CENTER OF THE AMERICAN EXPERIMENT
Minnesota's Think Tank

Great Jobs Without a Four-Year Degree

A 2017 Review in 30 Eclectic Blogs and Commentaries

KATHERINE A. KERSTEN
MITCH PEARLSTEIN
FOREWORD BY JOHN H. HINDERAKER

Center of the American Experiment's mission is to build a culture of prosperity for Minnesota and the nation. Our daily pursuit is a free and thriving Minnesota whose cultural and intellectual center of gravity is grounded in free enterprise, limited government, individual freedom, and other time-tested American virtues. As a 501(c)(3) educational organization, contributions to American Experiment are tax deductible.

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Foreword

John H. Hinderaker
President
Center of the American Experiment

Center of the American Experiment officially launched its "Great Jobs Without a Four Year Degree" project in April 2017. The Great Jobs project is one of the most ambitious, and most important initiatives, ever undertaken by the Center. Its object is to effect, to the greatest degree that we can, a shift in Minnesotans' thinking about postsecondary education. We seek to promote alternatives to four-year college degrees, both to benefit Minnesota's young people, many of whom are missing out on exciting, lucrative careers, and to boost the state's economy by creating a better match between employers' needs and job training.

Is that a tall order? Yes. But in less than a year, the project's leaders, Mitch Pearlstein and Katherine Kersten, have made a lot of progress. They have conducted public programs; sponsored an eye-opening paper by labor economist Amanda Griffith showing that many skilled occupations not requiring four-year degrees out-earn men and women who do have baccalaureates; produced radio ads to publicize Dr. Griffith's findings; worked behind the scenes to connect educators, employers, and others; produced biweekly emails featuring success stories from around Minnesota; and established a highly informative web page for students, parents, employers and educators at GreatJobsMn.com.

And they have written op-eds, magazine articles and web site posts at AmericanExperiment.org. Mitch and Kathy are both prolific writers, so it shouldn't be surprising that in less than a year they turned out dozens of such products regarding the project—but if not surprising, it is certainly impressive. A sampling of 30 of their 2017 pieces are collected here.

These articles, columns and posts cover a wide gamut: the cultural biases that prevent many students from pursuing promising alternatives to four-year college; the rewards that can come from working with one's hands; the successes that many young Minnesotans are experiencing as they pursue skilled careers; the economic rewards of technical job training; and much more.

This compendium is a good guide to the progress made by the Great Jobs project. The best news, however, is that Kathy, Mitch and the Center are just getting warmed up. We look forward to seeing what 2018 brings.

Golden Valley, MN
February 2018

The Many Virtues and Similarities of Transatlantic Plumbing
By Mitch Pearlstein
February 3, 2017

The British government announced last week that it would spend £170 million (the equivalent of about $213 million) developing a series of "Institutes of Technology" intended as "credible alternative[s]" to well-worn routes many young people take to more academically oriented universities. As reported by Times Higher Education, the new Institutes are part of Prime Minister Theresa May's industrial policy, in which "technical education will get a radical shake-up so as to 'level the playing field' for those who do not go to university."

The Prime Minister was "expected" to say that the strategy would be a "critical part of the plan for Britain" once the country departs the European Union. More specifically, May reportedly saw it as "unwise to force less academic pupils into the straitjacket of university, leaving them drowning in debt for the sake of a poor degree"—particularly, she added, "when we have a chronic shortage of British plumbers and engineers."

For a range of reasons, Center of the American Experiment won't be recommending that either Minnesota, or the United States more generally, create the kinds of institutions the Brits seem poised to pursue. One of those reasons, a quite large one, is that this state and nation already have great numbers of such places, variously called community colleges, technical colleges, and the like—as in Northland Community and Technical College in Thief River Falls, Northwest Technical College in Bemidji, Riverland Community College in Austin, Alexandria Technical and Community College, and Minneapolis Community and Technical College, among many other invaluable such schools across the state and nation. This is not to say, though, that my colleagues and I don't resonate when we hear calls for more plumbers, regardless of the side of the Atlantic from which they flood forth.

We very much do.

As you may know, American Experiment is in the early stages of a multi-year project aimed at helping more young people win good-paying jobs and solid middle-class careers without four-year degrees. We start from the belief that American colleges and universities are the envy of the world, and nothing we ever will say or write will seek to dissuade anyone from attending one if that is their dream and plan.

We know many young men and women who really don't want to spend a minimum of four years in college, yet nevertheless enroll, believing that doing so is their only avenue to occupational success, when it definitely is not. Such quests regularly end sadly, with students not only dropping out, but routinely amassing sizable debt in the process.

How can we overcome the unhealthy cultural bias that just about every young American ought to go to college and come out around four years later with a degree? What educational alternatives are better routes for countless young men and women? And far from incidentally, what kinds of educational options—starting with apprenticeships and certificate programs in community colleges—increase the chances that employers can find enough employees with first-tier technical skills to allow their businesses to thrive and remain in Minnesota?

College and Career Counseling: Who Needs that Aggravation?
By Mitch Pearlstein
May 2, 2017

One of the most frequent themes John Hinderaker, Kathy Kersten, and I hear as we speak to a variety of Minnesotans about American Experiment's new project, "Great Jobs Without a Four-Year Degree" is that high school guidance counselors too rarely advise students to consider educational routes other than a bachelor's degree. They don't talk enough about well-paying and challenging careers made possible by completing one-year or two-year certificate programs, or apprenticeships in the trades, or training in the military, or the like—jobs, more specifically, in modern manufacturing, or high-tech healthcare, or in a wide range of other sophisticated fields.

I'm reasonably confident this is the pattern in most high schools in Minnesota and other states, though I'm quick to acknowledge I haven't spoken to any actual guidance counselors about it—but I soon will. Thinking back, I haven't spoken to many high school guidance counselors at all since Miss Craft, 50-plus years ago, properly suggested it would be a waste of my time and my parents' money to apply to any campus with even a twig of ivy.

Why do guidance counselors now seem so much more likely to recommend that their students apply to a four-year college rather than pursue any other avenues to a solid middle-class career and life? I went Googling yesterday and landed on a 1996 article in the *American Journal of Education* by sociologist James E. Rosenbaum and two colleagues, "Gatekeeping in an Era of More Open Gates: High School Counselors' View of Their Influence on Students College Plans." Here is a key passage:

> While counselors in the 1960s had authority to influence who applied to college, this study examines whether the role of counselors has changed in light of past criticisms of their role in channeling and the vast expansion of community colleges.
>
> In interviews with 27 counselors in eight highly different high schools, we find that counselors do not like giving students bad news about their future prospects, do not want the responsibility, do not believe they have the authority to do it, especially when parents have opposing views. Instead, they advocate college for all and emphasize personal counseling, which allows them to avoid unpleasant realities.

It's a short jump to understanding why most counselors are currently not particularly interested in urging students to consider careers in carpentry, plumbing, or much of anything that could be demeaned as "vocational"—not that most guidance counselors, in the first place, necessarily know much about various trades and similar professions.

The word "channeling" above is pivotal, though it's less stark than "tracking," which was what great numbers of guidance counselors—and great numbers of other educators—used to be guilty of when it came to urging, or *not* urging, low-income and minority young people to attend a four-year institution. Given how far tracking or channeling has fallen out of favor, it's understandable and easy to see why counselors have come to say in recent decades, "Who needs that aggravation?" "Who needs to be called a racist?" Alternatively, sometimes in the matter of young women, "Who needs to be called sexist?"

Instead of evaluating with other educators the skills and aptitudes of students as rigorously and fairly as they could, most counselors, for a relatively long time now, have backed off, recommending both implicitly and explicitly that just about every 17-year-old should, in fact, aspire to the academy, if that is his or her stated wish.

Fifteen years after writing "Gatekeeping in an Era of More Open Gates," Rosenbaum, in 2011, followed up with an article called "The Complexities of College for All." Here's a shorter but even more telling passage:

> When 89 percent of high school graduates plan [bachelor's] degrees, and low-achieving seniors who plan degrees have 80 percent failure rates, raising already high plans may be a poor strategy for improving success. ...[M]any seniors have high plans but poor information, and this leads to predictable failures in college.

Data and findings like these need more attention than they routinely receive. Many students—smart and ambitious young men and women, not just "low-achieving" ones—clearly would be better served if counselors and other respected adults were forthright in saying things like:

> Bill, if you want to go get a four-year college degree, congratulations. I wish you great success. But I know you like working with your hands a lot. Have you ever considered making a living doing that? If so, let's talk some more. Better yet, I know someone in construction who would like to meet with you. Interested?

"Even if You Do Go to College, Learn a Trade in the Summers"
By Mitch Pearlstein
May 4, 2017

"The Graduate" with Dustin Hoffman playing Benjamin Braddock premiered a scary 50 years ago, in 1967. Yes, it featured Ann Bancroft playing Mrs. Robinson. And yes, Katharine Ross played Ben's true love, Elaine, who just happened to be Mrs. Robinson's daughter. But if you're a truly practical person, I would like to think that before recalling any of the beautiful women who headlined Ben's complicated summer, your first memory is of the career advice he received from a family friend first thing in the movie.

> Mr. McGuire: "I just want to say one word to you. Just one word."
>
> Benjamin: "Yes, sir."
>
> Mr. McGuire: "Are you listening?"
>
> Benjamin: "Yes, I am."
>
> Mr. McGuire: "Plastics."

A new grad from a college back east, Benjamin was urged to consider a possibly moldy life in plastic.

Granted, that might have been sage occupational advice a half-century ago, in the same way that IT is reasonably hot now. But in doing research for American Experiment's new project, "Great Jobs Without a Four-Year Degree," I came across a pertinent as well as much more interesting piece of career advice, aimed this time at high school graduates, which may or may not be warmly received by most parents. The suggestion is in *Shop Class as Soul Craft: An Inquiry into the Value of Work*, a terrific book by Matthew Crawford, a brilliant and idiosyncratic writer who I've cited before and will again.

With young men and women in Minnesota and across the country only weeks away from processing into auditoriums and gyms to Edward Elgar's most famous piece, I'm curious about how many people find the following excerpt as intriguing as I do. It's on page 53 in a chapter called "The Separation of Thinking from Doing." One of Crawford's main arguments is that "doing" blue collar things such as plumbing and fixing engines routinely requires more actual "thinking," more cognitive firepower than do many white-collar jobs. Hence the chapter title. He asks and answers the following:

> So what advice should one give a young person? If you have a natural bent for scholarship; if you are attracted to the most difficult books out of an urgent need, and can spare four years to devote yourself to them, go to college. In fact, approach college in the spirit of craftsmanship, going deep into liberal arts and sciences. But if this is not the case, if the thought of

> four more years sitting in a classroom makes your skin crawl, the good news is that you don't have to go through the motions and jump through the hoops for the sake of making a decent living.

Before finishing the quotation, it's useful to note that Crawford owns a motorcycle repair shop in Richmond, Virginia, where he is very much hands-on. It's likewise useful to note that he also holds a Ph.D. in political philosophy from the University of Chicago. He sums up:

> Even if you do go to college, learn a trade in the summers. You're likely to be less damaged, and quite possibly better paid, as an independent tradesman than as a cubicle-dwelling tender of information systems or low-level "creative." To heed such advice would require a certain contrarian streak, as it entails rejecting a life course mapped out by others as obligatory and inevitable.

Parents: Sound advice? Or a little too romantic and disconcerting for your tastes?

New graduates: What say you?

BMW's Success with Germany's Apprenticeship Model
By Katherine A. Kersten
May 17, 2017

American employers have much to learn from Germany's apprenticeship model. At least, that's what BMW's success at its production facility in Spartanburg, South Carolina, suggests. BMW is the biggest car exporter in the United States, and at Spartanburg—its largest plant in the world—the company employs 9,000 people and trains 100 apprentices at any one time. Peter Wittig, Germany's ambassador to the United States, explained how the apprenticeship system works in a recent *Wall Street Journal* op-ed:

> In Germany, half the graduates of high schools and junior high schools choose a track that combines training on the job with further education at a public vocational institution. This apprenticeship model is one reason why Germany has the lowest rate of youth unemployment in Europe and has been able to keep manufacturing jobs in the country.

The success of the German apprenticeship model, adds Wittig, builds on the conviction that it is an equivalent alternative to college education:

> As high-wage countries, Germany and the United States face similar challenges in protecting existing production facilities and creating new manufacturing jobs. One of the most decisive factors for companies is whether they can find skilled and motivated workers, which is what apprenticeship programs provide.

"In the future, artificial intelligence and other digital technologies will radically change American manufacturing. The key to apprenticeship programs' continued success will be the integration of digital skills, along with efforts to ensure workers are prepared for lifelong learning," says Wittig.

American companies that want to learn more about the German apprenticeship model can contact the German Embassy's Skills Initiative. BMW's presence in South Carolina has inspired a statewide program of apprenticeships that now range beyond manufacturing and the building trades to fields like nursing, pharmacy, and IT.

Here in Minnesota, a number of apprenticeship initiatives on the German "dual training" model are underway. One is the Learn, Work, Earn project, carried out under the auspices of the Minnesota Advanced Manufacturing Partnership, a consortium of Minnesota State System (formerly MnSCU) colleges. South Central College, with Mankato

and Faribault campuses, is the lead college in the consortium.

Learn, Work, Earn focuses on apprenticeships in advanced manufacturing—mechatronics, machining, and welding. The program emphasizes a statewide core curriculum, employer-driven apprenticeships, and cooperative education opportunities that lead to industry-recognized credentials in manufacturing.

Our state needs many more innovative apprenticeship initiatives if it is to meet workforce needs going forward.

