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Apprenticeships

Useful Alternative, Tough to Implement

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EXECUTIVE SUMMARY

A college education is not everyone's cup of tea. The United States needs other ways to instill job skills in the younger generation. The German apprenticeship system is sometimes viewed as an appealing alternative. But substantially increasing apprenticeship opportunities in the United States may not be as easy or inviting as it sounds. The German model depends for its success on strong unions and professional licensing requirements. Applying the German method to the United States would require huge—and, for some, hugely unpopular—changes to the structure of the economy.

Successfully expanding the availability of apprenticeships in the United States will therefore require real thought. Any American-style apprenticeship model will need to deal effectively with the age-old problem of the “runaway apprentice”—the apprentice who leaves his employer after the employer has invested time and

energy in training him, but before the apprentice has been useful enough to make the employer's investment worthwhile.

In centuries past, the problem was dealt with by jailing runaway apprentices. Today, Germany instead denies them union membership or professional licenses. The dominant solution in the United States has been to try to teach job skills at publicly subsidized educational institutions, so students will emerge already valuable to employers, in theory making apprenticeships unnecessary. But this method has not been a smashing success.

This paper discusses various ways to encourage apprenticeships—from ensuring that potential apprentices can borrow money to finance apprenticeships in the way they currently borrow for college (thus allowing the employer to avoid having to pay an apprentice more than he is initially worth) to more elaborate public subsidies and changes in the law.

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INTRODUCTION

The golden key to a great future is a college education—or so we have been told. But one size does not fit all. Even the most zealous advocates of college education will usually agree (1) that not everyone wants to or should go to college, and (2) that not all useful learning is best conveyed in a college setting.

These days more and more Americans—including many who teach at traditional colleges and universities—have serious concerns about the ability of these institutions to provide young people with the kinds of skills they need to succeed in the labor market. As part of that concern, many have been calling for a greater emphasis on alternatives to traditional higher education, including apprenticeships.¹

Centuries ago, vocational training in the United States was dominated by apprenticeships, and they continue to exist in some sectors of the labor force, particularly unionized and licensed building trades. Sometimes they are stand-alone programs and sometimes they are coupled with college classes, most commonly at the community college level. But in general, the American economy has evolved away from that model. These days apprenticeship opportunities are extremely limited.²

By contrast, in Germany, the apprenticeship model is alive and well and strongly supported by the government. Apprenticeships are available for hundreds of recognized vocations, from banker to plumber to optician, and considerably more than half of young Germans sign up for one or more of them. Typically, a German apprenticeship involves “dual” training—with an on-the-job element and a classroom element at a vocational school. Germany’s extensive apprenticeship program is often held out as an example for this country.

Alas, replicating the German model in the United States may not be such a good idea. The purpose of this paper is more to point out some of the pitfalls that efforts to create more apprenticeships here will face. While Germany’s program is in many ways admirable, it needs to be emphasized that this is not Germany,

and most Americans wouldn’t want it to be. The German apprenticeship system depends in significant part on the existence of strong unions and complex professional licensing requirements for its success, both of which tend to exclude competition from outsiders to the system. That, in turn, curbs labor freedom and innovation and raises production costs. Those “carrots”—union membership and professional licenses—do, though, give apprentices a strong incentive to stay in their apprenticeships long enough for their employer’s investment in their training to pay off. As I hope to explain, without similar mechanisms, this country probably cannot sustain a large-scale system of apprenticeships along the lines of the German model.

That doesn’t mean that all is lost for advocates of apprenticeships. While it may be unlikely that the United States will create an effective system of apprenticeships as extensive as Germany’s, there are things that can be done to increase the number of stand-alone or school-sponsored apprenticeships. This paper discusses possible modest steps in that direction. Even if these steps are not embraced by the nation, they may help start a realistic conversation about the ways in which apprenticeships can be taken seriously as an alternative or supplement to higher education.

Three questions need to be addressed here: (1) why traditional colleges and universities are ill-suited to the task of general vocational education; (2) why apprenticeships don’t work without a mechanism for ensuring that employers will see a return on their investment into the apprentices’ training; and (3) how an American-style system of apprenticeships might be able to overcome the return-on-investment problem.

TRADITIONAL HIGHER EDUCATION: SLOW TO PERCEIVE JOBS OF THE FUTURE AND TRAIN PEOPLE FOR THEM

Few would gainsay the notion that, for many tasks, hands-on training is the most effective way to learn. Indeed, in view of the generally

disappointing graduation rates at both four- and two-year colleges, it may be that, at least for some students, hands-on learning would be more enjoyable, in keeping with their hopes for their futures, and more effective.³ If you want to learn how to construct a stone wall, classroom learning will take you only so far. What you really need to do is break it down into each step and watch someone who knows what he's doing perform that step. Then, under his close supervision, try each of the steps yourself, put them together, and build a wall. Over time, you will observe most of the things that can go wrong and how an experienced practitioner of the art of stone masonry deals with those problems. At some point, you will be a stonemason, not just a stonemason's assistant.

