

# BEHAVIORAL FINANCE



**Why is it relevant?**  
**How can it affect investor decisions?**  
**Can we limit its impact?**



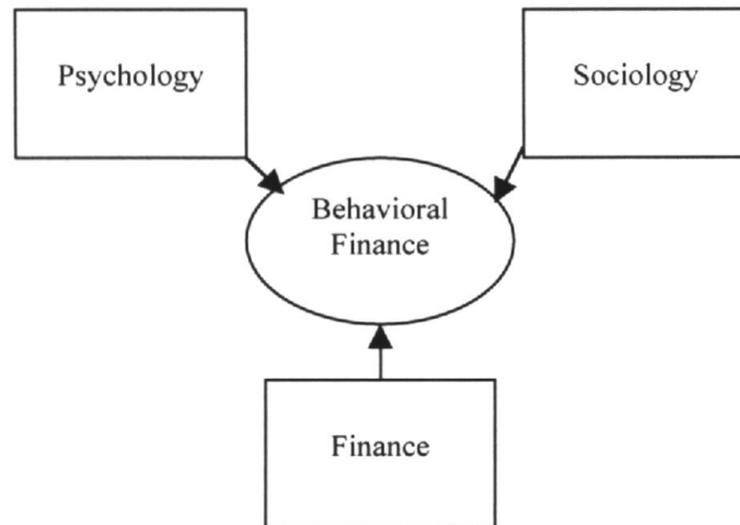
**By: Philip H. Weiss, CFA, CPA**

<http://www.apprisewealth.com>

[philweiss@apprisewealth.com](mailto:philweiss@apprisewealth.com)

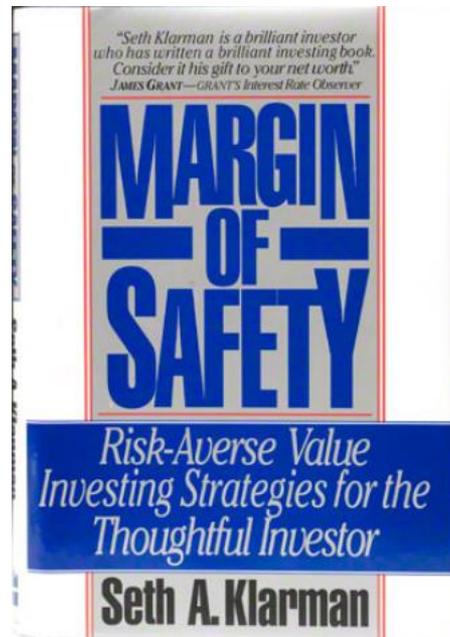
# What is Behavioral Finance?

A relatively new field that seeks to combine **behavioral** and cognitive psychological theory with conventional economics and **finance** to provide explanations for why people make irrational **financial** decisions.



# Investing & Psychology

- “Investing is the intersection of economics and psychology.” – Seth Klarman



# Successful Investing

- “Truly successful investing is more about psychology, behavior and temperament than IQ or education. The ability to keep your cool and not go on a selling rampage during market downturns will serve you well.” – Millennial Investment World
- “Successful investing takes time, discipline, and patience. No matter how great the talent or effort, some things just take time: You can’t produce a baby in one month by getting nine women pregnant.” – Warren Buffett



# Financial Advising & Psychology

- Being a financial advisor is one part portfolio manager and one part clinical psychologist
- People aren't very good at anticipating how they're going to react to various market outcomes
- A financial advisor's real goal is to help each client understand what is possible and what isn't.



# Efficient Market Hypothesis

- Assumes all people are rational.
- EMH and CAPM would be true; in a world without humans

**EFFICIENT  
MARKET  
HYPOTHESIS:  
THE THEORY THAT  
BEATING THE MARKET  
IS IMPOSSIBLE**



Value investing is predicated on the efficient market hypothesis being wrong.

