Peak Summary

By Anders Ericsson

Does practice really make perfect? Many of us believe that great athletes are born, and that nature trumps nurture. Professor Anders Ericson has been thinking about this for 30 years, and is an expert on the subject.

People often think that natural talent equals top performance, but *Peak* debunks the idea of natural prodigies, and reveals that we can make significant improvement with the *right* kind of practice. It's not about quantity of practice, but about building structured and deliberate quality practice.

You're probably thinking, 'hold on a minute!' What about Usain Bolt, Eliud Kipchoge, Simone Biles, and Michael Phelps? Michael Phelps was born with hyper-extended joints, which help to give him his powerful kick, so yes, he does have the right genes. Of course genetics matters, especially in areas where height or other physical factors are essential. For example, a 6-foot tall woman would find it virtually impossible to succeed as an elite gymnast. But the point is that it's not all about genes, and there's a lot more that's responsible for being a high achiever.

This brief summary explains, that if we want to get to the top, there are no shortcuts, and relying on good genes and natural ability won't get us to where we need to go. What's more, diligence, consistency, and the right kind of practice methods will drastically improve our overall performance. After all, true mastery results from sticking to a process, and being disciplined about our chosen practice.

Time Devoted to Practice Matters

It's not just about setting aside time to practice; it's about dedicating enough time towards it, and then being disciplined.

Ericsson's research team looked at what makes some musicians outstanding, compared to those who are merely good. Is it innate talent, or the amount of time spent practicing? They studied a group of violinists, at the Berlin University of Arts, and split these students into three categories - "good," "better," and "best". The significant difference between these groups, was how much they practiced. Research showed that by the age of 18, the good violinists had practiced a total of 3420 hours. But those found to be the best, logged over 7410 hours of practice time. Crucially, what separated the best violinists from the good, wasn't just the quantity, but the quality of practice. The violinists who set specific goals, focused intensely, sought feedback, and adjusted quickly, became the elite.

In another example, many argue that All-Star basketball player Ray Allen, was born with a natural talent. Allen disagrees. When people tell Allen he was naturally blessed with a beautiful jump shot, he pushes back. He says that if you ask anyone on his team who practices the most three-point shooters, they'll say it's him. Furthermore, if you talk to Allen's high school basketball coach, he will tell you that Allen's jump shot wasn't noticeably better than his teammates; in fact, it was poor. But with hard work and dedication, Allen transformed the shot into one so graceful and natural; that people just assume he was born with it.

But it's not just about quantity, but about quality. Although the suggestion is that we should practice something for 10 thousand hours before we become an expert, it's not enough to just go through the motions. The

accurate interpretation of the 10 thousand hour rule, is that, yes, 10 thousand hours of practice help, but it has to be the right sort of practice. This type of practice is known as deliberate practice, and it's described in the following example. Have you ever noticed the difference in an older person's driving ability? You probably haven't, because the average person who has been driving for 20 years, isn't better than a person who has been driving for five. Just because they've been driving for longer, doesn't make them a better driver.

The key is that once you reach a certain level, it's no longer just about practice on repeat. And, once we've got the basics down, practicing the same way over and over again, isn't going to do much for our overall performance. So if we don't want to plateau, we need to focus on deliberate practice.

Deliberate Practice Takes Us Out of Our Comfort Zone

So how do we go about beginning the process of deliberate practice?

Let's say that you want to get better at tennis. The first step would be to set specific targets for each practice. So, you wouldn't just decide to play for an hour a day. Instead, the idea is to be very specific and goal-focussed. You might decide to commit to practicing until you hit fifty balls over the net today. And if it isn't possible to get this done in a single day, then you keep practicing until you've reached your goal.

The next aspect of deliberate practice is making sure that we're undistracted and undisturbed, because it demands intense focus.

Thirdly, feedback is everything. Experts need experts and mentors. So find someone who can give you advice on what you're doing correctly, and precisely where you're falling short.

Lastly, it's about putting in the effort. And remember, stretching beyond our limits isn't supposed to feel comfortable. So we need to step out of our comfort zone and embrace the challenges in front of us.

We Can Change the Structure and Function of Our Brains

For decades scientists believed that the circuits to our brains were pretty much fixed, and that this circuitry determined our abilities. However, since the 1990s, researchers have come to realize that the brain, even the adult brain, is far more adaptable than anyone ever imagined. We have tremendous control over what our brains can do.

The incredible power of the brain is demonstrated by London cab drivers. London cab drivers have extensive knowledge of the roads, and learn all routes and shortcuts. A study in 2000 compared the brains of London taxi drivers, with non-cab drivers, and It showed that the cab drivers had a larger posterior hippocampus. The posterior hippocampus is the area in the brain that helps us navigate space, and memorize locations. Furthermore, drivers who had been in the trade the longest, had the largest hippocampi. This study proved that time spent mastering every possible route, new landmarks, and continually challenging themselves,

changed the cab drivers' brains' structure and capability.

Deliberate Practice Changes How We Think

Deliberate practice not only has the ability to change the shape of our brains, but it also changes the way that we think. What makes experts excel is their unique ability to visualize, remember, and quickly make sense of information. This ability to form effective mental representations, is the mind's ability to identify and recognize patterns, and it's one of the things that sets experts apart. So experts literally have a "mind's eye" for their craft.

Consider the legendary chess player Alexander Alekhine. In 1924, he did something extraordinary. He played twenty-six different chess opponents; simultaneously. Out of the twenty-six games, he won sixteen, lost five, and drew five. Without looking at the chessboard, he had to think of all the moves and counter moves.

This is a feat of incredible skill and aptitude. Think about what was happening inside his mind. He needed to visualize and remember 26 boards, 832 individual chess pieces, and 1664 squares. Alekhine had the ability to visualize and remember each chessboard, and could picture moving all of the different pieces around in his head. His ability to form these mental representations allowed him to process complex information, and respond accurately and quickly. These highly developed mental representations are what distinguish the good, from the so-called gifted. However, it's not a gift, we can all grow and adapt our individual abilities.

So, in order to change our brain and develop our mind's eye, perhaps it's

time to change our game plan when it comes to how we practice.

Deliberate Practice is Useful in Academics and Business

Practice isn't just about physical prowess, it's also highly useful when it comes to increasing our overall ability in academics and business.

In an examination of two different approaches to teaching university-level physics, students were divided into two groups. One group participated in lecture-test learning. The other group had to actively engage in student-led discussions and debates, and they had to put what they knew to the test. When it came to the final test, the latter group scored better.

Education often focuses on what people know, rather than what they're able to do with knowledge. Think of flight training simulators or virtual reality scenarios. If you look at strategies where lawyers train through moot courts, salespeople sell through role-playing, it's all about building expertise. It's also about building skills quickly so that people are less likely to make mistakes when it really matters.

And you'll know how well you're learning, because you're getting feedback. For this, you need a teacher. But not just anyone. To be the best of the best, you need to learn from the best.

In Conclusion

There are three keys to improving our skills and expertise. They are targeted practice, feedback, and motivation. It's also important to note that deliberate practice isn't always fun, and there will be instances where we lack motivation. A way to stay on track is to be ruthless about routine and structure, and use group enthusiasm wherever possible. Furthermore, measuring improvement is a huge factor when it comes to staying motivated.

Finally, Professor Ericsson uses his thirty years of experience in psychology, physiology, and the neuroanatomy of extraordinary people, to understand how we can outperform others, even if we don't think that we have the genetic advantage. And in outperforming others, we also exceed our expectations of ourselves.

So when it comes to being the best that you can be, deliberate practice makes perfect.