A PANOPTICPROTOCOL COMMENTARY

Thinking, Fast and Slow

Two systems share your head. The fast one trades, the slow one reads the statement.

COMMENTARY · NOT A SUMMARY · READ FOR CRYPTO

Daniel Kahneman spent fifty years measuring how the mind decides. His finding in one line: when faced with a difficult question, we often answer an easier one instead, usually without noticing.

A market asks difficult questions — what is this worth, was that skill or a streak — and we answer the easy ones instead. Every experiment in this book has a twin on a trading screen.

2
systems
the fast one decides, the slow one signs off

3.2
points a year
by which the shares investors sold beat the ones they bought

.01
correlation
25 advisers, ranked across eight years: no skill signal

TWO SYSTEMS, ONE MARKET
System 1 decides fast; System 2 pays later.

The anchor	The loss	The story	The sample	The plan
the all-time high	counts double	persuades, does not predict	three green months	mainnet "in Q2"

> **Read the book.** *Thinking, Fast and Slow*, Daniel Kahneman, 2011. Every experiment and number here is his; the crypto bridges are ours.

START HERE

The whole book in 60 seconds

If you read one page, read this one. The rest is the evidence.

The mind is two characters. **"System 1 operates automatically and quickly, with little or no effort and no sense of voluntary control. System 2 allocates attention to the effortful mental activities that demand it."** System 1 reads faces, finishes sentences and hands System 2 an answer, which System 2 usually signs without checking — because "laziness is built deep into our nature."

System 1 builds the best story it can from whatever it has — **what you see is all there is** — and its confidence comes from how neat that story is, not from how much evidence is behind it. It anchors on numbers, feels losses about twice as heavily as gains, sees patterns in noise, and swaps hard questions for easy ones. None of it can be switched off.

WHY THIS BOOK, FOR CRYPTO

A market runs at System 1's speed and settles at System 2's. Charts, leaderboards, streaks and leverage sliders are built for the fast system; the statement arrives for the slow one. Kahneman tested each of these reflexes in a laboratory and put a number on it. He also says the uncomfortable thing: where the world is not regular enough to learn from, intuitive hits "are due either to luck or to lies."

THE COLOUR RULE

Yellow is Kahneman and his experiments. Coral is the crypto twin. When a page shows both, it is because they are the **same mechanism**, not a loose comparison. Where the bridge is weak, the guide says so.

⚡ SEND THIS TO A FRIEND

Kahneman in one line: you answer an easier question than the one you were asked, and feel sure because the story is neat. Every trade you ever regretted started there.

NO JARGON

Six words from the psychologist

Kahneman coined most of this vocabulary, and it is now everywhere. Here it is with the original meaning.

System 1 and System 2

Two characters. System 1 is fast, automatic and always on. System 2 is slow, effortful and lazy.

IN PLAIN TERMS Recognising a chart pattern is System 1. Checking whether it ever worked is System 2.

Substitution

When a hard question has no quick answer, System 1 answers an easier one and hands it over as if it were the same.

IN PLAIN TERMS Asked "is this token worth it?", you answer "do I like this team?"

WYSIATI

What you see is all there is. System 1 works only with what is in front of it, and never asks what is missing.

IN PLAIN TERMS A pitch deck is coherent because it left the other side out.

Anchor

Any number you see before making an estimate, which then pulls the estimate towards it — even a random number.

IN PLAIN TERMS The all-time high is the anchor for every price after it.

Loss aversion

Losses feel about twice as big as equal gains. Kahneman calls it psychology's biggest contribution to economics.

IN PLAIN TERMS A red day hurts twice as much as an equal green day pleases.

Outside view

Judging your case from what happened to similar cases, instead of from your own plan.

IN PLAIN TERMS Not "our roadmap says Q2" but "how late were the last twenty mainnets?"

⚡ **SEND THIS TO A FRIEND**

System 1 answers fast and feels sure. System 2 could check, but it is lazy. Every word in this book is about the gap between those two sentences.

NO JARGON

…and six from the blockchain

Each one tied back to an experiment, so the coral pages read as easily as the yellow ones.

All-time high

The highest price a coin has ever traded at. On every chart, and never forgotten by anyone who bought near it.

IN PLAIN TERMS Kahneman's anchor: a number on the table that moves every later judgment.

Bags

Tokens held long after the reason for buying them has gone, because selling would make the loss real.

