

# After Credentials

paulgraham.com · Paul Graham · 2008-12 · [source](#)

---

| | |

|

December 2008

A few months ago I read a New York Times article on South Korean cram schools that said

Admission to the right university can make or break an ambitious young South Korean.

A parent added:

"In our country, college entrance exams determine 70 to 80 percent of a person's future."

It was striking how old fashioned this sounded. And yet when I was in high school it wouldn't have seemed too far off as a description of the US. Which means things must have been changing here.

The course of people's lives in the US now seems to be determined less by credentials and more by performance than it was 25 years ago. Where you go to college still matters, but not like it used to.

What happened?

---

Judging people by their academic credentials was in its time an advance. The practice seems to have begun in China, where starting in 587 candidates for the imperial civil service had to take an exam on classical literature. [1] It was also a test of wealth, because the knowledge it tested was so specialized that passing required years of expensive training. But though wealth was a

necessary condition for passing, it was not a sufficient one. By the standards of the rest of the world in 587, the Chinese system was very enlightened. Europeans didn't introduce formal civil service exams till the nineteenth century, and even then they seem to have been influenced by the Chinese example.

Before credentials, government positions were obtained mainly by family influence, if not outright bribery. It was a great step forward to judge people by their performance on a test. But by no means a perfect solution. When you judge people that way, you tend to get cram schools—which they did in Ming China and nineteenth century England just as much as in present day South Korea.

What cram schools are, in effect, is leaks in a seal. The use of credentials was an attempt to seal off the direct transmission of power between generations, and cram schools represent that power finding holes in the seal. Cram schools turn wealth in one generation into credentials in the next.

It's hard to beat this phenomenon, because the schools adjust to suit whatever the tests measure. When the tests are narrow and predictable, you get cram schools on the classic model, like those that prepared candidates for Sandhurst (the British West Point) or the classes American students take now to improve their SAT scores. But as the tests get broader, the schools do too. Preparing a candidate for the Chinese imperial civil service exams took years, as prep school does today. But the *raison d'être* of all these institutions has been the same: to beat the system. [2]

---

History suggests that, all other things being equal, a society prospers in proportion to its ability to prevent parents from influencing their children's success directly. It's a fine thing for parents to help their children indirectly—for example, by helping them to become smarter or more disciplined, which then makes them more successful. The problem comes when parents use direct methods: when they are able to use their own wealth or power as a substitute for their children's qualities.

Parents will tend to do this when they can. Parents will die for their kids, so it's not surprising to find they'll also push their scruples to the limits for them. Especially if other parents are doing it.

Sealing off this force has a double advantage. Not only does a society get "the best man for the job," but parents' ambitions are diverted from direct methods to indirect ones—to actually trying to raise their kids well.

But we should expect it to be very hard to contain parents' efforts to obtain an unfair advantage for their kids. We're dealing with one of the most powerful forces in human nature. We shouldn't expect naive solutions to work, any more than we'd expect naive solutions for keeping heroin out of a prison to work.

---

The obvious way to solve the problem is to make credentials better. If the tests a society uses are currently hackable, we can study the way people beat them and try to plug the holes. You can use the cram schools to show you where most of the holes are. They also tell you when you're succeeding in fixing them: when cram schools become less popular.

A more general solution would be to push for increased transparency, especially at critical social bottlenecks like college admissions. In the US this process still shows many outward signs of corruption. For example, legacy admissions. The official story is that legacy status doesn't carry much weight, because all it does is break ties: applicants are bucketed by ability, and legacy status is only used to decide between the applicants in the bucket that straddles the cutoff. But what this means is that a university can make legacy status have as much or as little weight as they want, by adjusting the size of the bucket that straddles the cutoff.

By gradually chipping away at the abuse of credentials, you could probably make them more airtight. But what a long fight it would

be. Especially when the institutions administering the tests don't really want them to be airtight.

---

Fortunately there's a better way to prevent the direct transmission of power between generations. Instead of trying to make credentials harder to hack, we can also make them matter less.

Let's think about what credentials are for. What they are, functionally, is a way of predicting performance. If you could measure actual performance, you wouldn't need them.

So why did they even evolve? Why haven't we just been measuring actual performance? Think about where credentialism first appeared: in selecting candidates for large organizations. Individual performance is hard to measure in large organizations, and the harder performance is to measure, the more important it is to predict it. If an organization could immediately and cheaply measure the performance of recruits, they wouldn't need to examine their credentials. They could take everyone and keep just the good ones.

Large organizations can't do this. But a bunch of small organizations in a market can come close. A market takes every organization and keeps just the good ones. As organizations get smaller, this approaches taking every person and keeping just the good ones. So all other things being equal, a society consisting of more, smaller organizations will care less about credentials.

---

That's what's been happening in the US. That's why those quotes from Korea sound so old fashioned. They're talking about an economy like America's a few decades ago, dominated by a few big companies. The route for the ambitious in that sort of environment is to join one and climb to the top. Credentials matter a lot then. In the culture of a large organization, an elite pedigree becomes a self-fulfilling prophecy.

This doesn't work in small companies. Even if your colleagues were impressed by your credentials, they'd soon be parted from you if your performance didn't match, because the company would go out of business and the people would be dispersed.

