Learn a trade

America has been on the wrong path for a century by promoting academic achievement over work in the trades. Yet by any intellectual comparison, they're not mutually exclusive.

Because the work is dirty, many people assume it is also stupid.

By Matthew B. Crawford

I graduated from a big state university in 1989 with a degree in physics and moved to Los Angeles to look for work in the aerospace industry. I sent out dozens of resumes and got close to zero response.

After five months, my savings gone, I found myself in the parking lot of a home improvement store putting flyers on car windshields to advertise my services as an electrician, work I had done through high school and college, starting as a helper at age 14. "Unlicensed but careful," the flyers said.

I got immediate response. There was more demand for my services as an unlicensed electrician than as a credentialed college graduate. I was glad to have something to fall back on and went into business for myself, illegally.

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I never ceased to take pleasure in the moment when I would flip the switch. And there was light. The effects of my work were visible for all to see. My competence was something incontestable; it wasn't just a private opinion I had of myself. Nor was it something bestowed on me by a diploma.

I was sometimes quieted at the sight of a gang of conduit entering a large panel, bent into nestled, flowing curves with varying offsets, which somehow all terminated in the same plane. This represented a skill so far beyond my abilities that I felt I was in the presence of some genius — and that the man who bent that conduit must have imagined this moment of recognition as he worked.

As a residential and light-commercial electrician, most of my work got covered up inside walls. Still, I felt pride in meeting the aesthetic demands of a workmanlike installation. Maybe another electrician would open up the wall and see it someday. Even if not, and though I never became a fully licensed electrician, I felt responsible to my better self. Or rather, to the thing itself — craftsmanship has been said to consist simply in the desire to do something well for its own sake.

A problem of prestige

The trades and the education associated with them suffer from low prestige, and I believe this is based on a simple mistake: Because the work is dirty, many people assume it is also stupid. We've developed a dichotomy of knowledge work versus manual work as though they are mutually exclusive. But that's a distinction that doesn't make sense to me. Say you're trying to diagnose why a car doesn't idle properly. That's not a trivial problem. And more generally I'd say that the different kinds of thinking that go on in the various trades can be genuinely impressive if we stop to notice the fact. The mechanic uses his hearing, his tactile sensitivity, and often his sense of smell to diagnose problems, as well as uses the kind of diagnostic logic that can be formalized in a service manual. He develops a mental library of subtly distinguished sounds, smells, and feels that are intimately tied to his own experience and become the basis for genuine expertise.

Conversely, we sometimes romanticize white-collar work by presuming it has more intellectual content than it may actually have. A lot of white-collar work gets dumbed down, and an electronic sweatshop can be every bit as stultifying as the assembly line. By contrast, what a plumber, electrician, or auto mechanic does is fundamentally different from the assembly line because such work can never be reduced to simply following a set of procedures. The physical circumstances in which men and women do those jobs vary too much for the work to become routine. Solving problems like the ones they confront on the job requires improvisation and adaptability. Doing that makes a person feel like a human being, not a cog in a machine.

Obviously, there's a great diversity of different kinds of work that take place in an office, and some of it is much better than others. The real question therefore isn't whether you work with your hands or work in an office, but whether the job entails using your own judgment. But it is precisely on those grounds that the trades are worth taking a fresh look at. The trades are not for everybody — just as college is not for everybody — but working at a trade can be a good life for someone who wants to use his or her mind at work.

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Some people get hustled off to college, then to the cubicle, against their own inclinations and natural bents, when they would rather be learning to build things or fix things. A woodshop teacher and writer named Doug Stowe eloquently wrote:

> In schools, we create artificial learning environments for our children that they know to be contrived and undeserving of their full attention and engagement. Without the opportunity to learn through the hands, the world remains abstract and distant, and the passions for learning will not be engaged (2014).

A gifted young person who chooses to become a mechanic rather than accumulate academic credentials is viewed as eccentric if not self-destructive. There is a pervasive anxiety among parents that there is only one track to success for their children. That track runs through a series of gates controlled by prestigious institutions. Yet in the United States, less than half of students who begin university have received a degree after six years. This is not terribly surprising: Sitting at a desk, staring at books, is not the way most people are best able to learn. It is a specialized activity that has somehow become the norm.

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Compare earnings

Those who do get a university degree find themselves saddled with substantial debt (an average of $27,000, in addition to whatever debt their parents

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took on) and uncertain job prospects, not to mention the loss of crucial years when they could have been acquiring marketable skills outside the bubble of youth culture that is the university. As these facts begin to make themselves felt, a shift is in the air. We may be witnessing the beginning of the end of a higher education bubble that began after World War II, not unlike the recent housing and technology stock bubbles.

We often hear that those with four-year degrees earn more than those without. In fact, they earn a lot more — on average. But these categories are misleading. If you compare the earnings of a diesel mechanic working on heavy equipment in the North Dakota oil fields to those of a person with a degree in sociology working in retail (as such scholars often do), you'll get a very different picture. The mechanic is likely earning about three times as much.

Not only is he likely to be making more money, he's almost certainly exercising his intellectual capacities more intensely at work. If diagnosing machines could be reduced to simply following rules, that mechanic would not be earning $100,000 a year.