Creating Entrepreneurial Opportunities
By Katherine A. Kersten
June 1, 2017

Here's the lament we hear constantly from employers in Greater Minnesota: "We can't find a skilled workforce—or grow as a community—because our kids can't wait to leave town as soon as they finish high school."

One Minnesota high school—Wright Technical Center in Buffalo—is tackling this challenge head-on. Wright Tech is a consortium of eight school districts in Wright and Sherburne Counties, including Buffalo-Hanover-Montrose, Monticello, Delano, Maple Lake, Annandale, Big Lake, St. Michael-Albertville, and Howard Lake-Waverly-Winsted.

In 2015, Wright Tech launched a program called Creating Entrepreneurial Opportunities (CEO), using a model conceived by Illinois entrepreneur and educator Craig Lindvahl. Students in the program each start their own business.

To prepare, they work with mentors, tour area businesses and sit down with the owners to learn what it's like to launch and run a business. The students meet at local companies for an hour and a half each day before the school day begins. In the last two years, CEO students have visited more than 100 businesses.

Nine students completed the CEO program last year, and four are still running the businesses they started.

Mark Lee, Wright Tech's Work-Based Learning Coordinator, oversees the CEO program and says:

> Every week—after we tour a business and sit down with the owner—I hear the same thing from students. They say, "I've driven by that building my whole life, and I never knew what they do there. I didn't know they make parts for the Space Shuttle, or medical devices, or whatever."

Through CEO, Lee says, students come to realize what great opportunities there are in their own community.

Last year, one CEO student dreamed of someday opening a bakery and coffee shop. In the CEO program, she started small, launching a cupcake and birthday cake business. Her mentor, who had a wedding-related business, donated a booth at a wedding expo and helped her set it up. One bride ordered a cake, and was so thrilled with the student's work that she praised her on social media. Soon other area brides were calling to order a wedding cake.

"The story went from 'a high school girl making cupcakes in her kitchen' to now renting a commercial kitchen," says Lee. "She's still baking birthday cakes, but she's concentrating on wedding cakes, where there's more money to be made."

One of last year's CEO students started a DJ business, while another created a grass-fed beef business. His future plans include founding an agriculture-related business that does field scouting with drones, among other things.

Yet another student aspires to be a property manager and saved enough money to make a down-payment on his first, fixer-upper duplex. All these businesses are still in operation.

Ray Przekurat, Wright Tech's director, says he sees

two remarkable changes in the students who complete CEO.

First, "The growth of the students in this program is unbelievable," he says. "At the beginning of the year, many can't look you in the eye, can't shake your hand. At the end of the year—at the trade show where they introduce their business to the public—they're handing you their business card, telling you their business plan, and telling you what's so great about Wright County and Sherburne County."

How does this transformation take place?

"In CEO, we put a lot of emphasis on people skills," explains Lee. "The students network at Rotary Clubs, at the Jaycees, Kiwanis, Lions, Business Networking International. They see business people networking there, and they talk about their own businesses."

"It's easy to talk to people your own age," he adds. "It's harder to talk to adults. We talk about the 'art of conversation,' and what we call 'intergenerational conversation' with the students. We encourage them to ask questions—to have a couple of go-to questions and a follow-up question. For example, if the person you're talking to owns a business, ask what its name is and what their biggest challenge is. Students who get practice at this end up mature and self-confident."

CEO students have the opportunity to sit down with the leaders of companies like Whirltronics in Buffalo, a top manufacturer of rotary lawnmower blades, and J & B Meats, the maker of No Name Steaks, in St. Michael.

"Business owners will talk about their own business journey," says Lee. "They say things like, 'I had an idea, I saw a need, I started in my garage or barn—I worked my regular job until it grew enough that I could step away.' They tell students about the pitfalls to expect, about what they wished they had done differently."

The second change Wright Tech leaders see in CEO students is the way their appreciation for their own communities grows. At the beginning of the school year, students are asked in a survey about their plans after high school.

"Ninety percent of them say, 'I'm out of here, I don't want to live around here, there's nothing here,'" says Przekurat. "That's normal for high school kids. But by the end of the year, that flip-flops. The kids say 'I can't believe all the companies that are here; I can't believe all they make and do.'"

The business owners whom CEO students meet often encourage them to start their businesses in the area, says Lee. "They say, 'we will support you; you've got a great network here.'"

What do CEO students do after high school? So far, about one-third attend a four-year college, one-third attend a two-year technical school, and one-third run their businesses or go to work, according to Lee.

CEO is only one of the 14 programs that Wright Tech offers students in the eight school districts it serves. About 700 students take classes in the school's tech center and about 100 in its alternative learning program. Tech center students come for an hour-and-a half every day, and can take one class both junior and senior year. CEO students don't meet at the school, but at area businesses.

Wright Tech's technical programs focus on training kids for high-wage, in-demand occupations. They include automotive technology, which has a state-of-the-art, industry-equipped automotive shop; healthcare; and welding technology, where students work towards completing American Welding Society certification. In the construction technology program, kids build a three-bedroom house. A licensed electrician and plumber are the only outside professionals involved, and the students work right alongside them.

"I've been told that Wright Tech is one of those 'best-kept secrets,'" says Przekurat. "It shouldn't be."

Przekurat says last time he looked at the data, 31 percent of Minnesotans had graduated from a four-year college. In Wright County, it's about 25

percent, he says. "That's great," he notes. "But my question is, what are we doing for the other 75 percent of our population?"

Wright Tech's high school CEO program isn't the only one in Minnesota. The other two are in Kandiyohi County and in Staples-Motley, which collaborates with Wadena-Deer Creek and Pillager. The Midland Institute for Entrepreneurship in Effingham, Illinois, which oversees the CEO program nationwide, requires that school districts form a consortium to operate a CEO program.

Businesses, not school districts, underwrite the programs' costs. Wright Tech, for example, raised $70,000 to pay for its CEO program.

What Wright Tech and other schools using the CEO model are doing is great for both their kids and their communities. More Minnesota school districts should do the same.

The Educational Value of Beautiful and Physically Demanding Things
By Mitch Pearlstein
June 8, 2017

As a rule, I stay miles away from proposing that high schools expand their curricula to address assorted lists of societal problems. I've been in meetings, for instance, when participants have said it's essential that students take a required course regarding the personal and societal benefits of marriage. As avid a proponent of marriage as I may be, I've argued against these suggestions on two grounds: Such additions would further clutter what frequently are already overstuffed curricula, and much of what would be taught inevitably would run radically counter to what people around the table wanted advocated on the subject.

Despite those objections, let me suggest, certainly not a full-fledged course of any kind, but rather modest reading assignments—homework which would cover barely a chapter or two of one or two books from a short list.

The first book is a distinctively original effort I've written about in the past: *Shop Class as Soulcraft: An Inquiry into the Value of Work*, by Matthew Crawford. The second, complementary book: *Why We Make Things and Why It Matters: The Education of a Craftsman*, by Peter Korn. My intent with both is to modestly, very modestly, fill voids caused by the widespread elimination of shop classes across Minnesota and the nation in recent decades. Much more frequently than is now the case, young people once had opportunities in high school (and earlier) to make and fix things; tangible things made of wood, metal, or fabric. As the two authors convincingly argue in their respective ways, there is deep value in such experiences—learning experiences that are now frequently extinct in high schools.

As a high-end motorcycle mechanic who also holds a Ph.D. in political philosophy from the University of Chicago, Crawford's focus is on the trades. As a high-end furniture maker who graduated from the ivy-enriched University of Pennsylvania, Korn focuses on the arts and crafts. Here are a few telling excerpts from each book.

Peter Korn:

> It was not just making furniture that I loved, but also being a furniture maker. I liked being self-employed, working hard to meet my personal standards, and trusting in the skill and strength of my hands. Having a storefront location meant having a public presence. Mary the butcher, Mike across the street, the Dominicans who frequented the social club two doors down, and the local artists all knew me first and foremost as a furniture maker.
>
> [I]t would be difficult to overemphasize the degree to which the materiality of craft in particular, and creative work in general, are effective sources of fulfillment, meaning, and identity.... We think with materials and objects at least as much as we think with words, perhaps far more. They are con-

> duits through which we construct our selves and our world. I was becoming aware that a good life was not some Shangri-La waiting to be stumbled on. One constructed it from the materials at hand.

Matthew Crawford, more abstractly:

> The special appeal of the trades lies in the fact that they resist this tendency toward more remote control, because they are inherently situated in a particular context. In the best cases, the building and fixing they do are embedded in a community of using. Face-to-Face interactions are still the norm, you are responsible for your own work, and clear standards provide the basis for solidarity of the crew, as opposed to manipulative relations of the office "team." Aristotle begins his Metaphysics with the observation that "all human beings by nature desire to know." I have argued that real knowledge arises through confrontations with real things. Work, then, offers a broadly available premonition of philosophy. Its value, however, does not lie solely in pointing to some more rarefied experience. Rather, in the best cases, work itself may approach the good sought in philosophy, understood as a way of life: a community of those who desire to know.

Given their high-end, higher-education credentials, it might seem ironic to have Korn and Crawford make strong cases, in effect, for educational tracks that end a few years short of four years. But the validity of their arguments and testimonies are inherently potent and stand on their own, whoever might voice them.

As my colleagues Kathy Kersten, John Hinderaker, and I have been writing since last fall and before, there are many avenues to great jobs and solid middle-class careers in Minnesota and the United States, with a four-year degree being but one of them. This is happily the case, because no more than 35 percent of Americans, if that, wind up with one anyway.

For many young people who truly do not want to seek a bachelor's degree—for whatever academic, financial, personal or other reason—it generally makes more sense for them to consider paths like apprenticeships, one-year and two-year certificate programs, associate's degrees, and job training in the military, among others.

These routes lead to skills and jobs that are satisfying, well-paying, and often particularly important to our well-being at home and elsewhere (think electricians, x-ray technicians, and hair stylists), as well as to the prosperity of our businesses and economy overall (think sophisticated toolmakers, construction workers, and farmers).

This is all reinforced by how we are still early in the retirements of immense numbers of often highly skilled baby boomers. Highly trained younger men and women must succeed them. But beyond economic and similar considerations, Crawford and especially Korn emphasize the intrinsic worth and beauty of men and women knowing how expertly to use their thumbs, along with their hearts and minds, for endeavors other than texting.

Reading a handful of pages or chapters in their two books, compelling as they are, cannot equate with sculpting real maple or fixing intricate engines hands-on. Yet for huge numbers of current students who know very little about such molding or restoring, a few brilliant pages about physically demanding and beautiful things could be exquisitely educational.

What's CTE? And It Increased High School Graduation Rates by How Much?
By Mitch Pearlstein
June 14, 2017

If I had to guess, there is a general sense among adults that high schools in Minnesota and else-

where around the country currently offer many fewer shop classes than they used to. They're right to think that.

If I had to guess a second time, I would say people in general are less familiar with the rise of something called "Career and Technical Education," which might be thought of as encompassing—and, significantly, adding to—the aims of old-time shop classes.

My own aim here is to report on an important 2016 study that found, among other things, that "students who focus on their CTE coursework are more likely to graduate high school by twenty-one [percentage] points compared to otherwise similar students (and they see a positive impact on other outcomes as well)."

First, a copious definition, courtesy of the Minnesota Department of Education: Career [and] Technical Education programs offer academic and technical skills, knowledge and

> training to succeed in future careers. CTE programs prepare learners for the future by providing learning experiences spanning career fields such as agriculture, architecture, culinary arts, engineering, fashion design, electrical and plumbing, healthcare, robotics, construction, veterinary medicine, education, or accounting.

Adding specificity to this roster, Minneapolis Public Schools offer these high school courses:

- Business and finance at Edison and Southwest.
- Computer science at Patrick Henry, Southwest, and Transition Plus.
- Radio broadcasting at North.
- Web design & digital communication at Edison, Patrick Henry, Roosevelt, South, Southwest, and Washburn.
- Automotive at Roosevelt.
- Engineering & technology at North and Washburn.
- Construction at Roosevelt.
- Healthcare at Roosevelt.
- Cosmetology at Edison.

It's an impressive list, and to be frank, I have a lot to learn about these programs. This is vital, because my focus since last year on American Experiment's "Great Jobs Without a Four-Year Degree" project has been on programs and activities after high school.

The need to know more is further reinforced by the opening lines of a very good piece by Tom Robertson, reporting from Brainerd, on MPR News four years ago (April 5, 2013):

> If good jobs are going unfilled in parts of Minnesota, some people will tell you the problem starts in high school. Too many young people don't get exposed to industrial technology careers available to them and thus have neither the awareness nor training they might make good use of, say employers who are in a hiring mode.... Both career counseling generally and shop classes specifically have declined in Minnesota high schools in recent years. Employers and higher education officials alike blame that for part of what they consider a skills gap.

This is still true and thus provides a further reason for the Center's "Great Jobs" initiative.

With all that as useful prologue, what about the "important 2016 study" teased above? Conducted by Shaun M. Dougherty, an assistant professor at the University of Connecticut, it was published under the auspices of the Fordham Institute and goes by the title *Career and Technical Education in High School: Does It Improve Student Outcomes?* Its overall and short answer is "yes." As for how he came to his conclusions, Dougherty took advantage of an unusually "rich set of data from the Arkansas Research Center," making it possible to follow three cohorts of students, more than 100,000 young peo-

ple in all, "from eighth grade through high school, and into college and/or the workforce...."

Here are four key findings from the research:

- "Students with greater exposure to CTE are more likely to graduate from high school, enroll in a two-year college, be employed, and earn higher wages."
- CTE is not a path away from college: "Students taking more CTE classes are just as likely to pursue a four-year degree as their peers."
- "CTE provides the greatest boost to the kids who need it most—boys, and students from low-income families."
- "Students who focus on their CTE coursework" are more likely to graduate high school—by a quite substantial 21 percentage points—than similarly situated students.

