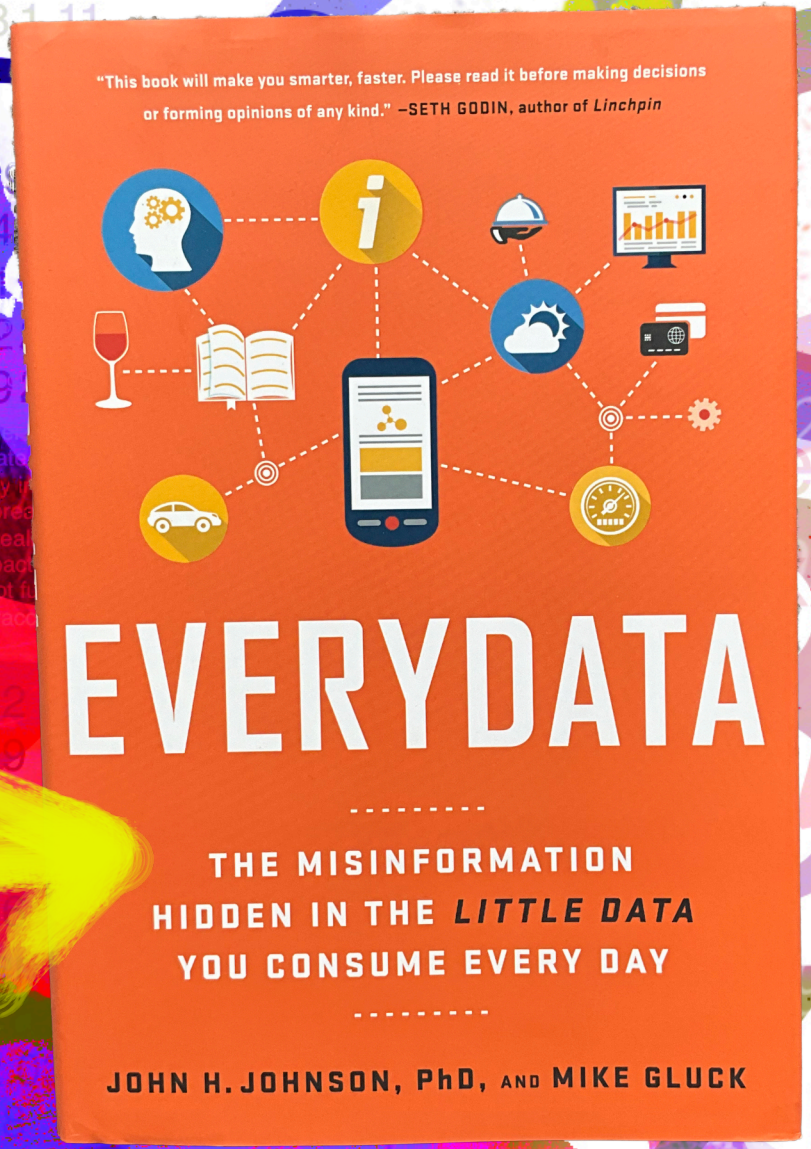

Psst,
sometimes
data has a
story
to tell
TheOtherKev, Pixabay
Detecting BS
Veronique Frizzell

When my internet went down, I read THIS book.



A fascinating book - chockfull of eye-opening anecdotes, thus making the book accessible to non-data scientists.

Topics covered include polling, sampling, averaging, correlation versus causation, data visualization, confidence interval, cherry picking and forecasting.

Now, DON'T go to SLEEP. As I said, the authors spice things up with some good stories to illustrate ways you can be fooled. Like the story about the *Challenger* explosion and the erroneous selection of data.


Even the
FOOTNOTES
have gems.

BUT...

I was SURPRISED the authors didn't catch THIS.


The topic was data visualization and the story was exercise and mortality risk.
Keith Pixabay
BS
Veronique Frizzell

Here's a screenshot of data:

Hours of Exercise per Week	Reduction in Mortality Risk
0	0 percent
0–7.5	20 percent
7.5–15	31 percent
15–22.5	37 percent
22.5–40	39 percent
40–75	39 percent
>75	31 percent

John H. Johnson, PhD and Mike Gluck (2016) *EVERYDATA: the misinformation hidden in little data you consume,* Bibliomotion, p.87.


Basically,
the MORE you exercise,
the LOWER
your mortality risk.

