

## Book Synthesis

The books that I chose to read throughout the course were *The Theory That Would Not Die* written by Sharon Bertsch Mchrayne and *The Future is Faster Than You Think* written by Peter H. Diamandis and Steven Kotler.

*The Theory That Would Not Die* was an easy read that followed the history of a mathematical practice (specifically a Statistical practice) called Bayes' Theorem. This theorem had many ups and downs throughout its history and the book did an amazing job telling the different stories. It started from the beginning, with Thomas Bayes creating this theorem based on a similar concept game to pool, fast forwards through 200 years of history to when Alan Turing uses Bayes' Theorem to help him crack the Enigma Code and defeat the Germans, and finishes with Bayes' Theorem as it looks today in the modern era.

Throughout my short teaching career, there have been many times I wished there had been a math history course somewhere in my collegiate studies. I could not count the number of times students ask me about the origins of certain math formulas or subjects. It seems silly, because the history of the math topic does not really matter when it is time to solve the problem, but it always seems to peak the students' interests, at least, the history lovers'. I try to keep these questions in my head to research and get back to the students. Sometimes it happens, other times something more pressing takes my time away. This book was a great excuse for me to learn the history, in its entirety, of a mathematical subject. One of the greatest values of this book is that it will allow me to

teach the students about the history of a mathematical subject or theorem. I stress to my students that there is so much more than just the *how* in the mathematical process. We must understand *why* before or in order to perform the *how*. This book allows me to add *where, who, and when* to this process, making it cross curricular with history classes. This will allow me to interest more students and get them engaged in their learning. Although the statistics taught in our schools are more frequency based, it still provides me with an awesome view of alternative forms of statistics. To me, this is where I found the most value in this book. It is the reason I kept interest throughout the reading.

I would not recommend this book for most people. There are several reasons for this, but most importantly is that its content does not appeal to the masses. Most people are not interested in the history of mathematics. I will say, however, that the book is very well written and is an easy read. You do not need to know much about mathematics or statistics to understand the content in the book. This book is history focused first, rather than mathematically focused. I could see people who enjoy history liking this book, especially chapter 4, where it details Bayes' theorem during WW2.

*The Future is Faster Than You Think* is a book written about the acceleration of modern technologies. It is broken into three main parts: the power of convergence, the rebirth of everything, and the faster future. The first section, the power of convergence, focuses on the convergence of all the incredible technologies we are starting to see pop up in society. These different inventions are powerful alone, but even more powerful when converging with one another. Part Two, the Rebirth of Everything, focuses on

what the future holds for several different aspects of life, such as entertainment, education, healthcare, and many others. In part three, The Faster Future, the book goes into detail about the risks that threaten the development of technology.

Growing up in the mid 90s and early 2000s I have seen a lot of growth in technology. I was blown away at some of the current advancements in technology that were described in the book. One of the more interesting parts of the book was in the first part where it detailed how close we are to certain technologies that seem unattainable. Some examples of this are the Hyperloop designed by Elon Musk, rockets that would transport people from LA to Sydney in 30 minutes (also designed by Elon Musk), and virtual worlds that allow us to work from home, yet be in the office in a far away place as an Avatar. This was absolutely fascinating to me.

Perhaps the most meaningful and valuable part of this book was the chapter on the future of education. As a teacher, I hate that we as a society are satisfied with the fact that our education system has not changed for the past 200 years. Brain science and educational studies clearly show that every learner is different, yet we continue to try to pursue the one size fits all approach. In the book, the authors lay out some examples of how the future will look in education if we finally take the leap of faith away from our traditional schooling. Virtual Reality is a huge interest of mine, as I have held a training (with the help of one of my students) to demonstrate to the high school staff the uses of VR in the classroom. We only had around 10 teachers sign up. We have tried to convert our library into a maker space, which is a STEAM (science, technology, engineering, art, and mathematics) oriented space that would house VR stations and many other

awesome educational tools. We hope this is still an option in the near future, but our outlook has been growing dim. This part of the book proved to be incredibly meaningful to me because it gave me hope. It also made me realize that I am highly invested in the future of education. The authors gave an example of virtual field trips and customizable learning. Isn't that what studies have proven works best for our students? Just as they did in the rest of the book, they painted a picture of what education would look like in the near future. It was so powerful for me to visualize this. It has motivated me to continue pushing for the changes we need to see in our education system, to make learning individualized to each student!

This book was incredibly well written and was an interesting, easy read. I would highly recommend this to any and all. In fact, I am considering using this book for my AP Computer Science Principles class summer assignment. It would be great for people who are interested in technology, but also those who are not as invested in the topic. I think it could be eye opening (for the better) to many people who still believe technology is a bad thing.

Overall, I really enjoyed both the books I read. I thought both were well written and immensely captivating. *The Theory That Would Not Die* gave me an in depth view of the history of a mathematical subject, something I have longed for since I began teaching. *The Future is Faster Than You Think* gave me insight to the ever growing field of technology and allowed me to continue my push towards changing our current education system.