But let's put that very important point aside, since that's only part of the problem with viewing colleges and universities as our primary vehicle for instilling job skills in young people. Even when dealing with vocational knowledge and skills that can be learned in a lecture hall or seminar room, traditional colleges and universities will not always be the best institutions to teach them. Their tendency will be to lag behind the times—training students for the jobs of yesterday rather than the jobs of tomorrow. Even when they have correctly identified the right jobs, when the skills necessary to hold those jobs are subject to rapid or even not-so-rapid change, colleges and universities may tend toward teaching outmoded skills or skills that serve the needs and desires of the faculty rather than of the students.

Put differently, if we depended on traditional higher education to provide all of our vocational education needs, we might be turning out hordes of travel agents, despite the collapse of that industry in the age of the Internet. Worse still, those travel agents might not have the practical skills necessary to book travel, such as the ability to navigate Travelocity, Orbitz, Priceline, or other travel-related websites. Instead, they might be very knowledgeable about the travel habits of the 19th century English aristocracy, because that was the topic of their professor's dissertation.

Never lose sight of the fact that traditional colleges and universities have been explicitly designed to be resistant to external and even internal political pressure. That's what academic freedom, faculty governance on academic issues, and tenure are all about.⁴ They are intended to make institutions and individual faculty members resistant to political influence. Meanwhile, massive public subsidies largely insulate them from market discipline. These factors combine to make colleges and universities ill-suited to respond nimbly to an ever-changing job market.

Consider, for example, the curriculum. The power to influence what is taught at a college or university is highly dispersed. Each institution confers that authority largely on its faculty members, both individually and collectively; most are tenured and have a strong interest in preserving their turf. This creates a certain level of inertia that makes colleges and universities ill-equipped for the task of training students for vocations that are subject to broad swings in demand or to significant changes in the skills required.

It would take huge changes in the way traditional colleges and universities are structured—changes that would render them nearly unrecognizable as institutions—to make them reasonably suited to the task of broad-based vocational education. At best, they would look more like proprietary universities like the University of Phoenix, which operate mainly through part-time instructors who work by day in the area they teach by night.

That doesn't mean that traditional colleges and universities should be largely replaced with institutions like the University of Phoenix. No institution can be all things to all people. Traditionally, vocational training and higher education have been thought to be two very different things. A classical liberal arts education was meant to convey certain bodies of timeless knowledge. It was (and is) hoped that in learning about the poetry of Basho, Newtonian physics, or the American Civil War, students would broaden as well as sharpen their minds and mature into thinking adults and citizens.

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Academic freedom, shared governance, and tenure evolved as a means to support that model of higher education. They make it difficult (though unfortunately not impossible) for educational fads to take hold on campuses, and give the concept of a classical liberal education a fighting chance against the pressures of the everyday. For both good and ill, academia is *supposed* to be an ivory tower.

One can buy into the notion that a liberal arts education is timeless and much more than simply vocational training or one can dismiss it as elitist puffery. It matters not for the purposes of this paper. The point is simply that traditional colleges and universities will be institutionally ill-suited to the task of deciding which vocations the economy is likely to need in the future and what skills need to be taught in order to qualify students for those vocations. That is unlikely to change in the near future.

High schools may be marginally better—or marginally worse—at these tasks. On the one hand, even more than traditional colleges and universities, high schools are largely cut off from market discipline. And while not all high schools operate under a system of tenure for teachers, many do, and those that don’t usually operate under a system of de facto job security. Those two factors combine to create problems for a system of vocational education at the high school level that responds well to the actual labor market. On the other hand, curriculum is more centrally controlled, which, in the context of public schooling, may work as an advantage, since it decreases the ability of teachers to defeat reform proposals and maintain the status quo for self-interested reasons.

It is not impossible for colleges and universities (or for high schools) to do a better job than they currently do at providing vocational training. But expectations should be kept low. In many respects, we have a “socialized” system of education. We should not be surprised to learn that socialism creates problems here, just as it does everywhere else. Faculty and staff tend to be insulated from responsibility for the success of their actions; their paychecks are usually secure no matter what. This

is hardly the kind of incentive that leads to innovative strides. Of course, the problems created by socialism are by no means limited to vocational training. Rather, they are just a little easier to see in this area.

APPRENTICESHIPS AND THE IVORY TOWER

This is where apprenticeships—particularly stand-alone apprenticeships—can come in. No individual person or institution has access to broad and reliable knowledge about where the jobs of the future will be. That knowledge is dispersed among hundreds of thousands of enterprises of various kinds around the country and around the world. That is a significant part of the reason that apprenticeships—learning a vocation from working directly with someone who is already engaged in that trade—can be a good idea. Few know more about whether the number of jobs in a particular category is likely to increase than those already in that job category (or employing individuals in that category). When a sorcerer takes on an apprentice, it is because he anticipates that he is going to need help taking care of his business over the course of that apprenticeship. He may be wrong. But he probably has a better shot at being right than anybody else.

This is particularly the case when it comes to various highly specialized jobs that are so few in number that no high school, college, or university program could ever be organized to turn them out. Where does one go to learn to be an artisan cheese maker? Or a glass blower?⁵ Even the market for printing machinists, picture framers, or yacht builders/repairers may be too small for a traditional or nontraditional college or university program.