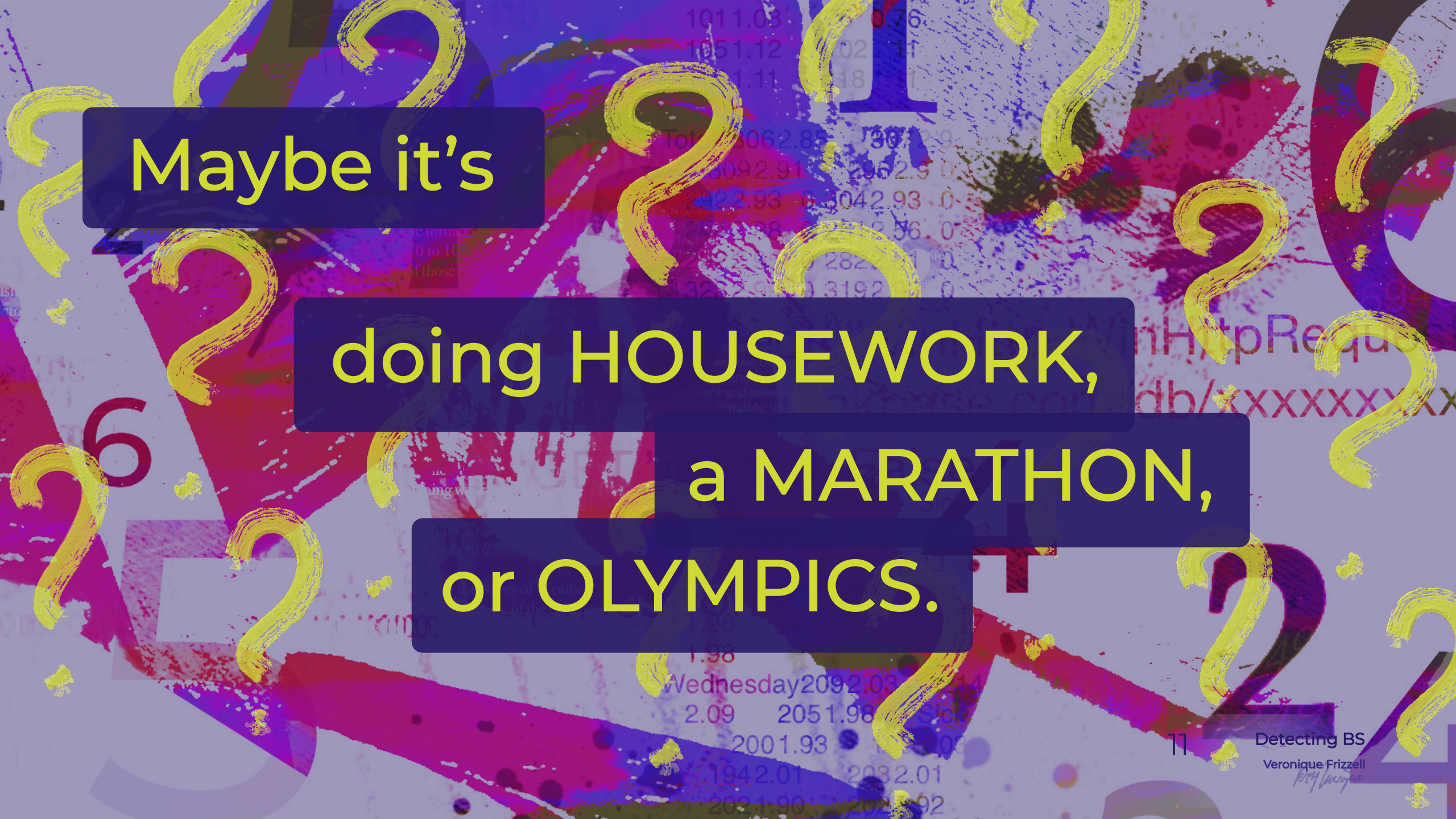

BUT
WAIT 4

WHO DOES THIS?