IN PLAIN TERMS The disposition effect: people sell winners and keep losers. It costs about 3.4% a year.

DCA

Buying a fixed amount on a fixed schedule, whatever the price.

IN PLAIN TERMS A risk policy: a rule that stops you deciding again every red day.

Roadmap

A protocol's schedule of launches. Usually a best case presented as a plan.

IN PLAIN TERMS The planning fallacy, in a document. Kahneman's own textbook took eight years, not two.

Narrative

The story a market tells about why prices moved — halving, ETF, rate cuts — assembled afterwards.

IN PLAIN TERMS "A statement that can explain two contradictory outcomes explains nothing at all."

PnL screenshot

A posted profit — one trade, one month, one streak — offered as proof of skill.

IN PLAIN TERMS The law of small numbers: four marbles read as if they were a hundred.

⚡ **SEND THIS TO A FRIEND**

An all-time high is an anchor. A bag is loss aversion. A roadmap is the planning fallacy. The book is older than every coin on your screen, and it describes all of them.

THE NUMBERS

Six numbers from the book

Kahneman argues with experiments, and the experiments come with numbers. These are the ones to carry.

3.2
points a year
by how much the shares Odean's investors sold beat the ones they bought

.01
correlation
25 advisers' rankings, every pair of 8 years: zero skill signal

2 to 1
loss aversion
the gain many people need to accept a coin toss that can lose $100: about $200

55%
anchoring index
a 1,020-foot difference in anchors moved redwood guesses by 562 feet

67%
surprises
CFO forecasts landed outside their own 80% range two-thirds of the time

8.1
decision weight
what a 2% chance feels like: overweighted four times

THE ONE TO REMEMBER

Kahneman was given eight years of results for 25 wealth advisers — the numbers that set their bonuses. He ranked them each year and compared every pair of years: 28 comparisons, average correlation .01. "The consistent correlations that would indicate differences in skill were not to be found." The executives nodded and changed nothing: "the firm was rewarding luck as if it were skill."

IN CRYPTO: THE SAME ARITHMETIC

Every leaderboard and copy-trading rank is that spreadsheet with a bonus attached. The test is not whether a trader had a great year but whether the ranking **persists**: whoever is top this quarter should be near the top next quarter, if skill is doing the work.

⚡ SEND THIS TO A FRIEND

Kahneman ranked 25 advisers over 8 years; the average correlation between any two years was .01. Zero. Now look at a crypto leaderboard again.

THE READING

What you see is all there is

Chapter 7. The machine for jumping to conclusions, and why a pitch deck is convincing.

System 1 builds the best story it can from what is in front of it, and cannot allow for what it does not have. Tversky tested this with a court case: some people heard only one lawyer, some heard both. Everyone knew the setup, and "the lawyers added no useful information that you could not infer from the background story." Yet one side was enough to swing the verdicts — and **"participants who saw one-sided evidence were more confident of their judgments than those who saw both sides."** The conclusion: "It is the consistency of the information that matters for a good story, not its completeness."

THE THORNTON CASE: SAME FACTS, DIFFERENT PRESENTATION (BARS ILLUSTRATIVE)

Heard one side only
judgment more extreme, confidence higher — confidence

Heard both sides
judgment more moderate, confidence lower — confidence

IN CRYPTO: the pitch deck is one side

"It is the consistency of the information that matters for a good story, not its completeness." Kahneman, not the founder.

IN CRYPTO: THE DECK IS ONE SIDE

A whitepaper, a founder's thread and an AMA are that court case with one lawyer. They are not lies; they are one side, and the mind does not lower its confidence for the side it never heard. The fix is procedural: form your view before the group call, write it down, and only then read the thread. "Knowing little makes it easier to fit everything you know into a coherent pattern."

⚡ SEND THIS TO A FRIEND

Kahneman: one-sided evidence makes people more confident, not less. A pitch deck is one side. The confidence you feel after reading it is the missing side, not the strength of the case.

THE READING

Anchors

Chapter 11. A rigged wheel, a redwood tree, twelve cans of soup, and the all-time high.

Kahneman and Tversky rigged a wheel of fortune to stop at 10 or 65, spun it in front of students, then asked what share of African nations are in the UN. Those who saw 10 guessed 25%; those who saw 65 guessed 45%. A random number had moved a judgment. In another test, people asked to guess the height of the tallest redwood said 844 feet after hearing 1,200, and 282 feet after hearing 180.