I urge review of all the paper's findings, as well as Dougherty's recommendations, but for a concluding comment here, something in its anonymously written foreword fits perfectly with what propels "Great Jobs Without a Four-Year Degree":

> American students face a double-whammy. Not only do they lack access to high-quality secondary CTE, but then they are subject to a "bachelor's degree or bust" mentality. And many do go bust, dropping out of college with no degree, no work skills, no work experience, and a fair amount of debt. That's a terrible way to begin adult life. We owe it to America's students to prepare them for whatever comes after high school, not just academic programs at four-year universities.

Good News about Apprenticeships
By Mitch Pearlstein
June 20, 2017

President Trump signed an executive order on June 15, 2017, that significantly reduced federal oversight of apprenticeship programs that receive federal funds. Good and good. Or more precisely, less regulation will lead more businesses, unions, schools, and postsecondary institutions to participate in such programs. Overwhelmingly, they will do so responsibly—fiscally and in other ways—even with governmental officials demanding less paperwork than usual.

One name that has come up frequently has been that of economist Robert I. Lerman, who has studied apprenticeships more insightfully, and advocated them more energetically, than any scholar I know.

In a 2013 paper, "Skill Development in Middle Level Occupations: The Role of Apprenticeship Training," he noted that the "scale of apprenticeship programs varies widely across countries," with a barely detectible 0.3 percent of the U.S. workforce involved, while proportions are about 13 times larger in Germany and Australia. Not good, considering the virtues of apprenticeships, which he summarized fulsomely but succinctly:

> Apprenticeships to train workers for intermediate-level careers work well. Skill development through apprenticeships is closely suited to the needs of employers and the job market, reinforces classroom learning with applications at the workplace, involves trainees in the production process, makes for a seamless transition from school to a career, provides trainees with a natural mentoring process, allows trainees to earn wages while gaining occupational mastery, applies to a wide range of occupations, requires less government spending than other education and training strategies, and generally raises the quality of the workforce. Countries with robust and well-structured apprenticeship programs appear to outperform other countries in achieving low youth unemploy-

> ment, raising the status of skilled and semi-skilled occupations, and maintaining more good-paying manufacturing jobs.

Sounds pretty good, with American Experiment's focus on apprenticeships and what they can do for young Minnesotans and the state's economy, continuing to grow as part of our multi-year project, "Great Jobs Without a Four-Year Degree."

AchieveMpls Helps Students Find Great Jobs that Don't Require a Four-Year Degree
By Katherine A. Kersten
July 9, 2017

Many Minnesota companies are looking high and low for skilled welders. They have an ally in AchieveMpls.

The mission of AchieveMpls—the strategic nonprofit partner of the Minneapolis Public Schools—is to ensure the district's graduates are ready to pursue their best career and postsecondary options. When a student shows an interest in an occupation like welding, its staff connects him or her with professionals in the field and then assists the student in identifying—and applying to—the optimal training program.

In the past, the emphasis has been on getting a two- or four-year college degree. But in 2016, AchieveMpls launched an innovative program called the Career Readiness Initiative (CRI).

Based in AchieveMpls Career & College Centers at Roosevelt and Edison high schools, its goal is:

> to make sure students know about all their postsecondary opportunities—including two-year technical degrees, certificates, internships, apprenticeships, and on-the-job training. As part of CRI, volunteers from a variety of occupations come to classrooms once a month to talk to students about their own career journeys. The idea is to open kids' minds to fields they may never have considered or even known about.

AchieveMpls staff help students explore their options in a strategic way. After evaluating student interest inventories (completed during junior year), they invite businesses like UPS and Bachmann's, unions, and others to sit down with six to ten interested kids, answer their questions, and give them a good sense of what it's like to work in their field.

CRI also organizes "speed-networking" events. Recently, AchieveMpls invited Elevate Minnesota—a group of 16 unions—to meet with high school seniors who had expressed an interest in the trades. The students circulated around the room, spent five or ten minutes with each union representative, and exchanged contact information. Other speed-networking events have featured representatives from Deloitte and United Health Group.

On May 19, AchieveMpls staged a CRI Career Pathways 2016-17 capstone event at Edison High School. At this event for 10th-graders, hundreds of students had a chance to speak with exhibitors like Xcel Energy; Fairview Health; Dakota County Technical College; New Horizons Computer Learning Centers; and unions, including the International Union of Painters and Allied Trades; International Association of Sheet Metal, Air Rail and Transportation Workers, and the North Central States Regional Council of Carpenters.

One exhibitor was Buhler, Inc., an international company that makes machinery for processing flour, pasta and chocolate, among other things. Buhler's North American headquarters is in Plymouth. The company has developed a European-style, three-year "learn and earn" apprenticeship to train high school graduates to become customer-service engineers.

One such apprentice, a recent high school grad, was at the capstone event at Edison High School. He chatted with curious students about the program's benefits and showed off things he had made as an apprentice. "Instead of spending money on school, you're making a lot of money here," he told them.

Not only that—it's "fun" to master skills like drafting and computer-aided design.

AchieveMpls plans eventually to expand CRI beyond its two pilot high schools, Edison and Roosevelt. "The four-year colleges already have strong relationships with the high schools, which they've developed over many years," says James Houston, CRI's manager. "We want to create the same support structure for two-year colleges and other career paths. We'd like to see a technical college or apprenticeship become as common a goal for students as a four-year college degree."

One challenge is that most employers and unions have little experience interacting with high school students. AchieveMpls can help. "They just need to come here and be part of it," says Houston. "We'll give them access, and help them figure out the best way to market themselves to students."

Innovative Dunwoody Program Helping Women and Minorities Find Great Jobs
By Katherine A. Kersten
July 11, 2017

Minnesota's shortage of skilled workers is causing employers in many fields to scramble to find new sources of talent, including women and minorities. Dunwoody College of Technology is a great place to look.

Female and minority students now make up 14 percent and 19 percent, respectively, of Dunwoody's student body. The college's Youth Career Awareness Program (YCAP) has played a central role in attracting these young people to technical occupations of a kind many haven't traditionally sought.

Recently, the *Star Tribune*'s Neal St. Anthony profiled Dunwoody's YCAP Program, which was named after the late Leon Rankin, a 1960s Dunwoody graduate and one of Minnesota's first black master electricians and contractors:

> The program is credited with bringing more than 2,000 "underrepresented" high school students to Dunwoody for six-week paid internships to explore technical education and career opportunities. More than 1,300 of those students have gone on to earn degrees at Dunwoody or elsewhere. And graduates of YCAP who attend century-old Dunwoody typically receive scholarships valued at $20,000-plus.
>
> St. Anthony gives the example of Michael Simmons, a black 27-year-old Dunwoody grad who participated in YCAP and now works in transmission engineering at Xcel Energy: Simmons recalled that he had an interest at Washburn High in aviation, another in-demand field. That broadened when his mom sent him to YCAP before his junior year. It was an interesting internship that exposed him to careers, company visits and helped him connect why it made sense to do well in math, science and other classes.

Simmons first earned an associate's degree at Dunwoody and later returned to earn a four-year degree in industrial engineering. "I can advance further with a four-year degree," he told St. Anthony. "I will be able to manage employees and help our company produce reliable products and reduce waste."

Since 2010, minority hiring in construction, healthcare, and technology has been "growing faster than the overall job market," according to St. Anthony. Dunwoody's innovative youth-focused program has played an important role in that.

Where Does the Idea Everyone Should Go to College Come From?
By Mitch Pearlstein
July 12, 2017

The astute Howard Root had a very good column in the business section of the *Star Tribune* on July 10, 2017, with the forceful headline, "We're Not Doing Students Favors by Overselling College Degrees." Root is the recently retired CEO of Vascular Solutions, a Twin Cities medical device company he started and ran for 20 years. One of the most effective points he made: His firm "consistently had unfilled job openings for non-degree technicians in machine design at salaries well above $50,000." But when it came to their "entry-level marketing associate program," Vascular Solutions "received at least 50 applications from recent college graduates for every position we hired."

Observations and arguments are not brand new about how many young people who aren't interested in demanding academic work—much less adequately prepared for it—would be better served, economically and in other ways, if they opted for educational routes other than four-year degrees, but they're growing in number and persuasiveness. My American Experiment colleagues and I would like to think that our multi-year project, "Great Jobs Without a Four-Year Degree," is having something to do with this.

Yet even with heightened attention, a fundamental matter pursued less frequently than one might imagine is the origins and nature of the view that "just about everyone" should aim for a four-year degree. This assertion is certainly in the cultural air, even though—the point is rich—I've known only one person who ever explicitly said it. This was back in the late 1960s, when a left-wing political scientist told me exactly that, albeit stopping short before adding anything like, "Uninterested students of the world, DON'T unite!"

So, if few people, in fact, believe that virtually everyone should seek a bachelor's degree, why is the idea, or something akin to it, so potent?

As for origins, the significant degree to which soldiers returning from World War II made use of the GI Bill signaled the birth of mass higher education and its enrollment explosions. This was followed by the even larger degree to which baby boomers, born between 1946 and 1964, enrolled. Then, greater numbers enrolled, still, in subsequent generations.

College enrollments in the United States in 1939-40 totaled a rounded-off 1.5 million students. The number rose to 2.4 million in 1949-50. Followed by 3.6 million in 1959-60. Followed by 8.0 million in 1969-70. Followed by 11.6 million in 1979-80. Followed by 13.5 million in 1989-90.

Jumping ahead almost a quarter century later, the number of students enrolled in American colleges and universities in 2014 was 20.2 million men and (mostly) women. All these numbers include community college enrollments.

As for why enrollments have grown so dramatically, I would point to two dynamics, one mainly in the province of students and the other of parents.

Going back to 1997, Kenneth Gray, an education professor, reported, "Ninety-five percent of high school sophomores surveyed in a recent [U.S.] Department of Education study said they would go directly to college after high school, and 85 percent aspired to at least a four-year degree."

In 2011, sociologist James E. Rosenbaum wrote that a remarkable (or not so remarkable) 80 percent of "low-achieving seniors" who plan a four-year degree "have an 80 percent failure rate."

In 2014, a British sociologist, John Jerrim, reinforced Rosenbaum's finding when he wrote, "American teenagers are less realistic about their prospects of obtaining a bachelor's degree than young people in most other developed countries" (save for Canada, interestingly). How have parents chipped in? Despite findings like those by Gray, Rosenbaum, and Jerrim, as well as the fact that only slightly more than a third of American young people currently earn a bachelor's degree, 92 percent of parents in a 2010 Gallup Poll said their own children would, in fact, go to college. Given artificially

high expectations of this magnitude on the part of mom and/or dad, it's hard not to imagine great proportions of young people harboring unrealistically high expectations, too.

Postsecondary Education for Non-Dummies
By Katherine A. Kersten
July 16, 2017

In this era of high-technology manufacturing, four years and a bachelor's degree is hardly the only smart path to take. Only 22 percent of jobs in our state require a bachelor's degree or above.

High school graduation should be a time of optimism about the future and congratulations all around. But I heard recently about a mother who was in mourning at her son's graduation, struggling to restrain tears.

She had implored him to enroll in a four-year college, but he had chosen a two-year technical college instead. Now she fears he has lost his chance at the good life.

In fact, her son may have made a shrewd decision. Today, too many high school graduates start down the four-year road because they mistakenly think it's the only route to success. Too often, they wind up dropping out, jobless, and in debt, lacking the skills they need to succeed in the 21st-century workforce.

In recent decades, our society has developed a powerful cultural bias that a four-year college degree is optimal for everyone and that any other path to a career is second-best—"for dummies." Yet, in fact, young people who choose alternative pathways—like a two-year associate's degree, an apprenticeship or an occupational certificate—can often land in-demand, well-paying jobs fast, avoid crippling debt, and look forward to a secure future. Some earn significantly more than classmates who choose the four-year route.

A four-year degree remains an excellent choice for many people, but it's increasingly clear that our educational system's single-minded focus on four-year colleges is failing many young people. It is also placing our society's future prosperity in jeopardy.

Here's the paradox: Today, while an increasing number of young people—especially young men—are adrift and living in mom's basement, thousands of skilled jobs go begging in our state. This is especially true in high-demand fields like technical occupations and the trades.

Our state's manufacturers, for example, struggle to fill two-thirds of the available jobs, according to Minnesota's Department of Employment and Economic Development (DEED). The problem will grow worse as baby boomers continue to retire.

This skills gap will severely hamper the ability of Minnesota's economy to grow, unless we address it with urgency now.

"Today, 79 percent of construction companies can't find enough qualified workers," according to Dennis Medo, who heads Project Build Minnesota. "Unless that changes soon, building costs may skyrocket, and many construction projects simply won't get built."

"More than 40 percent of technical workers in the utility industry are eligible to retire in the next five years," says Bruce Peterson, executive director of the Minnesota State Energy Center of Excellence. "But if you take 40 percent of the people out of the power plants, how do you keep them running? None of us can function without electricity." All the skilled trades are "in the same predicament," he adds.

The solution is hiding in plain sight. We must do better at informing students and their parents about all the opportunities as they make postsecondary plans.

Many are likely to find the benefits of a non-four-year path enticing. For example, apprentices and students in some technical college programs can begin earning money in their occupation at age 18. The "learn and earn" model enables them to pay for their education and begin their careers with little or

no debt as young as age 20.

Those entering in-demand fields can generally expect several job offers before they finish training. Many have impressive earning potential.