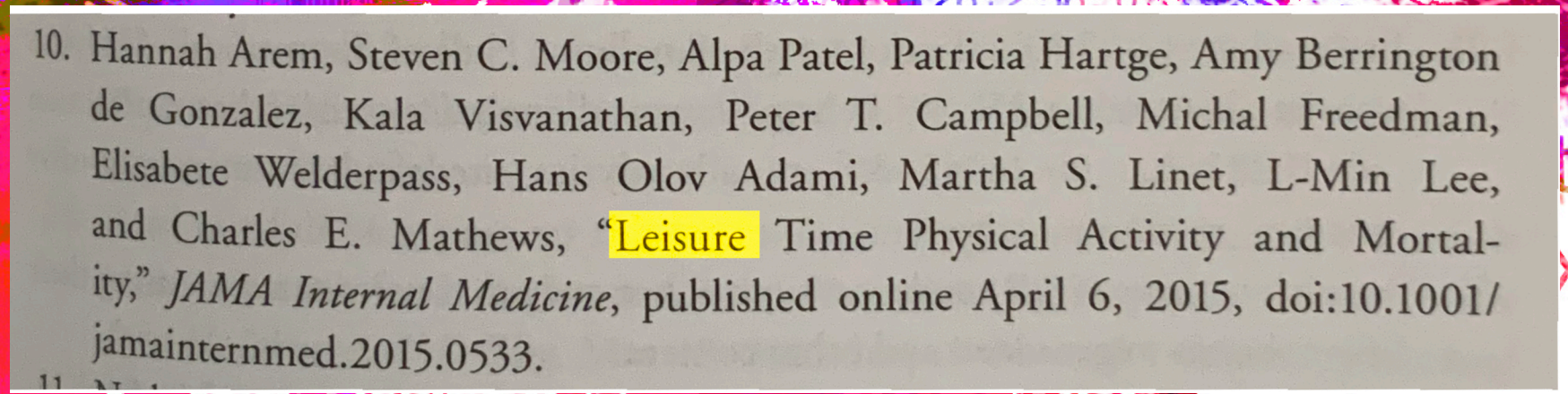
15–22.5	37 percent
22.5–40	39 percent
40–75	39 percent
>75	31 percent

Exercise 40 to 75 hours a week or even *more*?

That's like a whole week of work... or doubled!


Maybe it's
doing HOUSEWORK,
a MARATHON,
or OLYMPICS.

Looking at the footnotes, I get:



10. Hannah Arem, Steven C. Moore, Alpa Patel, Patricia Hartge, Amy Berrington de Gonzalez, Kala Visvanathan, Peter T. Campbell, Michal Freedman, Elisabete Welderpass, Hans Olov Adami, Martha S. Linet, L-Min Lee, and Charles E. Mathews, "Leisure Time Physical Activity and Mortality," *JAMA Internal Medicine*, published online April 6, 2015, doi:10.1001/jamainternmed.2015.0533.

Leisure!?! 75 hours of exercise?

John H. Johnson, PhD and Mike Gluck (2016) *EVERYDATA: the misinformation hidden in little data you consume,* Bibliomotion, p.179.

Note that the table didn't say how many people exercised at each level.

It could be 1 person at 75 hours.

Recently, I've gone to the original source - the research paper - and dug into the discussion.

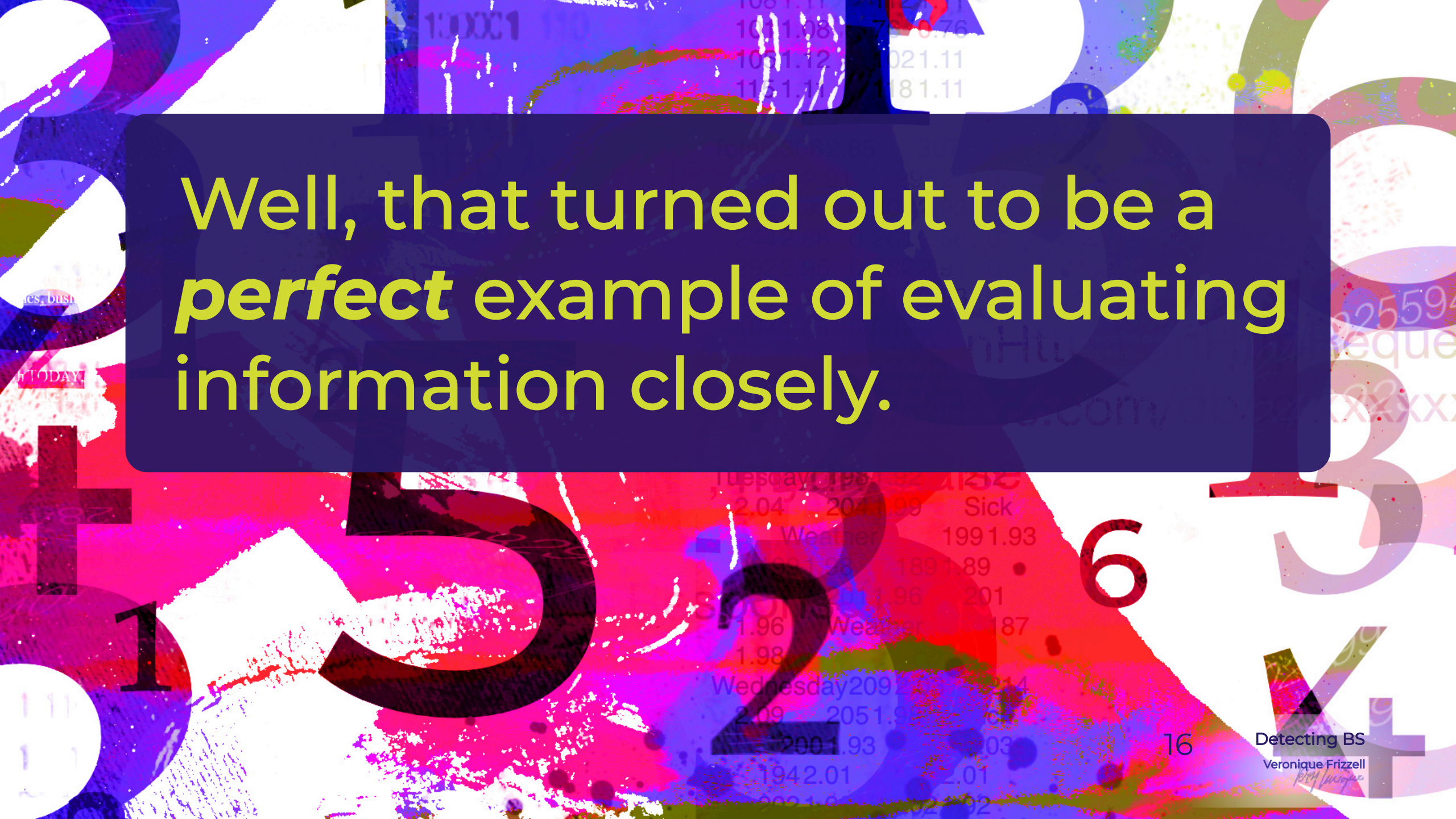
And I eventually discovered those hours are most likely

