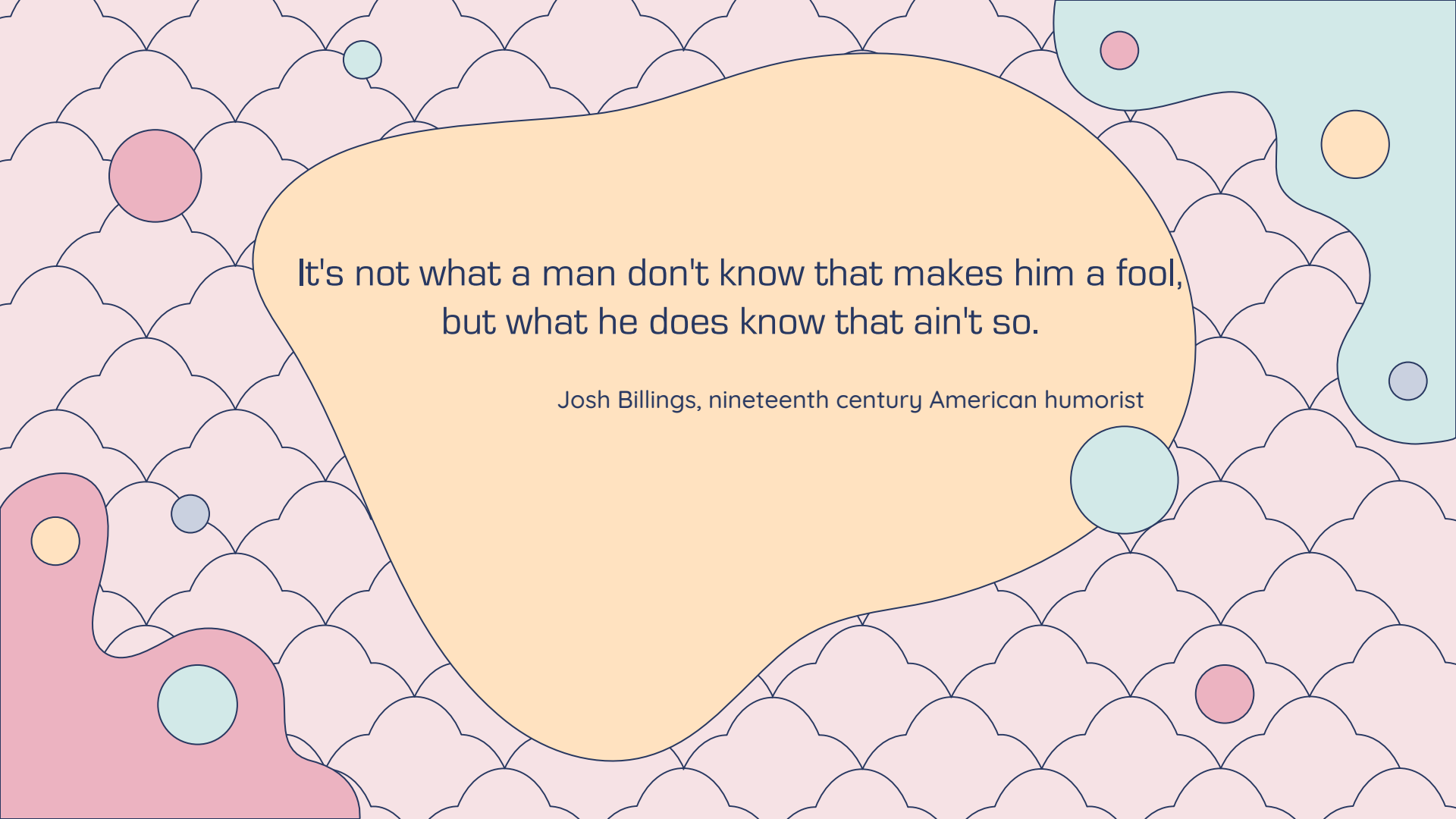


OVERCONFIDENCE



EE434 SEM1/2021
Sunsiree Kosindesha




It's not what a man don't know that makes him a fool,
but what he does know that ain't so.

Josh Billings, nineteenth century American humorist

Overconfidence is prevalent in many domains, not the least of which is financial decision-making.

For example, in 15 surveys (each with approximately 1,000 respondents) conducted between 1998 and 2000 by the Gallup Organization for UBS PaineWebber, respondents were asked what they expected the rates of return on the stock market and on their portfolios to be in the following 12 months.

On average, respondents expected their portfolios to **outperform the market**—that is, they were excessively optimistic.



People who are overconfident might have the tendency to **trade too much, underdiversify, and take on too much risk.**

Overconfidence can afflict managers and entrepreneurs, making them be **too ready to enter markets, invest excessively, acquire other companies too readily, and take on too much debt** because of excessive optimism.

OVERCONFIDENCE

The tendency for people to **overestimate their knowledge, abilities, and the precision of their information**, or to be **overly confidently optimistic of the future and their ability to control it.**

Confidence vs. Overconfidence

Confidence is about having a positive feeling about one's own skills, knowledge, etc.

Overconfidence is when one has an **inflated** sense of one's own abilities.

