Home Depot Syndrome, the Purple Squirrel, and America's Job Hunt Rabbit Hole

As America strives to regain its economic footing, good people can't find work even while companies struggle to find employees. How can this be happening? Wharton's Peter Cappelli has a provocative answer. By Trey Popp

On the morning of November 6, 2012, as Americans filed into voting booths at the end of an election campaign waged largely on the issue of jobs and the lack of them, the US Bureau of Labor Statistics released its regular monthly report on job openings and labor turnover.

The JOLT report is a crude measure of employment trends. Unlike the unemployment rate or the weekly tally of jobless claims, it sheds no light on the travails of people looking for work. But the November edition (which reported on September data) contained a statistic bound to madden many job seekers. It was the number of unfilled job openings as of the last business day of the month: 3.6 million.

That total was "essentially unchanged" from the month before.

There are a number of ways to interpret, or misinterpret, that figure. The 3.6 million jobs that were available at September's end weren't just the same ones left over from August. The number of new hires was even greater in each of those months, as was the number of "separations." There's a lot of churn in the labor market.

In one sense, those 3.6 million vacancies were a positive sign. The number of positions available had steadily climbed from its nadir in July 2009, when there were just shy of 2.2 million. So at least businesses seemed increasingly inclined to hire. And not just at fast-food counters. There were some 650,000 posted opportunities in professional and business services, well over 200,000 in manufacturing, and nearly 600,000 in trade, transportation, and utilities.

Yet for every one of those openings, there were still somewhere between three and four unemployed Americans eager for work—or nearly six, if you counted people working part-time because they couldn't find a full-time job. And in that light, you could forgive a resume-scattering job hunter for perceiving something mysterious—if not vaguely menacing—about the idea that 3.6 million jobs were, theoretically at least, there for the taking.

In fact there is something pernicious going on, because another thing is happening at the same time. A lot of job openings are going unfilled, and when American employers are asked why, their most common answer is a lack of qualified applicants.

You've probably heard this before. The idea that a "skills gap" is what ails the US labor market has become so widespread as to achieve one of the rarest conditions in contemporary American life: embracement by both political parties. As Mitt Romney put it in a campaign document: "One of the troubling features of the American economy today is the mismatch between the skill set of the American workforce and the requirements of the employment market. The gap between the two lies at the heart of our jobs crisis." The GOP candidate might as well have quoted President Obama's 2012 State of the Union address: "I also hear from many business leaders who want to hire in the United States but can't find workers with the right skills. Growing industries in science and technology have twice as many openings as we have workers who can do the job."

There's just one problem with this idea, according to longtime Wharton professor Peter Cappelli. It may largely be a myth.

Cappelli, the George W. Taylor Professor of Management, is a connoisseur of job-hunting stories gone wrong. One of his favorites was related to him by someone in a company whose staffing department failed to identify a qualified candidate for a "standard engineering position"—out of 25,000 applicants. Another comes from a software developer who was turned down for a job that involved operating a particular brand-name software-testing tool—despite the fact that he had actually *built* just such a tool himself. Adding insult to inanity, another time he was deemed unqualified because "I didn't have two years of experience using an extremely simple database report formatting tool, the sort of thing that would require just a couple hours for any half-decent database wrangler to master."

ILLUSTRATION BY GRAHAM ROUMIEU


CERTIFICATION
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BLOOD
TEARS
SWEAT

Even if your own employment situation is rosy, you could probably add similar stories of your own. Perhaps it's a spouse in mid-career transition who keeps running up against web-based applicant-management systems that request irrelevant minutia like high-school GPA. It could be a sibling flummoxed by an inflexible offer for an advanced-practice nursing job that pays less than an entry-level RN can make doing shift work. Or maybe you're despairing over your daughter's chances of scoring an unpaid internship as a stepping stone to full-time work—in which case, don't read the next sentence. According to Penn Career Services director Patricia Rose, internships have become the hottest new items at elite prep-school fundraiser auctions, where parents are literally buying plum summer positions for their kids.