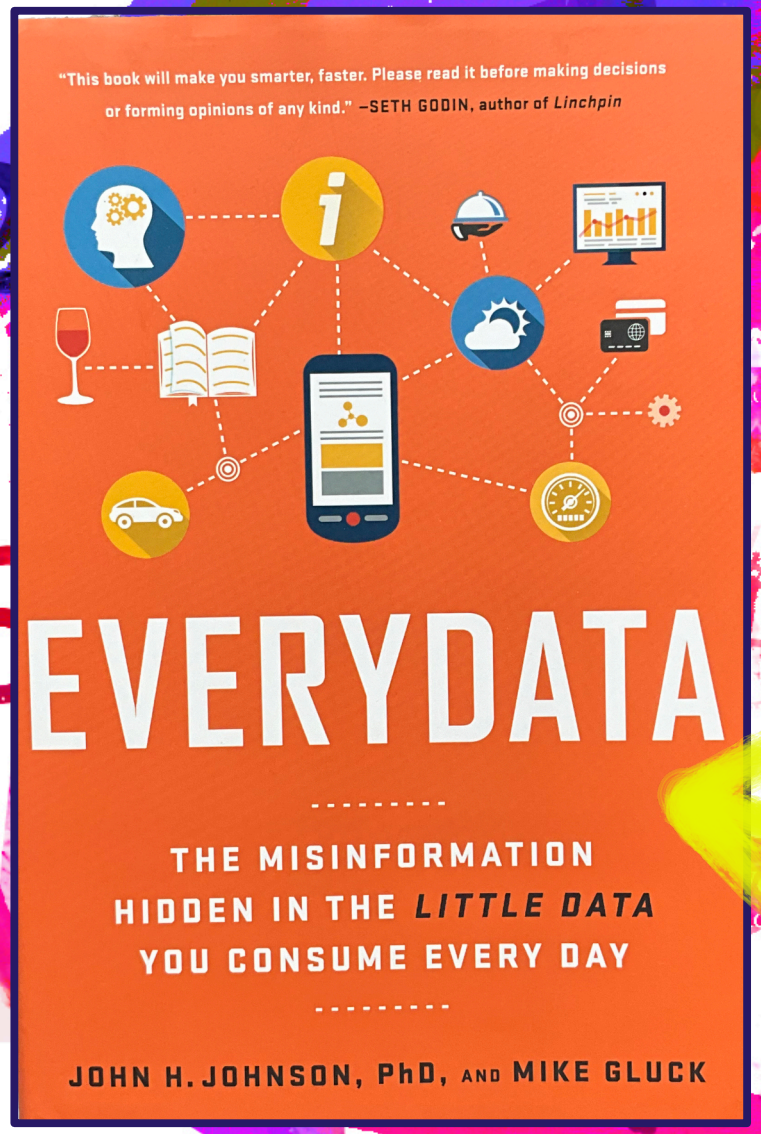
MET hours

Or metabolic equivalent task hours which are greater than regular hours.

