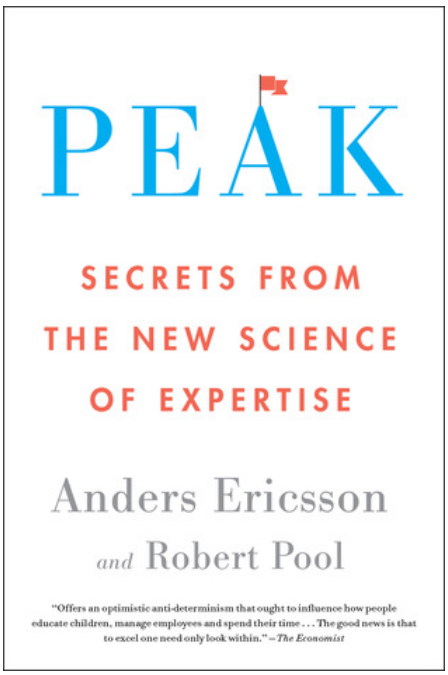

Peak: Secrets from the New Science of Expertise

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"This book is a breakthrough, a lyrical, powerful, science-based narrative that actually shows us how to get better (much better) at the things we care about."—Seth Godin, author of *Linchpin*

"Anyone who wants to get better at anything should read [*Peak*]. Rest assured that the book is not mere theory. Ericsson's research focuses on the real world, and he explains in detail, with examples, how all of us can apply the principles of great performance in our work or in any other part of our lives."—*Fortune*

Anders Ericsson has made a career studying chess champions, violin virtuosos, star athletes, and memory mavens. *Peak* distills three decades of myth-shattering research into a powerful learning strategy that is fundamentally different from the way people traditionally think about acquiring new abilities. Whether you want to stand out at work, improve your athletic or musical performance, or help your child achieve academic goals, Ericsson's revolutionary methods will show you how to improve at almost any skill that matters to you.

"The science of excellence can be divided into two eras: before Ericsson and after Ericsson. His groundbreaking work, captured in this brilliantly useful book, provides us with a blueprint for achieving the most important and life-changing work possible: to become a little bit better each day."—Dan Coyle, author of *The Talent Code*

"Ericsson's research has revolutionized how we think about human achievement. If everyone would take the lessons of this book to heart, it could truly change the world."—Joshua Foer, author of *Moonwalking with Einstein*

Peak: Secrets from the New Science of Expertise Details

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From Reader Review Peak: Secrets from the New Science of Expertise for online ebook

Mat says

Important Book

I try to keep a running list of "important" books that I want my kids to read when they're older. I'm adding Peak and its story of deliberate practice to the list. The book makes the point that there is no such thing as innate talent (or if there is, it only helps one at the very beginning of learning a new skill). Deliberate practice and building mental models (referred to as mental representations) are the keys. This book reinforced to me that having my kids take music lessons is worthwhile. Not because I want them to be prodigies, but rather I want them to experience skill building through deliberate practice.

Nick says

This book relates the research that Malcolm Gladwell's book Outliers was based on and referenced inaccurately. Ericsson is a passionate advocate of deliberate practice, which is NOT the ten thousand hours that Gladwell popularized, but rather a lot -- a lot more than you think -- of practice, but practice focused on specific goals, measurements, and development of mental schemas that help you become a more expert chess player, or high jumper, or physicist. Ericsson's great insight is that there is no such thing as innate talent. We all learn things the hard way or we don't really learn things at all. And the world's top experts get there in any field by working harder than anyone else. Put the time in, and ye shall reap the rewards. If you still don't believe this idea, then for heaven's sake read the book.

Matt Austin says

I first heard about this book while listening to the Freakonomics podcast a few weeks ago when Anders Ericsson was featured on the podcast and spoke at great lengths about his theory of "deliberate practice." The podcast was very interesting, so I had to get my hands on a copy of the book. After reading glowing reviews, I had high hopes. Unfortunately, the book was subpar, in my opinion. There are moments when I am captivated, but the discussion quickly becomes drawn out, and I find myself waiting for the chapter to end. Don't get me wrong – there's a lot of great material here. Most of all, I'm glad to see someone completely debunk Malcolm Gladwell's "10,000 hour" theory, which I never completely bought.

Overall, Mr. Ericsson has some great content here, but the book could have been a lot more succinct.