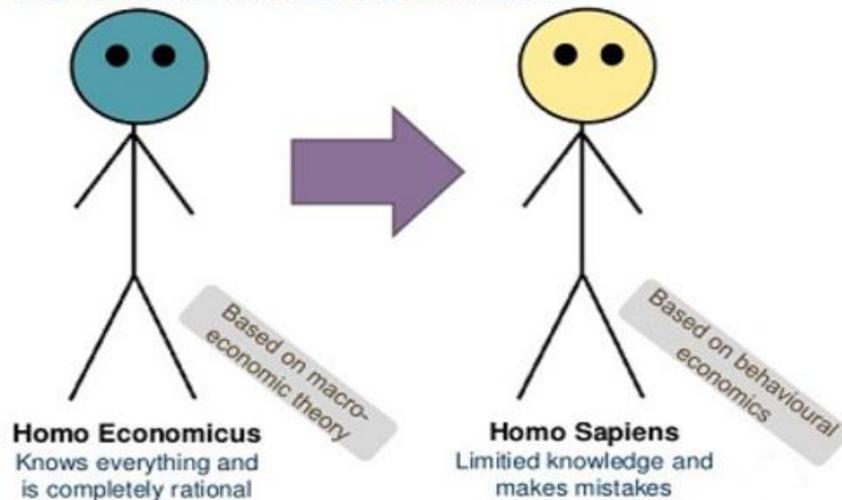
— Seth Klarman —

AZ QUOTES

# Truth vs. Reality

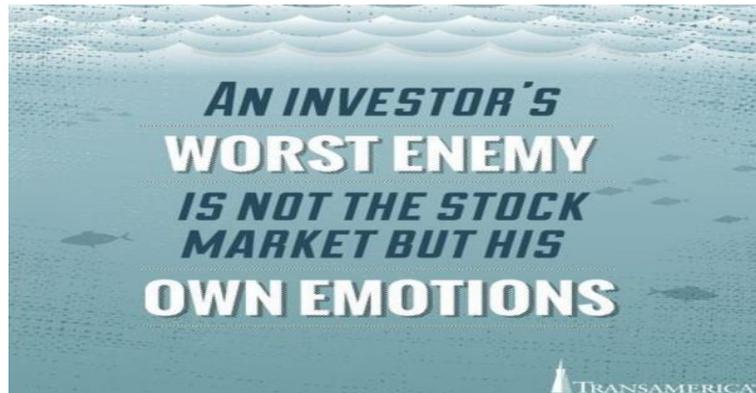
## What efficient market theory leaves out

More knowledge from research has changed the view on human behaviour...



# Process + Emotion

- Research without process can lead to:
  - Inability to assess performance
  - Failure
- Even if we have a good process, we still have to control our emotions



# Process Vs. Outcome

“We have no control over outcomes, but we can control the process. Of course, outcomes matter, but by focusing our attention on process, we maximize our chances of good outcomes.” – Michael Mauboussin

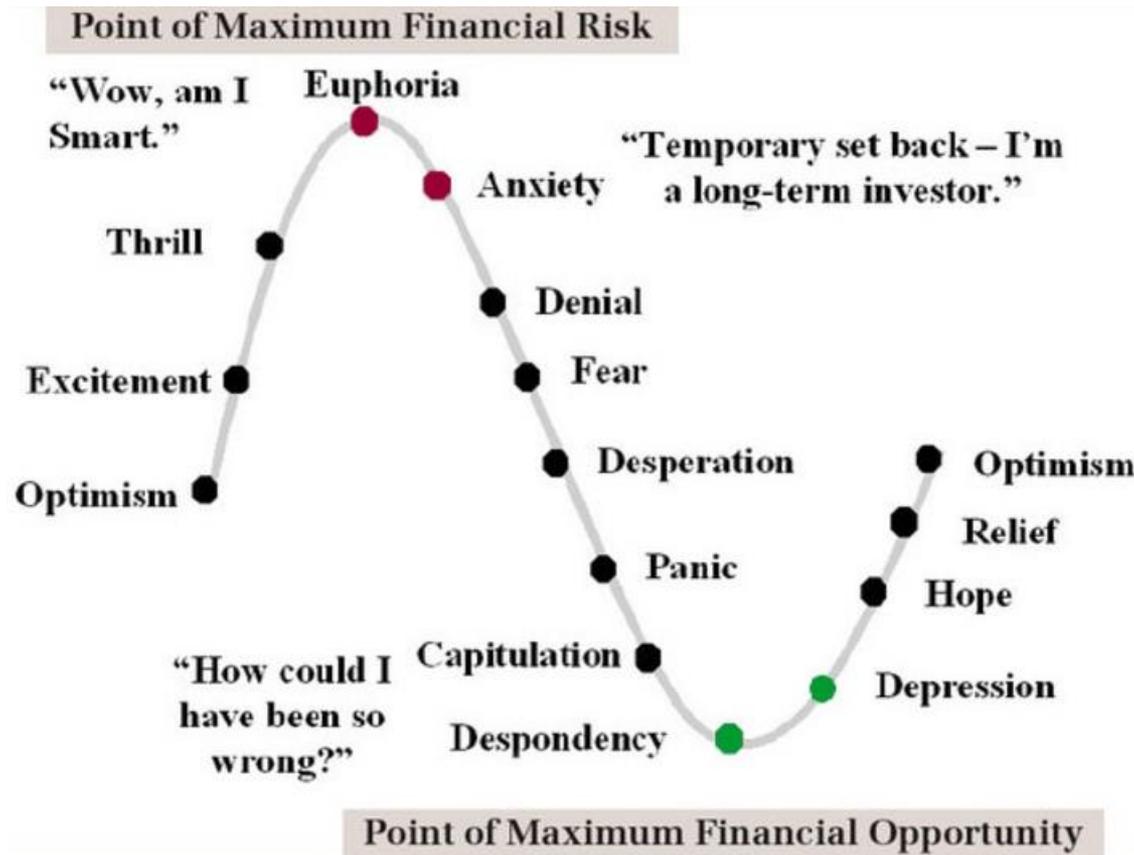
	Good Outcome	Bad Outcome
Good Process	Deserved Success	Bad Break
Bad Process	Dumb Luck	Poetic Justice