For example, the median annual wages for air traffic controllers, medical sonographers, and dental hygienists are $143,000, $75,900 and $72,500, respectively, according to DEED. Electrical repairers and installers' median annual wages are $58,600, and HVAC repairers and installers' are $52,200. For electric power line installers and power plant operators, the figures are $76,400 and $72,700.

That's just the beginning: Graduates with a two-year associate's degree can go on to earn a four-year degree in a "2 plus 2" arrangement. Sometimes employers will cover the cost of additional education. People in the trades, such as electricians, plumbers and carpenters, can launch their own businesses if they like.

Unfortunately, many young people never learn about attractive opportunities like these, because of our society's "college for all" mantra, which rests on a number of myths.

The first is that a four-year degree is a kind of ticket you must punch to have a wonderful life.

But here's the startling reality: Only 22 percent of jobs in our state require a bachelor's degree or above. Nevertheless, in a recent survey at the Southwest Career Expo, 64 percent of 10th-graders in southwestern Minnesota responded that they plan to attend a four-year college.

In short, today there's a striking mismatch between the educational requirements of the jobs in demand and students' educational pursuits. As a result, some Minnesotans with four-year degrees have a hard time finding work in the occupations for which they trained.

A quarter of all bartenders in Minnesota are graduates of four-year colleges. According to the U.S. Census Bureau, more than 100,000 college-educated Minnesotans are working as retail salespeople, waiting tables, and working as maids and janitors—all jobs that require a high school degree or less.

Here's another myth: You use your brain in jobs that require a college degree, but otherwise you're just swinging a hammer, or you're just a cog in a machine. Anyone who believes that hasn't seen a modern manufacturing facility. The Charles Dickens-era stereotype of "dark, dirty and dangerous" is woefully out of date. Today's manufacturing plants are high-tech, safe, and often as clean as a doctor's office.

I recently visited Ultra Machining Co. in Monticello. The computerized numerical controlled (CNC) machines I saw there are operated by highly trained, mathematically sophisticated machinists. The parking lot is filled with late-model trucks—some pulling an ATV or boat—and machinists can opt for a work/life balance that includes a three-day weekend.

At the state-of-the-art Minnesota Carpenters Union training facility in St. Paul, I heard about the many complex skills carpenters master, such as how to use computerized robotics and GPS to lay out building foundations and how to create negative air pressure environments to work safely in occupied hospitals. Yet the average age of those starting their four-year apprenticeships is 28.

"We'd like to get them at age 19," says Kyle Makarios, until recently the union's director of government affairs, "but young people don't seem to see carpentry as a desirable, meaningful career. If they were exposed to its rewards in high school, we could attract them much sooner."

Robert McLain, a 27-year-old HVAC technician, says he would have chosen his path earlier if he had known how rewarding and intellectually stimulating his work would be. Not one teacher or counselor at his large Minneapolis high school mentioned the trades as a career option, he says. Therefore, he drifted from job to job until age 24, then entered Hennepin Technical College's two-year program, where he snagged one of the school's many scholarships. Today, he earns twice as much as a friend who has both a four-year degree and a

$44,000 debt, McLain says. He loves the constant problem-solving in advanced electronics, and the fact that he never knows "what puzzles the day will bring."

In 2014, the average loan debt of students at four-year Minnesota institutions was almost $32,000, with a typical repayment cost, including interest, of almost $58,000. In Minnesota, one in nine higher-education borrowers has seriously delinquent student loan debt.

About half of Minnesota high school graduates enroll in a four-year college, but only 36 percent of full-time, first-time students at the state's public four-year institutions graduate in four years from the school where they started. Fifty-five percent finish in five years. Fewer than two-thirds have completed their degree after six years.

Fortunately, educators, employers, unions, nonprofits and government entities are tackling our skills gap/workforce development challenges in innovative ways.

For example, school districts such as Alexandria, Shakopee, Burnsville, and Rochester are revamping their curricula. The Northeast Minnesota Office of Job Training in Virginia offers an excellent program called "Career EdVenture" to area schools. The program provides a host of career-planning resources, teaches about employers' expectations, and helps students plan their optimal individual career paths.

Meanwhile, employers are donating state-of-the-art equipment to technical colleges, starting their own world-class-level apprenticeship programs or forming industry associations to work together to solve their talent pipeline challenges. In greater Minnesota, where the workforce problem is most acute, whole communities are pulling together to attract and retain skilled workers and to ensure top-quality educational options for all students.

Where can students and parents find the information they need to evaluate all their postsecondary options? A paper from DEED—"What to Know Before You Owe," available online—lays out a great initial decision-making strategy.

Families can also consult DEED's remarkable online "Graduate Employment Outcomes" tool, which shows how many Minnesota graduates are finding jobs from a broad range of majors and at what wages. Another online tool from DEED, "Occupations in Demand," includes information about careers that don't require postsecondary training.

Center of the American Experiment's new project, "Great Jobs Without a Four-Year Degree: Good News for Students, Parents, and Employers" has the mission to ensure that students and parents know about the many fulfilling paths to career success. Going forward, our society must re-emphasize the importance of honoring and respecting people who choose alternative career paths for the vital contributions they make to our communities. Our state's future prosperity and the well-being of many of our young people depend on it.

This appeared as the Star Tribune*'s Sunday cover oped on July 16, 2017.*

Kathy Kersten's Better Bloggerville Welcome
By Mitch Pearlstein
July 21, 2017

Whenever I have an op-ed published in the *Star Tribune*, I debate with myself whether I should read comments about the piece on the Strib's blog afterwards. Despite knowing, without a sliver of doubt, that some number of readers will suggest I'm a rotten human being in the employ of immorally rich capitalists and nasty plutocrats, I'm invariably curious enough to take a look, where the pattern routinely goes something like this:

> Blogger No. 1: "Pearlstein's article is a piece of trash."
>
> Blogger No. 2: "No, it's not. If there's any trash around here, it's all your dumb liberal ideas."

After which I'm mostly ignored as readers find reasons to fight amongst themselves, frequently with daggers for words, over something I may have

written or implied but probably didn't.

But heck with me and my admirers, as I'm pleased to report that responses were measurably more measured and more complimentary of my colleague Kathy Kersten's vitally important July 16, 2017, op-ed in the *Star Tribune*: "Postsecondary Education for Non-Dummies." One person actually wrote, more kindly than backhandedly I would like to think: "This is the first Katherine Kersten opinion I ever read that I agree with."

Animating what she wrote has been her passionate co-leadership of American Experiment's major, multi-year project that officially kicked off in April, "Great Jobs Without a Four-Year Degree: Good News for Students, Parents, and Employers." I would like to think President John Hinderaker and I are equally passionate co-leaders of the initiative, though speaking solely of myself, I have some quick catching up to do to when it comes to the attention her work deservedly garnered last weekend.

What follows is a sampling of comments by Strib bloggers, modestly edited for clarity and punctuation, about Kathy's op-ed, annotated here and there by me. The first three comments should be read together:

- Best thing I ever did was join the Navy and learn a skill that keeps me employed. Better than the degree I have.

- I have an accounting degree from the U of MN. Changed careers after 25 years, went back to school and got my Class A license to drive a semi. Salary almost doubled in the first year. Complete insurance benefits, 401(k), etc. Both my boys are journeymen electricians. One is a service electrician with a company provided van, the other is a project manager with similar benefits and a truck allowance. Both are making more money in their early 30s than I ever made. And they both work 52 weeks a year, no layoffs.

- I needed a plumber a few weeks ago. I paid him good money for about one hour of work. My sink works again. I didn't ask him if he studied art, women's studies, or philosophy in school. He knew accounting enough to invoice me. He was a white man, his boss a black man. I thank God we have men like this willing to work when we need them.

The next two comments should also be read together:

- I agree with the article but [Kathy's] is a largely backwards perspective on liberal arts education, and on higher education generally. Cultivating an ability to communicate effectively in writing, think critically, and engage in creative problem solving is probably the most valuable element of an education generally, no matter where it's obtained.

- There is value to citizenship and civic functioning for as many people to be as well educated as they can become...and more education doesn't hurt job performance either.

The irony here is that I know of no one in the State of Minnesota who has written more forcefully about the importance and beauty of the liberal arts than Kathy, a friend with whom I've worked for more than 30 years. To the extent that some might interpret "Great Jobs Without a Four-Year Degree" as an across-the-board slam against colleges and universities, that perception needs fast fixing. Our aim is demonstrating to students who wonder whether a four-year degree is really for them, that there are in fact solid alternatives such as apprenticeships in the trades and other fields, one-year and two-year certificate programs in a wide range of technical and other areas, two-year degrees designed to open many doors, and, as noted, a moment ago, job training in the armed forces. None of my Center colleagues will ever try to dissuade anyone from seeking a four-year degree, if that is their dream. That I have arguments with American higher education is wholly true, but I also have keen recognition of its necessary centrality in American life, a theme I'll return to in coming weeks.

And last, this question and comment by a reader:

- Another reality [Kersten] doesn't disclose: What impact will this choice have on the future prospects of the children which practically everyone wants to have? Well, if you live in a community with more college grads, the chances of your children using their talents greatly expands. Parents who have higher education value it more and know the ropes and have more useful contacts with that world. So your choice impacts future generations.

I trust one reason why Kathy didn't "disclose" anything about "the future prospects of the children everyone wants to have" is that she wrote an op-ed, not an opus. But I agree this is another question that warrants attention. Framing matters crudely, I've been thinking about the dynamic in terms of whether college-educated women, always generally speaking, will be as romantically interested in men who might wear blue-collar uniforms to work as opposed to suits and ties. From another direction, and in regard to how children might fare in all of this: what about potential fathers who become marriageable precisely because they've taken advantage of a non-four-year path—men who otherwise wouldn't be going to work at all?

"I Come to Mostly Praise Higher Education, Not Bury It"
By Mitch Pearlstein
July 23, 2017

As a young guy, I had planned on making my life in higher education—or the "academy," as I liked to say—not that things worked out back then. Nearly four decades later, I can't deny I was disappointed and often angry when things didn't mesh. But what I can say is that I am exceedingly pleased my career has worked out the way it has, as the sense of satisfaction I've derived from conceiving and then leading Center of the American Experiment for a long time has been grander, I'm confident, than any fulfillment I could have found in any college or university. As a bonus, my exhilaration continues to grow, as Chairman Ron Eibensteiner and President John Hinderaker, along with dozens of other directors and staffers, take the Center even higher and farther. Just about to the stars. Or, maybe, beyond.

Whoa, Mitch. Slowdown boy. What's gotten into you? You're not sounding terribly Minnesotan. Take a breath.

(Pause)

My apologies for the epiphanic burst, especially since my intention is not to effuse about the Center, but to say good things about American higher education. Why, exactly? Given my academic and professional background—which includes serving on the staff of University of Minnesota President C. Peter Magrath in the 1970s—I'm compelled to reaffirm publicly what's invaluable about colleges and universities, as they've been catching more flak than usual recently. Much of the criticism, of course, has been justified, as witness for prime example how campuses frequently are hothouses for the most uncivil and fascistically flavored in our midst, with the most distinguished institutions often home to the most intolerant First Amendment deniers.

Nevertheless, many of the barbs directed at colleges and universities are overdone, as witness for example, some of the comments made by bloggers in response to a superb op-ed in the *Star Tribune* by my colleague Kathy Kersten. More precisely (the point is key), the bloggers with whom I had problems didn't necessarily criticize what Kathy had written but rather contended that the liberal arts are useless. They did so as if she somehow concurred, when, in fact, my friend and colleague of more than 30 years had written nothing of the sort. I know of no greater champion of the liberal arts than Kathy—so long as (the point is key again) literature and history and art and other subjects are taught sensibly. Which is to say, not "deconstructed" into nonsensical and nasty speechifying about alleged American evil.

An additional reason for writing about higher education at this moment involves the very project Kathy wrote about in the *Star Tribune*: American Experiment's major initiative, "Great Jobs Without

a Four-Year Degree: Good News for Students, Parents, and Employers." As a co-leader of the project, along with Kathy and President John Hinderaker, I'm enormously proud of it, as many young people, without question, would be better served if they chose educational targets other than a bachelor's degree—yet arguing this while simultaneously recognizing that America's colleges and universities are often the best in the world. To the extent that anyone interprets "Great Jobs Without a Four-Year Degree" in that disparaging way, it's a misinterpretation.

So, what's so special about our country's institutions of higher learning? Let me suggest just two abbreviated things for now. While it is easy to pick arguments with every point that follows as well as spotlight how I don't say anything about hard-to-fathom tuition rates at many places, each assertion, I would contend, is fundamentally accurate.

Among the well-pedigreed critics who beat up on higher education, I assume there aren't many who would be willing to de-learn what they learned in college or to forfeit the professional, financial, and other benefits and accolades they've enjoyed, in large measure, because they went to college. If the educational route they took is not the type they would now recommend, which ones would they suggest? Might they really expect young people to learn what they need to learn, mostly on their own, mainly on-line, either in or out of their pajamas? No question this new-wave method works for sizable numbers of learners. For most? Not a chance.

Then there is university research. It's no accident that American researchers in the sciences, medicine, and other fields are the most life-enriching and life-saving in the world, just as it's no accident that disproportionate numbers of the most successful researchers and scholars are on university faculties. As a speechwriter a long time ago, I used to write about how the University of Minnesota, and not just in terms of research, is our state's "engine." Might the line be heard as rhetorical overreach by some? I trust, yes. That doesn't mean it isn't true.

Revolutionary New Tool Helps Employers Find Skilled Workers
By Katherine A. Kersten
July 25, 2017

Finding workers for hard-to-fill skilled jobs is one of the toughest challenges that Minnesota's small- to medium-sized employers face. Fortunately, a revolutionary new online search tool—the Real-Time Talent Exchange—now gives them the kind of reach and sophistication they can otherwise only dream of.

