to Fargo to work in the shops of the Northern Pacific Railway. In 1902, Chisholm became an instructor at NDAC, where he served until his retirement in 1937. This was a fortunate match.

Blacksmithing was a common study for students at the AC, and Chisholm's students remembered him as a teacher not only of skills but also of wisdom. Chisholm insisted that his iron work was no mere utilitarian pursuit but rather a matter of artistic fulfillment. He kept a book in which he wrote sayings and observations, which now reposes among his other papers in the North Dakota State University Archives. Among the jottings of Chisholm is the statement, "I have never regretted a dollar spent for loveliness." Other commonplaces from the pen of Haile Chisholm:

To sit idle when you feel that you should be doing something is the hardest thing in the world.

Work is love made visible.

Chisholm believed that those who were inclined to be bookish needed to learn the dignity of labor with their hands. Those who worked with their hands needed to learn to regard their work as art and to appreciate poetry. Thus he had something to teach everyone, something he continued to learn himself all his life. At lyceums and literary events on campus, there was Chisholm, and he had questions.

Among Chisholm's commissions of iron-work is the great gate that stands at the southeast entrance of the university. He also fashioned the ornamental gate that stood in front of the Teddy Roosevelt cabin on the capitol grounds and the trowel used to lay the cornerstone of the capitol in 1932.

In 1931 the college faculty awarded Chisholm an honorary degree, Master of Artisans, saying, "He has elevated the art of craftsmanship in iron working to a fine art." He had to retire in 1937 on account of deafness, no doubt induced by his work at the



forge. After the death of his wife Mary in 1931, he lived with his daughter Anna until 1951, when the old smith died. Late in life he wrote,

I hear them say "He's passing fast,"
And what they say is true.
I'm not the man they used to know
In eighteen ninety-two.

'Twas not so very long ago
They called me hale and strong.
They found me ready night and day
To tote my load along.

My place beside the anvil true
I filled with honest pride;
My hands ne'er shrank from hardest tasks
By daily needs supplied.

If you listen to those stanzas, you can hear the hammer in them. And if you reflect upon the life of Haile Chisholm, Master of Artisans, you can achieve a good understanding of what we have come to call the land-grant ideal.



Haile Chisholm, June 1924



... the land-grant ideal comprises two essential elements, the first of which is access. The Morrill Act threw open the heavy gates of college to the sons and daughters of farmers and laborers who never before in history could have aspired to higher education.

At home I have a great old trunk that my dear cousin Bernice gave me. She told me Grandpa Isern received the trunk as a gift, and packed his stuff into it, just before he caught the train for Manhattan, Kansas, to attend the Farmers' Short Course, commencing 3 January 1905. According to the Kansas State Agricultural College catalog of that year, the short course was taught "on a different plane" than the regular term — more concrete, less theoretical. Admission requirements: be "at least eighteen years of age and of good moral character."

Here are some of Grandpa's textbooks — a physics text, and *Principles of Plant Culture*, by E.S. Goff of Wisconsin University. What surprises me a little is to find among them Sir Walter Scott's *Lady of the Lake* and a book of Washington Irving's sketches. It surprises me only a little bit, because the agricultural colleges such as KSAC were never confined to teaching about crops and livestock. They always provided, as their congressional creators said, "liberal and practical education."

Oh my, here's Grandpa's composition book. It has a few physics equations in the back, along with some handy recipes for dosing