Note that my claim is not that colleges and universities are incapable of providing vocational training. They obviously do it—sometimes in partnership with employers or unions and sometimes by themselves. So do high schools. For example, the initial training necessary for entry into certain vocations—lawyer, physician, and so on—has been

thought throughout the 20th century to lend itself well, at least initially, both to classroom teaching and to higher education more generally.⁶ Indeed, most Americans would have a hard time imagining the training for those fields beginning anywhere else.

But it is worth noting that these vocations have not always been taught in a university setting, and since becoming part of the higher education system, they have indeed tended to suffer in exactly the ways identified above. This is not to say that there are not advantages that outweigh these problems, or that these vocations should not be taught on campuses. Rather, the point is that there are predictable problems with doing so.

Consider the example of the legal profession: At the time our nation was founded, the ordinary way to become a lawyer was to apprentice to a practicing lawyer. An apprentice would commit to stay for a specified length of time, during which the practicing lawyer might provide him room and board in return for help in his practice. Obviously, these apprentices or “clerks” would be of greater help the longer they had been with their mentor. It was therefore important that they not leave prematurely.⁷

Over time, some lawyers found they liked the business of training younger lawyers and began to derive a substantial portion of their income from charging their “students” and spending less time in the actual practice of law. The higher the tuition charged, the less important it became to insist that the clerk stay a lengthy period of time. Also during this period, the quantity of written materials that a young person would have to master before he was able to call himself a competent lawyer was expanding. Out of this came some of the early law schools, the most prominent of which was the Litchfield Law School, founded in 1784 by Tapping Reeve. Among his students were Aaron Burr, John C. Calhoun, and Horace Mann.⁸

Some, but not all, of these law schools became affiliated with universities. Those that were so affiliated tended to prosper more than those that were not, perhaps in part because

such an affiliation allowed them to share in the large public subsidies that higher education often enjoys.

Not surprisingly, as legal education evolved away from an apprenticeship model and toward the law school model—and eventually the university-affiliated law school model—it became increasingly disconnected from the legal profession. These days most law professors don’t have that much contact with practicing lawyers. For the most part, they have neither the time nor the incentive to immerse themselves in the goings-on of the bar. Their scholarship has increasingly become aimed at other law professors or at other academics and not at judges and practicing lawyers.⁹

That is not necessarily a problem. There is a large and reasonably stable body of knowledge that must be conveyed to those who aspire to become lawyers and a number of skills that must be honed that do not require up-to-the-minute knowledge of what is happening in the legal profession. Many, perhaps most, lawyers believe that knowledge and those skills are better developed in law school than elsewhere.

But the downside of training future lawyers at universities can be observed in at least two ways. First is the tendency of faculty—undisciplined by the full force of the market—to fail to update the curriculum, or to update it to suit their own interests and eccentricities. This tendency can be exemplified by the persistence of the Rule against Perpetuities (a bafflingly complex limit on the ability of a testator to control his property after death) in classes devoted to property law. Few states even apply the rule anymore, at least not in anything like its original form. Yet law professors love to teach it; it’s like secret knowledge that they can pass on without much effort to each new generation of lawyers. The tendency toward designing a curriculum to suit the interests and eccentricities of law professors can be seen in the decline of the core law school curriculum, with its basic building block courses like Civil Procedure, Constitutional Law, Contracts, Corporations, Criminal Law, Evidence, Professional Responsibility, Property, and Torts. That

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decline is mainly a function of the fact that fewer faculty members want to teach them. Meanwhile, a plethora of esoteric and boutique courses—such as Harvard’s “Alternative Sexual Relationships: The Jewish Legal Tradition” and “Progressive Alternatives: Institutional Reconstruction Today”—have found their way into the curriculum because, well, some law professor feels like teaching them and nobody has an incentive to tell him that he can’t.¹⁰

Second, when a downturn in the market for lawyers hit in 2008, not only did law schools not see it coming, they could not easily respond to it. They had bills to pay, most significantly in the form of salaries for faculty and staff. Cutting the sizes of entering classes was painful and occurred more slowly than it would have if maintaining student quality and ensuring students get jobs had been the only things schools needed to consider.¹¹

These particular problems—difficulty in predicting changes in the job market or in designing an appropriate curriculum—are less likely to occur with a decentralized system of apprenticeships, particularly stand-alone apprenticeships. The teachers will be full-time practitioners of the vocation they are teaching and hence in better touch with the current realities facing that vocation. Such a system will have a quite different problem, as the following section will describe.

ENSURING EMPLOYERS WILL SEE A RETURN ON THEIR INVESTMENT

Apprenticeships are obviously not a uniquely German institution. They used to be the ordinary way in which young people were taught job skills in this country and others.¹² Many of the Founding Fathers apprenticed in their youth. Among the signers of the Constitution, Benjamin Franklin was a printers’ apprentice and Robert Morris apprenticed with a shipping and banking firm.¹³ As late as 1869, the president of the United States was a former apprentice; Andrew Johnson had been apprenticed to a tailor in his youth.¹⁴

In understanding why apprenticeships served a strong need, one will not go too far wrong to conceptualize the problem of vocational education as one of credit. Two problems must always be solved: Who will pay for the upkeep of the student while he learns what he needs to know in order to make a good living, and how can we be sure that the debt will be repaid?