For these employers, the Exchange is like having their own top-dollar, Fortune 500-style human resources department. And it's remarkably affordable: $39 for regular job postings and $19 for internships.

RealTime Talent, which operates the Exchange, is a public-private collaboration formed in 2015 out of work started by the business advisory group Itasca Project. RealTime Talent's goal is to increase workforce alignment in Minnesota.

The organization launched the Exchange in February 2017. The mission of this new service is to remake today's inefficient hiring process, which is often a hit-or-miss affair in which employers struggle both to reach an adequate pool of candidates and to determine if any are a good fit. Using a revolutionary new technology, the Exchange cuts the time needed to fill jobs, minimizes productivity losses from unfilled positions, and helps identify ideal matches.

A recent Twin Cities Business article describes how it achieves this:

> While [the Exchange] has the normal functionality of a job board where interested applicants can apply, the real difference is in its matching tools. Applicants...fill out a skills and interests quiz tailored to their preferred industry and roles. The questions are drawn from [a federal database], which contains the description of every job type in

the country.

> Based on the results of the quiz, employers and applicants are able to see a one- to five-star rating on how well the job might fit the applicant.... It also provides the employer with seven of the best-matched profiles on the site that haven't applied for the job so they can reach out to them.

A RealTime Talent brochure sums it up this way: "Our data-driven technology sorts and stack-ranks matched candidates based on alignment with job characteristics, not keyword counts.... You receive a list of the candidates who best match your needs and then click to connect."

With the Exchange, employers never need to worry about reaching an adequately broad pool of potential candidates. Job postings are automatically distributed to more than 5,000 local, regional, and national job boards and also integrated with promotion through social media and email.

Job applicants who use the Exchange have as much to cheer about as employers do. A RealTime Talent brochure lays out the process:

> To start, you'll answer simple, occupation-specific questions focused on your interests and skills. Then, you'll receive instant compatibility scores, while employers will receive instant notifications of good matches. You're matched with new opportunities as they're posted. Positions are active for just 30 days to ensure you're only connected with employers who are actively looking to hire.

Candidates who fail to get a job they applied for can see where they fell short, and identify other job opportunities that may be a better match.

The Exchange is designed to serve individual employers and job seekers. But RealTime Talent offers a variety of sophisticated services that have a broader focus. Sandee Joppa, the organization's executive director, explains its goal this way in the *Star Tribune*:

> [Our state] is experiencing a shortage of workers that will grow to about 278,000 by 2022 unless we make significant changes. Minnesota needs a better way to make sure the students we graduate have the skills they need...and that employers know where to find them more easily, and vice versa.... We provide custom research, access to labor market data and innovative tools to address labor force needs and to support our higher education and workforce centers. Ultimately, we are all about boosting the economic prosperity of our state and Minnesotans through collective action and market-oriented decisions.

Great Work by an Intern on Her Summer Vacation
By Mitch Pearlstein
August 21, 2017

I had an exceptional intern this summer, Tori Roloff, who worked with me on two projects: American Experiment's multi-year initiative, "Great Jobs Without a Four-Year Degree"; and a related book I'm writing, tentatively titled *Educational Roads Less Traveled: How America's Fixation on Four-Year Degrees Limits Both Careers and Economic Growth.* Tori is a sophomore at the University of Virginia and an alumnus of Minnehaha Academy in Minneapolis. Rather than give her simple assignments such as looking up this or counting that, I asked her to research several complex issues—six in all—and then write a short essay about each one. How did she do? Quite impressively, as witness excerpts from three of her pieces below.

The first question I asked Tori to investigate was how and why there is a norm "out there" that just

about everyone should seek a four-year degree when I've heard only one person in my entire life ever say this, and that was almost fifty years ago? She wrote:

> There may be some people who truly think that everyone should pursue a bachelor's degree—or at least come close to believing so—and explicitly share this viewpoint with others. However, those individuals are in the minority and, as a result, they are not likely the main reason that students feel pressure to pursue one. Instead, young Americans feel the strongest pressure indirectly from a variety of sources. One source may be confusion that often arises when national leaders use vague terms such as "higher education" and "college" to discuss postsecondary education and the social and private benefits it reaps. Furthermore, young people may feel pressure from their parents who want "the best" for them but draw conclusions on misleading averages. Students may even put excessive pressure on themselves after they have seen these statistics.... For the most part, politicians, parents, and scholars do not intend to claim almost everyone should seek a four-year degree, yet understandably, that is often the perception that young people gather. Ergo, although it may not be entirely accurate to say that there is an explicit, spoken, cultural norm that "just about every young American should pursue a bachelor's degree," there is still undue and powerful pressure on just about every young American to seek one.

On another occasion, I asked her for a faster-than-fast sense of vocational education's historical place in the United States. She wrote:

> By the middle of the 1980s, the decline of vocational education in high schools was apparent. A 1996 National Center for Education Statistics (NCES) report found that "in 1982, 33.7 percent of all high school graduates had a concentration in a vocational program area, but by 1992 the group of concentrators had declined to 24.4 percent of all graduates." In addition, the same report found that the average number of credits taken in vocational fields at the secondary level was decreasing. Together, these findings suggested an uncertain future for vocational education in high schools. Some attributed the apparent decline to factors such as increased high school graduation requirements, more individuals wishing to pursue higher education, and a growing stigma associated with technical training; as Kenneth Gray notes, "It [took] courage for a talented student to enroll in vocational education." To combat this decrease in participation, Congress passed the Perkins Vocational and Technical Education Act in 1984.

On another occasion, I asked her to think about a particularly intricate question: whether young people who opt for something other than a four-year degree will wind up with smaller chances of marrying someone who does, in fact, have a B.A.? As well as similar matters regarding eventual circles of friends. Drawing on scholarly studies, Tori concluded, in part:

> There are at least two reasons why the individual lacking a bachelor's degree should not necessarily worry. First, the existing correlation between earning potential and educational homogamy [look it up] may work in his favor. Take my example from the beginning of this paper—

> the individual who chose to pursue an associate's degree in a vocational field rather than a bachelor's degree in history. If this individual has a higher earning potential as a result of his choice, he may have a better chance of marrying a well-educated spouse than he would have if he received a four-year degree. Moreover, the existence of cognitive homogamy may also work in this man's favor. Although promoted by the postsecondary system, cognitive homogamy exists independent of educational homogamy. Since one's cognitive ability is not affected by which postsecondary education route he chooses, his chances of marrying a capable intelligent individual do not necessarily change because of his choice.

Yet immediately following this passage, she added a critical, "On the other hand...," further suggesting the quality of her analysis.

CMMA is Model for State's Manufacturers
By Katherine A. Kersten
August 21, 2017

When Les Engel and a handful of other St. Cloud-area manufacturers got together one morning in 2008 to strategize about their "talent pipeline" problem, they had no idea how many area businesses would show up. "We were expecting 25 people," says Engel, CEO of Engel Metallurgical in St. Cloud. "We got 105."

That day, the Central Minnesota Manufacturing Association (CMMA) was born. "We came together because we wanted to have a voice—in the community, in the schools, in St. Paul—to influence things we believe need to be changed," Engel explains.

CMMA's motto says it all: "Today, growth and innovation can rarely be maximized by one company, one service organization, or even one industry going it alone."

The organization is now a model of how our state's manufacturers can join forces to advance their interests and those of their communities. It has a three-point strategy: manufacturing education, workforce development, and legislative advocacy.

CMMA's approximately 150 members range from Electrolux, which builds freezers in St. Cloud, to Bayer Interior Woods, a custom cabinetmaker in Sauk Centre. Members also include bankers, attorneys, suppliers, and other Central Minnesotans interested in manufacturing.

CMMA holds monthly breakfast meetings at a local manufacturing facility. Every meeting features a speaker and a tour of the host company's facility. ("Manufacturers love to see what other manufacturers are doing," Engel says.) Speakers discuss topics like quality improvement, how to work with non-English speakers to ensure safety, and, of course, talent recruitment and development.

One of CMMA's top priorities is to get member businesses to work together to meet their workforce challenges.

Early on, the group began the Minnesota Tour of Manufacturing—inspired by the real estate concept of the Parade of Homes. The program's goal was to expose as many high school students as possible and their parents to manufacturing as a career.

"We were having trouble attracting young workers," explains Engel. "Parents would discourage kids—telling them 'it's dark, dirty, dangerous, and all the jobs have gone to China.' We wanted kids and parents to see how different manufacturing is today."

Since then, the Minnesota Tour of Manufacturing has taken off all over the state as part of the "Dream It. Do It." initiative. In 2017 in the St. Cloud area, the program includes a new incentive to drive student and parent attendance: Nine companies opening their doors over two weekends and a scholarship drawing for students visiting all nine.

CMMA's next big project will be to assist businesses in the complex process of hiring high school students through Youth Apprenticeship. In this program, high school juniors and seniors can combine on-the-job training with classroom instruction, sometimes earning college credit as well.

When CMMA met to discuss the idea of recruiting high school kids last year, "the room was packed," says Engel. "I asked how many knew about the high school apprenticeship program, and only five or six did. Then I asked how many would be interested, and almost every hand shot up."

Employers are enthusiastic, because students who are introduced to manufacturing in high school are more likely to choose it as a career. But the paperwork required can be daunting. "The need for schools, government and business to work together has made the process really tough," according to Engel.

Now, CMMA is working with Wright Technical Center, a technical high school in Buffalo, to put together the tools necessary to facilitate the hiring of high school apprentices. The package will include all the forms and information employers need about insurance, mentors, and the rules and requirements the state has created—including the things kids can
and cannot do.

CMMA plans to post the entire package on its web site. "Then we'll lay it all out at a meeting," says Engel. "Here's how you get an apprentice." To date, CMMA has helped place two youth apprentices in Central Minnesota.

Going forward, CMMA hopes that businesses across Minnesota—including many in fields outside manufacturing—will use the youth apprenticeship tools it is now helping to prepare. The goal is to help our state's economy to thrive and to benefit the kids of Minnesota.

Technical Education Can Save Parents from Drowning in College Debt
By Katherine A. Kersten
August 22, 2017

The move to broaden young people's exposure to career paths beyond a four-year college degree just got a boost from the *Wall Street Journal*. The *Journal* reports that the default rate in the federal government's Parents Plus program now exceeds that on U.S. mortgages at the peak of the housing crisis.

According to the article, headlined "Parents Are Drowning in College Loan Debt":

> Millions of U.S. parents have taken out loans from the government to help their children pay for college. Now, a crushing bill is coming due. Hundreds of thousands have tumbled into delinquency and default. In the process, many have delayed retirement, put off health expenses, and lost portions of Social Security checks and tax refunds to their lender, the federal government.

Parents Plus is "one thread in a web of college loan programs that have come to resemble the subprime mortgage industry a decade ago, given the shaky quality of many of the loans," the *Journal* reports. The problem with the program is, according to the *Journal*:

> The government asks almost nothing about borrowers' incomes, existing debts, savings, credit scores, or ability to repay. Then, it extends loans that are nearly impossible to extinguish in bankruptcy if borrowers fall on hard times.

The number of Americans with federal student loans grew by 14 million to 42 million from 2006 to 2016, according to the *Journal*. Overall student debt more than doubled to $1.3 trillion during that time. Nearly 40 percent of student loans, the great majority of them federal ones, went to borrowers

with credit scores below the subprime threshold.

All this money drove a surge in college enrollment, which grew by 20 percent from 2005 to 2010—the biggest increase since the 1970s.

Not surprisingly, the *Journal* adds, about eight million Americans owing $137 billion are now at least 360 days delinquent on federal student loans. Another three million, who owe $88 billion, are at least a month behind or have been granted temporary reprieves on payments because of financial distress.

As of late 2015, nearly two-thirds of borrowers with Parent Plus debt were between the ages of 50 and 64, says the *Journal*. Nearly 40 percent of Americans age 60 and above with student debt—most of whom borrowed for children or grandchildren—reported skipping healthcare needs in 2014.

A four-year college degree remains an excellent choice for many young people. But sobering statistics like these make clear that families should take a careful look at costs and benefits before they make postsecondary plans. (An article entitled "What To Know Before You Owe," from the Minnesota Department of Employment and Economic Development, is a great place to start.)

After reviewing the facts, an increasing number of parents and kids may decide that a "learn and earn" plan—including a technical college degree, a certificate, or an apprenticeship—is the better way to go. Career paths like these can keep costs and debt low or avoid them altogether and lead quickly to a skilled job in an in-demand field.

The Importance of Listening Closely to Students and Recent Graduates in Technical Fields
By Mitch Pearlstein
August 23, 2017

A major topic at the first gathering of the Advisory Council for "Great Jobs Without a Four-Year Degree" on August 10, 2017, concerned a series of meetings my American Experiment colleagues and I hope to host for people in the multifaceted field. It was an early conversation, and not just because it started at 7:30 a.m.

A gist of our discussion was that young people studying technical subjects, often in community colleges, as well as those who have been working in technical fields for several years, should be afforded more opportunities to share their stories on a regular basis with seasoned ladies and gentlemen like us. While the young men and women surely would gain from the experience, the larger benefit would derive to the salt-and-peppered.

Here are a few excerpts from the transcript of our conversation. They've been edited for clarity since conversations involving a dozen or so people always need to be massaged. But also in this instance because the heroic transcriber had a hard time hearing clearly over the clanging of silverware at Perkins.