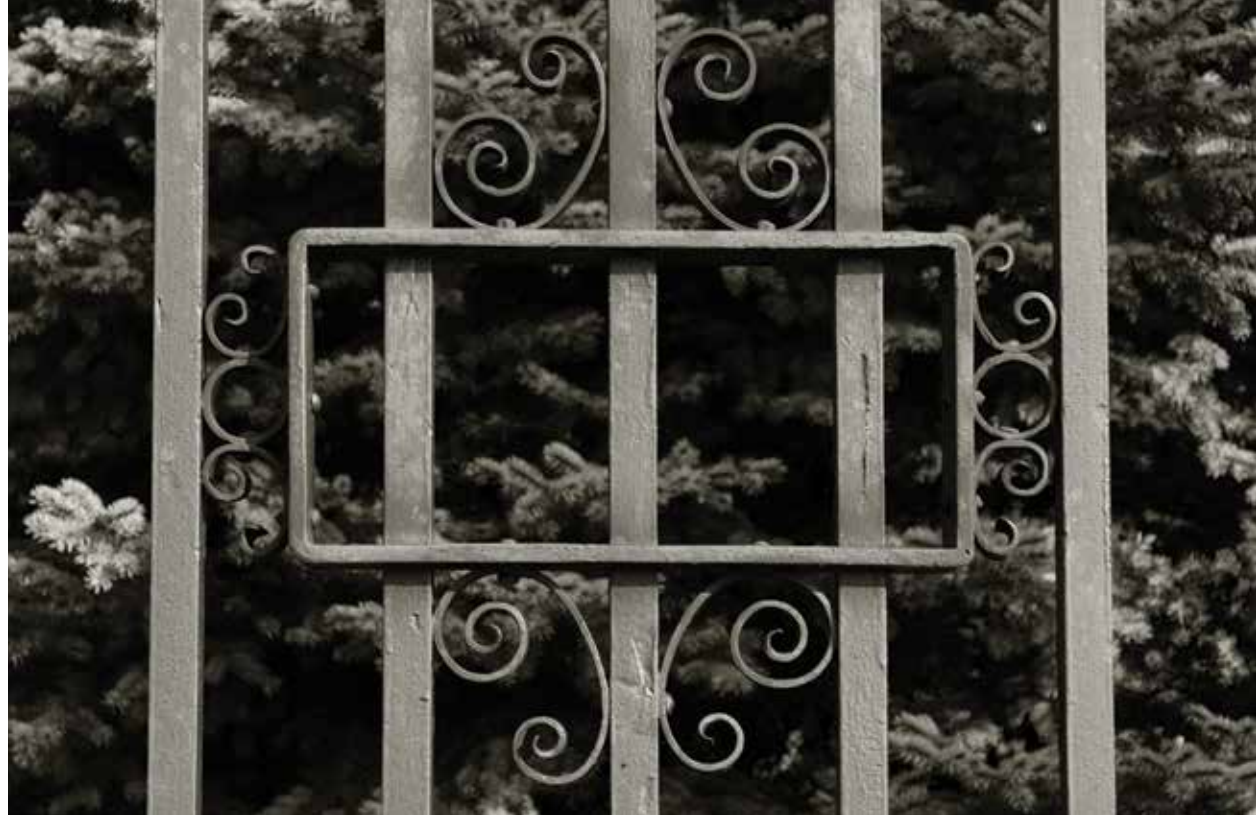
horses, but mostly it contains the lecture notes he took and brief quotations he evidently was expected to commit to memory. This was just the short course, remember, but it looks like Grandpa absorbed a good bit of Oliver Goldsmith, Henry Wadsworth Longfellow, Washington Irving, Robert Burns, Matthew Arnold, William Shakespeare, Benjamin Franklin, Walter Scott, and the historian, Thomas Carlyle.

Here's a quick quiz I gave to my nieces, graduates of Kansas State University: Can you name any works of these authors your great-grandpa read in college?

Perhaps, instead, you'd like to try a few math problems from the assignment sheet Grandpa folded into his composition book. "If two horses weighing twelve hundred pounds each can just pull a load of four tons on the level, how many horses will it take to pull it up a hill rising 1 foot in 10, 600 pounds being taken as the limit of a horse's strength?"

All right, try an easier one: "With an even 4 ft. long how will you place the hitch in order to give one horse 1/8 the advantage?"

And this was just the short course, remember, taught "on a different plane."



By now I hope you have taken my point about the ideal of the land-grant university. The land-grant college, now land-grant university, is a glorious American invention, like nothing else in the world. It was an idea that originated with the democratic *Zeitgeist* of antebellum America, attained actuality with Republican dominance of the Congress during the Civil War, and is credited by historical memory to Senator Justin Morrill of Vermont, the father of the land grant university system, author of the Morrill Act of 1862. That act famously promised subsequent generations of Americans a “liberal and practical” education in a whole new class of institutions of higher education.