Anecdotes like these, Cappelli says, are just the tip of an iceberg of troubling data. In his latest book, *Why Good People Can't Get Jobs: The Skills Gap and What Companies Can Do About It* (Wharton Digital Press, 2012), he explores America's dysfunctional jobs market and concludes that the skills gap—at least as it's most commonly formulated ("Schools aren't giving kids the right kind of training. The government isn't letting in enough high-skill immigrants. The list goes on and on")—isn't really to blame.

"The real culprits," he contends, "are the employers themselves."

Cappelli has studied labor markets, and this aspect of them in particular, from just about every imaginable angle. In the late 1980s he worked on the US Secretary of Labor's Commission on Workforce Quality and Labor Market Efficiency. In the 1990s, he co-directed the National Center on the Educational Quality of the Workforce within the US Department of Education. For a period during the 2000s, he was senior advisor for employment policy to the Kingdom of Bahrain. He's a distinguished scholar at Singapore's Ministry of Manpower. At Wharton, where he has been a professor since 1985, he directs the Center for Human Resources.

Why Good People Can't Get Jobs is essentially a story about human resources—how companies succeed and fail at finding and retaining talent. The book (and the larger body of research behind it, which he delved into in a wide-ranging conversation for this article) contains lessons for employers, advice for job-seekers, and important implications for policymakers.

Perhaps the best place to start is with the humans themselves. What skills do companies really want from them, anyway? And are American firms facilitating the acquisition of those skills—or standing in the way?

On Skills and Schooling

The notion that America's education system is failing to equip the workers of tomorrow is at least as old as the seminal 1983 government report *A Nation at Risk*, which memorably quipped, "If an unfriendly foreign power had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war." Today's CEOs regularly blame schools and colleges for their difficulties in finding adequately prepared employees. The complaint shows up in survey after survey, as Cappelli shows in his book, and it is substantially more common among American employers than their peers in most other developed and developing economies.

But do these surveys "show that the United States is among the world leaders in skills gaps," Cappelli asks, "or simply in employer whining and easy media acceptance of employer complaints?"

He thinks a body of lesser-reported studies contains the answer. "If you look at the studies of hiring managers and what *they* want, they're not complaining about academic skills," Cappelli says. "You hear the business spokespeople saying this, but the actual hiring managers are not saying this now. And in fact they've never, in modern times, said that."

In other words, there's a disconnect between the people who actually do the hiring and the C-suite executives who get asked about it.

"The spokespeople at the very top don't know what's going on," Cappelli argues. "But there's a popular story that explains what's going on, and that story is: schools are failing."

Cappelli reckons there are two main reasons this story has staying power. "One reason it's popular is that it allows you to advocate for school reform, which sounds like a socially desirable sort of thing to do. And so all these different groups like this story [too], because it works for the people who like to think that they're interested in reforming society and improving education. What's not to like about that?

"It also works for employers who are saying: This is not our problem. It's a problem the public sector ought to solve for us. They ought to get better at providing the things that we need, and then we don't have to do anything—we don't have to train, we don't have to adjust our expectations."

The problem with the story, Cappelli says, "is there's no evidence for any part of it." And what's more, it's hurting the very companies that espouse it.

More on that second point later. Before we get there, what are hiring managers complaining about? For the most part, Cappelli says, work attitudes and lack of on-the-job experience—neither of which can be fairly laid on schools. When you dig deeper into the surveys of talent shortages, a similar theme emerges. Cappelli notes that the top 10 hardest-to-fill jobs globally in 2011, according to a well-regarded survey from the Manpower Group, included positions such as *laborer* ("about as unskilled a job category as we can get"), *production operator* ("a factory job, typically semiskilled"), *technician* and *skilled trade* ("those skills are learned largely on the job"), and *sales rep.*

Of the top 10, he reckons that *engineers* and *accounting/finance* workers learn their skills largely in college classrooms. The same is probably true now of IT staff—but wasn't always, which brings us to another of Cappelli's insights.