Kony says

Talent is made, not born. Specifically, according to Ericsson & Pool, it's made through years and years of deliberate practice: the process of learning to recognize and emulate existing models of elite performance, through active trial-and-error, regular expert feedback, and self-motivated resilience. Deliberate practice is necessarily painful, but rewarding for those who keep at it.

Key implications: There's no "genius" gene, and in any case it doesn't take genius to become an expert or elite performer. Most of us are born with the potential to excel in many fields. What derails most of us from excellence isn't any lack of innate ability; it's the fact that we give up in response to early failures and/or external discouragement. By applying this understanding to the ways we raise kids and train professionals, we might unleash into society a great deal of otherwise-untapped human potential.

I've seen these arguments before, but I like how they're articulated here: in clear and engaging prose, with sparing anecdotes, and with concisely explained scientific evidence. In deciding how to present and illustrate their ideas, the authors have applied their understanding of human learning, and to good effect. I recommend this book as a clarifying follow-up to the many fluffy "pop science" books on this topic (including Malcolm Gladwell's). If short on time, read this instead of those.

Michael says

Everest! There is no vantage point higher on the subject of expert performance than Anders Ericsson’s lifetime achievement in sharing this book. Through years of deliberate practice in observing what truly sets apart the best from the rest, Ericsson has guided many to new heights of accomplishment through his insights that sparked a paradigm shift of our understanding of “experts”. The ideas shared in these pages will no doubt help propel countless others for decades to come as they make even greater summits of human achievement.

If you are looking to get better at any skill, from athletics, to medicine, to teaching, to science or business, then read this book. The answers are not easy, but they are clear. The world owes Anders Ericsson a deep debt of gratitude for helping shift our collective understanding of expert performance, talent, and extraordinary human results.

Malcolm Gladwell most effectively popularized parts of Ericsson’s insights in his book Outliers: The Story of Success. Carol Dweck’s Mindset: The New Psychology of Success is a very complementary and convergent idea. Angela Duckworth’s, Grit: Passion, Perseverance, and the Science of Success magnificently illuminates the insights of persistent deliberate practice.

Joshua Foer, met with Anders Ericsson in preparation for his own summit in winning the US Memory Championship and writing his book, Moonwalking with Einstein: The Art and Science of Remembering Everything. Geoff Colvin cemented and extended many of Ericsson’s thoughts in his book, Talent is Overrated: What Really Separates World-Class Performers from Everybody Else.

Matthew Syed, became a notable athlete and author of Bounce: Mozart, Federer, Picasso, Beckham, and the Science of Success, with insights owing to Ericsson.

In searching for any subject, finding a great teacher is often best performed by looking the world over to see who is most often cited as an authority figure. Powering Google’s search engine is an algorithm that at its core leverages “citation analysis” to find authority figures, also called hilltops; or in this case a towering *Peak* on the search for expertise. In your quest for a great teacher to help guide your personal journey there is no living author with greater authority than Ericsson.

If you want to do better, read this book.

Kieran Seán Fitzpatrick says

Great book.

Note to self. Create mental model to remember to figure out how to create mental models.

Zac Scy says

Before I say anything else, this is the single most rewarding book I've read this year. I recommend anyone and everyone to read it. It's one of those books that busts the myths that have been floating around about "natural talent" being something that only a select few possess.

Back in 2008 Malcolm Gladwell introduced K. Anders Ericssons research on expertise to the masses. Those who read up on the research understood that there was more to it than the version presented in Gladwell's book. Unfortunately the press just ran with the "10.000 hour rule" as a headline and failed to delve deeper into what expert performance and deliberate practice really entails.

I found the research intriguing and now, after almost 8 years of waiting, it's finally available in a more digestible form.

The examples and explanations for how to go about achieving greatness in any pursuit is something everyone can benefit from. Whether you're just starting out with something new or if you've been at it for decades already.

What I'm most excited for is the fact that perhaps we can finally get rid of the excuses and false beliefs that have held so many people back from pursuing the things they want.

Maybe we can finally start to teach the next generation of kids the greatest lesson not all of us got to learn: How to learn.

Franta says

Anders Ericsson reasons that expertise is best developed by deliberate practice and the existence of innate talent is an unconfirmed hypothesis.
Deliberate practice means doing - knowledge by itself is not indicative of expertise.

This is a positive book as its message is that the power to become great in any area is in everyone's hands.

Here are the insights.