More specifically, the land-grant ideal comprises two essential elements, the first of which is access. The Morrill Act threw open the heavy gates of college to the sons and daughters of farmers and laborers who never before in history could have aspired to higher education.

The second essential element of the land grant ideal has to do with curriculum. Agriculture was a *sine qua non*, but studies in the land-grant colleges, Senator Morrill explained, “comprehended not only instruction for those who hold the plow or follow a trade, but such instruction as any person might need — with ‘the world before them where to choose’ — and without the exclusion of those who might prefer to adhere to the classics.”

The union of these two elements is the land-grant ideal, an ideal of empowerment and inclusiveness. Historian Allan Nevins concludes that the assumption “behind the land-grant movement was that liberty and equality could not survive unless all men had full opportunity to pursue all occupations at the highest practical level. No restrictions of class, or fortune, or sex, or geographical position — no restrictions whatsoever — should operate.”

The assumption of which Nevins writes is not a plan or even a map. It is an ideal, and it is a fine example of what historians have come to call “agency.” Historians of agency, and I am one, reject the idea that history is driven merely by deterministic forces. Historians of agency say, we make our choices, and we live with the consequences.

A person exemplifying agency in history, such as Justin Morrill, believes that it might just be possible to form a more perfect union through that equality of opportunity afforded by access to higher education and by choice of curricular options.

As heirs of Justin Morrill, we inherit not only his ideal but also the agency implicit in it. No restrictions. The possibilities are as wide open as our prairies of yellow and green.



The past few paragraphs have drawn me into the philosophy of History, which happens to me more and more these days, as my



[The reformers] wanted farmers and laborers not only to produce more but also to live better. Farmers and laborers should live fulfilling personal lives, through the understanding of nature, books, and art, and they should lead responsible public lives, able to read critically, speak effectively, and exercise judgment.



resistance to such philosophical digression grows daily weaker. And yet, it may be worthwhile to be self-conscious and explicit as to how the habits of a historian may extract meaning and, dare I say it, wisdom from the land-grant university experience.

Begin with the observation that History is one of the Humanities, and has little to do with social science. There are no predictable cycles in History. History doesn't give a damn where it is going.

History, in a word, is chaos. If you're familiar with chaos as theory, then you know that this does not mean there are no meaningful patterns in History, it just means the patterns are so long and loopy and multi-dimensional that we will never be able to discern them. This is why History embraces narrative as its explanatory mode. Meaning comes from the discernment of connections, one thing leading to another. This narrative way of doing History is wonderfully compatible with chaos theory, which takes account of sensitive dependence on initial conditions.

Where good historians today differ from chaos theorists is that whereas History and chaos don't give a damn where things are going, we do. A historian who embraces agency, who insists that human events are not mere products of deterministic forces, will point out that some of those apparently random but consequential turns of events so dear to chaos theorists in fact are willed acts. Someone had an idea — perhaps the idea of the land-grant university — and acted, and the consequence was History.

Which brings us to another essential doctrine of good historians, contingency. Historians of the past were fond of chapter titles like “The Road to the Civil War,” as if that road were graded and marked in advance, and there was no other path possible. Such historians might insist it was logical and irresistible that the little land-grant colleges of the 19th century would evolve into the big research universities of the 21st. The story to be told, then, would be a matter of rationalizing who and where we are now. This development, I say, was by no means inexorable. Any number of events, either random or willed, might have taken things in a different direction.

There is one more historical doctrine I need to add to the tool kit before proceeding, which is the conflation of History and memory. History, as Carl Becker famously observed, is not the events of the past; it is, rather, “the memory of things said and

done” (emphasis added). Some things we forget, or choose to forget, and some things we remember, or choose to remember. What we remember, we arrange into meaningful patterns that are the basis of judgment and identity. At the beginning of this talk, I chose to remember Haile Chisholm, thereby making him History. I did so because we might emulate his good judgment, and because by telling his story, we might define who we are as people of the land-grant ideal.



