

“Talent Is Overrated “

Geoff Colvin

Kindle Notes by Dave Kraft

The factor that seems to explain the most about great performance is something the researchers call “Deliberate Practice.” Contemporary athletes are superior not because they’re somehow different but because they train themselves more effectively. That’s an important concept for us to remember. When Tchaikovsky finished writing his Violin Concerto in 1878, he asked the famous violinist Leopold Auer to give the premier performance. Auer studied the score and said no—he thought the work was unplayable. Today every young violinist graduating from Juilliard can play it. The music is the same, the violins are the same, and human beings haven’t changed. But people have learned how to perform much, much better. For virtually every company, the scarce resource today is human ability.

That’s why companies are under unprecedented pressure to make sure that every employee is as highly developed as possible—and as we shall see, no one knows what the limits of development are. “World class” is a term that gets thrown around too easily. For most of history, few people had to worry about what world class was. But now that’s changing. In a global, information-based, interconnected economy, businesses and individuals are increasingly going up against the worlds best. The costs of being less than truly world class are growing, as are the rewards of being genuinely great. Most of what we want to do is hard. That’s life. Encountering problems, discouragement, and disappointment is inevitable. Josh Billings famously said, “It ain’t so much the things we don’t know that get us into trouble. It’s the things we know that just ain’t so. One factor, and only one factor, predicted how musically accomplished the students were, and that was how much they practiced.

The music school students reached grade levels at earlier ages than the other students for the simple reason that they practiced more each day. As one of the researchers, Professor John A. Sloboda of the University of Keele, put it: “There is absolutely no evidence of a ‘fast track’ for high achievers. The idea of giftedness—which is the same as our definition of talent—thus has a very considerable head of steam behind it. But what if the concept itself turns out to be troubled. Most of the people who became extremely good in their field did not show early evidence of gifts. Mozart became Mozart by working furiously hard.” Asked to explain Tiger’s phenomenal success, father and son always gave the same reason: hard work. The most typical assessment seems to come from a woman who tutored the Rockefeller children and later recalled, “I have no recollection of John excelling at anything. I do remember he worked hard at everything; not talking much, and studying with great industry. By the time Buffett began accumulating a world-class record of performance, he was well into his thirties—and had been working diligently in his chosen field for more than twenty years.

The concept of innate business talent is not looking like a very promising answer to the question of how Buffett or any of the business greats became who they were.

For him, SF exemplified what he calls the remarkable potential of ‘ordinary’ adults and their amazing capacity for change with practice. Memory along with general intelligence, is widely regarded as a key skill of great performers, so it’s definitely surprising, at least at first, to find that research doesn’t support the view that extraordinary natural general abilities—as distinct from developed abilities like SF’s memory—are necessary for high achievement. Obviously the most successful people in business or any other domain have something special. But what is it?

The idea that it’s an inborn gift for cost accounting or writing software or trading cocoa futures doesn’t seem to hold up. You are virtually guaranteed to know people who have succeeded in the business world, sometimes very considerably, without evincing conventional brainpower that’s in any way impressive. We typically explain this by saying they’re good with people, or they work extremely hard, or they really put their heart into it. Such factors may relate to Gardner’s multiple “intelligences” or Goleman’s EQ, but the critical point is that whatever these people have, it definitely is not general intelligence—our first hint that IQ may not explain great performance as well as we usually suspect.

A wide range of research shows that the correlations between IQ and achievement aren’t nearly as strong as the data on broad averages would suggest, and in many cases there’s no correlation at all. Intelligence was virtually useless in predicting how well a salesperson would perform. Whatever it is that makes a sales ace, it seems to be something other than brainpower. It seems our view that intelligence necessarily produces better performance is so deep that it may occasionally even blind us to reality.

Whatever it is that an IQ test measures, it is not the ability to engage in cognitively complex forms of multivariate reasoning. IQ is a decent predictor of performance on an unfamiliar task, but once a person has been at a job for a few years, IQ predicts little or nothing about performance. Most important, the research tells us that intelligence as we usually think of it—a high IQ—is not a prerequisite to extraordinary achievement. We tend to think we are forever barred from all manner of successes because of what we were or were not born with. The range of cases in which that belief is true turns out to be a great deal narrower than most of us think. The roadblocks we face seem to be mostly imaginary.