THE REDWOOD EXPERIMENT

Anchor: 1,200 feet
mean guess 844

Anchor: 180 feet
mean guess 282

Anchoring index 55%: every 100 feet of anchor moves the guess by 55.

THE ANCHORS ON-CHAIN

The all-time high	"at 40 it is cheap"
The presale price	later prices are measured from it
"Max 3 per wallet"	Campbell's limit of 12 cans
The round target	"100k" before any analysis

"You should assume that any number that is on the table has had an anchoring effect on you."

EVERYDAY EXAMPLE

A supermarket put a sign on discounted soup: *limit of 12 per person*. Shoppers bought an average of 7 cans — twice as many as on the days the sign said *no limit*. The 12 was a number nobody had to reach. It anchored anyway.

IN CRYPTO: THE HIGH THAT NEVER LEAVES

The all-time high is the redwood anchor: once 69,000 has been on the table, 40,000 is "cheap". The presale price anchors every holder for years. A mint's "max 3 per wallet" is the soup sign. Round targets shouted before any analysis are anchors set on purpose. Kahneman's rule: **"you should assume that any number that is on the table has had an anchoring effect on you."**

⚡ SEND THIS TO A FRIEND

Kahneman moved people's estimates 20 points with a rigged wheel of fortune. The all-time high is a wheel that stopped once at a very big number, and it has been anchoring you ever since.

THE READING

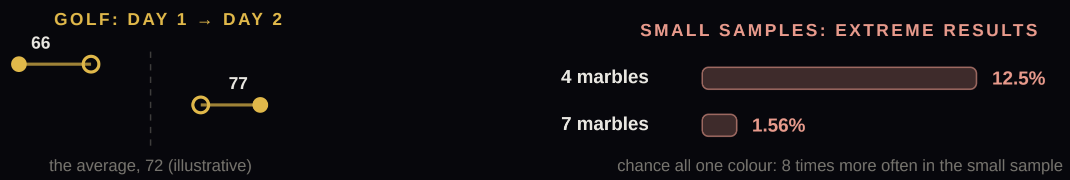
Talent plus luck

Chapters 10 and 17. Small samples, regression to the mean, and the trader with three green months.

The American counties with the lowest rates of kidney cancer are rural and thinly populated. So are the counties with the highest rates. Nothing about rural life explains both: small samples simply produce extreme results. Then Kahneman's favourite equation: **"success = talent + luck; great success = a little more talent + a lot of luck."** A golfer who shoots 66 on day one is talented and lucky. On day two the talent stays and the luck does not, so the best guess is a worse score. The mind hates this, so "we pay people quite well to provide interesting explanations of regression effects."

success = talent + luck

great success = a little more talent + a lot of luck



A market is a four-marble sample that we read as if it were a hundred. The next day regresses.

IN CRYPTO: THE STREAK AND THE SEQUEL

A trader with three green months is a sample of four marbles. A fund that topped last year's table is the golfer who shot 66. The question worth asking is Kahneman's own: "How many good years should you wait before concluding that an investment adviser is unusually skilled?" The arithmetic runs the other way too: the coin at the bottom of the table will mostly improve without anyone fixing anything.

⚡ SEND THIS TO A FRIEND

Kahneman: great success is a little more talent and a lot of luck, and luck does not repeat. Three green months is a sample of four marbles. Wait before you copy the trade.

THE READING

The illusion of skill

Chapters 20 and 22. Why trading feels like expertise, and when intuition can be trusted.

Terry Odean studied 10,000 brokerage accounts and nearly 163,000 trades. Whenever someone sold one stock to buy another, he compared the two a year later: **"the shares that individual traders sold did better than those they bought, by a very substantial margin: 3.2 percentage points per year"** — before the cost of the trades. Intuition earns trust under two conditions: "an environment that is sufficiently regular to be predictable" and "an opportunity to learn these regularities through prolonged practice." Stock pickers, he says, have neither.

25 ADVISERS, 8 YEARS, 28 RANKING CORRELATIONS, EVERY PAIR OF YEARS

- **Odean's individual investors**
  the shares they sold beat the shares they bought by 3.2 points a year
- **Mutual funds**
  at least 2 in 3 below the market in any year; year-to-year correlation barely above zero
- **Tetlock's experts**
  284 people, 80,000 forecasts, worse than assigning equal odds

IN CRYPTO: WHICH PARTS ARE CHESS

Crypto splits cleanly on those two conditions. Arbitrage, market making and MEV have fast, clear feedback: a bot learns in minutes whether it was right, and skill is real there. Price prediction over months has neither, so the confident thread is what the book says it is: "declarations of high confidence mainly tell you that an individual has constructed a coherent story in his mind, not necessarily that the story is true."