The Home Depot Syndrome

In a 2011 op-ed article for *The Wall Street Journal*, Cappelli remarked on a telling statistic from the Silicon Valley tech boom of the 1990s: only 10 percent of the people in IT jobs had IT-related degrees. But a lot of the same people would probably have a hard time landing similar jobs today, because employers have increasingly adopted what Cappelli calls "a Home Depot view of the hiring process, in which filling a job vacancy is seen as akin to replacing a part in a washing machine.

"We go down to the store to get that part," he explains, "and once we find it, we put it in place and get the machine going again. Like a replacement part, job requirements have very precise specifications. Job candidates must fit them perfectly or the job won't be filled and business can't operate."

ADDISON GEARY

"Unlike a machine part, no perfect fit exists between applicants and job requirements."

The problem with this approach, he says, is that "unlike a machine part, no perfect fit exists between applicants and job requirements." In his book, Cappelli cites a series of studies by the National Institute of Economic and Social Research in London that investigated how companies "making almost identical products but operating in different countries got their work done." US firms used more engineers and unskilled workers, for instance, than German firms, which relied more heavily on skilled craftsmen. In other words, there are multiple ways—and multiple kinds of employees a company might rely on—to accomplish a given task. Narrowly drawn job criteria may be a sign that a company is ignoring possibilities for alternative, and perhaps even more effective, operational strategies. To the extent that they slow down the hiring process, a company might stand to benefit from adopting a more flexible approach to hiring.

There's a simple lesson there. "When employers have a vacancy to fill," Cappelli writes, "they have many options for filling it." That sounds like common sense, but it runs us smack into a new reality of the contemporary hiring process: common sense is exactly what software-based hiring systems lack.

The Software Ate My Job Application

Remember the story about the company that couldn't find a garden-variety engineer out of a deluge of 25,000 applicants? Is such a thing really possible?

More possible than you might think, Cappelli says.

If you've applied for a job through a web-based interface that requests everything from your most recent job title to your Excel proficiency to your grades in high school, you may have discovered this the hard way. In many common applicant-screening programs, each question functions like a gate. If your answer to any of them doesn't fit the precise criteria set by the company, that gate slams shut and the software deems you unqualified. Alternatively, some systems rely on automated keyword searches of resumes, rejecting those that don't produce exact matches with job descriptions that are by turns overly detailed or hopelessly vague.

It's easy to see the natural tendency of a hiring manager to keep tacking on questions or keyword criteria. The most important credentials for a software engineer, for instance, might include Microsoft certification, proficiency with JavaScript, and so many years of experience. But why not specify a minimum typing speed while we're at it, or a cut-off point for high-school GPA? All it takes is a click.

In this manner, a company can hamstring its own applicant search pretty quickly—even if its job posting draws 25,000 responses. "All one needs for that to happen are 14 requirements in the model just discussed, many fewer if some hurdles are highly specific," Cappelli notes. And as crazy as it sounds, mundane choices like how a job-seeker formats his resume can also hurt his chances.

(For Cappelli's advice on "beating" the software, see sidebar on page 41.)

Not everyone shares Cappelli's view of software-based hiring. Gary Truhlar WG'74 is the executive director of human resources at Penn, which is the largest private employer in Philadelphia.

"When I first came to Penn, we would post job opportunities on seven bulletin boards," Truhlar recalls. "They were xeroxed, behind date, and physically posted on bulletin boards—so if you weren't on campus, you didn't know about those jobs. We would run a small subset in the *Inquirer*, but that's very expensive. So the good side of the technology, posting on the web, is that as soon as HR knows about the job, the world knows about the job."

That translates into a broader and more diverse applicant pool. Job postings at Penn frequently attract 300 or more candidates. The dramatic expansion of applicant pools has presumably led to a more talented workforce.