The genius and resilience of the land-grant university derives from willed acts on the part of historical persons exercising agency in moments of contingency. This is not to say that external circumstances are unimportant. Earlier, you recall, I spoke of the land-grant college as emerging from the “democratic Zeitgeist of antebellum America.” By this I mean, during the 1840s and 1850s, with the democratization of American public life, there arose demands for what was known as “industrial education” — that is, education for the masses, the sons and daughters of farmers and laborers.

American conceptions of industrial education differed from those institutionalized in the nations that otherwise served as academic models for the United States, those being Britain and Germany. Agricultural colleges there were focused on making better, more scientific farmers. American reformers, on the other hand, consistently propounded what they called “liberal education” for farmers and laborers — which begs the question, what the heck did they mean by “liberal education?”

Close reading convinces me that the reformers knew what they were talking about, and it corresponded rather well with the ideals propagated by Henry Newman, western civilization's wisest commentator on the idea of a university. The reformers desired to make farmers and laborers better farmers and laborers through training in specific practices, certainly. They also wished to impart to them scientific knowledge, so they would be intelligent workers, not automatons, and lifelong learners, as we would say today. The reformers went well beyond this, however, when they spoke of liberal education. They wanted farmers and laborers not only to produce more but also to live better. Farmers and laborers should live fulfilling personal lives, through the understanding of nature, books, and art,





The first thing, as Morrill saw it, was to let the students into college; the second was to let them study any darned thing they wanted, whether liberal or practical. And because existing colleges had only the liberal and not the practical, make sure that matters agricultural, mechanical, and military had prominent and respected places in these new colleges of democracy.

and they should lead responsible public lives, able to read critically, speak effectively, and exercise judgment.

This was well and good, but nevertheless limited in scope, for the proponents of industrial education never quite grasped the ideas of equality of opportunity and advancement by merit that were coming to characterize America the way Tocqueville described it. They spoke of “appropriate” liberal education for farmers and laborers, as though such education should be different for them than for gentlemen, should not attempt to incorporate options beyond the social station of the students. Industrial education so envisioned was constrained by stubborn conceptions of social class hierarchy.

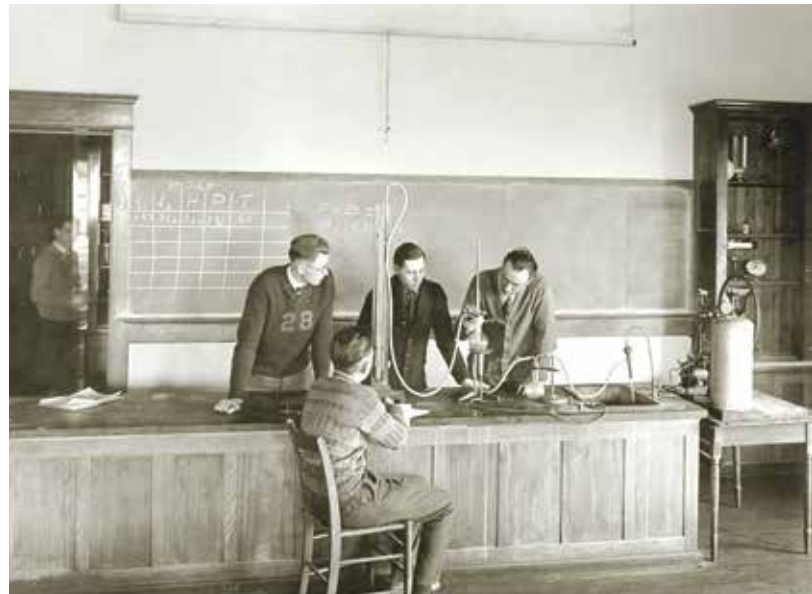
Justin Smith Morrill of Vermont brooked no such constraint. Did I mention, by the way, that he was the son of a blacksmith? Morrill proposed colleges for the sons and daughters of farmers and laborers, but he did not propose to train happy workers content with their stations in life. He embraced what one historian has called the “culture of aspiration” that would transform American higher education. The first thing, as Morrill saw it, was to let the students into college; the second was to let them study any darned thing they wanted, whether liberal or practical. And because existing colleges had only

the liberal and not the practical, make sure that matters agricultural, mechanical, and military had prominent and respected places in these new colleges of democracy.