# Self-Attribution Bias

Attributing good outcomes to our skill as investors, while blaming bad outcomes on something or somebody else.

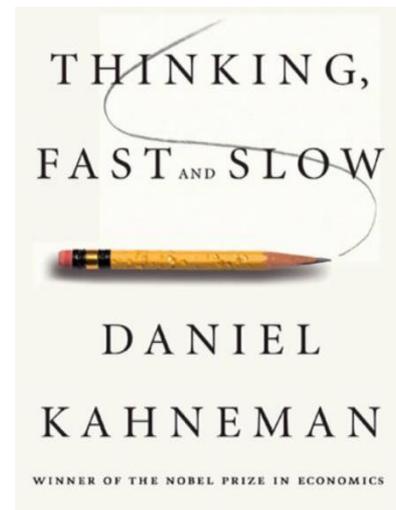


# The Cycle of Market Emotions



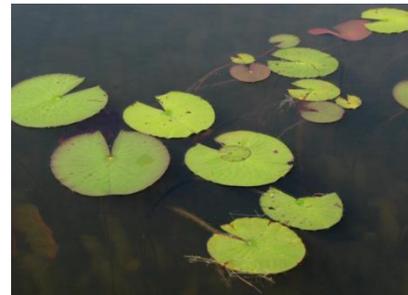
# Thinking Fast & Slow by Daniel Kahneman

- System 1
  - Impulsive
  - Automatic
  - Intuitive
  - Emotional
- System 2
  - Calculates
  - Considers Thoughts
  - Deliberate
  - Logical



# A Short Quiz

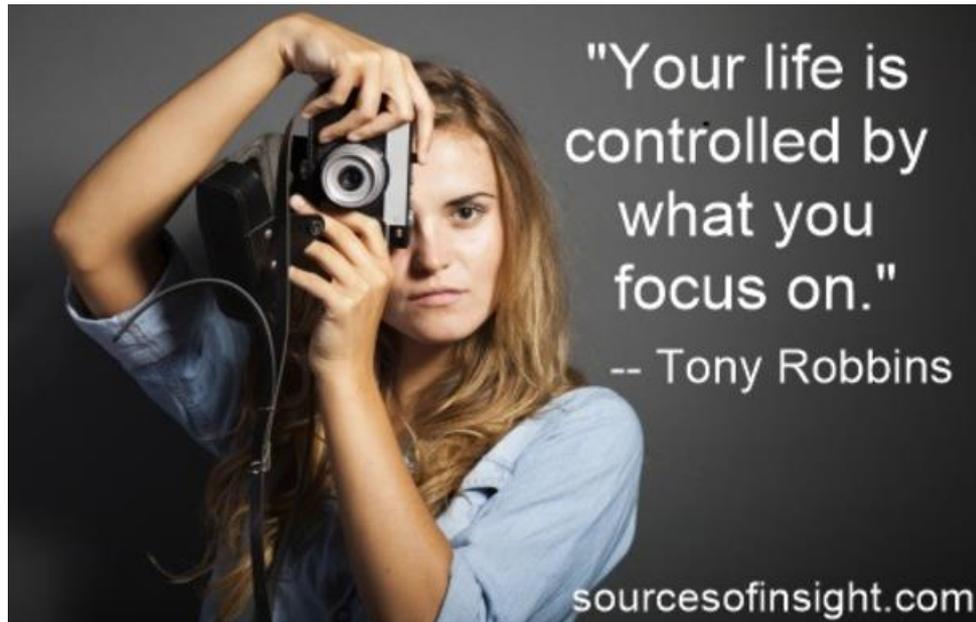
- A bat and a ball cost \$10.10 in total. The bat costs 10 dollars more than the ball. How much does the ball cost?
- If it takes 5 machines 5 minutes to make 5 widgets, how long would it take 100 machines to make 100 widgets?
- In a lake, there is a patch of lily pads. Every day, the patch doubles in size. It takes 48 days for the patch to cover the entire lake, how long would it take for the patch to cover half the lake?