"The downside," as Truhlar points out, "is that anybody can apply for anything. So, Peter's work notwithstanding, you'll have a secretary applying to be a vice president."

Penn uses a web-based applicant management system to handle the volume—but, Truhlar stresses, not one that relies on keyword searches or binary gates that stack the deck toward rejection. "We are concerned that applicants are not eliminated because of the system limitations created by certain application providers," he notes. So the system Penn uses—called PeopleAdmin—is designed to assign scores to applicants, not simply render them qualified or unqualified. So even if no one scores 100, a hiring officer can use the scores as a starting point for making more nuanced judgments.

The notion that a firm hiring engineers would let 25,000 people apply without finding one "stretches my imagination," Truhlar says.

"We just filled a data-security and privacy position," he adds by way of example. "And you can kind of do the same thing. You can say, Do you have five years of experience in the data security business? Do you have Microsoft certification? And that's terrific—that's probably absolutely what you need. Well, then you can make the mistake of saying, I need Microsoft x.3.7, and I need Symantec version 8.2.1—and that's how you get into a situation where 25,000 people didn't qualify. And I would say those HR people are useless, if that's all they're doing is a keyword search and they can't find anybody."

Cappelli would agree, but perhaps go one step further by noting what he sees as a major reason HR departments don't succeed: the departments themselves have been driven to the brink of extinction.

Human Resources in Bad Decline

"One of the things which is a great puzzle," Cappelli says, "is that 50 years ago in the US, most big employers were much more sophisticated about hiring than they are now. So they've actually gotten worse at this."

The body of knowledge about what predicts job performance goes back to World War I, Cappelli says, "and it's just being systematically ignored."

Take the case of high-school GPA. "We know something about this!" he says. It "predicts nothing about your job performance—especially 30 years later. Why are they bothering to ask that? We know it doesn't work."

He has a ready answer to that question: "the gutting of the human-resource function—cutting people out, cutting staff out. The people who were trained in this stuff, and used to know it, are all gone now."

This is arguably the product of systemic changes to the US labor market that gained pace in the 1980s. As high unemployment rates from the late 1970s persisted into the following decade, companies increasingly had at their disposal a labor pool that was more experienced than ever before.

"A generation ago you had to hire out of college and train people," Cappelli explains, singling out firms like IBM and General Electric, which aimed to retain employees for life. "Nobody hopped jobs. But as companies started to lay people off, and there were lots of skilled people around and lots of white-collar workers, lots of managers, you could sort of hire whoever you wanted. It wasn't very hard. So you maybe didn't have to be that sophisticated at recruiting and selection" anymore.

Some of the pressures that touched off the cycle of layoffs are well known, like increased global competition, and the perceived need for companies to respond more nimbly to changing consumer preferences (which could make replacing employees seem more efficient than taking the time to train them). But there are other salient factors that are underappreciated. Cappelli outlined one in a 1997 volume titled *Changes at Work*, in a chapter co-written with Wharton's Michael Useem, now the William and Jacalyn Egan Professor of Management: the growing concentration of stock ownership among large institutional holders, like pension funds.

Traditionally, such investors expressed dissatisfaction with a company's performance by simply selling their stock. But with the rise of indexed holdings—in which funds are invested according to preset formulas (for instance, mirroring the composition of the S&P 500)—and the sheer size of share blocks under ownership, it became harder for big institutional investors to shed unwanted stock positions. Consequently, they instead began pressuring companies to change, with a narrow focus on driving up share performance over shorter time periods.

"Institutional holders were now quicker to insist that the company find new strategies and structures to produce," Cappelli and Useem noted. "And the formulas they found concentrated on restructuring the companies and slashing jobs. One study of share-price reactions to company layoff announcements from 1979 to 1987 illustrates the thrust of the investors' message for would-be restructurers. In the days immediately following layoff announcements announced as part of general restructurings, stock prices rose an average 4 percent."