⚡ SEND THIS TO A FRIEND

Kahneman: trust intuition only where the environment is regular and the feedback fast. Market making is chess. Calling the top is a coin toss with a narrator.

THE READING

The outside view

Chapters 23 and 24. The planning fallacy, the premortem, and the mainnet that was due in Q2.

Kahneman's team was writing a textbook. Asked how long it would take, every member said about two years. Then he asked the one person who had seen other teams do it: about 40% never finished, and none took less than seven years. Their own team, he added, was "below average, but not by much." They carried on. The book took eight years and was never used. The Scottish Parliament was priced at £40 million and cost about £431 million. And in one survey, 81% of American entrepreneurs put their own odds of success at 7 in 10 or better; a third said their chance of failing was zero.

THE INSIDE VIEW	THE OUTSIDE VIEW
About two years	**7 to 10 years, if it finishes**
estimates from 1.5 to 2.5 years	40% of such teams never finished
nobody considered failure	"We're below average, but not by much"

The textbook took eight years and was never used.

Scottish Parliament	Kitchen remodels	Rail projects, 1969–98
£40m in 1997 → £431m in 2004	$18,658 expected → $38,769 paid	riders overestimated by 106%, costs over by 45%

IN CRYPTO: THE ROADMAP IS THE INSIDE VIEW

Every roadmap is the two-year estimate. The outside view is the record: not "our mainnet is on track" but how late the last twenty mainnets were, and how many tokens from the last cycle's top hundred are still there. For teams, Kahneman's remedy is the **premortem**: "Imagine that we are a year into the future. We implemented the plan as it now exists. The outcome was a disaster." Then write the history of it.

⚡ SEND THIS TO A FRIEND

Kahneman's team said two years; similar teams took seven to ten and 40% never finished. Every roadmap is the two-year estimate. Ask for the reference class before the launch date.

THE READING

Losses loom larger

Chapters 26 and 29. Prospect theory, the fourfold pattern, and where the liquidated trader lives.

Offered $900 for sure or a 90% chance of $1,000, most people take the sure thing. Offered a sure loss of $900 or a 90% chance of losing $1,000, most people gamble. The mind values changes, not totals, and **"losses loom larger than gains"** — ask what gain you need to accept a coin toss that could lose $100 and "for many people the answer is about $200." Small probabilities are stretched too: a 2% chance carries the weight of 8%. Put the two together and you get four cells: careful with likely gains, reckless with likely losses, lottery tickets for tiny chances, insurance against tiny risks.

GAINS	LOSSES
95% chance to win 10,000 fear of disappointment RISK AVERSE: accept less for sure	**95% chance to lose 10,000** hope to avoid the loss RISK SEEKING: reject the sure loss
5% chance to win 10,000 hope of a large gain RISK SEEKING: the lottery ticket	**5% chance to lose 10,000** fear of a large loss RISK AVERSE: the insurance policy

Top right: where the loser doubles down. Bottom left: where the memecoins live.

IN CRYPTO: THE TOP-RIGHT CELL

The darkest cell is the top right, "where people who face very bad options take desperate gambles." That is adding margin to a losing position instead of closing it: the sure loss is unbearable, the small chance of getting back to even feels bigger than it is, and "risk taking of this kind often turns manageable failures into disasters." The bottom left is the memecoin. There is an antidote in the same chapter: people told to "think like a trader" became measurably less loss averse.

⚡ SEND THIS TO A FRIEND

Kahneman: people gamble to avoid a sure loss and pay too much for a small chance of a big win. Adding margin to a loser and buying the memecoin are the same two cells of one table.

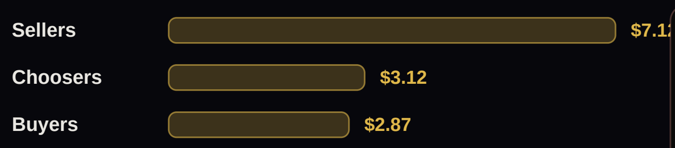
THE READING

Keeping score

Chapters 27 and 32. The endowment effect, the disposition effect, and the question to ask of every bag.

