

## Book Reviews

By William J. (Jay) Carson

*Disclaimer: These are the author's subjective opinions, and do not necessarily reflect the opinions of any organization or other individual. A human prepared this article, with assistance from Microsoft Editor and Grammarly.*

Of what value is a baby? I am paraphrasing a 250+-year-old Benjamin Franklin quote after observing a hot air balloon flight. I think Dr. Franklin would say the same thing about the current state of artificial intelligence.

As I increase my studies, I am getting more interested in the future of humanity. I think the metaverse is where we are headed, it will be powered by artificial intelligence engines, and those engines will be fueled by quantum computing. Assuming the ISSA Journal editorial team continues to publish my Book Reviews column, you will have to put up with a few months of book reviews on these subjects. For the rest of this article, I will lump them all together as "artificial intelligence and related fields."

Cybersecurity and privacy professionals need to have a solid grounding in artificial intelligence because it will come to dominate both in attack and defense operations. Or, if you prefer more drama and hyperbole, it will be the weapon of choice of the Good, the Bad, and the Ugly. It is tough to do book reviews on artificial intelligence, especially because the field is changing so fast. How do you stay current, especially if you are not directly engaged in AI research or development? You try to keep up via news feeds from the leading technical news sources. That does not mean there are not terrific books out there! Three of my past reading favorites are:

- Kissinger, Henry, Eric Schmidt, and Daniel Huttenlocher. *The Age of AI and our Human Future*. Little, Brown, and Company (2021).

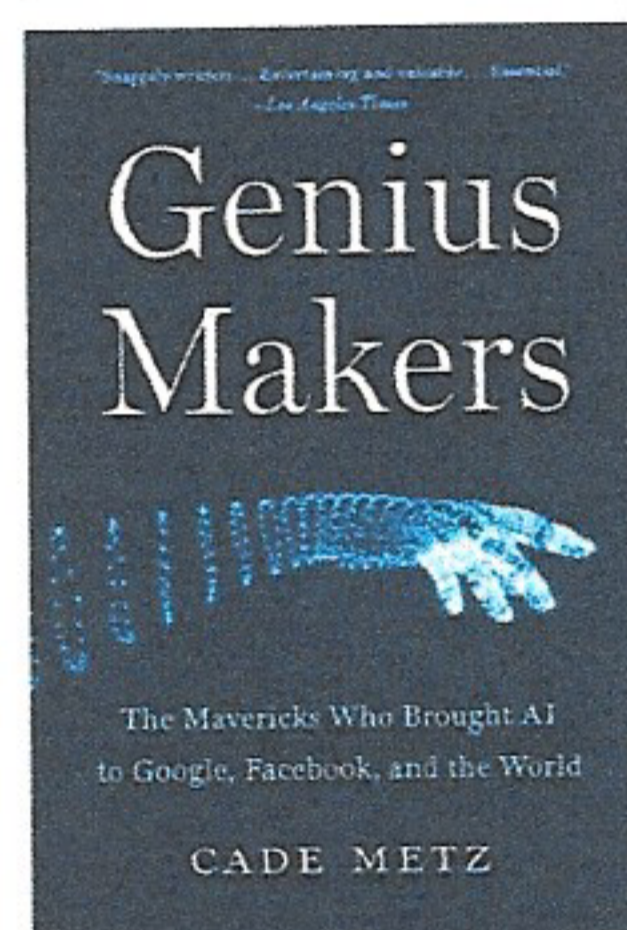
- Scharre, Paul. *Four Battlegrounds: Power in the Age of Artificial Intelligence*. W.W. Norton & Company (2023).
- Tegmark, Max. *Life 3.0: Being Human in the Age of Artificial Intelligence*. Vintage Books (2017).

Each of these are superb books, and they will enhance your ability to speak or write more authoritatively about the subject. You can be fairly sure that the more authoritative artificial intelligence speakers or writers will reference a couple of these books, or all three.

But those are side references in this article. Book #1 of this review, here we go:

**Metz, Cade. *Genius Makers: The Mavericks Who Brought AI to Google, Facebook, and the World*. Dutton (2021).**

**Sound Bite: This book tells you how we got here in AI, applying the old cliché about "knowing where you are going (in part) by knowing where you have been."**



This book is enjoyable by any reader, but especially relevant for the cybersecurity professional wanting a broad historical background on AI. In the classic movie *Butch Cassidy and the Sundance Kid*, Butch and Sundance are being chased by a posse, and Butch says "Who are those guys?" I share Butch's sentiment when I read about AI. Well, Geoffrey (Geoff) Hinton, Demis Hassabis, Frank Rosenblatt, Marvin Minsky, Jeff Dean, LeCun, Sundar Pichai, Eric Schmidt, Mustafa Suleyman, Mark Zuckerberg, Sam Altman, Kai Yu, are just a few named in the book. While I am name-dropping, the organizations named in the book are Google, DeepMind, Facebook, Microsoft, OpenAI, Baidu, Nvidia,

Clarifai, University of Montreal, MIT, NYU, Carnegie Mellon, etc., etc.