Concurrently, the ranks of experienced job-seekers swelled, making decisions to fire still easier to justify, since the labor market was flush with talent. This dynamic persists today—with a perverse twist.

Waiting for Superman

In the olden days, as Cappelli sketches them, HR departments served as "reality testers." Say a line manager at a big firm got permission to hire a new worker. "He'd say, 'We need somebody with an MBA for this.' And the HR people would say, 'You really need an MBA degree for that? Are you sure? What's important in this job?' … They'd be pushing back a bit in terms of the job description."

This injected a degree of flexibility into job criteria.

"Those guys are gone now," Cappelli continues. "Now the requisition often goes automatically to somebody who inserts it into the applicant-tracking system. So they kind of take the wish list from the hiring manager, who is often looking for Superman—the Purple Squirrel, as they say in IT—something that doesn't exist."

Unless maybe it does, what with all the talent among the ranks of the unemployed. When there are three or four job-seekers for every vacancy—and some postings draw applicants by the hundred—firms have an understandable incentive to wait for a dream candidate to show up. And ideally, a dream candidate who expresses a low salary requirement.

In that Manpower survey, 11 percent of the employers reporting skill shortages chalked it up to applicants unwilling to accept job offers at the wages companies were willing to pay.

"Given what we know about the difficulty all respondents have in recognizing problems that are actually their own fault," Cappelli writes, "the real percentage of employers who have difficulty hiring because they are not offering adequate wages is likely to be much, much higher."

He cites the case of a parts-supply company whose inability to fill 40 machinist vacancies had been estimated to be dragging sales down by 20 percent. "The jobs reportedly paid $13 per hour, which might sound good. But the Bureau of Labor Statistics reports that the average wage for such jobs is more than $19 per hour," Cappelli notes. "Would that have had some effect on the companies' ability to find candidates? You bet."

But, again, that has little to do with a skills shortage. "A *real* shortage means not being able to find appropriate candidates at market-clearing wages," Cappelli noted in *The Wall Street Journal*. In his book he adds, "When I hear stories about the difficulty in finding applicants, I always ask employers if they have tried raising wages, which in many cases have not gone up in years. The response is virtually always that they believe their wages are high enough."

Cappelli on How to Beat the Software

How sophisticated are the algorithms used to parse job applications for the right attributes? Mightily so, but they are capricious, too. This Beat-the-Software advice, culled from various experts, should serve as a warning shot across the bow of employers and would-be employers equally. Does anyone benefit from a hiring process that turns on such small distinctions?

■ ***Don't use headers or footers.*** They jam most parsing algorithms.

■ ***Customize each resume based on language used in the job description.*** If the description says "CPA," make sure "CPA" is on your resume. Don't go too far, though: copying and pasting the job description won't land you the gig.

■ ***Use conventional formats.*** While fancy fonts, strange layouts, and functional formatting might impress an employer, computers hate them. Stick to a simplistic style and reverse chronological formatting.

■ ***Put it in context.*** Modern resume parsers check the context of buzzwords such as Java or C++, so if you want to seem different from the kid who took one "Java" class in high school, go more in depth about what you know and how long you've known it.

■ ***Submit your resume in text format.*** While .pdf might be convenient, MS Word generally ensures the least parsing errors.

■ ***Never use graphics.*** Graphics always hamper the parsing process and generally show up as white noise to the algorithm. White noise is just what you *don't* want.

■ ***Include your postal address.*** Your address is often how your resume is filed. If you don't include it, you might not get considered at all.

And Waiting…

As the case of that parts-supply company shows, there is often a cost associated with letting positions remain vacant. But most of the time it's hard to quantify—whereas the benefit of not paying another salary is as clear as day. That's another source of grit in the gears of hiring.