After delving deep in the research, I estimated 75 MET hours as *maybe* being roughly 12.5 to 25 hours per week.

A more reasonable figure.

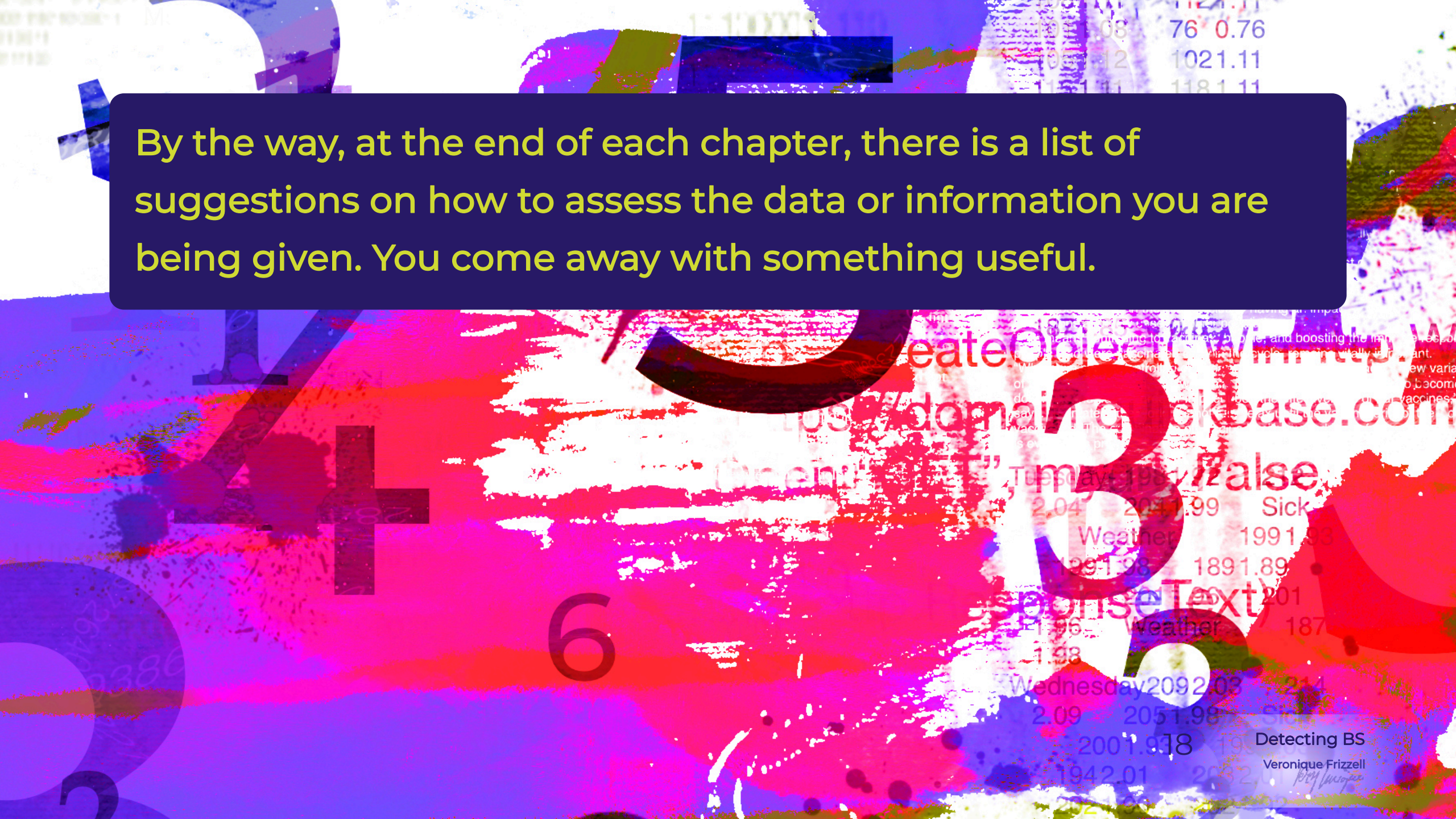

Well, that turned out to be a *perfect* example of evaluating information closely.



To **wrap** up,

If your internet goes down, you can do some upskilling by reading books such as this.

By the way, at the end of each chapter, there is a list of suggestions on how to assess the data or information you are being given. You come away with something useful.



If you want the link to the research, just comment or message me.

Otherwise, you can connect with me on LinkedIn by clicking on the More button at

https://www.linkedin.com/in/veroniquefrizzell/