It is an initial condition of the highest significance that Senator Morrill conceived a mission for the land-grant colleges that was one of empowerment and aspiration, rather than constraint and hierarchy. This was, however, but the first of several points of contingency whereby historical actors exercised agency to shape the development of the land-grant university, and specifically the land-grant university as manifest on the Great Plains.



Significant moments of contingency for the land-grant universities transpired again in the years following the Second World War, with two circumstances posing challenges. First, there was the advent of mass education, meeting pent-up demand and rising aspirations. The veterans availing themselves of the educational benefits of the GI Bill were but the advance guard of a larger legion — their children, the Baby Boomers. This prompted accommodations by the land-grant colleges, and by “accommodations” I do not refer only to the Quonsets they installed on their campuses to house people and programs.



(I love Quonsets, by the way, and revere them for their historic functionality, but for some reason, modern university presidents just hate them.) More important, the land-grants generated an impressive array of programs, across the disciplines, and including graduate programs, to serve their eager constituents.

The other challenging development at the same time was the rise of the modern research university, and the land-grants differed in their response to this challenge. The Cold War and industrial capitalism, together and separately, posed research and development imperatives that were best met in a democracy by research universities. Most of the Great Plains land-grants, although not necessarily expeditious about expanding beyond their traditional strength in agriculture, entered into the transition fairly readily. The great exceptions, regionally and nationally, were the so-called Baby Land-Grants of the northern plains — North Dakota, South Dakota, and Montana.

Policymakers in these three states, assessing prospects, foreseeing demographic and economic decline, and feeling a need to tighten their belts, were reluctant to participate in the proliferation of graduate programs, the investment in research infrastructure, and the overall expansion of higher education. This constituted a deliberate choice to practice retrenchment rather than become competitive.

That choice had consequences in the manner of self-fulfilling prophecy. The states of the Northern Plains possessed impressive political clout. Whatever they asked for, they got: military bases, agricultural commodity

programs, transportation expenditures, infrastructure of all kinds. What they could not ask for, and therefore did not receive, was R & D money. They had no research universities to make use of it.

This failure of imagination is the unacknowledged shortfall of leadership on the Northern Plains in the second half of the 20th century. It is only in the past decade that we have closed the gap toward the establishment of modern research universities up and down the Plains.



Thus the record of the Great Plains land-grants, although overall exhibiting good resilience, is checkered, and once again, they face a moment of significant contingency. In the early years of the 21st century, circumstances are opportune for the general redevelopment of the Great Plains. These transformative circumstances are most pronounced in North Dakota, the state which previous to the current era saw the most severe economic and demographic decline, but they obtain to a promising extent throughout the Great Plains as a region. These are the four pillars of regional redevelopment:

1. Long-term prosperity for agriculture. Increased demand due to higher standards of living in much of the world, particularly on the Asian Pacific rim, has elevated commodity prices, including agricultural commodity prices, to a new plateau.
2. Intensive development in the energy sector, particularly petroleum. With

current technologies of horizontal drilling and hydraulic fracturing, and with additional technological advances certain, the production potential of known formations is huge, and that of formations as yet assessed is literally unfathomable.

3. An established and burgeoning knowledge industry. Both public and private initiatives have leapfrogged the Northern Plains into an enviable position for R and D and for intellectual leadership. This element in regional redevelopment requires assiduous attention, but as a regional driver it is just as potent as food and energy.

4. For the first time in a century, a positive brand. Positive developments are piling up capital on the Northern Plains. This is a startling transformation that has captured the attention, not to say envy, of commentators across the country.

The question now is, have we the perspicacity, the initiative, and the commitment to channel these advantages into the greater consummation of the vision of Justin Smith Morrill. Sensing the rising tide of democratic expectations in his time, Morrill raised his own sights even higher, deploying distinctively American institutions of higher education both to answer and to elevate the culture of aspiration. This was leadership of a visionary and foundational sort.