"I'd bring in those young people," a college educator said, "maybe second-year students who could talk about their experiences. What led them to enroll in a technical program? How were they influenced? How did they overcome the perception that career and technical education is not as good as other kinds? Then I'd bring in people who were three-year, five-year, and seven-year veterans of technical jobs to talk about their experiences. You get a roomful of folks like that, and we'll learn more about how we can better inform other young people about the great opportunities out there as well as better inform people in their lives about those opportunities, including their parents."

He also talked about the importance of involving human resource professionals in the proposed meetings; men and women who labor trying to find highly qualified candidates for demanding technical positions in a variety of fields—including agriculture, as was pointed out. How to help them better connect with students and people already out of school and perhaps drifting? How to help them encourage students and former students to enroll in one-year, two-year, and other technical programs? "Human resource people," he said, "have big problems right now, and they're only going to

get worse."

Ninety minutes after the Advisory Council meeting ended, a member sent me an email that followed up perfectly on points just made:

> I feel strongly whoever makes up the audience at such meetings—prospective students, critical influencers, counselors, etc.—they will be most receptive to what I call "career enthusiasts." I see these individuals as a cadre of mostly under-thirty types who are successfully engaged in career and technical education. They include both current students and relatively recent graduates (men and women with less-than-seven years on the job) who are successful and enthusiastic workers in industries we are seeking to build interest in. We fifty-somethings and sixty-somethings who "get" the problem but who cannot convey the message to younger people need to recruit our "union of enthusiasts" to carry messages to their peers.

"There is work to be done," the Advisory Council member continued, "to pull this off. But the more difficult piece," he added, "is getting in front of prospective career and technical education students, these being 10th- to 12th-grade high school students. As well as those who may or may not have graduated high school in the last five to eight years but are out there without a certificate, diploma, or employable skill." This last sentence is vital.

But where to find many of these young and somewhat older people? He noted that the State Fair was approaching and that Machinery Hills is a "magnet for young people who love to be around that stuff." A brilliant idea, regardless of the proximity of french-fries.

West Virginia Leads the Way in Transforming High School CTE to Boost Economy
By Katherine A. Kersten
August 23, 2017

West Virginia has struggled for years with a declining economy and an increasingly discouraged and disengaged high school population. Now, the state is working to change that with an innovative new approach to Career and Technical Education, and the pay-off is inspiring, according to the *New York Times*:

> Long one of the poorest states, [West Virginia] is leading the way in turning vocational education from a Plan B for underachieving students into what policymakers hope will be a fuel source for the state's economic revival.
>
> Simulated workplaces, overseen by teachers newly trained in important state industries like health, coal, and even fracking, are now operating in schools across the state. Students punch a time clock, are assigned professional roles like foreman or safety supervisor, and are even offered several vacation days of their choice in addition to regular school breaks. (Many take time off during deer-hunting season.)
>
> Traditional math and English teachers have been reassigned to technical high schools to make sure students on the vocational track still gain reading, writing, and math skills.

The state has also added another, perhaps unprecedented, component:

> And this fall, students enrolled in simulated workplaces will need to participate in one of the program's

> boldest elements: random drug testing.
>
> "Given the extent of the state's opioid crisis, employers wouldn't take anything we were doing seriously until we passed that hurdle," said Barry Crist, principal of the Fayette Institute of Technology in Oak Hill.

The *Times* points out that, on technical education, the United States is an "outlier" internationally:

> Only 6 percent of American high school students were enrolled in a vocational course of study, according to a 2013 Department of Education report. In the United Kingdom, 42 percent were on the vocational track; in Germany, it was 59 percent; in the Netherlands, 67 percent; and in Japan, 25 percent.

Of course, it's very important that students get to choose the route they want to take in high school, and American kids should all get high-quality academics from K through 12. But in West Virginia, students appear to benefit from the state's new-and-improved approach to CTE in a number of ways.

Ron Foster, president of an 80-employee construction and fabrication firm that has hired eight graduates of the state's high school simulated workplace program over the past two years, had this to say: "Compared to previous hires, this group is more punctual and focused on building a career. If you're dedicated enough to go through that program, you're more apt to do a good, quality job [in the workplace]."

Students in the new program are also challenged in other ways: Far from being strictly a job training program for teenagers, classes like "Advanced Career Energy and Power...[a] four-course sequence... require math and physics instruction as rigorous as in the College Board's Advanced Placement track.... The hope is to prepare students for higher-skilled work. In the fracking industry, for example, they might qualify for jobs in equipment maintenance or environmental compliance instead of laying pipeline...."

In West Virginia, 37 percent of high school seniors completed a technical course of study in 2016, up from 18 percent in 2010.

As Minnesota grapples with improving educational options for students interested in technical fields, it's important to examine successful experiments in other states.

When the Welders Came to Capitol Hill
By Katherine A. Kersten
August 27, 2017

America needs more welders, and recently a delegation of them went to Washington to tell policymakers so. Congressman Tom Suozzi of New York wrote about their visit in the *Wall Street Journal*: "I'm sitting in my Capitol Hill office a few weeks ago, meeting with three well-dressed, well-spoken young men who earn salaries in the high-five and low-six figures. You see the type a lot in Washington, but these guys are different. They're not lobbyists. They don't represent Wall Street or any Fortune 500 companies. They're welders."

Representative Suozzi was impressed:

> America needs more of them and what they represent: good jobs at good wages. Last month I held a roundtable with suppliers in the aeronautic and defense industries, who told me they cannot find enough computer machinists. It sounds like an intimidating job, but according to these companies, trade schools and community colleges teach the specific skills needed.

The welders who visited Rep. Suozzi helped to broaden his perspective on the kind of postsecondary education our nation needs more of in the coming decade. Suozzi explained:

> Policy experts, economists and politicians (including me) have pushed college education as the solution [to our nation's economic problems]. We've argued the more you learn, the more you earn. Yet minting more college graduates in the STEM subjects—science, technology, engineering and math—is only half the story. The other half ought to be creating jobs that can be filled by graduates of high schools, trade schools, community colleges and union apprenticeships.
>
> The welders in my office seemed almost sheepish when I asked how they came to the trade. The common theme was that they didn't do well in school. I'll tell you what I told them: They're amazing. At 22, 29, and 32, they are making more than many graduates of college or even law school. They take the work that's offered, even if it means leaving home at 4:30 a.m. and driving an hour and a half. They like their jobs and are good at them.

Rep. Suozzi ended his reflections this way: "The policy debates in Washington—over the corporate tax, the income tax, regulatory reform, infrastructure spending—should be centered on creating positions like these. Republicans and Democrats should pledge to work together to create and fill, by 2020, five million new jobs that pay at least $80,000 a year."

It's important to add, of course, that many skilled, well-paying jobs that don't require a four-year degree exist right now, and employers are struggling to fill them. Perhaps what our nation needs most is renewed respect for the men and women who do these jobs, and who are vital to our continued economic prosperity.

Minnesota Foundations Lead Way in Training Needy Citizens for In-Demand Jobs
By Katherine A. Kersten
August 28, 2017

Philanthropic organizations in Minnesota are devoting major efforts to training the state's neediest citizens for in-demand jobs. A coalition of Twin Cities foundations called MSP Win is leading the way.

"Training that leads to employment 'is the best cure for many of society's challenges,'" said Brian Lipschultz of the Otto Bremer Trust, which gave away $47 million in 2017, according to the *Star Tribune*. The paper reported that, "MSP Win is analyzing job openings by area—health, construction, IT, for example—to better understand market demand. It's bringing together employers, unions, and trainers to map out successful career paths."

Ryan Ponthan of the North Central States Council of Carpenters told the *Star Tribune* that an infusion of philanthropic funds into worker training is "welcomed and needed": "I am out on job sites every day, and I see there is a need for more skilled labor out there.... Trades give workers a shot at achieving a comfortable middle-class lifestyle. Apprentice carpenters start at $18.50 an hour plus benefits, and that doubles when they reach journeyman status."

One successful program is Summit Academy, a vocational training center that prepares 750 adults a year to work in construction and healthcare. According to the *Star Tribune*, its 20-week training programs are free of charge. Summit is funded by government and foundation funds as well as individual donors. The *Star Tribune* explains:

> Summit's new 30-week program promising a GED and job training has financial backing from Otto Bremer, U.S. Bank, Target, and MSP Win. Summit graduates, unemployed when they enroll, reported earning $15.08 an hour, two years after leaving the program.

> Louis King II, Summit's president and CEO, said the school's appeal is simple: "The best social service program is a job. We have demonstrated through years of welfare and philanthropy [that] we cannot replace two working parents."

Higher Education and Careers: Schumpeter's Creative Construction
By Mitch Pearlstein
August 29, 2017

One of the virtues of writing a book is that an endnote in somebody else's book leads you to track down a third book you should have read a long time ago. Yes, I know I need to get out more often.

The book I'm currently working on has grown out of American Experiment's new, multi-year project, "Great Jobs Without a Four-Year Degree: Good news for Students, Parents, and Employers." The second book in the sequence above is *Shop Class as Soulcraft* by Matthew Crawford. With the third book a classic written by economist Joseph Schumpeter in 1942, *Capitalism, Socialism and Democracy*. In quoting Schumpeter below, please keep in mind that my colleagues and I will never try to dissuade any young person from seeking a four-year degree, if that is his or her dream.

But it's essential to acknowledge that many people who do earn baccalaureates wind up in jobs that don't work well for them, never mind excite them. In such instances, many people would be happier in jobs that don't require a bachelor's degree. I'm thinking of the trades, but not just them. Think also of good-paying jobs in healthcare, IT, and more.

With that as prologue, here a few paragraphs' worth of Schumpeter—the "creative destruction" guy—on what he saw as key aspects of capitalism:

> One of the most important features of the later stages of capitalist civilization is the vigorous expansion of the education apparatus and particularly the facilities for higher education. This development was and is no less inevitable than the development of the largest-scale industrial unit, but unlike the latter, it has been and is being fostered by public opinion and public authority so as to go much further than it would have done under its own steam.
>
> Whatever we may think of this from other standpoints and whatever the precise causation, there are several consequences that bear upon the size and attitude of the intellectual group.
>
> First, inasmuch as higher education thus increases the supply of services in professional, quasi-professional and in the end all "white collar" lines beyond the point determined by cost-return considerations, it may create a particularly important case of sectional unemployment.
>
> Second, along with or in place of such unemployment, it creates unsatisfactory conditions of employment—employment in substandard work or at wages below those of the better-paid manual workers.
>
> Third, it may create unemployability of a particularly disconcerting type. The man who has gone through a college or university easily becomes psychically unemployable in manual occupations without necessarily acquiring employability in, say, professional work.

It's hard to overstate how prescient Schumpeter was 75 years ago.

Have huge higher education enrollments contributed to the unemployment of college graduates, at least at various times in their lives, especially early

on? Without question.

Has the explosive expansion of American higher education since World War II, when Schumpeter wrote, contributed to the underemployment of many graduates, often resulting in their making less money than plumbers and carpenters? Without question.

Do some people who earn four-year degrees find the thought of blue collar work not just unappealing but insulting, too? Without question, again.

In writing along lines like these, I'm alert to how I'm never more than a few inches away from insulting someone for some reason. I fully acknowledge that if anyone suggested to me when I was graduating high school that I'd be wise to consider something other than a liberal arts degree, I would not have been pleased. So, I repeat: I have no intention of stomping on any dreams. Still, the fact is, a four-year degree is simply not a guarantee of job satisfaction, either now or when Schumpeter wrote. Young people and their parents, in making decisions with lifelong implications, would be well-served if they were familiar with more than a lone educational route to career success.

Minnesota Leads Nation in Good Jobs that Don't Need a Four-Year Degree
By Katherine A. Kersten
August 29, 2017

Minnesota is one of the top states in the nation for good jobs that don't require a four-year degree. That's the finding of a new report from Georgetown University's Center on Education and the Workforce.

The report defines a good job as one that pays $35,000 or more annually, or $45,000 or more for workers age 45 or older. A wage of $35,000 amounts to about $17 an hour, viewed by many experts as a living wage.

There are 30 million such jobs nationwide, but generally, candidates need more than a high school degree to get them. Almost half—45 percent—of "good" Minnesota jobs, by the study's definition, were held by workers without a bachelor's degree, compared to 50 percent in Wyoming, the top state, and 33 percent in Kansas, the bottom state. Other states with a high proportion of such jobs were New Jersey, Maryland, Connecticut, and Utah.

Recently, *MinnPost* speculated about why Minnesota offers so many good jobs for workers without a four-year degree:

> One reason the Minnesota economy might be doing well...is that it has higher shares of employment in fields like manufacturing and healthcare services. Those sectors tend to have more opportunities for people without college degrees.
>
> In Minnesota, 11 percent of employment is in manufacturing, compared to 8.6 percent in the U.S., according to Oriane Casale, assistant director of the Minnesota Department of Employment and Economic Development....
>
> Plus, Minnesota's manufacturing sector is more focused on durable goods (goods that last for more than three years) which tend to be more expensive to manufacture and transport than non-durable goods.

The *Wall Street Journal* also weighed in on the Georgetown study, pointing out the importance of postsecondary training in today's economy: "Among non-college degree holders, only workers with an associate's degree had better odds of landing a good job in 2015 than they did in 1991, Georgetown found. High-school graduates and dropouts, and people with some college, are all faring worse now than before, the report says."

The Georgetown Center's director, Anthony Carnevale, noted that today "you need to be in a program that leads directly to those jobs," such as a community college or a certification program. "And you

need to hold your institution accountable to being able to prepare you for a job."

Increasingly, workers understand this, says the *Journal*: "The number of career-focused certificates awarded by community colleges, in fields such as electronics engineering, emergency management and video production, more than doubled between 2000 and 2014, according to the American Association of Community Colleges.

