

Manufacturing and Pursuit of the American Dream: *Reality or Fool's Quest?*

By Jack McGuinn, Senior Editor

"The 'American Dream' is that dream of a land in which life should be better and richer and fuller for everyone, with opportunity for each, according to ability or achievement."

~ from American writer and historian

James Truslow Adams' *The Epic of America*

"They call it the 'American Dream' because you have to be asleep to believe it."

~ George Carlin

It wasn't so very long ago that a high school-educated, able-bodied person with a will to work typically had little trouble finding a decent job in manufacturing. Whether at an area job shop, an OEM plant or auto plant—work was to be had. Work that paid well enough to marry, buy a home, feed, raise and educate a family—with even enough left over for a modest retirement pension.

There was also a time when government-fueled jobs programs were not the "third-rail" political risk they have become today. Example: In 1956 President Eisenhower's Federal Aid

Highway Act was passed—with strong bipartisan support—that led to millions of jobs for Americans. (While the bill's collateral damage inflicted upon many of the country's urban centers—Chicago, Oakland, Atlanta, for example—is another story altogether.)

Things change—witness the battle over the president's stimulus program upon his 2008 election. It eventually passed, but in a partisan, much-weakened version. (Can any rational person envision any reality-based scenario in which a "big government" employment stimulus program such as that could ever pass in today's Congress? Say, perhaps, a nationwide infrastructure build-and-repair program (bridges, roads, schools, etc.)?

Meanwhile, today's workplace—even, to a lesser degree, our military—is equally represented in numbers—if not pay, by women. They are commonly

referred to as "working women," "working moms" or "career women." Setting "nuclear" family issues aside, reasonable people would agree the struggle for equal rights by and for women was hard-fought and a long time coming. Indeed, Archie Bunker doesn't live here anymore.

Here's the question—define "middle class" as you will—but does it in fact still exist? Or has it been banished to the same dark corner as our nation's fading manufacturing spirit? What has become of what once was the symbiotic relationship enjoyed for decades between the majority of the country's working citizenry and its manufacturing entrepreneurs, i.e.—our greatest jobs producers?

According to a report issued in August by the Pew Research Center, middle class households—with incomes between \$39,000—\$118,000—experienced its "worst decade in modern history" due to income reversals not seen since the end of World War II.

And reported in an August 2012 *Associated Press* story by Hope Yen,



"These are the disaffected middle class who work hard and play by the rules of society, but increasingly see their situation declining by forces beyond their control," said Timothy Smeeding, a University of Wisconsin-Madison economics professor. "The climb back up for the middle class and the recovery will be slow and often painful."

Also from the AP story in reference to the Pew report: "The notion that the middle class always enjoys a rising standard of living is a big part of America's sense of itself. And in modern times, it's always been true—until now," said Paul Taylor, executive vice president of the Pew Research Center."

Henry R. Nothhaft, in an opinion piece in *Bloomberg News* last year, says "Given how desperately the U.S. needs jobs, it's amazing how little effort Congress and the president devote to revitalizing manufacturing—the most potent of all job creators. For more than 30 years now, economists and policy makers have instead worshipped the false God of 'comparative advantage,' believing that the U.S. could prosper by specializing in innovation while letting China and other nations do the manufacturing. Simply put, manufacturing is what created an American middle class that was the envy of the world. Its loss is now destroying that middle class."

"Recapturing the American dream starts with the manufacturing middle class," says Carlos M. Cardoso, head of Kennametal Inc., in a guest columnist piece in the *Cleveland Plain Dealer* in August. "For decades, good manufacturing jobs allowed workers to own homes and cars, take nice family vacations, satisfy their health care needs, send children to college and retire with financial security."

The above is a brief sampling of a growing crescendo of recent observations from people in a position to know something about the nation's withering middle. Fact is, you can't deal with a problem until acknowledging that one exists.

Some facts we ignore at our peril

- Eighty-three percent of all U.S. stocks are in the hands of one percent of the people.
- For the first time in U.S. history, banks own a greater share of residential housing net worth in the United States

than all individual Americans put together.

- In 1950, the ratio of the average executive's paycheck to the average worker's paycheck was about 30-to-1. Since 2000, that ratio has exploded to between 300- and 500-to-one.
- The bottom 50 percent of income earners in the U.S. now collectively own less than one percent of the nation's wealth. (*Source: Business Insider, 2010—"22 Statistics that Prove the Middle Class is Being Systematically Wiped out of Existence in America."*)

Forget about whether you are better off today than you were four years ago—think generationally. If you are a parent or grandparent—or you simply care about your country—isn't it all about tomorrow? And the tomorrows after that?