In the 17th and 18th centuries, apprenticeships were essentially a special form of indentured servitude. Like indentured servitudes undertaken for the purpose of securing passage across the ocean, apprenticeships functioned as credit arrangements. If a young man on the other side of the Atlantic wanted to come to America, where he understood (usually correctly) his opportunities would be greater, but he had no money with which to pay for his passage, he could pledge to work in exchange for transportation. To do so, he would sign an indenture promising to “pay” with his future labor for a certain number of years—usually three, five, or seven.¹⁵

No bank would have made a simple, unsecured loan under such circumstances. A free person with a substantial debt could easily disappear into the North American hinterland, never to be seen again. But an indenture could be carried by the ship’s captain to an American port and purchased by a colonist in need of an extra hand. The purchaser could proceed to watch the servant like a hawk. Indentured servants often lived with the family to whom they were indebted.¹⁶

Similarly, if a young man already living in the colonies wanted to learn a trade in order to increase his potential earnings, his best bet was to enter into an apprenticeship, which might last three to seven years. The master (as he was called) would agree to train his apprentices and to provide them with food and shelter or the equivalent in modest wages. Sometimes a tuition payment to the master was necessary to enter into the relationship. During the early part of the apprenticeship, it was expected that the apprentice would likely be more trouble than he was worth. The time

spent training him, combined with his upkeep, would outweigh the usefulness of his labor. But as each year passed, he would become more valuable to the master until his labor exceeded the value of his keep and the master had recouped the effort he had put into the training.

Why would anybody in his right mind sign away his freedom like that? For indentured servants, it was often the only way to get to North America. Similarly, for those seeking job training, apprenticeships were simply the price that had to be paid for that training. They were entered into for the same reasons that student loans are incurred today.

What happened if an apprentice skipped out on his master before his apprenticeship was over? *He would be jailed*, of course. Just as newspapers of the period frequently contained advertisements calling for the return of runaway slaves and indentured servants, they frequently carried advertisements calling for the return of runaway apprentices.¹⁷ Indeed, Benjamin Franklin was a runaway apprentice (though his master was his own brother).¹⁸

It is entirely clear that 21st century Americans have no interest in jailing runaway apprentices. A legislative proposal calling for the arrest and detention of individuals in breach of their apprenticeship contracts would rightly be met with jeers and guffaws. Similarly, it is black-letter law that modern courts will not ordinarily order an individual to perform a contract for personal services.¹⁹ Instead, a jilted employer must, if anything, seek monetary compensation—a useless remedy against a runaway apprentice, who is overwhelmingly likely to be judgment proof.²⁰ Judicial enforcement of an obligation to work for a specified period of time pursuant to an apprenticeship contract is thus not an option.

But we need to understand that something is lost when apprenticeships cannot be effectively enforced. One of the prices of “free labor”—that is, labor that is free to move from one job to another at will—is that it increases the risk to an employer who otherwise might be inclined to invest in employees’ training. That in turn decreases the likelihood that

the employer will make that investment. A system of purely free labor is usually going to be a system of low employer investment in employee training. They are two sides of the same coin.²¹

It is no fluke that the “employer” that is best known for investing in the vocational training of its “employees” is the U.S. military.²² Alone among providers of intensive on-the-job vocational training in the modern era, the military has little fear that the beneficiaries of training will skip out or go to work for a competitor. If they do, they can be put in the slammer. If modern apprentices in this country (outside of the military) can’t be jailed, then other mechanisms are necessary to ensure that employers are compensated for their investment in their apprentices.

The problem of the runaway apprentice is not a hypothetical one in the modern era. Efforts to create a German-style apprenticeship pilot program in the North Carolina building trades resulted in just what one would expect. After learning the fundamentals of their vocations, the apprentices defected to competing employers who were able to offer higher wages than the original employers precisely because they did not have to shoulder the burden of training the apprentices. The competing employers were able to free ride on the efforts of the original employers.²³

WHAT TO DO WITH MODERN RUNAWAY APPRENTICES

Germany has solutions to the problem of the “runaway apprentice.” First and most obvious is strong unions.²⁴ Labor unions in Germany are frequently powerful and national in scope. If an apprentice leaves his union-sponsored apprenticeship prematurely, he may forfeit his ability to work in that vocation anywhere in the country. Add to that the fact that labor contracts frequently apply across the industry, and hence, wages will be the same, regardless of employer.²⁵ The apprentice therefore has little incentive to leave, and his employer is thus better able to recoup the

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investment it has put into his training than its American counterpart would be.

Not all German apprenticeships are union-sponsored, but those that are not frequently are linked to earning a license or certificate. That license or certificate may be necessary to have the right to engage in the vocation. Again, therefore, the apprentice has little incentive to leave his apprenticeship prematurely.²⁶ If he does, he will have wasted his time.