# Selective Attention

## Focusing on the task at hand

<https://www.youtube.com/watch?v=vJG698U2Mvo>



<b>BLUE</b>	<b>GREEN</b>
<b>RED</b>	<b>BLACK</b>
<b>BLACK</b>	<b>RED</b>
<b>GREEN</b>	<b>BLUE</b>

# Why We Often Use System 1 Instead of System 2

- When System 1 thinks it can get by without asking for help from System 2, it will do just that. Why? Asking System 2 for help takes more energy
- Not the same for each of us
- There are times using System 2 would result in harm or injury
- <http://www.mirror.co.uk/news/uk-news/heroic-rail-worker-risks-life-9084822>



# The Book's Main Messages

- We frequently self-sabotage our results due to erroneous biases or prejudices
- We incorrectly use examples to form broad conclusions on entire groups (or “populations”)
- We can dramatically improve our ability to make correct predictions by using a group’s “base rate”



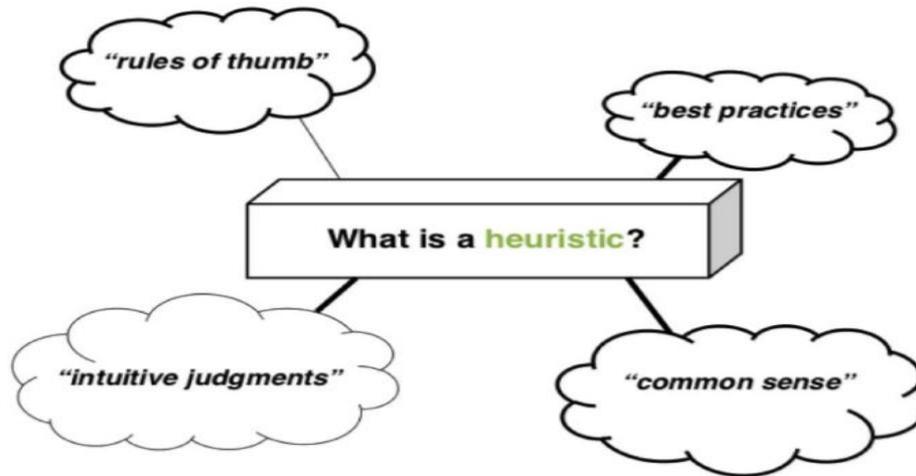
# Some Key Insights

- We are often lazy
- Ego depletion (our minds get tired)
  - Frequent breaks
  - Media fasting
  - Reading quietly
- Heuristics



# Heuristics

Simple, efficient rules which people often use to form judgments and make decisions. They are mental shortcuts that usually involve focusing on one aspect of a complex problem and ignoring others.



# Confirmation Bias

The tendency to search for, interpret, favor, and recall information in a way that confirms one's preexisting beliefs or hypotheses.



# Halo Effect

- Drawing a general impression of an individual (or thing) on the basis of a single characteristic; i.e., if someone is good (bad) at one dimension, she is perceived to be good (bad) at other dimensions as well.
- Real evidence is filled by a guess that fits one's reaction to a person we met.



# Forecasting Future Outcomes

- “Those who have knowledge don’t predict. Those who predict don’t have knowledge. Yet most of the investment industry obsesses with trying to guess the future. Don’t predict. Instead, be prepared.” – James Montier
- “I don’t know” is (almost) always the correct answer when someone asks you what’s going to happen in the markets today, tomorrow... whenever.



# The Inside Vs. The Outside View

- *When we use an "inside view,"* the focus is on the constituents of the specific planned action instead of on the actual outcomes of similar ventures that have already been completed.
- Using distributional information from previous ventures similar to the one being forecast is called taking an "**outside view.**" Reference class forecasting is a method for taking an outside view on planned actions.

Inside View vs. Outside View



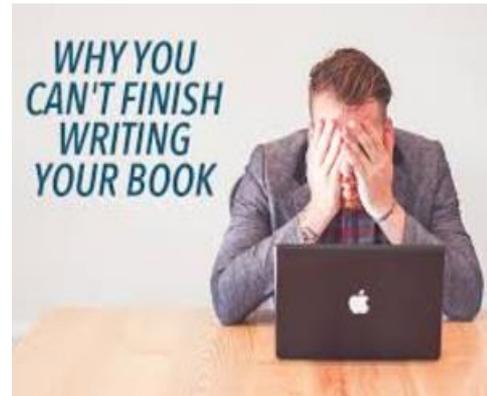
The Inside view is based on intuition.

