



February, 2020 In The Know Summary

Range: Why Generalists Triumph in a Specialized World

By David Epstein

Facilitator: [Judy Dickinson](#)

About the Book

The central argument of this book is that a broad “range” of experience is needed to succeed in today’s world. Since we are in such a fast-changing environment, you have to have a broad and varied background to understand it. You need “range.” Also, unlike many who insist it’s important to specialize early in life, the author shares examples of successful people who “sample” a variety of experiences, gather broad knowledge (a “range”), and reach great heights in their careers—sometimes later in life.

The author is a great storyteller and uses stories in a very compelling way to highlight the key points in the book. This book would be great for a recent college graduate or for someone who is mid-career and looking for a change.

Discussion Highlights

- We discussed how, in today’s world, we face wicked problems that are “complex.” “Complicated” problems are rule-based; whereas, “complex” problems are not as clear—where are the rules?
- **“Martian Tennis”** – Does more experience really lead to mastery? It depends! The author presents two types of learning environments:
 - **Kind learning environments** – In this environment, you see clear rules, patterns repeat. Feedback is accurate and usually prompt. Chess is a great example. It is *tactical*. You learn the rules, and a computer can outsmart a human!
 - **Wicked domains** – This is where you have unclear rules, non-obvious, or repetitive patterns. Feedback is often delayed, inaccurate, or both. Old strategies may be ill-suited to dealing with present challenges. “Martian Tennis” is an example. You can see the players on a court with balls and rackets, but nobody has shared the rules. It is up to you to derive them, and the rules are subject to change without notice.
- **“The Cult of the Head Start”** is the notion that *deliberate practice*—i.e., practice that is purposeful and systematic with the goal of improving performance—is critical to career success. In this theory, typically, performance is measurable, and feedback is immediate. The author shares examples of people who prove that starting early is not the only way to become great. In sports, the arts, and other disciplines, people who specialize early achieve success, as do people who gather a variety of experiences (and specialize later in life). Some athletes go through a “sampling period” where they try different sports. This gives you more “range.” It allows you to learn about your strengths and more fully maximize them.

- **10,000 hours:** This is related to the notion that you need 10,000 hours of practice, made popular by Malcolm Gladwell. We discussed how studies, such as “10,000 hours,” can be blown out of proportion and not sufficiently challenged. You may need the 10,000 hours, but just as important as the time is the feedback.
- **Sports:** Consider golf champ Tiger Woods & tennis champ Roger Federer: Woods started playing as a child and won tournaments starting at age two. Meanwhile, Federer dabbled in many sports and then specialized in tennis. Both have achieved great success in their sports.
- When Great Britain set up a program to boost their Olympics success, they nurtured athletes who were both children and adults. The adults (“Slow Bakers” program) did great.
- **Academia:** There are many examples of late developers. You don’t have to start early to become successful. We don’t need to pressure young people to find their passion at age 17! English and Welsh students have to specialize at age 17/18 – before university. Scottish students do not need to specialize early. There is little correlation with lifetime earnings potential.
- **Science:** Charles Darwin tried many jobs and was not successful. Someone suggested he get on a ship, and there he found himself! Einstein tried to disprove quantum physics. He got so stuck on his theory that he could not look at another theory. He could not change his mind. People who be open (and can change their minds) are more creative and experimental.
- **Entrepreneurs:** We think of start-ups as business that only “young” people, in their 20s, can start. Research shows that entrepreneurs who started the fastest growing startups were in their 40s, not 20s!
- **Importance of Sampling / “Developing Cognitive Flexibility”** – You have to taste/try different things. By trying them early, you get an idea of what you want to do. Musicians who try different instruments and choose later on do well.
 - Roger Federer sampled other sports. And then later specialized in tennis. If he had sampled cooking and arts, what would he have done?
 - Noteworthy: Many Nobel Prize winners have an interest in the art.
 - University of Washington created a class called “Calling Bullshit” focused on the broad principles of critical evaluation of the “daily fire hose of information” we receive. Critical thinking. When registration opened for this class, it filled in one minute.
- **How does AI relate?** AI will dominate in environments where it is rule-based, for example, in chess. It is a “kind” learning environment. Patterns repeat. You can be coached to improve. It is 99% tactical (not strategic). Computers will out-perform humans in this type of game. You need people who can take the data and recognize whether there is accuracy to it. AI does not make a decision. It is not well suited to a lot of environments.

Application

- **Working in Teams** – You can be in a solid environment, but you have to adapt and flex. When you look at studies with airline crews, you find that they rely heavily on checklists. (Very procedural.) Crews that work together are better suited to handle problem-solving in a “wicked” environment than crews that do not know each other.
- **“Cognitive Entrenchment”** – Amy Edmonson did research on teams and studied the Chilean mine rescue mission. Helping with the rescue effort were people with deep expertise in several fields. It required a “generalist” to bring that team together to translate and figure out concepts where they had common ground (“cognitive entrenchment”).
- **Career Coaching** – From career coaching, the notion of a “Versatilist” = someone who is a specialist in a particular discipline, but also able to change roles with ease.

Resources

- Laura Mendelow's [blog](#)
- [10,000 Hours versus The Sports Gene](#) – Malcolm Gladwell and David Epstein
- [Why Late Bloomers Win](#) – David Epstein
- 60 Minutes – [The Age of Mega Fires](#)

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