Strong unions, industrywide labor contracts, and professional licenses of various sorts may be useful to making the German system of apprenticeships work, but they likely will not be appealing to many Americans. Opinion has always been divided on the desirability of strong unions, but it is unlikely that many would allow their opinions to be driven by the effect that a policy change would have on apprenticeships. As for professional licenses, the zeitgeist is seemingly very much in the opposite direction—that too many vocations, from florists in Louisiana to interior designers in Washington, D.C., already demand a professional license.²⁷ Too often these licenses are a means to protect not the public from harm but those already in business from competition. Even the Obama administration has noted the problems with excessive licensure requirements.²⁸ The best that can be said here is that those vocations that are already dominated by unions or already require a professional license are better bets for the apprenticeship model than those that are neither unionized nor licensed.

Note that this problem won't go away just by using such happy terms as “partnership” between employers and educational institutions to promote apprenticeships.²⁹ Such corporate-speak sounds nice, at least to the ear of some people, but it does not in itself change the fundamentals of the problem: When the party providing the education (and footing the bill for it) is the state, with no direct and immediate stake in the success of that training, it does a poor job. When the party footing the bill is a private employer and does have such a stake, he will hesitate to invest in the trainees

unless he is confident they will get the benefit of that training.

Under some proposals, employers would commit to training a certain number of “interns” (paid or unpaid) and perhaps to hiring a certain number of interns upon graduation. They would also help prescribe the curriculum that the interns would be expected to follow at the partner educational institution. But if the participating employers provide the resources for the program in any significant way, the “runaway apprentice” problem will still exist. The employers will soon realize that the students emerging from the program are going to work for their competitors or simply for other employers. Without some mechanism to prevent this, the employers' willingness to continue funding the program or to work to make the internships true learning experiences would seem doubtful.

Fortunately, there are at least a few partial solutions to the problem of how to protect the employers' investment in their apprentices' education. While none can be classified as anything like “the” answer, each may contribute to the ability of the American economy to provide more apprenticeship opportunities than is currently the case.

One partial solution might be to ensure that apprentices can borrow money (e.g., through student loans) to pay for their own instruction or to post a bond that would be forfeited if they left their stand-alone or school-sponsored apprenticeships before their employers had recouped their investment. This would enable apprentices who do not have the assets at the beginning of their training to nonetheless undertake an appropriate apprenticeship while at the same time creating the right incentives for both sides to enter into an agreement and fulfill their obligations under it.

Another partial solution might be to structure the apprentice's compensation in such a way as to provide an incentive to stay in the job for a while. End-of-year bonuses can be a useful means, especially if they can be staggered in such a way that the employee is already on his way to earning another end-of-the-year

bonus by the time he receives his first one. Under such circumstances, the employee is free to leave if he wants to, but he will tend to want to stay if he sees an end-of-the-year bonus coming his way. If he is already halfway toward earning another bonus when he receives his first bonus, he may decide to stay yet another year. But end-of-the-year bonuses are not particularly effective when dealing with employees who are hired without any significant job skills. If an employee's productivity is not high enough to justify wages that are substantially above minimum wage, the employer will not be in a position to structure the employee's wages such that he receives part of his wages as an end-of-the-year bonus. Doing so can put the employer out of compliance with minimum wage laws. Apprenticeship-friendly modifications to the law may be useful to make this work.

Another small piece of an ideal American-style apprenticeship program might be non-compete agreements. If enforced by the courts, such agreements will at least prevent the more egregious efforts by competitors to free ride on employers' efforts at training apprentices.³⁰ Again, special rules for apprenticeships may be useful.

PUBLIC SUBSIDIES FOR APPRENTICESHIPS: DANGEROUS, EQUALIZING, OR BOTH?

There is an additional possibility: public subsidies for apprenticeships. They can be provided either through (1) subsidies to educational institutions working in partnership with employers or (2) some version of a voucher or a tax subsidy.

This is a touchy subject for many who support the general idea of apprenticeships as an alternative to a traditional college or university education, but who oppose the creation of more public subsidies and entitlements. With such subsidies and entitlements would come new special interests who would likely engage politically to expand the benefits they receive. And while the cost to the public fisc might be

mitigated to some extent by a reduction in the number of students attending traditional colleges and universities, it will not be wholly mitigated, since the odds that public subsidies will be reduced on a per student basis are slim.³¹ Moreover, not all (and maybe not even most) of the students who take advantage of subsidies for apprenticeships will have otherwise attended a college or university.

That said, state and federal governments already invest heavily in the education of the college-bound—a group that is generally privileged. They neglect the rest of our young people, some of whom might correctly view an apprenticeship (or a combination of apprenticeship and higher education) as a better route to fulfilling their hopes for the future.³² This argument presupposes an expansion in the number of young people benefiting from public subsidies, but in order to equalize and expand options.

Some have called for apprenticeship subsidies to take the form of more “partnerships” between employers and public colleges and universities, whether at the community college level or elsewhere. But in addition to the problems outlined earlier, other problems are likely to crop up. First, the private partners involved are likely to be large corporations. If funding comes from public coffers, that starts to sound like an unjustified public subsidy to those large corporations. It is unlikely that small employers could ever hope to have their hiring needs catered to so carefully. Small employers' needs are varied; colleges and universities are unlikely to take advantage of economies of scale in training their future employees. Small employers are also less well-organized than large employers and hence are less likely to have the clout necessary to get noticed by a college or university.