Gaining expertise is largely a matter of improving one’s **mental processes**.

If you never push yourself **beyond your comfort zone**, you will never improve.

Purposeful practice has well-defined, **specific goals**. “Play the piece all the way through at the proper speed without a mistake three times in a row.” Without such a goal, there was no way to judge whether the practice session had been a success.

Break it down and **make a plan**: What exactly do you need to do. Putting a bunch of baby steps together to reach a longer-term goal.

You seldom improve much without giving the task your **full attention**.

Purposeful practice involves **feedback**. You have to know whether you are doing something right and, if not, how you’re going wrong.

The main thing that sets experts apart from the rest of us is that their years of practice have changed the neural circuitry in their brains to produce highly specialized **mental representations**, which in turn make possible the incredible memory, pattern recognition, problem solving, and other sorts of advanced abilities needed to excel in their particular specialties.

The relationship between skill and mental representations is a **virtuous circle**: the more skilled you become, the better your mental representations are, and the better your mental representations are, the more effectively you can practice to hone your skill.

Deliberate practice requires a student to constantly try things that are just beyond his or her current abilities. Thus it demands **near-maximal effort**, which is generally not enjoyable.

Once you have identified an **expert**, identify what this person does differently from others that could explain the superior performance.

The traditional approach has been to provide information about the right way to proceed and then mostly rely on the student to apply that knowledge. Deliberate practice, by contrast, focuses solely on **performance and how to improve it**.

How do we **improve the relevant skills**?
Get some personal sessions with a coach who could give advice tailored to your performance. An experienced teacher watching you and providing feedback. Someone who knows the best order in which to learn things.
Focus. Feedback. Fix it. Break the skill down into components that you can do repeatedly and analyze effectively, determine your weaknesses, and figure out ways to address them.

Shorter training sessions with clearer goals are the best way to develop new skills faster. It is **better to train at 100 percent effort for less time** than at 70 percent effort for a longer period.

Cross-training - switch off between different types of exercise so that you are constantly challenging yourself in different ways.

Push yourself well outside of your comfort zone and see what breaks down first. Then design a practice technique aimed at improving that particular weakness.

Strengthen the reasons to **keep going** or weaken the reasons to quit.

Belief is important.

Emily says

Probably my favorite book on this subject. Ericsson was the researcher that Gladwell referenced in his book "Outliers" with his famous 10,000 hour rule (the number of hours to become great at something). This book gives more detailed information and better explains his theory and research. The ideas and premise of this book kept popping up in discussions with my family, and especially children, and I was grateful for the hope and motivation it provides. Basically, besides body type and size, talent is not born, but developed. If you want to learn or become great at something, you can with consistent "deliberate practice." We have already changed the way we talk about hard things in our home...no more of "I am not good at math," but "I'm going to have to put forth more time and effort into math to be good at it." It has also motivated me to try things I have wanted to do, but have previously shyed away from because I didn't feel like it came naturally for me. Great book!

Lance Willett says

My full review: https://simpledream.net/2016/04/28/pe...

Thesis: there is no such thing as natural ability — anyone can become an expert by putting in the time (10K hour rule). Traits favorable to a task help at the beginning, but don't make a difference at high levels — it all comes down to effort.

Mastery is possible through deliberate practice, focused training with an expert who can push you to a higher understanding of the craft. A key ingredient is using mental representations, these help you perform automatically because the actions have become second nature.

To excel one only needs to look within.

Meta notes:

First mention seen in *The Economist*, April 02, 2016 and I read a hard copy from Pima County Public Library.

The Economist compares this book favorably over its contemporary by Charles Duhigg, which I have not read yet, saying *Faster, Better* oversimplifies the topic by defining 8 "main traits," and jumps around a bit too much.

Alex says

I HIGHLY recommend this book to anyone looking to improve on something in their lives. Really interesting information about human potential! Definitely a book I could see myself returning back to when I'm working on something! Well written and easy to follow even with the science-y stuff.

Pouting Always says

I don't think this had to be a whole book but that said I do think the idea behind the book is a meaningful one. I know I personally spend a lot of time practicing things without getting better because I don't actively engage in what I'm doing and try to improve on whatever part of the skill I struggle with most. I also thought the writing was really good and appreciate that it was based on so much research evidence. Definitely was something new that I hadn't really thought of before.

Phil Sykora says

If you want to get better at anything, this book is your starting point.