The Outside view will, at least, gives us  
a ballpark.

*Which one will you act upon?*

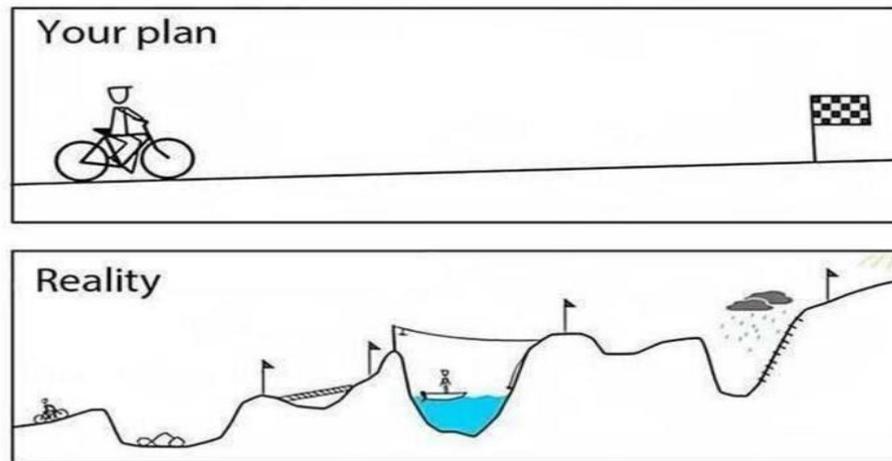
# Our Estimates Are Often Wrong

“A remarkable aspect of your mental life is that you are rarely stumped ... The normal state of your mind is that you have intuitive feelings and opinions about almost everything that comes your way. You like or dislike people long before you know much about them; you trust or distrust strangers without knowing why; you feel that an enterprise is bound to succeed without analyzing it.” – Thinking Fast & Slow, page 97



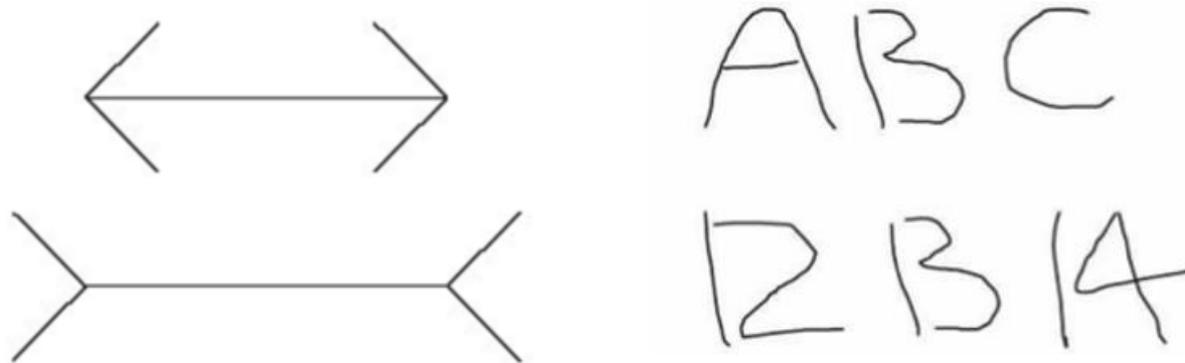
# The Planning Fallacy

A phenomenon in which predictions about how much time will be needed to complete a future task display an optimism bias and underestimate the time needed.



# What You See Is All There Is?

- We are persistently too confident in our opinions.
- We ignore data outside our direct purview.
- System 1's tendency to consider only the information that is directly at hand.
- WYSIATI



# Less Is More

## Set A

- Dinner plates 8 all in good condition
  - Soup/Salad bowls 8 all in good condition
  - Dessert Plates 8 all in good condition
  - Cups 8, 2 of them broken
  - Saucers 8, 7 of them broken
- 
- Which would you pay more for?

## Set B

- 8 all in good condition
- 8 all in good condition
- 8 all in good condition



# The Linda Problem

- *Linda is 31 years old, single, outspoken, and very bright. She majored in philosophy. As a student, she was deeply concerned with issues of discrimination and social justice, and also participated in anti-nuclear demonstrations.*
- Which is more probable?
- Linda is a bank teller.
- Linda is a bank teller and is active in the feminist movement.

# Visual of the Linda Problem

Where's Linda?