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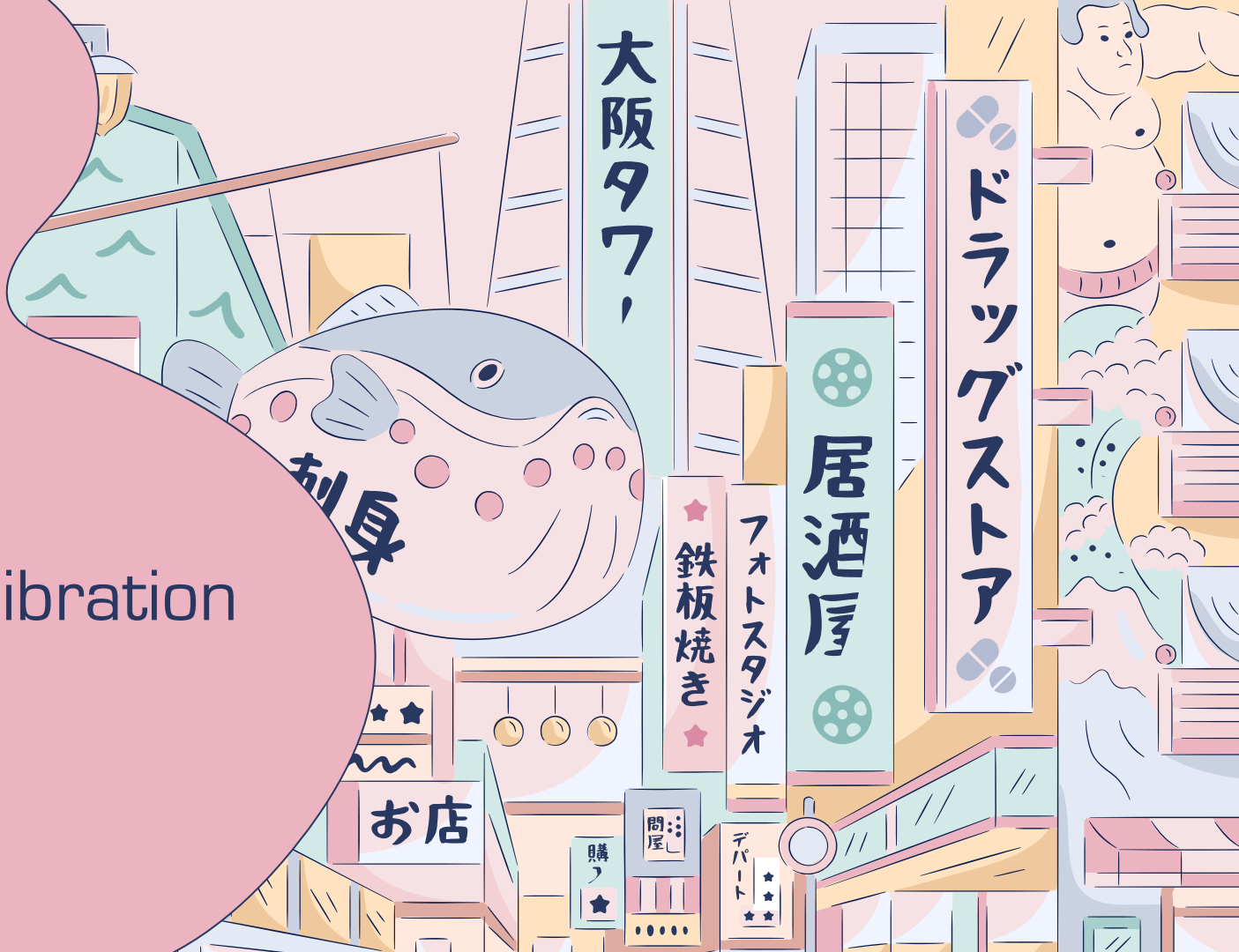
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01

Miscalibration



Miscalibration

- Miscalibration is the tendency to believe that your knowledge is more precise, that is, more accurate, than it really is.
- Calibration studies find that the confidence intervals that individuals provide are too narrow.

Calibration test

- Ask people 50 multiple choice questions,
 - Then ask how many the answers are right,
 - If they think they got 25 right...but they only got 15 right
 - they appear to be overconfident.

Calibration test

- Confidence interval approach
 - Individuals are asked to construct (say) 90% confidence intervals for currently (or soon) knowable magnitudes (such as the height of Mount Everest, or the level of the Dow in a month).
 - Typically, they are found to be miscalibrated, which means their intervals are too narrow.
 - If people are asked a large number of $x\%$ confidence interval questions, then proper calibration implies that about $x\%$ of their confidence intervals should contain correct answers to the questions.

02

Better-than-average effect



Better-than-average effect

Better-than-average effect says that many people feel we are smarter or more skilled than average.

But only 50% of us can really be better than average.

For example, Svenson(1981) surveyed a sample of students, reporting that 82% rated themselves in the top 30% of their group on driving safety.

Better-than-average effect

Both motivational and cognitive mechanisms are likely behind the better-than-average effect.