You are going to get great background on the dispute over the way-ahead for AI, neural networks, or symbolic AI. So the book is not just about the personalities of key people. You will learn about fundamental concepts and get a good understanding of why certain leaders thought as they did. Do not let me forget to mention the book details AI vs. chess and Go Masters.

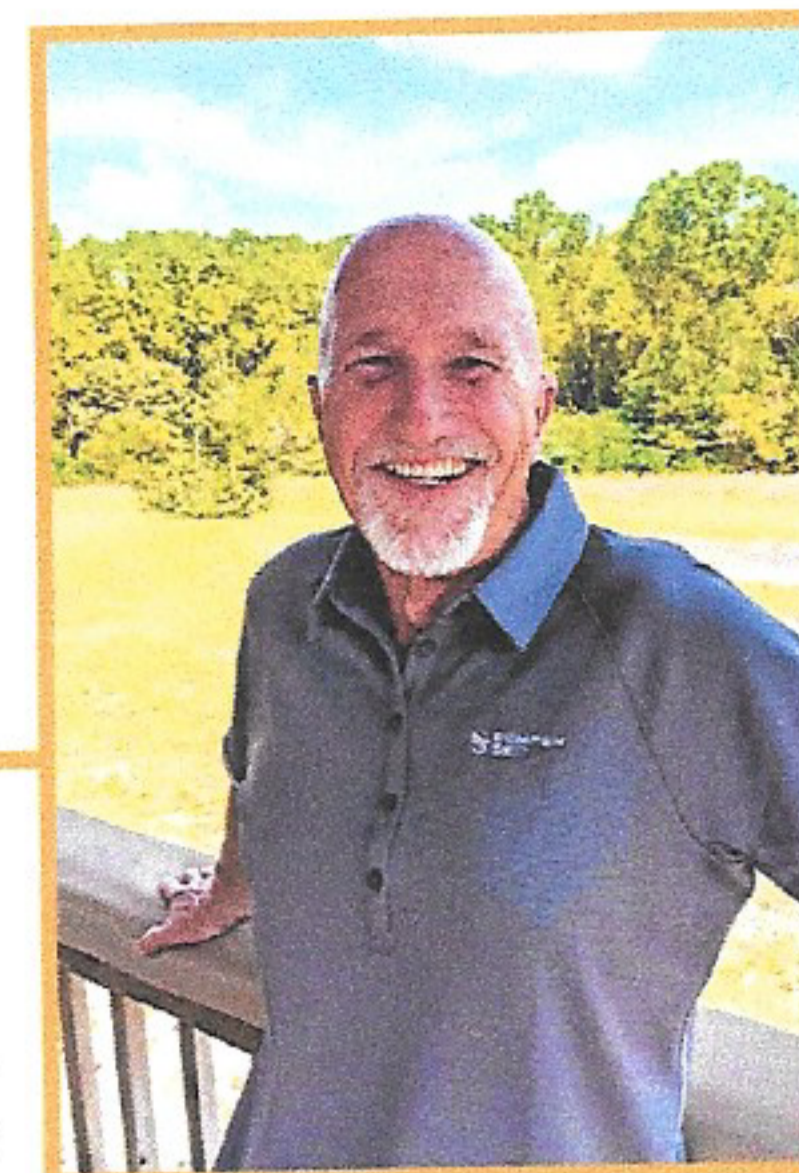
### The Author

OK, Matthew Cade is a technology reporter for *The New York Times*. But that is not as impressive to me as his past work. This is a past *Wired* reporter, with more than a decade at *PC Magazine*. The book is exceptionally good, and part of the reason is it reads like a great *Wired* article. For would-be writers, note he has a BA in English from Duke. That means he has a solid grounding in writing fundamentals. So combined with technical understanding, those writing skills, and about four hundred interviews for this book, you are in for a treat.

### The Metadata

A 2021 publishing date! The online ordering cost, including shipping, is going to be well under \$20 for a hardback or paperback copies. You can cut that cost if you use an e-reader. The hardcover version is about 350 pages. At the end of the book there are notes pages, a who's who list, and a timeline. I read it via a copy in my local public library system, so it may be there for you too.