In one sense, you can trace it all the way back to what typically spurs companies to post job openings in the first place. It is not, as an economist of the rational-choice school might suppose, a determination that a new worker will add more profit than expense to the balance sheet. Arguments to hire, Cappelli says, "mainly come from people complaining about overwork."

In some cases—perhaps especially when high unemployment keeps existing workers docile—the complaints come from a company's own customers. Cappelli recently came across a financial-services company whose retail customers were actually signing petitions asking the firm to deploy more service people.

The prevailing approach among American companies, as Cappelli characterizes it, has been, "Let's just cut staff until we notice blood. But part of the problem, too, is that the accounting systems internally have not been sophisticated enough to notice when there *is* blood." He suggests that the development of performance metrics capable of measuring the cost of lost opportunities, or of burnout among existing workers trying to do two jobs at once, would redound to the benefit of job-seekers and bottom lines alike.

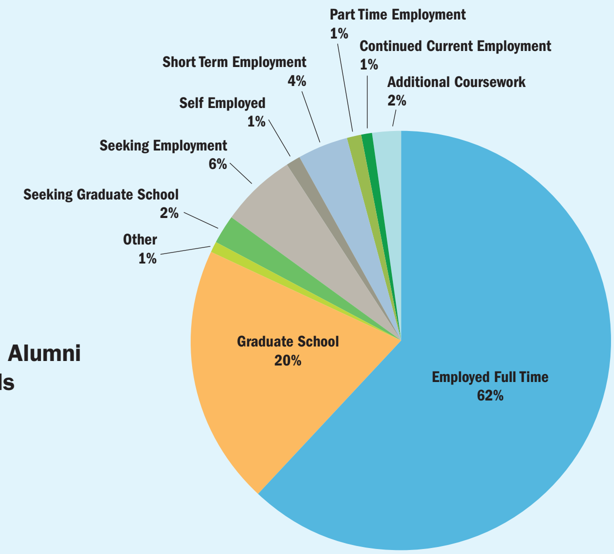
Chris Ittner, the Ernst & Young Professor of Accounting at Wharton, has a more skeptical view.

"In accounting, we don't account well for intangible assets, period—but with people especially," he agrees. "Firms have a hard time even finding out what kind of payback they get from training their employees."

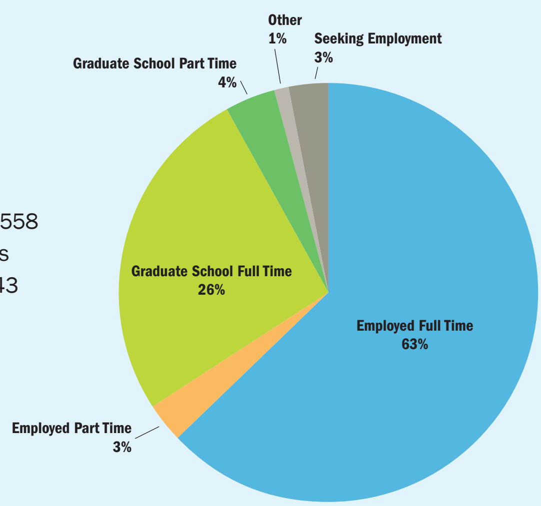
But he deems it unlikely that American companies are suffering from a collective failure to realize the moneymaking potential of ramping up their payrolls. If profits in a given sector were being held down by overly lean workforces, he suggests "there would be an arbitrage opportunity." In other words, you'd expect one or several companies to accelerate hiring as a way to gain an advantage over their competitors—and if that strategy panned out, their competitors would

How Quakers Are Faring

Penn Career Services collects a lot of employment data from alumni. Here's how the Class of 2011 is faring, plus snapshots of the Classes of 2004 and 1999 as of their five- and 10-year reunions, respectively.