Too many of our youngest soldiers enlist in the military simply because no other job opportunities or pathways to training programs exist for them. Think of the GI Bill—the greatest boost to the middle class since the New Deal.

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We invited people from various perspectives to weigh in on the interconnected issues of U.S. manufacturing, a well-trained workforce and what was once known as the “manufacturing middle class.” They are teachers, longtime gear industry experts, AGMA members, businessmen and socio-economic policy influencers. As their comments reveal, they agree—and disagree—strongly on the issues raised here. But there is one hopeful constant: they care. What’s more, each—in his own way—is doing something about it.

Our Panel

Bart Aslin (*baslin@sme.org*), chief executive officer, SME Education Foundation; **William “Bill” Bradley** (*billb111@att.net*) former AGMA vice president—Technical Division, winner of AGMA Lifetime Achievement Award and *Gear Technology* technical editor; **Doug Bowman** (*dbowman@vinu.edu*), HTEC director, Vincennes University (Vincennes, IN); **Scott N. Paul** (*spaul@aamfg.org*), executive director, Alliance for American Manufacturing; **Jerry Ruble** (*jruble@vinu.edu*), director, ABB Robotics Lab and Industrial Maintenance Training Business & Industry/ South, Vincennes University; **Chuck Schultz** (*gearmanx52@gmail.com*), owner/operator, Beyta Gear Service, AGMA member and *Gear Technology* technical editor; and **Dwight Smith** (*dsmith@colemfgsystems.com*), owner/operator Cole Mfg. Systems, Inc., and current chairman of the AGMA Nomenclature Committee.

Gear Technology: What role would you like to see government and educational institutions do to promote careers in manufacturing?

Chuck Schultz (CS). We need a rational industrial and trade policy. Then we can talk about German-style apprenticeship programs.

Bill Bradley (BB). Provide the manufacturing industries with more incentives, like tax breaks that promote jobs.

Bart Aslin (BA). Besides the funding of a nationwide PR/marketing plan, government should stay out of the way. Lower the tax burden on industry and remove onerous regulations.

Jerry Ruble (JR). I’m not a big fan of government. My view is they are there to protect our county and uphold the constitution. I think it is the job of the manufacturing world to get people interested. (Vincennes University) just signed an agreement with Toyota Motor Manufacturing Indiana to recruit high school students into the high tech manufacturing jobs. It’s called the Toyota Advance Manufacturing Technician program. They will do this by showing the students what is available these days in manufacturing. Then they will agree to hire the students two days a week to work at TMMI while going to school three days a week for five semesters to earn an associate degree. After that, they can choose to continue on to a bachelor’s degree or enter the work force with a well-paying secure job.

Dwight Smith (DS). Promoting manufacturing with incentives for ‘on-shoring,’ for example, will boost manufacturing and therefore, boost careers in manufacturing.

Scott Paul (SP). At the federal level, the Administration has put some resources behind the Skills for the Future Initiative, which already has strong support from industry and academia. This initiative is designed to attract new talent into technical school and community college programs to gain skills certifications for manufacturing careers. There’s also a higher-level need, as well, to ensure that people know the government backs manufacturing and insourcing. Our polling showed that other than aspirations of achieving a four-year degree, the biggest obstacle to getting Americans to pursue manufacturing was a belief that the jobs would be outsourced. The (often cited) ‘dirty job’ and ‘mundane’ aspects of manufacturing were very far down the list of concerns.

Doug Bowman (DB). Just projecting a positive attitude about the importance of manufacturing to our nation would go a long way. I know SME and NTMA do a lot to promote careers in manufacturing. Maybe promoting careers in manufacturing would be a great role for all of the professional organizations to engage in.

Do you believe companies are spending enough to train their own workers?

CS. No, many spend more on landscaping.

BA. Smarter government tax policy should be enacted in order to incentivize ongoing education of our workforce.

JR. Absolutely not! Part of it is the economy; the other part is just competition. Companies are forced to quote their products with lower and lower prices. At some point they are just trying to survive and make 0.5 or 1 percent on their investment. They won’t allocate the money for training because they don’t see the return on their investment.

DS. Most companies do not invest enough in their employees in the way of training. Some company owners have told me that they don’t want to train workers for their competition. However, studies have shown that training employees actually improves employee retention.