Photos courtesy of NDSU archives

Students practice commodity trading in new lab

As labs go, this one lacks stuff like Bunsen burners or safety sinks. If you didn't know better and you glanced into the room while walking through Barry Hall, you might think it's just a nice new computer cluster. Each of the 32 work stations has two very large screens, and the walls are covered with an understated paneling, the chairs are nice. But from the hall, you might not see the stock ticker up high on the east wall, a clue to the true purpose of this unassuming room.

This is the Commodity Trading Room, opened in 2011, the only lab of its kind in the country, where students practice trading in real time, analyzing commodity markets and dealing with risk management and international trading.

The project was led by Bill Wilson of the NDSU Department of Agribusiness and Applied Economics. He says risk is a dominant issue in all aspects of agribusiness involving price, yield, weather, competitors, technology, and food safety, and risk is on the rise. "Agriculture is now three to four times more risky than in the 1980s and expected to continue for eight to 10 years."

The trading was funded by several sources including university entities, agribusiness companies and commodity organizations. "It's a true partnership between the university and industry to do a better job of teaching."



Agriculture is now three to four times more risky than in the 1980s and expected to continue for eight to 10 years.

— **BILL WILSON** University Distinguished Professor of Agribusiness and Applied Economics

Innovation competition winner creates better way to test drug



The first thing you notice about Erin Nyren-Erickson is her sassy red hair. Then how animated she is as she talks about liposomes and the ups and downs of conducting research.

She is a doctoral student in pharmaceutical sciences, and she's already had one of those aha moments. Hers hit on the morning of Sept. 26, 2010, to be precise.

Erickson had been working on a better way to test the drug heparin for contaminants. She walked into the lab that Saturday morning thinking about something Professor Sanku Mallik said about the best screening tests providing a clear positive or negative result.

From literature in the field, she knew traditional tests relied on chemical structure to identify contaminants. The problem was that certain contaminants looked like heparin structurally, leading to false negatives. Another type of test was more accurate but was also expensive and time consuming.

How could she create a simple, accurate, inexpensive test? She had a theory she wanted to test. She started mixing stuff. Her idea was on target.

She saw changes occurring in the vials of clear bright pink liquid. In the vial that contained the compound found in contaminated heparin, bright pink clumps formed and sunk to the bottom. The liquid in the vial of pure heparin turned turbid, showing significantly less change.

The bright pink clumps sparked two years of research that ultimately led to a new, more quantitative, more cost-effective test that will prevent allergic reactions and save lives.

The test has a provisional patent and is now being marketed to drug companies. The test also won her top honors in NDSU's recent student innovation competition. She won her category and the best in show prize — a total of \$10,000 — for the test.



LA native finds herself at home in Fargo

On a spring semester day, Spectrum editor Linda Vasquez is sitting behind the desk in her private office in the Memorial Union, but she's nervous about being interviewed. She is used to asking the questions.

Though Vasquez has more than a semester as editor behind her, it doesn't look like she's moved into her office. The items in the uncluttered room look inherited – a vase of artificial orange roses on the desk, a file cabinet, metal shelving with green-bound volumes of Spectrums from years past. She rarely uses the office. She's more at home in the newsroom where she's spent much of her NDSU college career banging out concert reviews, health stories and fashion features.

Soon after she enrolled at NDSU, she took the advice offered to new students: Get involved. She joined the Spectrum staff, earning more and more responsibility until landing the Spectrum's top leadership job after facing stiff competition and a committee of 15 interviewers.

Just four years ago, Vasquez was living in her native Los Angeles, never imagining a life in North Dakota. Vasquez was 20 and a student at California State LA when her mom broke the news that the family was

moving to Fargo for her stepfather's job. Vasquez was living on her own, studying criminology, enjoying an exciting social life. But Vasquez knew family was more important to her than anything. And she knew she needed a fresh start. She had been a good student through middle and high school, but felt lost in college, not enthused at all by the biology and criminal justice classes she needed to become a criminologist. As a child, her close-knit family had been her world.