As a sophomore in high school, I remember asking my favorite English teacher if he would sign off on my application to an advanced writing class. The look on his face was shock: mouth open, eyebrows raised. I felt stupid for even asking.

Needless to say, I took a general English class my junior year.

But I decided I didn't want the other kids to get ahead of me academically. I didn't have that elusive, all-important trait that everyone calls "talent." I had a brain that was geared more towards science and math, so when I read in Geoff Colvin's *Talent is Overrated* that there was a science behind improvement, I was blown away. I emailed K. Anders Ericsson, asking for research on how to use deliberate practice to improve my writing skills, and, to my surprise, he actually emailed me back. In this book, he made all of that research even simpler. Soon I began writing and reading every night for about an hour, focusing on improving my weaknesses, imitating my favorite writers, and stepping out of my comfort zone.

The following should speak for itself:

I took an AP writing course my senior year.
I scored a 5 on that test (the highest score possible).
I aced a creative writing course in college.
I began submitting my fiction to literary magazines (at this point I was churning out at least one story a week).
I became a professionally published short story writer at 20 years old ("Elite Slugger" in *Cracked Eye*).

I still have a long way to go, but one day I want to be a New York Times best-selling novelist. Without Mr. Ericsson's research, I would still be a sub-par writer. Instead, I developed a passion for something that no one thought I could do.

More importantly, though, I developed a passion for improvement, and that doesn't really depend on some outside factor, like whether or not a publisher wants to buy my work. Improvement is an intrinsic, driving force. Whether or not I ever become a New York Times best-selling novelist isn't the point. The point is constant improvement. The extrinsic goal is a side effect.

If there is some skill or "talent" that you always wish you had, then buy this book and follow its principles. I guarantee you can have it.

Seth Braun says

The book answer the question: How do we develop expertise?

The premise is: We develop excellence through deliberate practice.

Context: This is Anders Ericsson and Robert Pools' mainstream distillation of The Cambridge Handbook of Expertise and Expert Performance, which was made famous through Gladwell's reference of the "10,000 Hour Rule" in Outliers.

I am sold on the idea of deliberate practice and did not need to be convinced, however there is plenty here to persuade the reader to adopt the author's point of view.

The primary instructions I took away:
1. Identify an expert in the field you wish to develop expertise
2. Identify what this person does differently than explains superior performance (specifically, adopting the mental models the expert uses when preacticing)
3. Practice with this influence
4. Adjust based on results
5. When possible, work with a coach or teacher that can objectify your practice for you

What helps you succeed with deliberate practice?
A belief you can succeed.
The results you experience after getting through a plateau.
Minimizing interference, distractions and obstacles.
A desire to improve (generally a passion or purpose for developing the skill).
Pushing your comfort zone.
Surround yourself with people that will encourage and support you.
Create general social reinforcement
Create or define stages of improvement so growth can be measured in time.

Three Myths That Hinder Improvement:
1. The belief that one's abilities are limited by character traits. *I am not this way or that way*
2. If you do something long enough you will get better. *Without deliberate practice, this leads to getting good at being mediocre.*
3. All it takes to get better is hard work or effort. *If you want to be a better (fill in the blank), just try harder.*

Finally, build better mental models:
1. Learn more about the topic through study and from teachers and coaches
2. Apply the mental model to hone the skill
3. Honing the skill improves the mental model
4. This creates a virtuous cycle

This final idea, mental models, is tricky in leadership development versus say, playing classical violin or hitting a baseball. This is one of the challenges we face at Stagen Leadership Academy; how do we objectify what is subjective in the experience of world-class leaders?

In summary, Peak asserts that we have greater mental adaptability that we generally acknowledge; we have

enamored ourselves with the idea of "talent" and this cripples our ability to pursue excellence. Deliberate practice, not natural proclivity, creates masters of form and technique.

Paul, says

K. Anders Ericsson writes a good book with lots of practical applications that falls victim to the classic type 2 statistical error (false negative). Let's start with the good stuff. Ericsson tells a lot of cool anecdotes about the utility of deliberate practice. He never really defines deliberate practice. But basically it means getting a coach and performing focused exercises to get better while analyzing results. Easy enough. There is also some cool material about improving mental representations. The stories are encouraging, and they widen one's perspective of what is possible.