SP. I think the mistake that too many companies make is expecting a perfectly suited, highly skilled worker to show up on their doorstep, willing to start for relatively meager wages and needing no additional training. That’s fantasy land. But too many businesses live in it. Investing in human capital is smart and pays dividends. Manufacturers succeed by being lean but also by being smart. There are also companies that have been smart about training, wages and recruitment.

DB. Some probably aren’t, but I think many companies are starting to invest more in training out of necessity.

If you accept the premise that unions once played a significantly positive role, why has that perception changed? Do we blame it all on Jimmy Hoffa?

CS. Cumulative PR by “Big Business” and some real stupidity on the unions’ part; and lots of jealousy from people misunderstanding how much they were really being paid. Who else talks about their salary with benefits and overhead rolled in?

DS. Labor unions certainly played a positive role in protecting workers during a less enlightened time. I believe the perception changed when the

unions became more powerful and failed to put the workers' needs in perspective. They may have become more interested in their own furtherance, and relationships with company management became adversarial.

SP. Unions and management have both made a lot of mistakes over the years, but they have also come together in times of crisis. Large industrial unions like the steelworkers' and UAW have accepted reduced wages, more cost-sharing for retiree health care, and work rule flexibility to help save entire industries. Scapegoating unions serves no real purpose today. Jack Welch helped to lead a wave of corporate outsourcing. President Bill Clinton opened up trade with China without demanding real accountability. Really smart engineers developed robots that replaced workers. Wall Street became the master of manufacturing rather than the provider of capital. Who's really to blame? You tell me.

Aside from the actual training, what more can companies do on their own to generate interest in manufacturing?

BA. They can establish a coalition that will develop a nationwide campaign to inform people about the dignity of all workers and the importance of manufacturing to our future economy.

JR. They need to show the benefits of manufacturing—good pay, good benefits, job security with technical knowledge, etc.

DS. Manufacturers can strive to be good places to work and be involved in their communities.

SP. Putting out the help-wanted sign is a start. For years, manufacturers shed workers without hiring many new folks at all. I'm not concerned about the ability of the large manufacturers to compete for and attract a skilled workforce—otherwise I'd call it a management failure. But there is certainly work to be done in connecting small manufacturers with qualified workers for positions that require specialization or a high degree of skill.

DB. I think that the companies that provide frequent, upbeat tours of their plants, educate people about the benefits of manufacturing to the local and national economy, sponsor students in training programs, and provide internships generally generate a lot more interest, and are more successful in filling their skilled positions with qualified people.

Is time to stop blaming China for everything?

CS. Why blame them for acting rationally? Blame the people in Washington and London who set this system up for their gain. Check out Billy Bragg's NPWA (No Power Without Accountability).

BA. Global competition spurs innovation and growth in the U.S. (Facing the challenges that global competition offers will lead to improved productivity and innovative processes.

BB. I don't blame China. They have taken every economic advantage that world governments have let them have, and will soon own the U.S. if we let them. (Our) government needs to change the things that have driven the majority of manufactured products sold in the U.S. to be manufactured (outside) the U.S.

DS. It never has been correct to blame China. If we became complacent and failed to compete, we have no one to blame but ourselves.

SP. No—I don't think China is blamed nearly enough. Yes, we must get our 'own house' in order, but China is a blatant rule-breaker: on currency, intellectual property, government subsidies, technology transfer, labor rights, environmental regulations, rule of law, piracy, etc. But so many multinational companies have a China-centric sourcing strategy that it would cause a lot of pain to stop China's cheating. The bottom line is that I blame our government for not holding China accountable. We're not acting in our own national interest when we let China get away with cheating on trade rules.

DB. I think that China is only taking advantage of our follies. They are using basically the same manufac-

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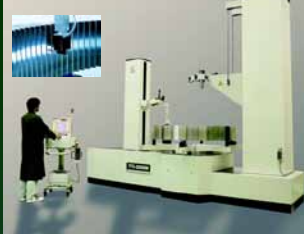
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turing model that we did to become a prosperous nation: capitalism. The interesting thing is that they are doing it in spite of the handicap of being a communist nation. Sure, it is well documented that some leaders in China promote suppressing their currency, stealing intellectual property and disregarding patents, but perhaps America has also helped to sponsor China's industrial growth. I think that the world is big enough for (both) China and the United States to be manufacturing giants. I have met many Chinese workers and they are good people, very hard working and friendly. They deserve a good quality of life also and manufacturing can provide that. I think some of the blame for our financial problems should fall rather to the greedy and powerful 'elite' financiers that work mostly behind the scenes to promote damaging agendas to their own financial gain.