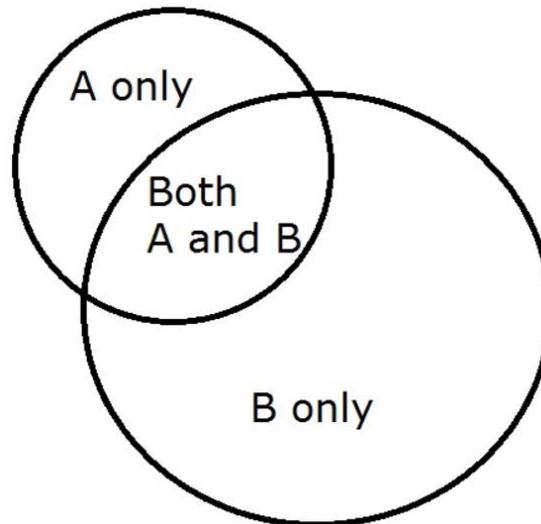
Bank Tellers

Feminist Activists



# Conjunction Fallacy

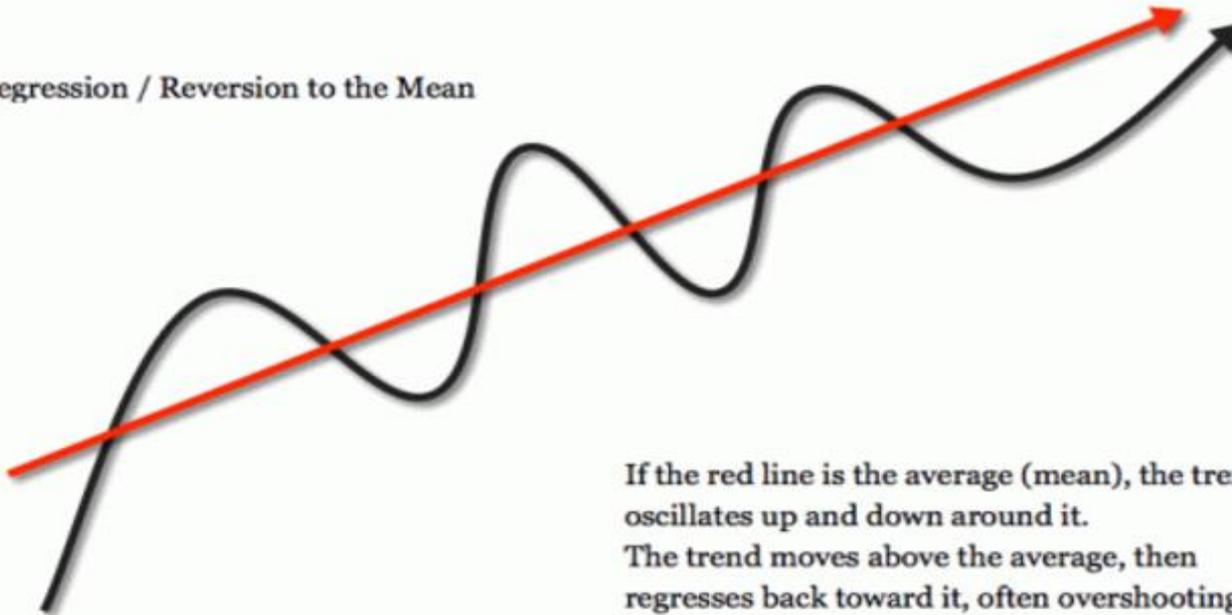
A formal **fallacy** (also known as the **Linda problem**) that occurs when it is assumed that specific conditions are more probable than a single general one.



# Regression to the Mean

Can negative reinforcement work better than positive reinforcement?

Regression / Reversion to the Mean



If the red line is the average (mean), the trend oscillates up and down around it. The trend moves above the average, then regresses back toward it, often overshooting up and down.

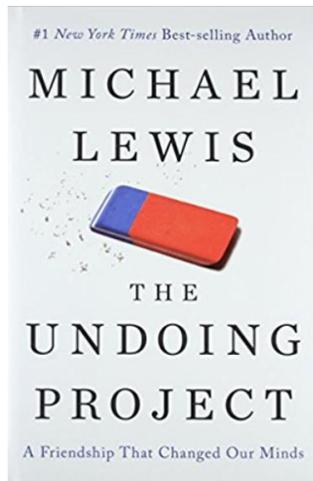
# An Example

## Punishment vs. Praise



# Kahneman on Reversion to the Mean

- “Because we tend to reward others when they do well and punish them when they do badly, and because there is regression to the mean, it is part of the human condition that we are statistically punished for rewarding others and rewarded for punishing them.”
- Kahneman quote from the *Undoing Project* by Michael Lewis