What makes some people go so much further than others? And what we have discovered so far is not what makes some people excel but rather what doesn’t. Specifically: It isn’t experience. It isn’t specific inborn abilities. It isn’t general abilities such as intelligence and memory. Everyone in the football world seems to agree that Jerry Rice (San Francisco 49ers) was the greatest because he worked harder in practice and in the off-season than anyone else. The conclusion we reach is that one of the greatest-ever football players devoted less than 1 percent of his football-related work to playing games. Rice and his coaches understood exactly what he needed in order to be dominant. They focused on those things and not on other goals that might have seemed generally desirable, like speed. The difference was that some chose to practice more, and those violinists were a great deal better.

Yes, more total practice is very powerfully associated with better performance. In a wide range of fields has substantiated the ten-year rule everywhere the researchers have looked. In math, science, musical composition, swimming, X-ray diagnosis, tennis, literature—no one, not even the most “talented” performers, became great without at least ten years of very hard preparation. If talent means that success is easy or rapid, as most people seem to believe, then something is obviously wrong with a talent-based explanation of high achievement. Summing up the extensive evidence, Ericsson and his coauthors observed that the search for stable heritable characteristics that could predict or at least account for the superior performance of eminent individuals has been surprisingly unsuccessful. It could be put very simply: What the authors called “deliberate practice” makes all the difference.

Or as they stated it with stark clarity in their scholarly paper, “the differences between expert performers and normal adults reflect a life-long period of deliberate effort to improve performance in a specific domain.” Their framework is not based on a simplistic “practice makes perfect” observation. Rather, it is based on their highly specific concept of “deliberate practice.

Deliberate practice is characterized by several elements.

- It is activity designed specifically to improve performance.
- It can be repeated a lot
- feedback on results is continuously available
- It’s highly demanding mentally
- It isn’t much fun.

It’s designed specifically to improve performance. Without a clear, unbiased view of the subject’s performance, choosing the best practice activity will be impossible.

Deliberate practice requires that one identify certain sharply defined elements of performance that need to be improved, and then work intently on them. Noel Tichy illustrates the point by drawing three concentric circles. He labels the inner circle “comfort zone,” the middle one “learning zone,” and the outer one “panic zone.” Only by choosing activities in the learning zone can one make progress. That’s the location of skills and abilities that are just out of reach. We can never make progress in the comfort zone because those are the activities we can already do easily, while panic-zone activities are so hard that we don’t even know how to approach them.

Two points distinguish deliberate practice from what most of us actually do. The choice of a properly demanding activity in the learning zone; the other is the amount of repetition. Feedback on results is continuously available. It’s highly demanding mentally. Continually seeking exactly those elements of performance that are unsatisfactory and then trying one’s hardest to make them better places enormous strains on anyone’s mental abilities.

A finding that is remarkably consistent across disciplines is that four or five hours a day seems to be the upper limit of deliberate practice, and this is frequently accomplished in sessions lasting no more than an hour to ninety minutes.

It isn't much fun. Instead of doing what we're good at, we insistently seek out what we're not good at. Then we identify the painful, difficult activities that will make us better and do those things over and over. At most companies this is a travesty, consisting of an annual performance review dreaded by the person delivering it and the one receiving it. Telling someone what he did well or poorly on a task he completed eleven months ago is just not helpful. Their own stories have convinced them that their father was right. Susan said, "My father believes that innate talent is nothing, that [success] is 99 percent hard work. I agree with him."

More specifically the story of the Polgars illustrates how the principles of deliberate practice (when carried to an extraordinary level) produce extraordinary achievement. Great performers never allow themselves to reach the automatic, arrested-development stage in their chosen field. That is the effect of continual deliberate practice—avoiding automaticity. At this point the evidence seems strong that the right kind of practice can turn someone of unremarkable endowments into a much better, even exceptional performer.