Students given a coffee mug wanted $7.12 to sell it. Students offered the same mug would pay $2.87. Owning it doubled it. Experienced traders showed no such effect: at a card convention 48% happily swapped a gift for an equal one, against 18% of newcomers. Then the adviser who asked Amos Tversky for the purchase price of every stock he owned. "Isn't it supposed not to matter?" Amos asked. It matters, in the wrong direction: **"finance research has documented a massive preference for selling winners rather than losers"**, and it costs about 3.4% a year against doing the opposite.

THE MUGS EXPERIMENT



Same mug, same choice: keep the mug or take cash. Owning it doubles it.

THE ADVISER'S QUESTION

The adviser asked for the purchase prices.
Amos: "Isn't it supposed not to matter?"
The adviser was astonished.
You sell the winners, you keep the losers —
and it costs about 3.4% a year.

"Imagine we did not own it; how much would we think it is worth?" The question for every bag.

IN CRYPTO: THE BAG IS A MUG

A bag is the mug: worth twice as much to its owner as to anyone who would have to buy it. "I'm not selling at a loss" is the disposition effect said out loud. The gap between newcomers and traders is the useful part, because it means the habit is learnable. Kahneman's question does the work in one line: **"Imagine we did not own it; how much would we think it is worth?"**

⚡ SEND THIS TO A FRIEND

Kahneman: owning a mug doubled its price; owners refuse to sell losers and it costs them 3.4% a year. Ask of every bag: if I did not own it, would I buy it today?

THE READING

Narrow frames

Chapters 30 and 31. Samuelson's bet, and how often to look at the portfolio.

Paul Samuelson offered a friend a coin toss: lose $100 or win $200. The friend refused — but said he would gladly take a hundred such tosses. He was right: a hundred tosses have an expected gain of $5,000 and almost no chance of losing anything. One toss seen alone is a narrow frame. The practical rule follows: **"closely following daily fluctuations is a losing proposition, because the pain of the frequent small losses exceeds the pleasure of the equally frequent small gains. Once a quarter is enough."** Rare events get the same treatment. Nobody who has not lived through one takes it seriously — "in 2007 no banker had personally experienced a devastating financial crisis" — and a fresh disaster is overweighted, then forgotten.

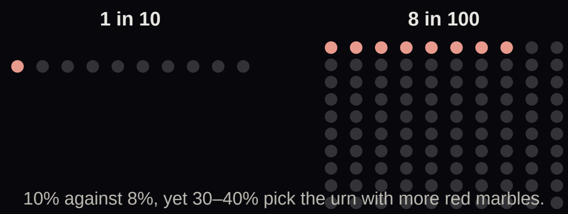
SAMUELSON'S BET

1 toss — rejected
lose 100 or win 200

100 tosses — accepted
expected gain 5,000; 1 in 2,300 to lose anything

Same bet, broader frame: "you win a few, you lose a few."

DENOMINATOR NEGLECT



10% against 8%, yet 30–40% pick the urn with more red marbles.

Check the portfolio once a quarter; the pain of small losses outweighs the pleasure of equal gains.

IN CRYPTO: THE PORTFOLIO AT 3 A.M.

The phone that shows the portfolio every hour is Samuelson's single toss played all day, and every red candle is charged at the loss-aversion rate. DCA is the hundred tosses. The hack cycle is the same story: a bridge exploit dominates for a month, then a new cohort arrives that has never seen one. The trader who has only known one bull market is the banker of 2007.

⚡ SEND THIS TO A FRIEND

Kahneman: check the portfolio once a quarter, because the pain of small losses beats the pleasure of equal gains. One toss is a bad bet; a hundred is a good one. That is what DCA is.

SIDE BY SIDE

The book, and its twin

Eight experiments. Yellow is the chapter, coral is where you will meet it on a trading screen.

KAHNEMAN	THE FINDING	ON-CHAIN
WYSIATI	One side raises confidence	The pitch deck; the founder's halo
Anchors	A number on the table moves estimates	The all-time high; the presale price
Small numbers	Small samples give extreme results	Three green months; the PnL screenshot
Regression	Talent plus luck; luck averages out	Last cycle's top fund; the bottom coin
Illusion of skill	Rankings that do not persist are luck	Leaderboards; copy trading
Outside view	Plans are best cases; use the record	Roadmaps; "mainnet in Q2"
Loss aversion	Losses count double; sure losses get gambled	Adding margin; the memecoin lottery
Narrow framing	One toss looks bad; a hundred look good	Hourly portfolio checks; DCA

AND ONE WHERE IT CUTS AGAINST CRYPTO

Kahneman is not a libertarian. He ends by endorsing the nudge: "Humans, more than Econs, also need protection from others who deliberately exploit their weaknesses." A 20x default on the leverage slider is that exploitation, aimed at the fast system. The Mill guide on this shelf argues the other way; read both.