Making the world intelligible

The debate about academics versus education in the trades has a long history. In 1895, the former child coal miner Booker T. Washington addressed an audience in Tuskegee, Ala. He said, "When you speak to the average person about labor — industrial work, especially — he gets the idea at once that you are opposed to his head's being educated; that you simply want to put him to work. Anybody who knows anything about industrial education knows that it teaches just the opposite — how not to work. It teaches him to make water work for him, to make air, steam, and all the forces of nature work for him. That is what is meant by industrial education."

Grappling with concrete things for pragmatic purposes is perhaps the most reliable way to learn solid truths about the world (Aristotle said as much). Throughout history, workers in some reflective moment have hit upon technological innovations that preceded and abetted scientific breakthroughs that would later frame that discovery in a larger theoretical understanding. For example, the invention of the steam engine by mechanics and tinkerers who had observed the relations between pressure, temperature, and volume led to the demise of the "caloric" theory of heat; their insights played a role in the development of classical thermodynamics.

This suggests a different lens through which to view technical skills training, quite apart from the economic case for it. By confronting a world that resists his will and tinkering with things, a young person begins to make the world intelligible. By developing skills, he comes to learn that he can have an effect in the world — through the cultivation of his understanding. He learns that the world is a place that is fundamentally hospitable to him.

And conversely, if he doesn't have such experiences because he has not had opportunities to learn through doing, then it becomes attractive for him to retreat into a virtual world where he is offered a kind of fantasy of agency and competence. He becomes a consumer of manufactured experiences — for example, computer games — in which his actions have no real consequences. Corporate forces leap in on our behalf to offer us quasi-satisfaction based on digital stimuli that are so hyper-palatable that they would seem to be the mental equivalent of fast food. Human experience becomes a highly engineered and therefore manipulatable thing.

Du Bois v. Washington

Washington went on to have a famous quarrel with W.E.B. Du Bois about the proper forms and ends of education for their race — both were African-Americans writing in the shadow of slavery. But their quarrel transcends their historical moment and the concerns of any particular race. It is worth revisiting for the light it sheds on the situation of a young person today of whatever background. For there is something a little slavish about our growing dependence on manufactured experiences. They are thin consolation when someone feels a lack of genuine agency.

The different kinds of thinking that go on in the various trades can be genuinely impressive if we stop to notice it.

Du Bois took offense at the prosaic nature of the industrial education Washington was promoting. Himself an erudite Harvard man, Du Bois placed his hopes in the cultivation of "the talented tenth" — those suited by nature to scholarship. But in this he seemed to adopt uncritically the ancient medieval categories that place the "liberal arts" in direct opposition to the "servile arts." For obvious reasons, Du Bois was anxious to put as much distance as possible between his people and anything suggesting servility, and, to him, industrial education carried such an odor.

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Respectable opinion today lies entirely with Du Bois. In forming their aspirations for their children, middle-class people of all races take their bearings from the "talented tenth." Our educational system is predicated on this point of orientation. It is not serving students very well — neither as a system for cultivating their minds nor for guaranteeing their economic stability.

Washington believed that dignity for African-Americans could best be achieved not by supplicating elite institutions for certification as part of the talented tenth, hoping thereby to gain admission to the walled garden of the masters, but from cultivating independence of spirit.

Such independence has a material prerequisite: being able to earn a living by the exercise of your own powers. Washington urged his fellow citizens to learn a trade, make themselves useful to one another, and thereby secure for themselves a well-founded pride — in themselves and in their own communities.

Becoming a grown-up

Washington's message is worth revisiting in light of the current crisis of higher education. The dismal graduation rates, the often crippling debt that students incur, and the uncertain job prospects of those who do get a degree all point to a massive misallocation of human capital. In more intimate terms, they indicate a misdirection of human striving, away from the modest but reliable pleasures of doing work that is concrete and toward a societal image of clean, abstract work that often turns out to be a mirage.

Educators who want to steer students toward solid ground might do that in part by rehabilitating the skilled trades. For example, they could gather and present to students information about apprenticeship and summer employment opportunities, in the same way they do information about colleges. The earlier students are exposed to different realms of work, the earlier they can begin to discover what they find appealing, and what repellent. This would introduce a bit of the adult world into education, which for the most part is hermetically sealed off as a separate youth culture. It would interrupt the decades-long adolescence that has become the norm in American society. This would likely bring psychic benefits as well as material ones — not least, perhaps, an attenuation of that self-absorption that is unattractive in itself but which also, I believe, makes us especially pliable to the purveyors of manufactured experience.

But to shoot a dose of reality into schools in this way would take courage. Any high school principal who doesn't claim as his or her goal "100% university attendance" is likely to be accused of harboring "low expectations" and run out of town by indignant parents. That indignation is hard to stand against, as it carries all the moral weight of egalitarianism (every child can be a scholar). Yet it is also snobbish, insofar as it regards the trades as a "low expectation." The best sort of democratic education would be neither snobbish nor egalitarian. Rather, it would take its bearings from whatever is best. If I were talking to a smart and ambitious 16-year-old, I might whisper into his ear: There is a secret society among us, a democratic aristocracy that is ready to welcome him if he is ready to work. It is made up of those who acquire real knowledge of real things, and make the world keep running. K

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Reference

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"Sitting at a desk all day and bringing work home is how schools prepare you for a career."

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