On the motivational side, thinking that we are better than average enhances **self-esteem**.

On the cognitive side, **the performance criteria that** most easily come to mind are often those that **we are best at**.

03

Illusion of control



Illusion of control

Illusion of control causes people to believe that **they have more power to exert control over events than objectively can be true.**

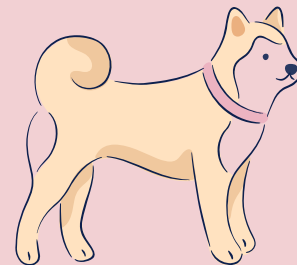
For example, one sees dice players acting as if they can control the outcome of the dice roll.

Possible reasons for Illusion of control

- **The satisfaction or feeling of competence** would result from being able to control the seemingly uncontrollable.
- There is motivation to avoid the **negative consequences** that accompany the perception of having no control.
- A temporary loss of control is **anxiety arousing**.
- **Skill and chance** factors are so closely associated in people's experience. There is often a true difficulty in making the discrimination, since there is an element of chance in every skill situation and an element of skill in almost every chance situation.

04

Excessive Optimism



Excessive Optimism

Excessive optimism reflects **the feeling that things will be rosier than objective analysis suggests.**

Excessive optimism is present when people assign probabilities to favorable(unfavorable) outcomes that are just too high(low) given historical experience or reasoned analysis.

Excessive Optimism

For example:

Despite high divorce rates, newlyweds almost universally expect that their marriages will succeed.

Investors might expect their portfolios to outperform the market

Excessive Optimism

Excessive optimism can lead to **planning fallacy**.

Planning fallacy (Kahneman and Tversky (1979)): people's tendency “to **underestimate the time required to complete a project**, even when they have considerable experience of past failures to live up to planned schedules.”

Excessive Optimism

Lovalllo&Kahneman(2003) explained that planning fallacy is when **managers make decisions based on delusional optimism** rather than on a rational weighting of gains, losses, and probabilities.

They **overestimate benefits and underestimate costs.**

They **spin scenarios of success** while overlooking the potential for mistakes and miscalculations.

Kahneman, D., & Tversky, A. (1979). Intuitive prediction: Biases and corrective procedures. *TIMS Studies in Management Science*, 12, 313–327.

Lovalllo, Dan; Kahneman, Daniel (July 2003). "[Delusions of Success: How Optimism Undermines Executives' Decisions](#)". *Harvard Business Review*. **81**(7): 56–63.

05

Nature of overconfidence



Are people consistently overconfident?

People have been shown to be **sometimes overconfident and sometimes underconfident.**

- Measured level of confidence depends on the design of the test, i.e. type of test, wording, framing, etc.

Are people consistently overconfident?

Kirchler & Maciejovsky (2002) investigated individual overconfidence within the context of an experimental asset market.

They used two different measures of overconfidence:

(1.) Subjective confidence intervals

Subjective confidence intervals are too narrow, as they exclude observed trading prices far too often

(2.) Differences between objective accuracy and subjective certainty

Traders are overconfident with respect to the accuracy of their price predictions, as their subjective certainty of having made accurate decisions exceeds the objective accuracy.

It was found that overconfidence increased with experience and was negatively correlated with individual earnings.

06

Factors impeding correction



Biases interfering with learning

Some biases contribute to overconfidence, such as:

- Self-attribution bias
- Hindsight bias
- Confirmation bias

Self-attribution bias

Self-attribution bias is the tendency for people to attribute successes or good outcomes to their own abilities, while blaming failures on circumstances beyond their control.

This can lead to an increase in overconfidence.

Self-attribution bias

- Suppose an overconfident individual observes personal performance outcomes that are logically a combination of external and internal (to the individual) forces.
- If things go well, the thinking will be that this is because of great ability, skill, or knowledge (much more so than an objective consideration of circumstances would warrant), and the result will be an increase in overconfidence.

Self-attribution bias

- On the other hand, adverse events, being only moderately ascribed to personal forces, will not lead to symmetric (but of opposite sign) revisions in overconfidence.
- Perhaps, people might “learn” to be overconfident.

Hindsight bias

Hindsight bias is defined as the belief that **an event is more predictable after it becomes known than it was before it became known.**

Hindsight bias occurs when people **feel that they "knew it all along".**

Hindsight bias involves the **inability to recapture the feeling of uncertainty that preceded an event.**

Hindsight bias

Hindsight bias embodies any combination of three aspects:

- memory distortion,
- beliefs about events' objective likelihoods, or
- subjective beliefs about one's own prediction abilities.

Hindsight bias

Consequences of hindsight bias include:

- myopic attention to a single causal understanding of the past (to the neglect of other reasonable explanations) as well as
- general overconfidence in the certainty of one's own judgement.

Confirmation bias

- Confirmation bias is the tendency to **search out evidence consistent with one's prior beliefs** and to **ignore conflicting data**.
- People who hold strong opinions on complex social issues are likely to examine relevant empirical evidence in a biased manner.
- They are apt to accept "confirming" evidence at face value while subjecting "discontinuing" evidence to critical evaluation.
- People perceive ambiguous information as supportive of their current beliefs.

THANKS!

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