I took a one-page sample of the text to analyze for readability. Measured by a Wikipedia article about the Flesch-Kincaid Readability Test, the writing level and style is the middle-of-high school level. There was 0% passive voice in my sample. I love professional maga-



zine writers, they get it! This article is about 4% passive voice, for comparison.

### Table of Contents (abbreviated/modified and annotated in bold font by me)

#### Part I

##### A New Kind of Machine

- Chapter 1 Genesis - "Frankenstein Monster Designed by Navy That Thinks" **Back to the fifties with Frank Rosenblatt**
- Chapter 2 Promise - "Old Ideas are new." PDP - **Parallel Distributed Processing**
- Chapter 3 Rejection - "I was definitely thinking I was right the whole time." **Neural Networks**
- Chapter 4 Breakthrough - "Do what you want at Google - not what Google wants you to do." **At least one reason Google attracts talent.**
- Chapter 5 Testament - "The speed of light in a vacuum used to be about 35 mph. Then Jeff Dean spent a weekend optimizing physics." **I like the joke about having a PIN as the last four digits of pi.**
- Chapter 6 Ambition - "Let's really go big." **DeepMind**

#### Part II

##### Who Owns Intelligence?

- Chapter 7 Rivalry - Hello, this is Mark, from Facebook."
- Chapter 8 Hype - "Success is guaranteed." **AI and the Press**
- Chapter 9 Anti-Hype - "He could produce something evil by accident." **Elon Musk about Larry Page (and they were friends)**
- Chapter 10 Explosion - "He ran AlphaGo like Oppenheimer ran the Manhattan Project." **Geoffrey Hinton about Demis Hassabis**
- Chapter 11 Expansion - "George wiped out the whole field without even knowing its name." **George is George Dahl. Great stuff here about AI and medical diagnostics!**
- Chapter 12 Dreamland - "It is not that people at Google drink different waters."

#### Part III

##### Turmoil

- Chapter 13 Deceit - "Oh, you can actually make photo-realistic faces."

- Chapter 14 Hubris - "I knew when I gave the speech that the Chinese were coming."
- Chapter 15 Bigotry - "Google Photos, y'all (fouled) up. My friend is not a gorilla." **What happened and why - do not skip this!**
- Chapter 16 Weaponization - "You probably heard Elon Musk and his comment about AI causing WW3."
- Chapter 17 Impotence - "There are people in Russia whose job it is to try to exploit our systems. So this is an arms race, right?"

#### Part IV

##### Humans are Underrated.

- Chapter 18 Debate - "However long the rapid progress continues, Gary will still argue it is about to end." **Gary Marcus**
- Chapter 19 Automation - "If the room looked like things had gone crazy, we were on the right track."
- Chapter 20 Religion - "My goal is to successfully create broadly beneficial AGI. I also understand this sounds ridiculous." **Sam Altman**
- Chapter 21 X Factor - "History is going to repeat itself, I think."

How will AI, or AGI, ultimately manifest itself? The next book gives an answer.

**Ball, Matthew. *The Metaverse: And How It Will Revolutionize Everything*. Liveright Publishing Company (2022).**

**Sound Bite: You might not be a gamer, but while metaverse origins seem to be in video games, a cybersecurity professional needs to understand the basics to understand where we are headed.**

What is the metaverse? The book will give you a well-thought-out definition, but my short-form definition is "3D Internet." Watch me catch the dickens for that comment!

I have never been a gamer. While I recommend this book, please do not use it as an excuse to let your children run wild

with games, thinking it will help prepare them for the future. If your children do use video games, read:

Kardaras, Nicholas. *Glow Kids: How Screen Addiction is Hijacking Our Kids - And How to Break the Trance*. St. Martin's Griffin (2016).

That said, *The Metaverse* has a ton of information on Graphics Processing Units (GPUs), the overall origin and state of the video gaming industry, how electronic payments are made in various systems, how blockchain does and will relate, and finally how the metaverse will be a conceivable way AI will ultimately be used in our daily lives. Cybersecurity pros take note. The possibilities for evil are incredible!

#### The Author

Matthew Ball is an entrepreneur, and a CEO, and was the global head of strategy for Amazon Studios. He has written for *Time Magazine*. Impressively, he knows and tells an enormous amount about the gaming industry.

#### The Metadata

A 2022 publishing date! The online ordering cost, including shipping, is going to be about \$15. The hardcover book is around 320 pages depending on how you count. There are notes with references, but not separate bibliography. I got my copy from my local public library system.