So she came to Fargo, where she noticed a lot of people wearing Bison gear. Her interest was piqued. When she toured NDSU, she found the kind of campus she saw in movies. Stately buildings. Manicured lawns. Smiling faces. She was sold.

Vasquez started as a psychology major and criminal justice minor, trying to use credits she took at Cal State. But a communication class convinced Vasquez she needed to change her major. She had always loved and excelled at writing but resisted it as a career choice. "People sometimes confuse being good at something as taking the easy path," she says. "That's the world telling you what you should do."

Once Vasquez focused on journalism and advertising, she found her groove.

She loves storytelling. "It's fascinating to hear about other people. Everyone grows up differently," she says. "I never get bored. There is always a different person to learn about and hear her story. That's what's great about communication."

Under Vasquez's leadership, the Spectrum won first place in its category at the Associated Collegiate Press' Best of the Midwest College Newspaper Convention in February. "Our reaction when our name was announced was pretty much screams, hollers and claps," Vasquez says. "My reaction was 'after all our hard work, we did it! I did it!'"

Vasquez has spent her final year at NDSU living on her own for the first time since she left California. In August 2012, her stepfather was transferred for his job – this time to Colorado – and the family moved again. But this separation has been different. Vasquez is completely focused on her goals and finds motivation from her family. "I work for my family," she says. "They make me keep going and not quit."

A. Robinson-Paul

Commencement 2013 50 years of doctoral degrees



NDSU granted its first doctoral degrees fifty years ago, with five students earning advanced degrees in five different areas: agronomy, chemistry, pharmacy, entomology and paint chemistry.

Frank “Ed” LeGrand is the only living graduate from that first class of doctoral students. He was honored at commencement in May, and sat on the stage while 123 doctoral degrees were granted. That brings the total of Ph.D.s granted at NDSU to more than 1,500.

LeGrand dug up photos from his graduation day, June 2, 1963.



1963

5 doctoral degree programs offered
5 doctoral degrees granted

2013

50 doctoral degree programs offered
123 professional doctoral and research degree recipients
1,500+ doctoral degrees granted since 1963



REPEAT

THE BEST FANS

Based on social media activity before, during and after the event, we can report that NDSU fans around the world enjoyed the football team's second consecutive national championship, especially the 20,000-some who made it to the game in Frisco, Texas.

TM



MATT STRASEN



YELLOW LEADERS



IT TAKES A CERTAIN KIND OF SPUNK TO BE A YELL LEADER.

It's sort of a cross between a cheerleader and a marching band conductor, with some theatrics thrown in. You wear a very bright yellow suit and stand on a ladder in front of the student section at football games. Your job is to keep the crowd loud and proud, add some zip to the student experience and keep things clean and positive. You also make appearances, in full regalia, at pre-game events and the tailgate lot. You are very popular.

The 2012 team is pictured here: Jayme McGillis, on the left, and Eric Miller, right. McGillis loved his yellow suit so much he wanted to get married in it, when that day comes, but alas, the uniform must be turned in at the end of the season.

Yell leaders are chosen by Bison Ambassadors, NDSU Athletics and the NDSU Alumni Association through a skit competition, and receive a scholarship from the NDSU Alumni Association for their service.

ESSAY

by Brianna McDaniel

My place in the world

One moment does not exist when adulthood suddenly arrives. No magical instance or epiphany or time when suddenly everything falls into place. At least if there is, I have not yet experienced it. I am a 2011 English Education graduate of North Dakota State University. I now live in Beach, North Dakota, where I teach English and speech classes to high school students. Therefore, I must be an adult. Right?

For the first 21 years of my life, I was constantly labeled as “Trevor’s little sister.” According to Laura McDaniel, the editor of this magazine (and my aunt), I am “the little sister [who] looked just like Cindy Lou Who, the sweet little girl with the blonde ponytail who didn’t mistrust the Grinch as he was stealing the family Christmas tree.” That sweet little girl was me, the girl who knew herself in relation to a brother who seemingly outshined her in most areas of her life, and I grew up this way, attending Bismarck Century High School and fighting to be heard, to stand out as an individual in a big school with plenty of people just as intelligent and talented as I was.