In a world of small companies, performance is all anyone cares about. People hiring for a startup don't care whether you've even graduated from college, let alone which one. All they care about is what you can do. Which is in fact all that should matter, even in a large organization. The reason credentials have such prestige is that for so long the large organizations in a society tended to be the most powerful. But in the US at least they don't have the monopoly on power they once did, precisely because they can't measure (and thus reward) individual performance. Why spend twenty years climbing the corporate ladder when you can get rewarded directly by the market?

I realize I see a more exaggerated version of the change than most other people. As a partner at an early stage venture funding firm, I'm like a jumpmaster shoving people out of the old world of credentials and into the new one of performance. I'm an agent of the change I'm seeing. But I don't think I'm imagining it. It was not so easy 25 years ago for an ambitious person to choose to be judged directly by the market. You had to go through bosses, and they were influenced by where you'd been to college.

---

What made it possible for small organizations to succeed in America? I'm still not entirely sure. Startups are certainly a large part of it. Small organizations can develop new ideas faster than large ones, and new ideas are increasingly valuable.

But I don't think startups account for all the shift from credentials to measurement. My friend Julian Weber told me that when he went to work for a New York law firm in the 1950s they paid associates far less than firms do today. Law firms then made no pretense of paying people according to the value of the work they'd done. Pay was based on seniority. The younger employees were paying their dues. They'd be rewarded later.

The same principle prevailed at industrial companies. When my father was working at Westinghouse in the 1970s, he had people working for him who made more than he did, because they'd been there longer.

Now companies increasingly have to pay employees market price for the work they do. One reason is that employees no longer trust companies to deliver deferred rewards: why work to accumulate deferred rewards at a company that might go bankrupt, or be taken over and have all its implicit obligations wiped out? The other is that some companies broke ranks and started to pay young employees large amounts. This was particularly true in consulting, law, and finance, where it led to the phenomenon of yuppies. The word is rarely used today because it's no longer surprising to see a 25 year old with money, but in 1985 the sight of a 25 year old professional able to afford a new BMW was so novel that it called forth a new word.

The classic yuppie worked for a small organization. He didn't work for General Widget, but for the law firm that handled General Widget's acquisitions or the investment bank that floated their bond issues.

Startups and yuppies entered the American conceptual vocabulary roughly simultaneously in the late 1970s and early 1980s. I don't think there was a causal connection. Startups happened because technology started to change so fast that big companies could no longer keep a lid on the smaller ones. I don't think the rise of yuppies was inspired by it; it seems more as if there was a change in the social conventions (and perhaps the laws) governing the way big companies worked. But the two phenomena rapidly fused to produce a principle that now seems obvious: paying energetic young people market rates, and getting correspondingly high performance from them.

At about the same time the US economy rocketed out of the doldrums that had afflicted it for most of the 1970s. Was there a connection? I don't know enough to say, but it felt like it at the time. There

was a lot of energy released.

---

Countries worried about their competitiveness are right to be concerned about the number of startups started within them. But they would do even better to examine the underlying principle. Do they let energetic young people get paid market rate for the work they do? The young are the test, because when people aren't rewarded according to performance, they're invariably rewarded according to seniority instead.

All it takes is a few beachheads in your economy that pay for performance. Measurement spreads like heat. If one part of a society is better at measurement than others, it tends to push the others to do better. If people who are young but smart and driven can make more by starting their own companies than by working for existing ones, the existing companies are forced to pay more to keep them. So market rates gradually permeate every organization, even the government. [3]

The measurement of performance will tend to push even the organizations issuing credentials into line. When we were kids I used to annoy my sister by ordering her to do things I knew she was about to do anyway. As credentials are superseded by performance, a similar role is the best former gatekeepers can hope for. Once credential granting institutions are no longer in the self-fulfilling prophecy business, they'll have to work harder to predict the future.

---

Credentials are a step beyond bribery and influence. But they're not the final step. There's an even better way to block the transmission of power between generations: to encourage the trend toward an economy made of more, smaller units. Then you can measure what credentials merely predict.

No one likes the transmission of power between generations—not the left or the right. But the market forces favored by the right turn out to be a better way of preventing it than the credentials

the left are forced to fall back on.

The era of credentials began to end when the power of large organizations peaked in the late twentieth century. Now we seem to be entering a new era based on measurement. The reason the new model has advanced so rapidly is that it works so much better. It shows no sign of slowing.

## Notes

[1] Miyazaki, Ichisada (Conrad Schirokauer trans.), *China's Examination Hell: The Civil Service Examinations of Imperial China*, Yale University Press, 1981.

Scribes in ancient Egypt took exams, but they were more the type of proficiency test any apprentice might have to pass.

[2] When I say the *raison d'être* of prep schools is to get kids into better colleges, I mean this in the narrowest sense. I'm not saying that's all prep schools do, just that if they had zero effect on college admissions there would be far less demand for them.

[3] Progressive tax rates will tend to damp this effect, however, by decreasing the difference between good and bad measurers.

Thanks to Trevor Blackwell, Sarah Harlin, Jessica Livingston, and David Sloo for reading drafts of this.