Class of 2011, Undergraduate Alumni from all Schools

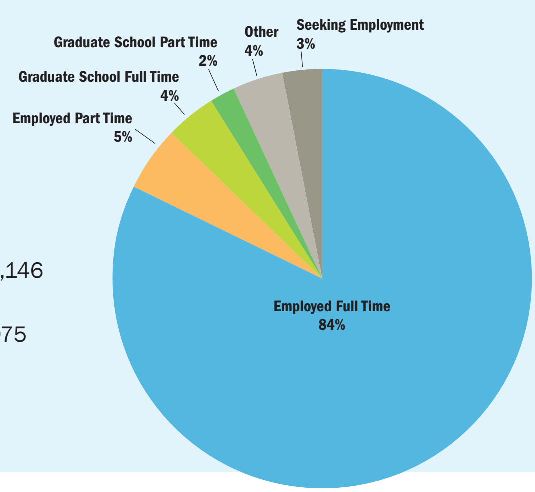


Class of 2004, Alumni of the College

Average First Salary: $39,558

Average Salary Five Years After Graduation: $79,743

[published Summer 2010]



Class of 1999, Alumni of the College

Average First Salary: $31,146

Average Salary Ten Years after Graduation: $106,975

[Published Summer 2010]

likely follow suit. But there's little evidence of that happening.

Ittner observes further that hiring is inherently risky.

"If you choose to hire, you're stuck with that decision—because it's not that easy to fire people. And firms don't want to make an investment when there's so much uncertainty about what will happen in the future," he says. "So you might be willing to accept the cost of lost productivity or lost sales."

A Blind Alley

In virtually every discussion about America's jobs crisis, a familiar solution is trotted out. If only we could get more people through college—whether that means a bachelor's or two-year associate's degree—we'd have a workforce matched to employers' needs.

On an individual basis, this advice holds water. College graduates have substantially more success in the job market than their less-schooled peers. (For Penn alumni, the picture is rosier still. For a snapshot of how Quakers have been faring in recent years, see chart at left). The Penn Alumni Career Network is another potentially valuable resource: www.vpul.upenn.edu/careerservices/pacnet.)

On a societal basis, however, there are good reasons to doubt the efficacy of that prescription. Cappelli worries about overeducation. Citing survey data, he points out that many American workers have—and have paid for—more education than what's required by the jobs they are doing. That can be viewed as a deadweight loss for the economy at large, and it's getting worse.

"In order to prove to an employer that you can do this job," he explains, "maybe you get an extra degree. So rather than two years experience as a pharmaceutical rep, I go get a master's degree in pharmaceutical rep work. In Philadelphia, there's a local business school that has an MBA degree in pharmaceutical marketing, a highly specific degree which you never would have seen a generation ago. And it's an expensive way to get the experience. It's a time-consuming way. And I'm sort of over-relying on academic institutions to get this."

From an employer's perspective, this approach beats "growing all your own talent," as the IBMs and GEs of yesteryear did. After all, a company invests in training its employees at the peril of having them hired away by a competitor who avoids the expense. So even if it has to pay a premium for a candidate who has an equivalent academic credential, that makes more sense.

The problem, as Cappelli sees it, is that this dynamic has fueled an "explosion of certifications" in the US, the majority of them provided by for-profit organizations and vocational schools. Aside from the incentive this creates for people to pursue more credentials than jobs require, just to "muscle out" other job-seekers, Cappelli wonders if there may be an underappreciated downside for the employers themselves.

The rise of credentials as a basis for hiring "makes people more plug-and-play," Cappelli points out.

"You see, for example, in places like nursing and health care, where credentials are everything now, that it makes it easier to pop new people in and pop other people out. Maybe that's a good thing. It does mean for an employer, though, that everything becomes more like a profession. And your ability to get things done differently might become a little harder. And to get practices that are unique to you, a little harder.

"For example, say I'm an IT person working in your company, and you'd like me to get good at your legacy computing system. Should I do that? What's in it for me? It's risky, because I'm going to spend a couple years working on this system, and I don't get any credential out of it that's useful elsewhere. So maybe I don't even take that job—I'd much prefer to work for less for somebody else where I get a credential at the end, which is transferable."