"In 2015, Wyoming had the highest share of non-college jobs, thanks to a boom in mining and other natural-resource industries, coupled with a low overall population. It was followed by New Jersey and Maryland, densely populated states with more diverse economies."

Soon, people who want to better their employment situation will have access to a new tool that will tell them where in the country they can look to find greater opportunity, the *Journal* concludes: "This fall, Georgetown, in concert with J.P. Morgan Chase & Co., will launch a Good Jobs Index that maps the states and occupations where people without college degrees can find economic opportunities that pay at least a living wage."

How Many Occupations Does It Take to Buy One House and Sell Another?
By Mitch Pearlstein
September 25, 2017

My wife Diane and I have just moved, after 25 years, from Minneapolis to Eden Prairie. Early on, I needed to hire a painter to do a modest amount of inside work to get our Minneapolis house ready for sale. But after a half-dozen calls, I couldn't find one who could squeeze us in under three weeks, which would be too long. I finally tracked down a painter by speaking to a friend, who urged me to call another a friend, who knew a very good painter who might be able to start in a couple of days, which happily he could and did.

That time-consuming exercise got me thinking about how dependent we might be on people in the trades, especially since I'm not the most adept or enthusiastic person when it comes to home repairs. As it turned out, we were dependent on dozens, in and out of the trades.

Correction: We're still dependent on several.

The following alphabetical list contains the kinds of practitioners and businesses we have paid and, in some instances continue to pay, trying to repair and/or jazz up both our homes. It may not be a complete list, as I may have repressed some.

I can only guess at what kind of education or training each person has, or what kind of credentials they hold, or how much money they make. In other words, I don't know how many ever pursued any of the educational routes my American Experiment colleagues and I have been advocating under the banner of "Great Jobs Without a Four-Degree"—pathways such as jump-starting a career via an apprenticeship, participating in a one-year or two-year certificate program at a community college, or acquiring a valuable job skill in the military.

Rather, I thought it would be interesting simply to get a sense of all the occupations potentially involved in selling one house and buying another, which is to say, all the men and women who are important—often essential—to the adventure. Or more precisely, all the players who might have a four-year degree. Or for our purposes, might not:

- Appliance technicians
- Appraisers
- Boiler technicians
- Concrete specialists
- Consignment store workers
- Electricians
- Floor cleaners
- Garage door specialists
- Glass specialists
- Handymen
- Hardwater specialists
- Hardwood specialists
- Home inspectors
- Inside house cleaners
- Landscape specialists
- Lighting specialists
- Mortgage bankers

- Moving companies
- Outside house cleaners
- Painters
- PODS people
- Plumbers
- Public Storage people
- Realtors
- Rubbish haulers
- Security system technicians
- Stagers
- Videographers
- Window cleaners

A sincere postscript: Yes, our new house is great. As is our new neighborhood. And, I'm guessing, so will Hwy 169 be someday. Diane and I are happy to be where we are. But given what moving can entail and cost, unless getting out of town is a near-life-or-death imperative, you might want to consider staying put forever.

Gold in a Two-Year Degree
By Katherine A. Kersten
Fall 2017

If there's one thing most Americans think they know, it's this: To get ahead, you've got to have a four-year college degree. Young people today grow up believing that without a college diploma, they are doomed to a life that's second best.

This cultural stereotype is based, in part, on the widespread assumption that four-year college graduates can expect to make a lot more money over a lifetime than their peers. To buy a decent house and car and support a family, you've got to have a B.A. or B.S. degree, the thinking goes—even if you're not so inclined, and you worry about the time investment and student debt this entails.

But a recent study from Center of the American Experiment reveals that the common wisdom here is wrong. The study—entitled "No Four-Year Degree Required: A look at a selection of in-demand careers in Minnesota"—reaches a surprising and dramatic conclusion:

> Young people who choose non-four-year pathways, like a two-year degree, apprenticeship, or occupational certificate, can often do better financially than their college-educated peers. For example, median lifetime earnings for CNC machinists, dental hygienists, plumbers, electric line installers, and some similar occupations are actually higher—*as much as 61 percent higher*—than those of four-year degree holders.

The new study is the first of several research papers the Center plans as part of its "Great Jobs Without a Four-Year Degree" project, launched in April 2017. The project focuses on a troubling dilemma: Today, when so many young people are dropping out of college—often without skills and living in their parents' basement—thousands of high-skill jobs go begging in our state.

This "skills gap" threatens both the next generation's future and Minnesota's economic prosperity. How can we address it most effectively?

A four-year college degree is an excellent option for many young people, of course. But today, there's a striking mismatch between the educational requirements of the jobs in demand and students' educational pursuits. Only 22 percent of jobs in Minnesota require a four-year degree or more, yet about 50 percent of our state's young people start a four-year degree after high school. Too often, they never learn about other career paths that would allow them to get in-demand, well-paying jobs fast, avoid crippling debt, and build a strong future.

The Center's new study identifies a range of such opportunities and evaluates the financial returns that each one offers an 18-year-old Minnesotan looking to plan his or her future.

The study's author is Dr. Amanda Griffith, a labor economist at Wake Forest University in North Carolina. Griffith examined occupations in four broad career clusters: skilled manufacturing; healthcare; construction-related trades; and jobs that require only a one-year certificate, such as HVAC tech-

nician and electric line installer. Some of these occupations require a two-year associate's degree, some an apprenticeship, and others—as noted—an occupational certificate.

For each occupation in these four clusters, Griffith determined the costs of education or training, as well as median hourly wages for workers in that field in the Twin Cities and in Minnesota as a whole. (Wage data is from the Minnesota Department of Employment and Economic Development (DEED).) Then she calculated an estimated median lifetime earnings profile for each and compared it to the median lifetime earnings of four-year degree holders in Minnesota.

Skilled Manufacturing

In the skilled manufacturing cluster, Griffith examined three occupations: CNC machinist, millwright, and welder. CNC machinists program and operate high-tech "computer numerical control" (CNC) machines; millwrights install or repair complex manufacturing machinery; and welders join materials using heat and/or pressure in manufacturing, construction, and other industries.

The costs of the education and training required to enter these three occupations are relatively low. To become a CNC machinist or millwright, a person generally needs a two-year associate's degree from a technical college. On average, such a degree for a student living off-campus apart from his or her family costs about $20,000 a year at a public educational institution in Minnesota.

This total cost can be substantially lower for students who continue living with family. For instance, the federal government estimates that Anoka Technical College costs $21,000 for students who don't live with family versus $13,500 for students who live with family. These total costs, however, don't account for grant or scholarship aid. For students who receive this aid—a majority of students—the actual cost after aid is only about $11,500 per year. Thus, on average, a two-year associate's degree costs just $23,000 for students who receive aid. A career in welding generally only requires a one-year occupational certificate, with attendant lower costs.

Students in skilled manufacturing generally pay for their education by taking out loans and working part time. Loans average about $5,800 a year. (Employers sometimes pick up the bill, further lowering students' costs, Griffith notes.) Most students also work part time—"earning as they learn"—at manufacturing companies that are eager to hire them as they train.

Costs are much higher for students pursuing a four-year college degree. For those who live off-campus apart from family, the total cost comes to about $23,000 per year at a public institution in Minnesota, or $92,000 over four years. For students at a public institution who receive grant or scholarship aid, the cost after aid is about $15,000 per year, or $60,000 over four years.

Griffith assumed a best-case scenario of graduation in four years, though only about one-third of students at the state's public four-year institutions graduate in four years from the school where they started. After six years, less than two-thirds have completed their degree. Many students drop out.

This high education cost necessitates significant borrowing on the part of most bachelor's degree students—about $7,500 per year, on average, or $30,000 over four years.

What can students in skilled manufacturing—compared to those with four-year college degrees—expect to be paid after they complete their education or training? The results are likely to surprise many.

The median wage for four-year college graduates in Minnesota is $25 per hour, according to the U.S. Census Bureau. Both CNC machinists and millwrights in the Twin Cities actually have a higher median wage: $27 and $28 per hour, respectively, according to DEED. In Minnesota as a whole, these figures are $26 and $24, respectively. Welders earn less, at $21 per hour in the Twin Cities and $20 in the state as a whole.

Now for the big picture: How do the educational costs and earnings just described add up over a lifetime? To answer this, Griffith calculated an estimated median lifetime earnings profile for the three

skilled manufacturing occupations in question, as well as for four-year college degree holders. To do this, she used the median wage for each across the state of Minnesota and then subtracted educational costs.

These calculations reveal that, over a lifetime, CNC machinists in Minnesota will have estimated median earnings that are 11 percent higher than college graduates', while millwrights' will be 4 percent higher. Only welders can expect to net less—by 15 percent.

Healthcare

In the healthcare cluster, Griffith examined four occupations: registered nurse, dental hygienist, radiologic technician, and LPN (licensed or limited practical nurse). All require a two-year associate's degree except LPN, which generally requires a two-or three semester diploma. RN's with a two-year degree are likely to work in private practices, nursing homes, and schools, rather than hospitals.

The educational costs for these healthcare occupations are comparable to those of the skilled manufacturing occupations just described. (LPNs' costs are roughly comparable to those of welders.) But median wages for workers in these fields are even higher than for CNC machinists and millwrights—again, with the exception of LPNs.

The median wage for an RN with an associate's degree is $38 an hour in the Twin Cities. For dental hygienists and radiologic technicians, median wages are $36 and $31, respectively. LPNs are lower, at $22 per hour. For the state as a whole, median wages are $35 for RNs and dental hygienists, $30 for radiologic technicians, and $21 for LPNs. Again, this compares to a median wage for four-year degree holders in Minnesota of $25.

In terms of median lifetime earnings, in Minnesota, RNs' expected earnings are 50 percent higher than four-year degree holders'. Dental hygienists' and radiologic techs' are 49 percent and 31 percent higher, respectively.

LPNs are the only group whose median lifetime earnings are lower than four-year graduates', but by only 5 percent. This startling similarity between LPNs' and four-year college graduates' median life-time earnings is due to the fact that LPNs only have one year of schooling and much lower student loans as a result.

Construction-Related Trades

Next, Griffith examined the construction trades, including carpenters, electricians and plumbers. Preparation for these occupations can take a variety of forms. Generally, it involves an apprenticeship, either formal or informal, and may also involve study at a technical college. Either way, the goal is to achieve certification as a highly skilled journey-worker.

Griffith focused on the formal apprenticeship program at the North Central States Regional Council of Carpenters. In this four-year program, apprentices train at the union's facility in St. Paul for one week, four times a year. They complete the rest of their training on the job. They begin at an entry-level wage, and wages increase as the skills required for certification as a journey-worker are completed. There is no out-of-pocket cost for the apprenticeship, as all training costs are negotiated with the many employers who participate. Workers do join the union and pay union dues.

The median hourly wages for carpenters, electricians, and plumbers with journey-worker certification in the Twin Cities are $27, $32, and $37, respectively. They are $23, $29, and $33, respectively, in the state as a whole.

To estimate median lifetime earnings for these occupations, Griffith assumed that workers completed a formal apprenticeship program without schooling at a technical college. Thus, she assumed no direct costs of schooling and no loans to repay. Under these assumptions, carpenters in Minnesota can expect median lifetime earnings that are 2 percent higher than four-year degree holders' earnings. Median earnings are 31 percent and 49 percent higher for electricians and plumbers, respectively.

The North Central States Regional Council of

Carpenters would prefer that apprentices enter its program right out of high school, at age 19. However, the average starting age is 28, according to Kyle Makarios, until recently the union's director of government affairs. The situation is similar in other skilled trades, he adds. This likely reflects many young people's tendency to drift from one low-wage, unskilled job to another for several years after high school before getting serious about a career.

Unfortunately, this course of action sets them up for a substantial financial loss. Griffith found that carpenters who begin their apprenticeship at age 28 rather than age 19 forego more than $246,000 in earnings over a lifetime. If young people understood the price of delaying career preparation, they might make well-thought-out plans—and act on them—much earlier.

One-Year Certificate Careers

The final career cluster included occupations that require a certificate that can be earned in only two or three semesters. Griffith chose two examples: heating and air conditioning (HVAC) installation and maintenance and electric power line installation. The cost of earning these certificates at a two-year public institution is about $11,000 after grant aid is subtracted. The average student loan is about $6,000.

Median wages for HVAC technicians and power line installers in the Twin Cities are $28 and $36 an hour, respectively. In Minnesota, they are $25 and $37, respectively. Median lifetime earnings in both occupations are higher than those of four-year degree holders, with HVAC workers' 11 percent higher and power line installers' a whopping 61 percent higher.

Conclusions

A four-year college degree is an excellent option for many Minnesotans. But too often today, young people enroll at a four-year institution because they feel pressured to do so and then drop out without useful skills but with burdensome debt.

At the same time, employers are scrambling to fill a host of skilled, well-paying positions. Minnesota manufacturers, for example, say they struggle to find workers for two-thirds of available jobs, according to DEED. The agency projects demand for CNC machinists to grow by 19 percent and for millwrights by 16 percent over the next 10 years.

The situation is similar in the construction industry. "Today, 79 percent of construction companies can't find enough qualified workers," according to Dennis Medo, who heads Project Build Minnesota. "Unless that changes soon, building costs may skyrocket and many construction projects simply won't get built."

"More than 40 percent of technical workers in the utility industry are eligible to retire in the next five years," says Bruce Peterson, executive director of the Minnesota State Energy Center of Excellence. "But if you take 40 percent of the people out of the power plants, how do you keep them running?" All of the skilled trades are "in the same position," he adds.

The need for healthcare workers is booming, as well. DEED projects that by 2024, demand for RNs and dental hygienists will grow by 12 percent, and for radiologic techs and LPNs by 11 percent.