Our middle class—some refer to it as “the manufacturing middle class”—is shrinking and in danger of eventually losing its majority status (nearly 6 million factory jobs lost since 2000—NY Times).

CS. (Due to) totally reciprocal trade agreements. If you have tariffs on my stuff you get the same tariffs on yours. Brazil charges an 80 percent tariff on goods that could be made in-country. Any surprise they are growing so fast?

JR. (We need to) control the amount of people entering the country; keep jobs in our country and not send them to other countries. Then, figure out how to compete with the other up-and-coming countries.

BB. First, I am not sure what defines middle class. Is it wages, net worth, type of job or what? If the average wage or net worth increases, is there more in the 'middle class,' more rich, or less poor, a combination, or what? There seems to be moving definitions of poor, middle and rich, depending on political need. We need to change our cultural perspective on class. Perhaps there are those that can live without assistance, contribute, and those that can't—some of which take from government. Job

loss or gain and unemployment are (other) areas where there seems to be a disconnect in definition.

DS. The emphasis on non-value-added activities, i.e.—financial services—has caused the best and brightest to seek their fortunes there rather than in science and engineering. When manufacturing is once again strong, young people will want to be part of it.

SP. When manufacturing is doing well, our economy does well. We are exporting more, creating jobs that pay relatively well. It means the 'ripple effect' produced by manufacturing and its value chain has a larger impact. Manufacturing is not likely to ever employ 30 or 40 percent of our nation again, but that doesn't mean its impact is unimportant. We need a smart (national) manufacturing policy (addressing) taxes, trade, innovation, infrastructure, skills and energy.

Do you envision any scenario in which Washington—or at the state level—would enact an education program based on the GI Bill model that would incentivize young people to pursue—or teach—STEM-type coursework—science, technology, engineering, and mathematics?

JR. I think a program like that is a real possibility. I think a program could be started to have the STEM educators that are off work in the summer work with local companies and manufacturers so they can keep up with this very quickly evolving technology in manufacturing. I think this would strengthen the relationships between education and manufacturing. The manufacturer would receive help in the form of not only another headcount (everyone is running extremely lean now days), but someone with a very good understanding of manufacturing that could pick up and be productive quickly. The educator would benefit by seeing the newest technology and how manufacturers really manage and react to the changing work environment. While the educators are (embedded) there, they could make suggestions of other types of training that would help improve the skills of current

workers. There are a lot of pluses on both sides when you start to think through the possibilities.

BA. One of the most promising (STEM programs) is in the area of providing funding to those who will begin their post-secondary education at community colleges. This gives a tremendous boost to young learners and also allows them the opportunity to figure out what educational path and eventual career path fits their passions. Too many young people are pushed into four-year institutions, only to leave during their first year with debt and frustration over their future. (Government) needs to understand that all people deserve the opportunity to pursue lifetime learning. (But we must first) fix the STEM problem at the elementary, middle school and high school level. The SME Education Foundation (and) Project Lead the Way are dedicated to (that).

BB. We can't cure a perceived problem with young people pursuing coursework in science, technology, engineering and mathematics by using taxes to reduce an individual's secondary education costs or increase pay to educators; manufacturing jobs still operate on a supply-and-demand basis. We need to have government make it desirable to return manufacturing jobs on-shore and promote them to stay in the U.S. Thus there would be a greater need for those who pursue science, technology, engineering and mathematics to support manufacturing.

DS. Unfortunately, it may take a further decline in America's status and position in the world to make education the priority it needs to be (and the priority it is overseas). For example, a recent study reported that the U.S. ranked 25th out of 50 countries in math literacy.

SP. I think there is general awareness among our lawmakers of the need for more Americans to pursue STEM education and careers. We're falling behind—there's no doubt about it. We may be at such a crisis stage that the time is right for a GI Bill-like effort.

Hypothetically, would you want your son or daughter to have a career in manufacturing?

CS. I discouraged it.

JR. Yes, it's a good job. Making stuff (manufacturing) is the building block for everything else in the economy.

DS. I hope for an America where my grandson can have a fulfilling career in manufacturing.

SP. Absolutely. I have twin five-year-olds (boys); they love to tinker and imagine. I hope they never lose that. I enjoy nurturing those innate abilities. There are lots of careers in manufacturing. I hope they will strongly consider whether or not such a career makes sense for them.

DB. Yes! I have four children in manufacturing careers already and more to come.

BB. Yes. 



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