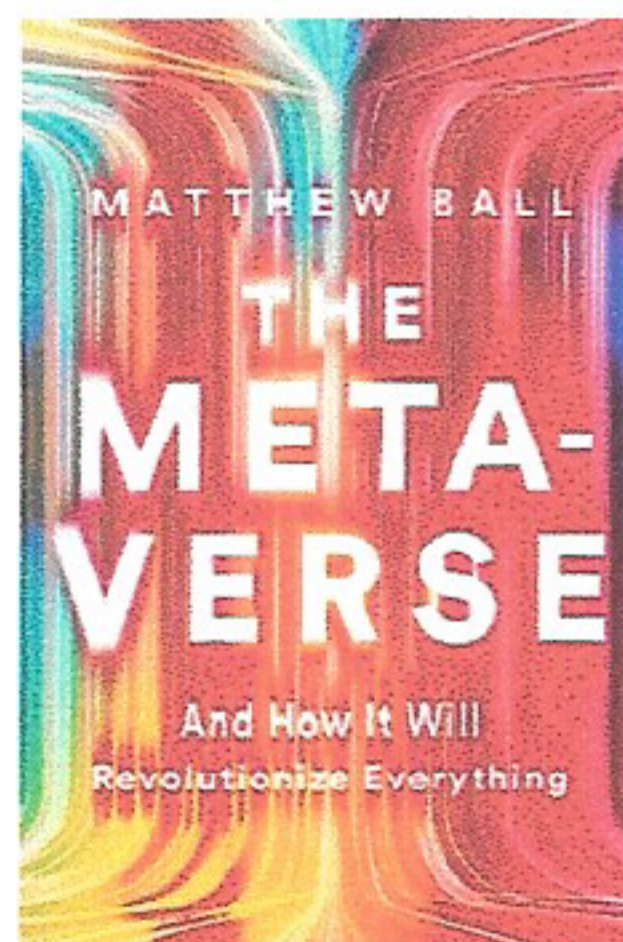
I took a one-page sample of the text to analyze for readability. Measured by a Wikipedia article about the Flesch-Kincaid Readability Test, the writing level and style is senior high school. There was about 17% passive voice in my sample, so it reads all right. This article is about 4% passive voice, for comparison.

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#### Part I

##### What is the Metaverse?

- Chapter 1 A Brief History of The Future
- Chapter 2 Confusion and Uncertainty
- Chapter 3 A Definition (Finally) **A more complete, if not the ultimate definition**
- Chapter 4 The Next Internet



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## Part II

### Building the Metaverse

- Chapter 5 Networking
- Chapter 6 Computing
- Chapter 7 Virtual World Engines
- Chapter 8 Interoperability
- Chapter 9 Hardware
- Chapter 10 Payment Rails I did not know all the system details – do you?
- Chapter 11 Blockchains

## Part III

### How the Metaverse Will Revolutionize Everything

- Chapter 12 When Will the Metaverse Arrive
- Chapter 13 Meta-Business Thought provoking
- Chapter 14 Metaverse Winners and Losers
- Chapter 15 Metaversal Existence

Happy Reading!

PS - If you have a book you want me to read & review, please use the email address in my biography and let me know!

PPS - Up next month: More AI-related books:

Kaku, Michio. *Quantum Supremacy: How the Quantum Computer Revolution Will Change Everything*. Doubleday (2023).

Kuhn, Thomas S. *The Structure of Scientific Revolutions. 50th anniversary (fourth) edition*. The University of Chicago Press (2012) (originally published 1962).

William J. (Jay) Carson

Aka 'Dad'

The Cyber Librarian

## About the Author

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### Additional sources used in the article:

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2. <https://time.com/author/matthew-ball/>.
3. LinkedIn profiles for authors listed, where available.
4. [https://en.wikipedia.org/wiki/Flesch%E2%80%93Kincaid\\_readability\\_tests](https://en.wikipedia.org/wiki/Flesch%E2%80%93Kincaid_readability_tests)

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6. Book by Ian Calder and Steve Watkins "IT Governance: An International Guide to Data Security and ISO27001/ISO27002, 7th Edition" (2019)
7. Ikram Khan (2020) "Difference between IT Governance and IT service management" (<https://www.business-beam.com/blog/it-service-management/difference-between-it-governance-and-it-service-management/>)
8. Cullen Childress (2023) "AI will transform IT management processes" (<https://www.techradar.com/pro/ai-will-transform-it-management-processes>)