In addition, such a program would fail to take advantage of one of the aspects of apprenticeships that is most intriguing: their usefulness in training individuals in highly specialized jobs for which there are only a few, if any, openings in any given year—like rare-book conservator or antique-map dealer. Traditional colleges and universities cannot easily devise a

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curriculum that would graduate students fully trained to take on such jobs. Nontraditional schools oriented toward vocational education can't do it either. The market is just too thin.

A direct subsidy to stand-alone apprenticeships (whether it takes the form of a voucher for the apprentice to “spend” or a tax subsidy for employers who take on an apprentice) may be less vulnerable to those objections. Under such a program—which could be funded at the state level, allowing “laboratories of democracy” to work and mitigating against federal control—a student or recent graduate might be given the opportunity to use his subsidy to enter into an apprenticeship contract of two to four year's duration.³³

One serious concern is the employer's good faith. If the employer is simply given a very large sum of money to subsidize the cost of taking on an apprentice, who is to say that he won't simply use it to decrease the cost of labor without actually conveying any useful skills to his apprentice? One might hope that the would-be apprentice would be judicious in his choice of employers and use the apprenticeship only where he is certain he will gain useful skills. Most of them probably would. But the cold truth is that we are dealing with inexperienced individuals who would be making judgments about employers about whom they have little information.

The temptation may be very strong to do something to help. A bureaucracy similar to that which oversees higher education today, complete with extensive regulation and accreditors, will certainly be advocated to ensure that only legitimate apprenticeships are offered. But that is hardly a happy thought. In Germany, one must have a license to take on apprentices, and a thriving bureaucracy does indeed exist to define exactly what and when apprentices must learn during their apprenticeships. It is all excruciatingly structured and centrally controlled, and with bureaucratic control come inefficiencies and blunted responsiveness to changing circumstances. But responsiveness to changing economic conditions is perhaps the greatest benefit of apprenticeships.

An alternative may be to make sure that if apprenticeship subsidies are created, they are kept modest. Instead of creating a bureaucracy charged with the responsibility for ensuring that employers are offering legitimate apprenticeships, policymakers could create incentives that would minimize the likelihood of abuse, and then put the program on automatic pilot. Consider, for example, a \$5,000 voucher for a two-year apprenticeship. Like most higher education programs, it could be funded and administered at the state level (thus further decreasing the likelihood that a large bureaucracy would grow up around it). To qualify, an employer would have to promise to increase substantially the salary of the apprentice in the second year. This is something that can be easily verified through tax forms that need to be filed with the government anyway. At the end of the two years, if both employer and apprentice have persevered, they get to split the \$5,000.

The virtue of such a program is that it is unlikely the employer would enter into such an arrangement without intending to impart valuable skills of some kind. It is also unlikely the apprentice would enter into such an agreement if he was already capable of commanding wages higher than those offered by the employer for the first year. Suppose, for example, a high school graduate with no marketable skills is hired as an apprentice locksmith at an initial minimum wage of \$12/hour or \$24,960/year. In the second year, the employer would be required to raise the apprentice's salary by 20 percent in recognition of his increased skill. If they both hang on until the end of the second year, they each get \$2,500. The amounts are not large, and the effect is not likely to be overwhelming. But it may be just enough to create the right incentives without creating the need for an overbearing bureaucracy.

CONCLUSION

Whether any of these thoughts have merit will be up to future policymakers. I will leave it at this: encouraging apprenticeships as an

alternative or supplement to higher education, which is clearly serving many people poorly or not at all, is certainly an idea worth pursuing. And some states are already experimenting in this area.³⁴ But if the ways in which apprenticeships are cultivated are not well thought out, they will not take root and flourish in the American context. Indeed, they could have negative effects. Creating apprenticeship opportunities is going to require some real thought.