This means that young people who enter the occupations profiled in the Center's new study can be confident of strong demand going forward. Already, students preparing for these jobs often have multiple job offers before they complete training—in many cases from employers they have worked for during their education.

The non-four-year career tracks examined here offer many other advantages. Rapid, low-cost entry and good earning potential give young workers relative freedom from school debt, and thus a substantial head start in saving for a house, family needs, and retirement.

In addition, most of these fields offer clear paths for advancement. Entrepreneurial carpenters, plumbers, electricians and HVAC technicians can start their own businesses. In some cases, well-paid

overtime work can boost earnings into six figures.

As high school students and their parents investigate postsecondary options, they need to know about a broad spectrum of career choices like these. An excellent online resource is a paper from DEED entitled "What To Know Before You Owe," which includes a wealth of information about careers that don't require a bachelor's degree.

Families should also know that after earning a two-year associate's degree, young people can eventually go on to get a four-year degree in a "2 plus 2" arrangement. Some employers offer tuition reimbursement to employees, which is tax-free for the employee, up to $5,250.

There are many exciting, fulfilling paths to a successful and productive career—and life—in Minnesota in 2017. Going forward, our society needs to re-emphasize the importance of honoring and respecting those who choose non-four-year routes for the valuable contributions they make to our communities. Our state's future prosperity and the well-being of many of our young people depend on it.

This originally appeared in the Fall 2017 Thinking Minnesota.

Advice for Employers in Greater Minnesota: A Report from the Front
By Katherine A. Kersten
October 11, 2017

Minnesota's rural economy is gaining strength, reports *MinnPost*, with many businesses primed for growth. The challenge, of course, is finding the qualified workers necessary to make that growth happen.

Southwestern Minnesota offers a "sneak peek at both the looming challenges and unique opportunities facing communities in Greater Minnesota," according to the article, entitled "The future of Greater Minnesota's economy is already here—and it looks a lot like Montevideo."

Innovative approaches range from busing in potential workers from the Twin Cities for a tour of businesses, to a "regional attraction plan" aimed at marketing the area to people who are thinking about moving to a rural setting.

According to *MinnPost*:

> Southwest Minnesota had about 6,500 job vacancies in the fourth quarter of 2016—well above its 16-year average. Moreover, median wages "offered" (the wages employers advertise when looking for workers) between 2011 and 2016 increased by $2.26 per hour in the region—a jump that was also notably higher than the statewide average.

Opportunities include retail, healthcare, and construction, along with the region's two biggest industries: agriculture and manufacturing. At the same time, 67 percent of area business executives who responded to a survey by Enterprise Minnesota said that "attracting and retaining a qualified workforce" was their biggest concern—the highest percentage among the six Minnesota regions included in the survey.

Southwestern Minnesota employers are getting creative about meeting this challenge:

> In one recent initiative, the Willmar Workforce Center worked with Hennepin County to bus about 100 job seekers from the western Twin Cities suburbs [to the region] for a tour of businesses.... [I]n Hutchinson,...the city and local manufacturers have invested $1.2 million in a technical education wing at the high school that will give students an apprentice-like experience in manufacturing.

In Appleton, the Upper Minnesota Valley Regional Development Commission has just started work:

> on trying to alter some of the perceptions of the region, creating what Executive Director Dawn Hegland calls a "regional attraction plan": an effort to present the region, largely through digital media, to people who are considering moving to rural areas. The initiative will build on the work already being done by Western Minnesota Prairie Waters, a marketing initiative whose logo is an image of Minnesota with the words "Get Rural."

The *MinnPost* article profiles Chandler Industries of Montevideo and the steps the company is taking to "grow its own" workforce:

> For a time, Chandler recruited graduates of a machine tool program at Minnesota West Community and Technical College, which has a campus in nearby Granite Falls. When that program closed, the company hired one of the school's retired teachers to train its workers. More recently, the company received a $275,000 matching grant from the state, which—in conjunction with a Minnesota school—it will use to train workers over the next three years. The company has also connected with high schools—even junior highs—to let students know about the career opportunities in manufacturing and how the industry has become a highly technical field, with workers running complicated, computerized equipment.

Increasingly, innovative, "self-starting" initiatives like these will be the engine that powers Minnesota's rural economy in the future.

The Increasingly Powerful Role of Student Debt in Shaping Careers and Lives
By Mitch Pearlstein
November 9, 2017

I don't need to be convinced that community colleges are vital, as I started off in one. To be precise, it was an *auxiliary* program of a community college with the rhythmic name "City University College Center at New York City Community College." How I luckily wound up there is a story for another day.

As for an important story today about the value of these two-year institutions, my sense is that many young people and their parents are looking more closely at them for a variety of good reasons, very much including how their students are likely to accrue much smaller—if any—debt compared to students at four-year colleges. This theme has been coming up regularly in interviews I'm conducting for a new book, *Educational Roads Less Traveled: How America's Fixation on Four-Year Degrees Limits Both Careers and Economic Growth*, that has grown out of American Experiment's multi-year project "Great Jobs Without a Four-Year Degree." The following passages are a sample of what people have been saying about student debt.

A senior educator with strong ties to both technical education in two-year schools and the liberal arts in four-year schools talked about how, for decades, he had only limited success in getting students and parents to give technical education fair hearings. The culture's emphasis on four-year degrees was too strong. But recently "people outside the world of vocational technical education started paying attention to the economic opportunities" offered by that kind of training. One reason for the change, he argued, is the frequently immense debt graduates of four-year schools—including those who drop out of four-year institutions before graduating—are taking on.

"One of the truisms of selling higher education," he said, "has always been that people with bachelor's degrees do better in their careers. But increasingly I wonder if those data adequately factor in the often

mountainous individual and family debt that four-year degrees often force them to go into." More than a fair skepticism. (All quotes have been edited for clarity and conciseness.)

By the measures I've seen, graduates of four-year schools in Minnesota owe, on average, more than $30,000 in college loans, which is quite high among the states.

In a wide-ranging discussion with a group of undergraduates, one young woman talked about how she was interested in eventually going to law school, but that she was hesitant about doing so immediately after finishing her bachelor's degree, as she would be "jumping from one debt to another." One can contend that we have more than enough lawyers, and she should think about doing something else. But what if she would be a terrific attorney (as she likely would be), but the size of her undergraduate debt would first delay and then, perhaps, dissuade her from pursuing not only law school but any kind of graduate education? This would benefit no one.

I have no problem with young adults winding up with a reasonable amount of college debt, as it's more than right they share such economic burdens with taxpayers. But one of my main concerns is that four-year college debt, which is frequently bigger than the price of a Ford, is dampening the likelihood of baccalaureate winners continuing their education when it clearly would be in their best interests, as well as their communities', that they do so.

Two more potent comments by interviewees:

One man spoke about a friend who has three adult children. Two of them earned four-year degrees in the liberal arts and picked up substantial debts doing so. The third sibling, without the aid of a bachelor's degree, has made his career in a technical field, where he makes more money than the other two, plus he has "zero debt."

Another interviewee spoke of a relative who wanted to be a welder but was pressured by his parents to acquire a four-year degree and, in the process, wound up with more than $100,000 in debt, too. According to my respondent, he's a "great welder and loves to sculpt," and who has asked, "Why wouldn't my parents look at trade schools as being great places for me?"

Technically Speaking, What Might Minnesota Learn from Tennessee?
By Mitch Pearlstein
November 9, 2017

This is a blog about impressive things going on with technical education in Tennessee. It's the kind of blog which Minnesota leaders in education, business, and government are likely to respond, "Hey bub, wait a minute, we're doing great things here, too. Some even better." Which I trust is the case and hope they let me know about them, especially because I still have much to learn about what various sectors in Minnesota are doing in this critically important area.

In working on American Experiment's major project "Great Jobs Without a Four-Year Degree," one of the big lessons my colleagues and I have learned is that an enormous number of excellent programs and other initiatives aimed at increasing the number of men and women in highly skilled technical professions have been underway in Minnesota for a while. Some ventures, I trust, have been up and running longer than comparable efforts in Tennessee. Katherine Kersten, John Hinderaker, and I are constantly impressed by these exceptional and invaluable but routinely not widely known programs. Yet whatever good things business, educational, and governmental leaders in Minnesota are doing to advance technical education, it's useful to get a sense of what their counterparts are pursuing in Tennessee.

The following annotated excerpts, which have been edited very mildly for stylistic purposes, are from a panel discussion last spring, in Nashville, sponsored by the American Technical Education Association. *(I'm the annotator, by the way, in italics.)* You can read the entire discussion in the Spring/Summer issue of the *AETA Journal*.

Michael Krause is the Executive Director of the Tennessee Higher Education Commission: "A couple of years ago, 2012, the governor, [Bill] Haslam asked: 'Could we change how students think about their own future? Could we change how they think about what college means?' And that was the genesis of the Tennessee Promise. The Tennessee Promise offers any student in Tennessee the opportunity when they graduate high school to attend one of our technical colleges for free."

I'm generally not a fan of free tuition once students get beyond high school. This is the case for budgetary reasons and because many people will succumb to the temptation of not working particularly hard since they have little financial skin in the game, as the cliché goes. But what I do like about this passage are the questions posed by Governor Haslam about helping students improve how they think about their future, reinforced by his spurring them to think anew about what college means.

Kevin Smith is Nissan's North America Manager of Technical Training: "The TCATs [Tennessee Colleges of Applied Technology] needed more space. We (Nissan) had to do more programmable logic controller training. We also needed more space. We made an offer to the State of Tennessee: We can provide you with the land; do you think you could build the facility that we can share for our mutual benefit? I know there's a lot of partnerships out there between states and auto manufacturers. There's not too many of them that actually share the facility and are open to the public and train residents of that area, as well as the employees of that company. And we're pretty proud of that fact."

Smith continues: "One of the things we wanted to be able to do with the building [*located in Rutherford County, in the middle of the state*] was to be able to bring in middle schoolers, high schoolers, their parents, their teachers, their counselors. We wanted them to see these are good careers. It's amazing to see the parents' eyes open-up when you can tell them their son or daughter can go 18 months to [an] industrial electrical mechanical mechatronics program [*I don't know what this means either*], that's free...and come out and make $50,000 to $60,000 a year. And 100 percent placement right after that program."

I applaud Nissan's interest in having not just students, and not just parents visit the factory, but teachers and counselors, as well. I particularly like how this comment segues to another one by an unnamed conference participant (see below). But more than "applauding" and "liking" what they do in Rutherford County, I'm amazed by how that Nissan plant produced 648,000 vehicles in 2016. Try imagining how many new vehicles that means every 24 hours, every day of a year. (For readers whose imaginations have stalled, it's 1,775.) Remarkable.

The unnamed participant said this: "[W]e need to train school counselors. They all have bachelor's degrees and master's degrees. That is a 20-year-old message, versus this more current message. I would love to see some way where we've got school counselors with more tangible TCAT experiences so that they know that's a tool in their tool kit."

My American Experiment colleagues and I would love to see that, too. We're working on it.

Skills Matter More Than Type of Degree
By Katherine A. Kersten
November 17, 2017

A new report from Center of the American Experiment reveals that there's "gold in a two-year degree." The study found that young Minnesotans who choose a variety of non-four-year career pathways—in skilled manufacturing, healthcare, construction-related occupations, etc.—can often earn more in a lifetime than their peers with four-year degrees.

Now a new study from the American Enterprise Institute (AEI) in Washington, D.C., confirms this is true across the nation. Data from Florida, Texas, and Tennessee make clear that there is a "host of educational pathways—not simply bachelor's degree programs—that can help put students on the path to educational success."

According to the study, 85 percent of college freshmen say the ability to get a better job is a

"very important" reason for going to college. These students would likely be surprised to know that the Georgetown Center on Education and the Workforce estimates that, nationwide, 28 percent of workers with a two-year associate's degree earn more than the median earnings of workers with a bachelor's degree.

For example, in Texas, AEI focused on programs of study from specific postsecondary institutions, where the expected return on investment (ROI) for graduates over a 20-year career exceeds $1 million, reporting:

> Among these highly rewarding programs, 19 are associate level, six are sub-baccalaureate certificates... and the remaining 14 are bachelor's degrees.
>
> That means more than half of the programs with the highest expected ROI in Texas are at the sub-baccalaureate level.

Most of these highly rewarded programs are in technical fields. Of the top 39 programs in Texas, 27 either have the word "technician" in their nomenclature or "technology" in their program name.

The situation is similar in Tennessee, where apprenticeship programs in technical colleges "have job-placement rates that would make many college programs envious," according to the study. Estimated earnings for most exceed the state's 2015 median household income. Likewise, in Florida, several of the postsecondary programs with the highest-earning graduates are apprenticeships in technical fields.

Overall, the AEI report concludes, in the states studied, "many of the programs—bachelor's degree or otherwise—are producing graduates with high wages and ROI and have one thing in common: They graduate students who know how to build and fix things."

Thus, the study concludes, the central question is not whether postsecondary degrees have value, but "what types of knowledge and skills are in greatest demand and are, in turn, rewarded in the labor market. Framed in this way, the degree a student pursue[s] means much less than commonly held: It is the outcome that matters." ●

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To obtain copies of American Experiment's recent reports—Steven F. Hayward and Peter Nelson's "Energy Policy in Minnesota: The High Cost of Failure," Amanda L. Griffith's "No Four-Year Degree Required: A look at a selection of in-demand careers in Minnesota," and Randall O'Toole's "Twin Cities Traffic Congestion: It's No Accident," or to subscribe to the Center's free quarterly magazine, *Thinking Minnesota*, email Peter Zeller at Peter.Zeller@AmericanExperiment.org, or call (612) 338-3605.