

Book was written by Gary Smith Economics professor.

Big idea of this book is about regressing to the mean and how people can overlook this simple fact in nearly all aspects of life.

The Law of Competitive Balance; teams with winning records tend to do not do as well the next year, while teams with losing records improve.

Logical fallacy known as post hoc ergo proper hoc ("after this, therefore because of this"),

BCG vaccine to reduce deaths from tuberculosis had initially appeared effective, but was not entirely so. This was because the group with the method of pooling candidates (consensual vs. non-consensual parents imparted bias).

For poker players and investors who have sound strategies, regression to the mean counsels that patience is better than a Hail Mary.

Some people have superstitions, such as Wade Boggs of the Boston Red Sox. (Woke up same time everyday, went through precise warmup routine, including fielding exactly 150 ground balls.

"It's that darn selective recall playing tricks with his mind... it sticks in his mind and he thinks coincidence is meaning. He can't accept the fact that his favorite team might have been lucky and their luck ran out."

"Fortunately for the bookies, there is more dumb money than

smart money."

"Our strategy is based on our theory that gamblers underestimate the role of change. Logically, this myopia will be most exploitable when there is a large difference between how the opposing teams performed in the previous weeks."

"It's not just doctor prescribed medications. The same is true of individuals who try home remedies. People who feel sick, tired or achy are likely to try something different. Even if "something different" is worthless, they will, on average, experience improvements - which then become testimonials for the effectiveness of "something different.""

"To encourage honest reporting by both subjects and researchers, well-designed studies are double-blind: neither the subject nor the researcher knows who is in the treatment group and who is in the control group until all the data have been collected."

gold standard of a randomized trial

1. In addition to the group receiving the treatment, a control group receives a placebo, so that we can compare treatment to no treatment without worrying about the placebo effect or the body's natural ability to heal.
2. The subjects are randomly assigned to the treatment group and the control group, so that we don't need to worry about whether the people who choose the treatment are systematically different from those who don't.
3. The test is double-blind so that the subjects and researchers are not influenced by knowledge of who is getting the treatment and who is not.

Ronald Coase cynically observed, "If you torture the data long enough, it will confess."

"Daryl Bem, a prominent social psychologist wrote that, The conventional view of the research process is that we first derive a set of hypotheses form, a theory, design, and conduct a study to test these hypthoses, analyze the data to se see if they were confirmed or discomfirmed, and then chronicle this sequence of events in the journal article... But this is not how our enterprise actually proceeds. Psychology is more exciting than that.

He goes on: Examin [the data] from every angle..."

"This pattern is so common in medical research, it even has a nam- the "decline effect." Some researchers who have seen the decline effect first-hand with their own research are so perplexed that they set off on wild-goose chases looking for a causal explanation, when the reason is right in front of them: regression. If the initial positive findings were due to luck - random variations exploited by multiple tests or tortured data - it is no surprise that the subsequent results are often disappointing."

Secrit wrote a book titled The Triumph of Mediocrity in Business. "Hardol Hotelling wrote a devastating review that politely but firmly demonstrated that Secrit wasted ten years proving nothing at all. What Secrist became famous for was being fooled by regression to the mean."

Common characteristic across growing economies is the regression to the mean.

"It is a lot easier to replace a loser than to replace a legend (Think Jack Welch, Walt Disney, Sam Walton.) It is hard to do better than

someone who has been phenomenally successful. It is easier to do better than someone who has done miserably. Because of regression, phenomenal success tends to be followed by diminished success; miserable failure by less failure."

Jim Collins book, Good to Great: Why Some Companies Make the Leap... And Other Don't. Book takes back to the concept of data mining and trying to find things that fit reality rather than thorough experimentation in a controlled, methodical fashion.

Richard Feynman asked Caltech students to calculate the probability that, if he walked outside the classroom, the first car in the parking lot would have a specific license plate, say 8NSR26. Caltech students are very smart and answer is a little less than 1 in 17 million, but Feynman knew this beforehand.

Whitmore was not solely responsible for Kodak's weaknesses, nor was Fisher solely responsible for Motorola's strengths. Fisher couldn't save Kodak and he resigned on December 31, 1999 a year before his contract was set to expire. Fisher's charisma kept Kodak stock up for a while, but it didn't last. (Fisher was the former CEO of Motorola). Stock rose on 8% of hire.

Push-polling to sway opinions tries to get people to lose site of regression to mean through fear mongering, etc. Polling is a method of control and influence; see George Gallup

"The good news is we get to keep looking. The sobering news is that the other person probably feels the same way about us."

People don't want to stick out.. Japanese Proverb: "The stake that sticks out gets hammered down, In Australia, referred to as Tall

Poppy Syndrome. Weight measurements fluctuate during day.

- Random walks experiment (unpredictable stock prices)

"The first rule of antibiotics is try not to sue them, and the second rule is try not to use too many of them."

Arthroscopic knee surgery didn't really work for osteoarthritis..

"In view of the totality of available evidence, in current coronary care practice there is no indication for the routine administration of intravenous magnesium."

Problem is that if we only see the studies that had positive results, we overestimate the treatment's benefit. When the treatment is then applied to the patients, the results regress to the mean.