NOTES

1. See Tamar Jacoby, “Why Germany Is So Much Better at Training Its Workers,” *Atlantic*, October 16, 2014, <http://www.theatlantic.com/business/archive/2014/10/why-germany-is-so-much-better-at-training-its-workers/381550/>. Jacoby notes that German-style apprenticeships have been “enchant[ing] employers, educators, and policymakers on both sides of the aisle,” but counsels caution regarding the idea.
2. Tamar Jacoby puts the figure at “fewer than 5 percent of young people.”
3. According to the National Center for Education Statistics, the six-year graduation rate for full-time undergraduates who began at a four-year degree-granting institution in the fall of 2008 was 60%. See Scott A. Ginder, Janice E. Kelly-Reid, and Farrah B. Mann, “Graduation Rates for Selected Cohorts, 2006–11; Student Financial Aid, Academic Year 2013–14; and Admissions to Post-Secondary Institutions, Fall 2014,” NCES 2015-181, U.S. Department of Education, December 2015, <http://nces.ed.gov/pubs2015/2015181.pdf>. The American Association of Community Colleges reports that 38% of those who start at a two-year public institution complete the program within six years (26.1% at the same two-year institution, 3.2% at a different two-year institution, and 9.8% at a four-year institution.) Jolanta Juszkiewicz, “Trends in Community College Enrollment and Completion Data, 2015,” American Association of Community Colleges, March 2015, http://www.aacc.nche.edu/Publications/Reports/Documents/CCErollment_2015.pdf.
4. For a significant example of an academic freedom and tenure policy and of a shared governance policy, see American Association of University Professors, “Statement of Principles on Academic Freedom and Tenure,” 1940, <https://www.aaup.org/report/1940-statement-principles-academic-freedom-and-tenure>. It states that “[a]fter the expiration of a probationary period, teachers or investigators should have permanent or continuous tenure, and their service should be terminated only for adequate cause, except in the case of retirement for age, or under extraordinary circumstances because of financial exigencies.” See also American Association of University Professors, the American Council on Education, and the Association of Governing Boards of Universities and Colleges, “Statement on Government of Colleges and Universities,” 1966, <https://www.aaup.org/report/statement-government-colleges-and-universities>. It says that “[t]he faculty has primary responsibility for such fundamental areas as curriculum, subject matter and methods of instruction, research, faculty status, and those aspects of student life which relate to the educational process.”
5. Ashley A. Smith, “Sole Provider,” *Inside Higher Ed*, August 2, 2016, <https://www.insidehighered.com/news/2016/08/02/research-universities-rely-salem-community-college-glass-technicians>. The article states that Salem Community College in New Jersey currently has the only program in the country for scientific glass technology. Salem is located in South Jersey, an area that for centuries had a skilled glassblowing industry. While the program also serves those who are interested in the artistic side of glass blowing, its curriculum was not designed around that purpose.
6. Education for medical students is complex, because internships and residencies are arguably a form of apprenticeship. Scientists are yet a different case, since graduate study also is structured in a way that reflects the apprenticeship model. Graduate students learn by working alongside academics, who hold the kinds of jobs the graduate students aspire to have.

“If the ways in which apprenticeships are cultivated are not well thought out, they will not flourish.”

7. See Richard L. Abel, *American Lawyers* (New York: Oxford University Press, 1989).
8. See *ibid.* and Marian C. McKenna, *Tapping Reeve and the Litchfield Law School* (Dobbs Ferry, NY: Oceana Publications, 1986).
9. A classic discussion of this came in the form of articles by two federal judges, both of whom had spent large parts of their careers as academics. See Harry T. Edwards, “The Growing Disjunction between Legal Education and the Legal Profession,” *Michigan Law Review* 91 (1992): 34–70; Richard A. Posner, “The Deprofessionalization of Legal Teaching and Scholarship,” *Michigan Law Review* 91 (1992): 1921–28.
10. See Harvard University’s Course Catalog, <http://hls.harvard.edu/academics/curriculum/catalog/default.aspx?o=69792>; <http://hls.harvard.edu/academics/curriculum/catalog/default.aspx?o=69946>.
11. See Peter Schworm, “Waning Ranks at Law Schools: Institutions Fear Recession’s Effect Could Be Lasting,” *Boston Globe*, July 6, 2014, <https://www.bostonglobe.com/metro/2014/07/05/law-school-enrollment-fails-rebound-after-recession-local-colleges-make-cuts/fR7dYqWbSrOeXPbS9ibqtN/story.html>; Natalie Kitroeff, “The Smartest People Are Opting Out of Law School: Fewer People with High Test Scores Are Going to Law School, and Low Performers Are Filling Their Slots,” *Bloomberg*, April 15, 2015, <http://www.bloomberg.com/news/articles/2015-04-15/the-smartest-people-are-opting-out-of-law-school>.
12. W. J. Rorabaugh, *The Craft Apprentice: From Franklin to the Machine Age in America* (New York: Oxford University Press, 1986).
13. Carl van Doren, *Benjamin Franklin: A Biography* (New York: Viking Press, 1938); Charles Rappleye, *Robert Morris: Financier of the American Revolution* (New York: Simon and Schuster, 2010).
14. See David O. Stewart, *Impeached: The Trial of President Andrew Johnson and the Fight for Lincoln’s Legacy* (New York: Simon and Schuster, 2010).
15. Somewhere between one-half and two-thirds of all white immigrants to the American colonies from the mid-17th century to the Revolutionary War came as indentured servants—either voluntarily or as convicts. Convicts were only about 10 percent of the total number of indentured servants. Abbot Emerson Smith, *Colonists in Bondage: White Servitude and Convict Labor in America, 1607–1776* (Chapel Hill, NC: University of North Carolina Press, 1947), p. 336; Edwin J. Perkins, *The Economy of Colonial America*, 2d ed., (New York: Columbia University Press, 1988), p. 93.
16. David W. Galenson, “The Rise and Fall of Indentured Servitude in the Americas: An Economic Analysis,” *The Journal of Economic History* 44 (1984): 3. Galenson writes that “[E]xisting English capital market institutions were patently inadequate to cope with the problem, considering difficulties that included the high transactions costs entailed in making loans to individuals and enforcing them at a distance of 3,000 miles.”
17. Farley Ward Grubb, *Runaway Servants, Convicts and Apprentices Advertised in the Pennsylvania Gazette, 1728–1796* (Baltimore: Genealogical Publishing Company, 2011). See also Stanley Lebergott, *The Americans: An Economic Record* (New York: W. W. Norton & Company, Inc., 1984), p. 27; Edwin J. Perkins, *The Economy of Colonial America*, 2nd ed., p. 91. Writes Perkins, “The indenture system was, for up to 90% of its participants, a market-driven, unexploitative arrangement that financed the movement of thousands of willing migrants to the colonies.” See also Statement of Gail Heriot in U.S. Commission on Civil Rights, “Report on Sex Trafficking: A Gender-Based Violation of Civil Rights,” September 2014, p. 65, http://www.usccr.gov/pubs/SexTrafficking_9-30-14.pdf.
18. van Doren, *Benjamin Franklin: A Biography*.
19. Nathan B. Oman, “Specific Performance and the Thirteenth Amendment,” *Minnesota Law Review* 93 (2009): 2020, 2022. Oman states that “[a]ll first-year law students learn the rule that ‘[a]