Now for the negative. Well, first, the "what should I do?" portion of the book could have been written in about 5 pages. But that's not the big deal. This is the big deal: "And this, more than anything else, is the lesson that people should take away from all these stories and all this research: There is no reason not to follow your dream. Deliberate practice can open the door to a world of possibilities that you may have been convinced were out of reach. Open that door. "

That, my friend, is really destructive nonsense. Because Ericsson falls prey to the type 2 error. His life's research is based on taking really successful people, moderately successful people, and sort of successful people and trying to find what the difference is. There, in music, in chess, in hockey, and in baseball, he finds that a strong correlation between deliberate practice and expertise. But I would bet a lot of money that Dr. Ericsson never played sports at a young age. Because he misses the type 2, the false negative. He doesn't take into consideration the kids who practiced harder, longer, with better coaching than anyone else, and still sucked. That is a common story.

Do you remember the kid that had incredible explosive speed but had no coordination? Coaches spend all kinds of time with those kids because of their potential. But after years of deliberate practice with great coaches, some of them just can't catch. They are uncoordinated. In explosive sports, basketball, football, sprints, jumping, boxing, talent is king. Check out this article, for example, Lombardo, Michael P., and Robert O. Deaner. “You Can’t Teach Speed: Sprinters Falsify the Deliberate Practice Model of Expertise.” PeerJ 2 (June 26, 2014). doi:10.7717/peerj.445.

In skill-centric sports, hockey, baseball, tennis, skill practice makes a big difference. In any sport, practice is what differentiates the great from the good. It is important, and that's why it is so evident in Ericsson's research. But Ericsson didn't spend his time trying to find all the people that put in years of hard, smart work with great coaches and just never became good. They didn't learn how to sing, or how to catch, or how to run fast or jump high. Genes do not guarantee success, but they are still important. The same is true of public speaking, art, science, math. There's a reason why most theoretical physicists are really smart and it's not because the less smart people just didn't work hard enough.

Don't lie to people and tell them to chase whatever dream they have regardless of their situation. That's a recipe for heartbreak. Be honest and tell people to work hard and train smart. Tell people that they can always improve if they are willing to pay the price. That's enough. But it doesn't sell many books.

Here are a few of my favorite quotes:

Without feedback—either from yourself or from outside observers—you cannot figure out what you need to improve on or how close you are to achieving your goals. (p.34)

In the brain, the greater the challenge, the greater the changes—up to a point. Recent studies have shown that learning a new skill is much more effective at triggering structural changes in the brain than simply continuing to practice a skill that one has already learned. On the other hand, pushing too hard for too long can lead to burnout and ineffective learning. The brain, like the body, changes most quickly in that sweet spot where it is pushed outside—but not too far outside—its comfort zone. (p.58)

That was okay, however, because the real action occurred once the pilots landed, in what the navy called “after-action reports.” During these sessions the trainers would grill the students relentlessly: What did you notice when you were up there? What actions did you take? Why did you choose to do that? What were your mistakes? What could you have done differently? When necessary, the trainers could pull out the films of the encounters and the data recorded from the radar units and point out exactly what had happened in a dogfight. And both during and after the grilling the instructors would offer suggestions to the students on what they could do differently, what to look for, and what to be thinking about in different situations. Then the next day the trainers and students would take to the skies and do it all over again. (p.131)

One of the implicit themes of the Top Gun approach to training, whether it is for shooting down enemy planes or interpreting mammograms, is the emphasis on doing. The bottom line is what you are able to do, not what you know, although it is understood that you need to know certain things in order to be able to do your job. This distinction between knowledge and skills lies at the heart of the difference between traditional paths toward expertise and the deliberate-practice approach. Traditionally, the focus is nearly always on knowledge. Even when the ultimate outcome is being able to do something—solve a particular type of math problem, say, or write a good essay—the traditional approach has been to provide information about the right way to proceed and then mostly rely on the student to apply that knowledge. Deliberate practice, by contrast, focuses solely on performance and how to improve it. (p.145)

All of these elite players were committed to chess, and in the beginning the ones with higher IQs had a somewhat easier time developing their ability. The others, in an effort to keep up, practiced more, and having developed the habit of practicing more, they actually went on to become better players than the ones with higher IQs, who initially didn’t feel the same pressure to keep up. And here we find our major takeaway message: In the long run it is the ones who practice more who prevail, not the ones who had some initial advantage in intelligence or some other talent. (p.248) -- I don't agree with this quote, but I think that there is a lot of truth in it.