The Data Detective Summary

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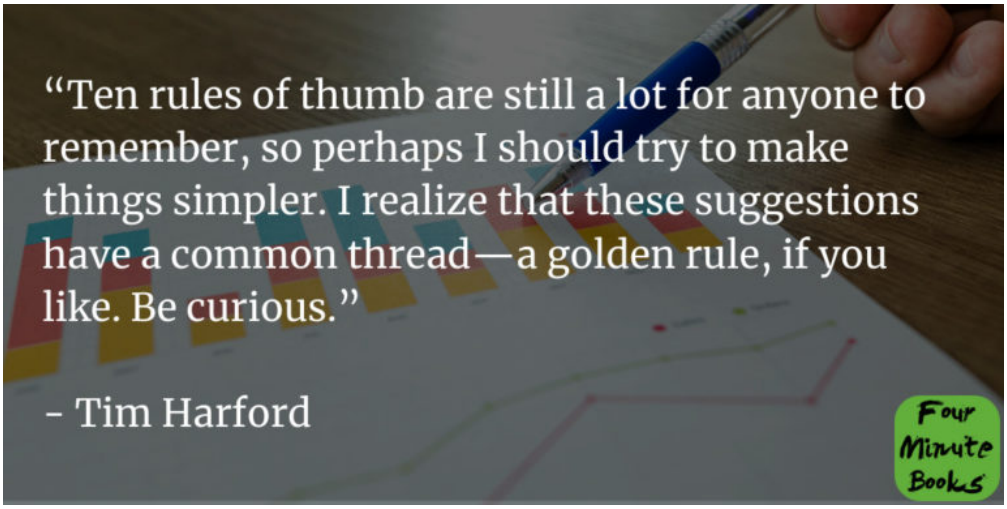
1-Sentence-Summary: *The Data Detective will make you smarter by showing how you can understand statistics well enough to see how they, and the beliefs and cognitive biases they can make you have, make such a huge impact in your life, for better or for worse, and how to separate fact from fiction.*

Read in: 4 minutes

Favorite quote from the author:



Have you ever heard that babies are delivered by storks? Statistics actually confirm this to be the case: Countries that have higher stork populations also have more babies than those with smaller stork populations.

Of course, this isn't really true. But this goes to show how easy it is to present statistics to convince people of something that isn't true. It's no wonder people are so leery when they hear statistics being thrown around.

In *The Data Detective: Ten Easy Rules to Make Sense of Statistics,* economist Tim Harford gives a practical guide on how to cut through the half-truths and truly understand the statistics that we come across. His ten rules are:

1. Search Your Feelings
2. Ponder Your Personal Experience
3. Avoid Premature Enumeration
4. Step Back and Enjoy the View
5. Get the Back Story
6. Ask Who Is Missing

7. Demand Transparency When the Computer Says 'No'
8. Don't Take Statistical Bedrock for Granted
9. Remember That Misinformation Can Be Beautiful Too
10. Keep an Open Mind

Using his simple tips, you can be an expert at statistics in no time!

Here are just 3 of the many useful and eye-opening lessons I got from this book

1. Take note of what your emotional reaction is and learn when it's better to trust statistics or your own experiences.
2. Find what a statistic is measuring and look for context to really understand it.
3. Statistics don't always apply to every person because of sampling problems.

What're the odds you'll learn something new about statistics in the next 4 minutes? Read on to find out!

Lesson 1: Watch out for statistics that invoke a strong emotion and learn when you should trust your own experience or a statistic.

Unfortunately, statistics can fool many people, especially when it stirs their emotions. Of course, not all statistics will cause any emotional reaction. But some statistics, particularly those that are politically charged, can easily stir our emotions.

When this happens and the information doesn't fit with our existing beliefs, we tend to ignore it. When it does fit in with our narrative, we like to use it as evidence. Even experts aren't immune to this sort of bias.

In fact, there are studies that show that people who are considered experts are even less likely to change their beliefs even if they are confronted head-on with a contradiction. It's easy to see why– they are motivated to avoid conflicting evidence and want to boost their own argument.

So how can we avoid this? First, notice how a statistical claim makes you feel. Are you overjoyed, upset, or in denial? After noting your emotions, stop to think about whether you are straining to come to a particular conclusion. This will help you think more clearly, free from bias. It can also help others follow suit.

However, there are times when personal experience can inform us as well or better than a statistic. When it comes to health outcomes, statistics usually win out, because the broad data shows a more accurate picture than your own experience.

On the other hand, statistics can be skewed in certain settings. This is seen a lot with performance reviews because people are more likely to distort or manipulate data when there is money or career opportunities at stake. In this case, judging performance on a case-by-case

basis is likely preferable.

Lesson 2: Considering what a statistic is really measuring and finding context can help us better understand information.

In the 2010s, the UK appeared to be experiencing an infant mortality crisis. What's more, rates of death varied widely depending on where you lived. It turned out the reason for this variation was because the definition of early death was different in different regions. Some places considered a baby born at 22 or 23 weeks to be a miscarriage and some considered it a live birth followed by early death.

This goes to show how important it is to find what a statistic is actually measuring. Look deeper to understand exactly what or who is being counted, because this can make a world of difference on a statistic.

Murky definitions like this make room for people to distort facts, often to support a political perspective. This is why it's important to investigate what the definitions are in a claim before you can accept or argue against it.

Finding context also can help us understand statistics. For example, a 2018 article in London's newspapers claimed that London now had a higher murder rate than New York City. Technically, the claim was true. But if you back up and look at the context, you can see this statistic doesn't mean much at all.

If you look at the past statistics of murders in both cities, you will see that murder rates in both cities have fallen significantly over the years, and New York started with a much higher rate that continues to fall.

But this doesn't mean suddenly London is a crime-ridden gang-infested city. Both cities are now safer than ever! Unfortunately, it's all too common for the news to prioritize things happening right now and leave out the bigger picture.

Lesson 3: Statistics may not all apply to everyone equally.

Do you ever feel pressured to be like the people around you? Almost all of us do to some extent. In one study by psychologist Solomon Asch, he showed subjects two images of three lines of different lengths. One of the lines was the reference line and the participants just had to say which one of the other two was the same length as the reference line.

But the catch was that the subjects were unknowingly surrounded by people who were told to choose the wrong line. The subjects chose the wrong line to conform with their peers a significant amount of the time. It was a fascinating and intriguing study, but there is one problem that makes it not applicable to people as a whole: it only included white male college students.

More and more, psychologists are becoming aware of this problem. In the years since, researchers have repeated the Asch experiment and found similar results. Although, they also found differences such as that women conformed more often than men.

Polling has a particular issue with sampling biases. **The fact of the matter is that some types of people are more likely to respond in a poll than others.** Another problem is where data is polled from. For example, if you use Twitter as your data, you might have an excess in opinions in young, college-aged people.

This is why it's important when you encounter data to ask: Who might have been missed in this sample? Try your best to find the answer because you might just find a blind spot in the sampling.

The Data Detective Review

Statistics is so cool! *The Data Detective* is one of the most important books on this subject because of how badly people misuse it. I think statistics can do a lot of good, however, if we can simply learn to be curious about the data we pay attention to and believe.

Who would I recommend The Data Detective summary to?

The 41-year-old know-it-all who wants to become more self-aware, the 22-year-old that loves to learn, and anyone who thinks they can trust every statistic they hear.