Part of the appeal of a "plug-and-play" approach to employers is the sense that it affords them flexibility. "If we're going to change our products or change our strategy," Cappelli explains, "we just get rid of everybody, and then we'll hire in a new group, with different skills."

Yet "some of this is not completely demonstrated by evidence," he adds. "A generation ago you would have heard companies like IBM talk about how lifetime employment gave them flexibility—because people internally didn't resist changes. You would change your products, you would retrain the people—off you go."

Still, the rise of vocational certification leaves the brunt of the risk on job-seekers. Cappelli has learned this the hard way, which is perhaps ironic considering his area of expertise. When his own son couldn't find a job with his college degree in classics, he "looked to one of the technical fields in health care that had been identified as hot, where employers (the media assured) were struggling to hire," Cappelli writes. "He went back to school, at a community college, and got a skills certificate in that field—only to discover that it was not hot."

If that fate can meet the college-educated son of a world-renowned expert in human resources, it may be time for the rest of us to look for another solution.

A Way Out

"The United States is at the moment the only country in the world where the notion that employers are simply the consumers of skills is seriously considered," Cappelli declares in *Why Good People Can't Get Jobs*.

"The great puzzle for people outside the US in the workforce world," he adds in conversation, "is why we don't have apprenticeship programs. Every other industrial country has got them. And in the countries that are emerging, like China, a big priority is to develop these programs … And we don't have them."

Nor are we likely to get them, he says—at least not at the national level. One reason is the sheer scale of the US economy. "In smaller countries in Europe," Cappelli observes, "you could get the key employers in a room together and say, 'Okay, guys, we've got to step up here.'" That's impossible here.

But he contends that employers have a lot to gain from embracing what you might call apprenticeship writ small.

"What employers are complaining they can't find now are not things the schools can deliver. They want work-based skills. They want the kinds of things that you can't learn in a classroom. How do you manage a team of people? How do you implement this particular software? And we shouldn't expect the schools to try to do that. It's not very efficient. It's much easier to teach somebody as an apprentice in the field."

He insists that the way forward for many employers is to relax job requirements (or at least pry them from the vise grip of recruiting software) and re-shoulder some of the training burden that they used to assume—and that some firms still do, albeit in a slightly different way.

"If you look at the consulting companies, for example, or around Penn you look at the investment banks, they have very high rates of turnover," he notes. "The investment banks lose all their junior analysts. And yet it works fine for them. Now, why is that? Because they're basically treating these folks as apprentices. They're learning a lot, but they're learning as they are working and as they contribute. So it's a model of learning that's different than the old corporate model, where you'd start out with 18 months of classroom training, and then after that we'd slowly give you work experience.

"At law firms, consulting firms, accounting firms, you start contributing the day you arrive. And you're learning as you go. So the model can work, and you can see it all over the place in parts of the private sector. And I think the parts that are not doing it have just got to figure out how to incorporate that pay-as-you-go model. It's not rocket science."

Similarly, he advocates tightening connections between employers and schools by way of co-op programs and collaborations that integrate classroom and work experience. Such arrangements in other countries, and when they've been tried here, work wonders for everyone involved. But "the constraint on building these arrangements has always been on the employer side: how to get them to engage in these efforts when the payoff to them is not immediate," Cappelli writes.

"The present, debilitating disconnect between job supply and job demand," he adds, "suggests that the time has finally come."

As he put it in a presentation at the 2012 World Economic Forum in Davos, Switzerland, "The question for us … especially businesspeople, is, What are we going to do?

"Will we stand back and expect our most important asset to simply show up when we want it? Or are we going to get engaged in the supply chain and try and *do* something to get the workers we want?" ◆

ON THE WEB:
Get a Job, History Edition
A 100-year view of finding work, and workers, in America. Featuring Walter H. Annenberg Professor of History Walter Licht.
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