⚡ SEND THIS TO A FRIEND

Eight experiments, eight things on a trading screen this afternoon — and one warning: Kahneman would nudge you into the savings plan, not the 20x slider.

THE VERDICT

The book, weighed

Where it holds, where it was overturned, and where a trader should push back.

What holds. The core. Loss aversion, anchoring, framing, the planning fallacy and the illusion of skill have been repeated across labs and countries for decades. And the market evidence is not even his: Odean's trading records, Tetlock's forecasts, a real firm's bonus spreadsheet.

What was overturned. Chapter 4. The priming studies — students walking slowly after reading words about old age — did not replicate, and in 2017 Kahneman admitted he had "placed too much faith in underpowered studies." His line that "disbelief is not an option" is the one sentence to disbelieve. The willpower story of chapter 3 failed a 23-lab test in 2016. And in 2018 economists found a flaw in the hot-hand analysis: streaks are modestly real after all.

Where to push back. On skill. Where feedback is fast and clear, as in market making, his own two conditions say expertise is possible. The book leaves that door open; the folklore around it does not.

WHERE IT HOLDS

- Loss aversion, anchoring, framing → replicated everywhere
- The planning fallacy → every roadmap
- The illusion of skill → leaderboards, "alpha"
- Odean's traders: what they sold beat what they bought

WHERE IT STRAINS

- Priming (Ch. 4): Kahneman, 2017: "too much faith in underpowered studies"
- Ego depletion: the 2016 multi-lab replication failed
- The "hot hand": in 2018 the original statistics were found biased

IN ONE LINE

A book of measurements. It cannot make your System 1 wiser — Kahneman says his own never improved — but it teaches you to recognise the minefield: an anchor, a sure loss, a streak.

TAKE THESE WITH YOU

Six lines worth stealing

In his words. And one sentence to explain the whole book.

"

Our comforting conviction that the world makes sense rests on a secure foundation: our almost unlimited ability to ignore our ignorance.

CHAPTER 19. THE NARRATIVE FALLACY.

"

You should assume that any number that is on the table has had an anchoring effect on you.

CHAPTER 11. THE ALL-TIME HIGH.

"

Success = talent + luck. Great success = a little more talent + a lot of luck.

CHAPTER 17. REGRESSION TO THE MEAN.

"

For the large majority of individual investors, taking a shower and doing nothing would have been a better policy than implementing the ideas that came to their minds.

CHAPTER 20. ODEAN'S 163,000 TRADES.

"

In the absence of valid cues, intuitive "hits" are due either to luck or to lies.

CHAPTER 22. WHEN TO TRUST AN EXPERT.

"

Nothing in life is as important as you think it is when you are thinking about it.

CHAPTER 38. THE FOCUSING ILLUSION, AND THE CHART AT 3 A.M.

HOW TO EXPLAIN THIS BOOK IN ONE BREATH

It is a book about the difference between the answer that comes to mind and the answer that is true. The fast system supplies the first, feels sure, and never notices what it left out. The slow system could check, but rarely does. Kahneman measured that gap in a hundred experiments, and a market is where the gap is priced.

WHAT TO READ NEXT

If this landed, these are next

Three guides in the library that pick up where Kahneman stops.

Trading in the Zone — Mark Douglas

Kahneman measures the biases; Douglas trains a trader to live with them.

The Art of Execution — Lee Freeman-Shor

The disposition effect, watched in real money: managers who were wrong half the time and still got rich.

The Psychology of Money — Morgan Housel

Talent plus luck is Housel's second chapter. Read it for what to do with the luck part.

Read them in that order. Douglas for the routine that keeps System 2 in the chair, Freeman-Shor for the bag you should have sold, Housel for what to do once you accept how much was luck.

⚡ SEND THIS TO A FRIEND

Just read the psychology book by the man who won the economics Nobel to understand my own trades, and it worked. Start with the anchor. Everything follows.