promise to render personal service will not be specifically enforced”; Restatement (Second) of Contracts § 367(i). Among the more common reasons for this is the difficulty of enforcing a mandatory injunction against an unwilling defendant. An employee who doesn’t want to be an employee will find ways to make his employer sorry that he ever asked a court to force him back to work. See *Lumley v. Wagner*, 42 English Reports 687 (1852).

20. The whole reason an individual might enter into an apprenticeship is that she wishes to learn a vocation, usually because she needs to earn a living and is not in a position to earn an adequate one without learning some marketable skills first. The odds that she will have assets that can be used to satisfy a judgment are very low, especially given the limitations on wage garnishment and the exemptions from debt collection that states usually impose. See Stephen G. Gilles, “The Judgment-Proof Society,” *Washington & Lee Law Review* 63 (2006): 603–715. As Gilles demonstrates, judgment-proof status is hardly unique to young adults who are just learning to make a living; it is widespread.

21. Christopher T. Wonnell, “The Contractual Disempowerment of Employees,” *Stanford Law Review* 46 (1993): 87–146.

22. For a listing of careers for which the military provides all or some training, see <http://www.careersinthemilitary.com>.

23. Conversation with Wilfried Prewo, PhD, who was familiar with the North Carolina project. See also Wilfried Prewo, “The Sorcery of Apprenticeship,” *Wall Street Journal*, February 12, 1993.

24. According to the Organisation for Economic Co-operation and Development, in 2000, 26 percent of German employees were union members, while in the United States only 13 percent were. Countries Compared by Labor, Trade Union Membership, International Statistics at NationMaster.com, <http://www.nationmaster.com/country-info/stats/Labor/Trade-union-membership>.

25. Francine D. Blau and Lawrence M. Kahn, “Institutions and Laws in the Labor Market,” in David Card and Orley Ashenfelter, eds., *Handbook of Labor Economics*, vol. 3 (Amsterdam, Netherlands: Elsevier, 1999), p. 1419.

26. Even jobs for which one might not expect a license or certificate to be required often require one. *Wikipedia’s* entry for “apprenticeship” (<https://en.wikipedia.org/wiki/Apprenticeship>) describes German apprenticeships in the area of business and administration this way:

The precise skills and theory taught on German apprenticeships are strictly regulated. The employer is responsible for the entire education programme coordinated by the German chamber of commerce. . . . Thus, everyone who had completed an apprenticeship e.g., as an industrial manager (*Industriekaufmann*) has learned the same skills and has attended the same courses. . . . Someone who has not taken this apprenticeship or did not pass the final examinations at the chamber of industry and commerce is not allowed to call himself an *Industriekaufmann*. Most job titles are legally standardized and restricted. An employment in such function in any company would require this completed degree.”

27. See Paul Avelar, “Untangle Occupational Licensing,” *National Review*, June 17, 2014, <http://www.nationalreview.com/article/380597/untangle-occupational-licensing-paul-avelar>.

28. See White House, “Occupational Licensing: A Framework for Policymakers,” July 2015, https://www.whitehouse.gov/sites/default/files/docs/licensing_report_final_nonembargo.pdf.

29. These days the term “university-corporate partnerships” is a staple of corporate-speak. See, for example, Frank McCluskey, “The Six Elements of a Successful University-Corporate Partnership,” *The EvoLLLution*, September 5, 2012, <http://evollution.com/opinions/the-six-elements-of-a-successful-university-corporate-partnership/>.

30. In the classic pair of cases, *Lumley v. Wagner*, 42 English Reports 687 (1852), and *Lumley v. Gye*, 118 English Reports 749 (Q.B. 1853), the courts declined to order opera singer Wagner to perform her contract, but did forbid her from singing for a competing opera hall. On the other hand, overly broad non-compete agreements will not always be enforced.

31. This is both because traditional colleges and universities would lose some economies of scale as the numbers of their students decreased, and because colleges and universities tend to have a fair amount of political clout to keep subsidies coming.

32. As discussed earlier, low college completion

rates suggest that many who have tried college may be better suited for apprenticeships.

33. One important advantage of funding at the state level is that it allows for more experimentation. The first state to modify its laws in an effort to encourage more apprenticeships is unlikely to devise the perfect policy.

34. See Angela Hanks and Ethan Gurwitz, “How States Are Expanding Apprenticeship,” Center for American Progress, February 9, 2016, <https://www.americanprogress.org/issues/labor/report/2016/02/09/130750/how-states-are-expanding-apprenticeship/>.

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