After high school, I spent four years at North Dakota State University, and they were arguably the best, most difficult, most confusing, most hilarious years of my life. I do not regret a single second of these years. I do not regret the unbelievable number of hours I spent studying or doing homework, I do not regret the nights I chose to spend with friends rather than writing an important “life-altering” paper, I don’t regret my major, and I don’t regret my choice to go to NDSU.





JONATHAN TWINGLEY

Not even for a second. Now, I am in my second year of teaching. I direct a play, coach a speech team, and advise a student council. I never imagined that I would be responsible for so much, but I love every minute of it. This must mean I am an adult. I think.

After college, I had no idea where life was going to take me. In the month of March prior to my graduation date, I did not know where I would be living in May. I came to NDSU uncertain, scared, and thinking that I had plenty of time to figure out my life. Four years later, I might have been one or two steps closer to figuring out life's mysteries, but what I learned in college is that maybe that is not what is most important. Maybe it is important to appreciate the smaller moments, like when Dr. Brown told me she thought I would be a good teacher. Or when Mary Pull asked me to work at the Center for Writers. I don't know that I am an adult even though I am now a teacher rather than a student. But what I do know is that isn't the point.

I suppose now, as a reader, you assume that I will tell you what the point is, but here is the most brilliant, frustrating, exciting part — I can't. I could tell you that the point of my college career was to create a strong, independent, intelligent, prepared teacher who has the ability to be successful in what many deem "the real world." I could say the point of college was to meet new friends, learn how to live on my own, fall in and out of love, and become what those who believe in a "real world" might consider an "adult." But these answers do not satisfy. Because what I learned at North Dakota State University is that "the point" is one of life's many clichés: life is what you make it, college is what you make it, and what it all comes down to is happiness.

So, no, there was not one magical moment after college when I suddenly became an adult. The transition from childhood to adulthood is so gradual that a person rarely notices the change. One morning you wake up feeling ill, and you go to your own medicine cabinet to find some

Tylenol instead of picking up the phone to call your mother. Or you stand up in front of a classroom full of students and suddenly realize that all of these kids think you are a role model, an expert in your subject area, when in reality, you are simply a human who has made plenty of mistakes and is trying to figure out life on her own. Or maybe one day you find yourself sitting at your kitchen table paying bills, and it hits you — it is just you. The moment you discover that your life is your own and you don't have to compete anymore and you don't have to justify any of your decisions to anyone, in that moment, when suddenly it is only you to whom you have to answer, that is when you truly become an adult.

I am and will always be "Trevor's little sister." A girl defined through relationships to others. I used to think this made me less of my own person, but that is not the case. I am happy to be a graduate of NDSU, a sister, a daughter, a friend, a niece, a granddaughter, an educator, a coach, a director, and most importantly, just me. No matter what path I end up on in life, happiness, hard work, and a willingness to go blindly into the unknown with only my intelligence, preparation provided at NDSU, and a sense of humor, will be the keys to my success.

I watch as my brother becomes successful in his career and his marriage, and I know that he is happy. I stand next to him, living a life completely different from his and realize that he has not outshined me because that would be impossible — we are two very different people with very different dreams who will always support each other's happiness. I might still have some "Cindy Lou Who" inside of me — a complete and utter faith in the honesty of the human condition, and I am and will always be defined through relationships, but NDSU created within me an outlook on the world that will allow me to create my own success and happiness simply by discovering what happiness means to me — "the little sister." Maybe this means I am an adult, maybe it means I never will be, but either way, I have found my place in the world.

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DAN KOECK

PRAIRIE NIGHT LIGHT Researchers in the NDSU School of Natural Resource Sciences spent a summer evening in Richland County, North Dakota, using mercury vapor light to trap moths. Kirk Anderson, left, Gerald Fauske, center, and Marion Harris, right, worked to find pollinators of the endangered Western Prairie Fringed Orchid. These pollinators are moths of the family Sphingidae – commonly known as Hawk moths or Sphinx moths. Members of this group that are active during the day are often called Hummingbird moths.