Everyone in these studies is hearing the same things, but through years of practice, some are perceiving more. Most of the indicators used by top performers require practice to be of any use. Intensive disciplined people evaluations had been central to Welch's career for decades. Deliberate practice works by helping us acquire the specific abilities we need to excel in a given field. Eventually researchers from a broad array of fields realized where the secret lay. The most important ingredient in any expert system is knowledge. In general, the knowledge of top performers is integrated and connected to higher-level principles. Building and developing knowledge is one of the things that deliberate practice accomplishes. Far from being a general ability, it is ultimately a skill that is acquired through many years of deliberate practice.

We've seen how extensive, well-structured, deliberate practice develops the specific abilities of great performers to perceive more, know more, and remember more, and how these abilities are critical to exceptional performance. So Franklin identified the aspects of his performance that needed to be improved and found a way to stretch himself, the essential core of deliberate practice. The first challenge in designing a system of deliberate practice is identifying the immediate next steps. The key, as in all deliberate practice, is to choose a comparison that stretches you just beyond your current limits.

We've seen how deep domain knowledge is fundamental to top-level performance. You don't have to wait for that knowledge to come your way in the course of your work. You can pursue it. This is one of the defining traits of great performers: They all possess large, highly developed, intricate mental models of their domains. A mental model helps you distinguish relevant information from irrelevant information.

Judy Pahren (senior vice president for development and diversity at Capital One Financial) which does a good job of applying the principles of great performance, says new employees consistently put continuous professional development at or near the top of their criteria for choosing an employer. About two-thirds of people development comes from carefully chosen job assignments, about one-third from mentoring and coaching (which we'll examine more closely), and a smidgen from classroom training. Organizations tend to assign people based on what they're already good at, not what they need to work on.

Most organizations are terrible at providing honest feedback. The annual evaluation exercise is often short, artificial, and mealy-mouthed. Many of these companies could do even more to establish a culture of candor. A powerful tool with great potential for most organizations is the U.S. Army's after-action review. Colonel Thomas Kolditz, who runs the leadership development program at the U.S. Military Academy at West Point, says that for the past twenty-five years "it has literally transformed the Army."

A telling indicator is how interns get others to work with them when they have absolutely no authority. Another signal that GE looks at, separate from internships, is whether someone played a team sport in college and what his or her role was. Identify promising performers early. Understand that people development works best through inspiration, not authority.

Invest significant time, money, and energy in developing people. Develop teams, not just individuals. Addressing potential problems that are particularly toxic to the elements of deliberate practice, such as picking the wrong team members.

"I'm not looking' for the best players, Craig. I'm looking' for the right players." Another pathology that frequently sinks teams is competing agendas. A team can still be torn apart by another curse-unresolved conflicts.

As for what exactly is going on during those long periods of preparation, it looks a lot like the acquisition of domain knowledge that takes place during deliberate practice. It. Professor Raymond S. Nickerson of Tufts University has written that the importance of domain-specific knowledge as a determinant of creativity is generally underestimated; even though investigators have given it considerable emphasis. When it comes to tasks that are part of their domain of expertise, great performers can keep performing at a high level even after their skills outside their domain have deteriorated.

"I've reluctantly discarded the notion of my continuing to manage the portfolio after my death—abandoning my hope to give new meaning to the term 'thinking outside the box'—Warren Buffet. Intrinsic motivation is still best, and extrinsic motivation that's controlling is still detrimental to creativity; but extrinsic motivators that reinforce intrinsic drives can be highly effective. Most organizations seem to be managed brilliantly for preventing people from performing at high levels. Since intrinsic drives are strongest, people will work most passionately and effectively on projects they choose for themselves. How many companies allow that?

Evaluations at most companies are exactly the opposite: telling the hapless employee what he did wrong, not how to do better, and specifying personal traits (attitude, personality) that must be changed, all under the unspoken looming threat of getting fired. This is so precisely unlike the way effective teachers and coaches help students persist in the demanding work of getting better that one can only gaze in wonder. Our quest for the source of great performance has taken us past many wrong turns and through a great deal of useful knowledge, and has led us finally to the issue of where the drive to persevere comes from. We've learned a lot even about that. Most significant, we've seen that the passion develops, rather than emerging suddenly and fully formed.