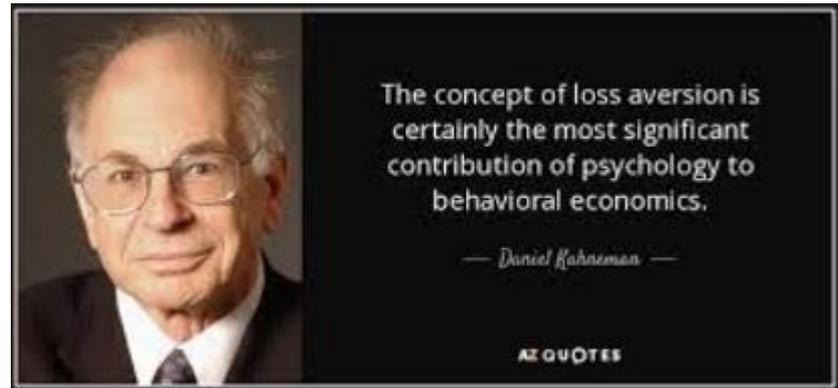
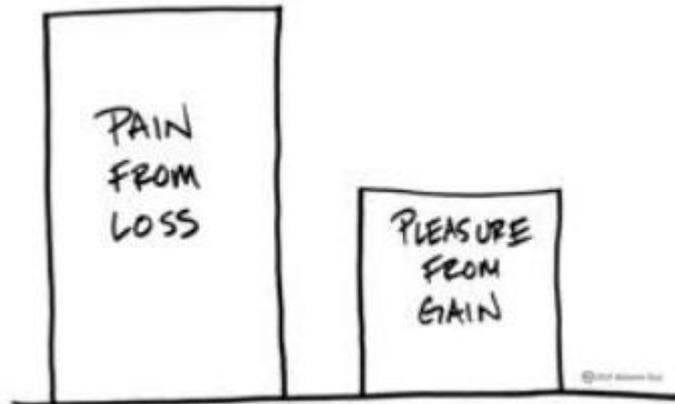
# Intuitive Faulty Predictions/Overconfidence

- Be warned: Your intuitions will deliver predictions that are too extreme and you will be inclined to put too much faith in them.
- Julie is currently a senior in state university. She read fluently when she was four years old. What is her GPA?

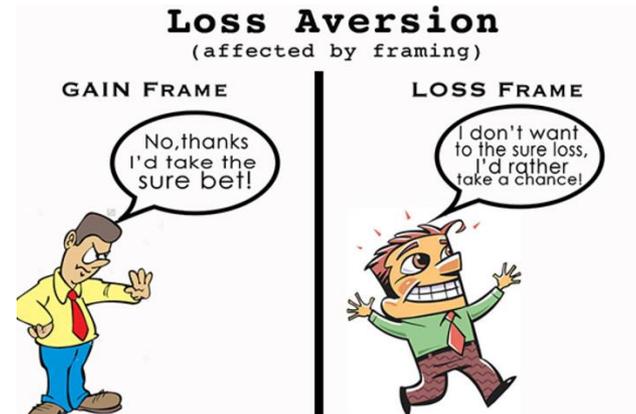


# Loss Aversion

People's tendency to prefer avoiding **losses** to acquiring equivalent gains: It is better to not lose \$5 than to find \$5. Some studies have suggested that **losses** are twice as powerful, psychologically, as gains.



# Example



- Choice #1:
  - A) Sure gain of \$240.
  - B) 25% chance to gain \$1,000 and 75% chance to gain nothing.
- Choice #2:
  - Sure loss of \$750.
  - 75% chance to lose \$1,000 and 25% chance to lose nothing.
- Choice #3:
  - 25% chance to win \$240 and 75% chance to lose \$760.
  - 25% chance to win \$250 and 75% chance to lose \$750.

# The Fallacy of Loss Aversion

Consider the Following:

- a) A 100% chance of receiving \$3000.
- b) An 80% chance of receiving \$4000, but a 20% chance of receiving nothing.
- About 80% of the subjects will choose option (a). Guaranteed gain is preferred over the potential to win more but possibly get nothing.

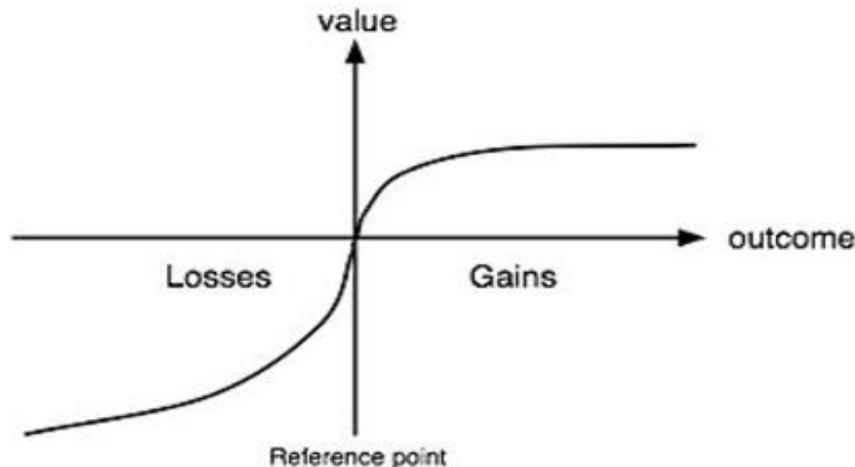
However, when given a very similar choice:

- a) A 100% chance of losing \$3000.
- b) An 80% chance of losing \$4000, but a 20% chance of losing nothing.
- Some 92% of the subjects will choose option (b). We would rather risk losing more for the chance to lose nothing.

We are not logical. We struggle to evaluate risks and threats.

# Prospect Theory

A behavioral economic theory that describes the way people choose between probabilistic alternatives that involve risk, where the probabilities of outcomes are known. ... The paper "**Prospect Theory: An Analysis of Decision under Risk**" (1979) has been called a "seminal paper in behavioral economics."



# Prospect Theory

- People value gains and losses differently, and as such, will base decisions on perceived gains rather than perceived losses. Thus, if a person were given two equal choices, one expressed in terms of possible gains and the other in possible losses, people would choose the former.
- When choosing among several alternatives, people avoid losses and optimize for sure wins because the pain of losing is greater than the satisfaction of an equivalent gain.

**We Take Risks to Avoid Losses**

	<b>Option A</b> There is a 50% probability of gaining \$1,000 and a 50% probability of gaining zero dollars	<b>Option B</b> There is a 100% probability - a certainty - of gaining \$500
	<b>Option A</b> There is a 50% probability of losing \$1,000, and a 50% probability of losing nothing	<b>Option B</b> There is a 100% probability - a certainty - of losing \$500

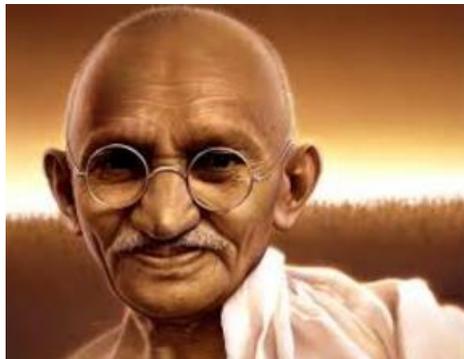
# Anchoring

Describes cases in which a person uses a specific target number or value as a starting point, known as an **anchor**, and subsequently adjusts that information until an acceptable value is reached over time



# Anchoring in Practice

- Estimate Gandhi's age at death using an anchoring question
- Consider how much you will pay for a house (what's the asking price)
- How much does an item cost?



SS NUMBER	WILLING TO PAY
00 - 19	\$16.09
20 - 39	\$26.82
40 - 59	\$29.27
60 - 79	\$34.55
80 - 99	\$55.64

# Base Rate Fallacy

A cognitive error whereby too little weight is placed on the **base** (original) **rate** of possibility (e.g., the probability of A given B); i.e., we tend to ignore prior probabilities and focus on expected similarities.



"LOTS OF THINGS ARE INVISIBLE, BUT WE DON'T KNOW HOW MANY BECAUSE WE CAN'T SEE THEM."

# Which do we fear more?

## The Base Rate Fallacy

- Fear of flying vs. driving
- Anthrax vs. influenza
- SARS vs. viral encephalitis

# Base Rate Neglect Fallacy

Happens when:

1. There is a low base rate of some condition.
2. We have a test for that condition.
3. Someone tests positive.
4. We assume that means they have the condition, ignoring the unreliability of tests for conditions with low base rates.

		Have Disease		Probability
		Yes	No	
Test Results	Positive	95	4,995	1.90%
	Negative	5	94,905	0.01%

# Why Do We Neglect Base Rates?

- Representative Heuristics:
  - Events that are representative or typical of a class are assigned a high probability of occurrence.
  - This heuristic is used when people judge the probability that an object or event A belongs to a class or process B.
- Example:
  - You are given a description of an individual and are required to estimate the probability that he/she has a certain occupation.
  - Estimate will be influenced by the similarity between the individual's description and your stereotype of that occupation.

**Example of Representative Heuristic Errors**

- Below is Fred. He is muscle-bound, uses steroids, and enjoys getting into fights. Is he more likely to be a high school teacher or a wrestler from the WWE.



# Availability Heuristic

A mental shortcut that relies on immediate examples that come to a given person's mind when evaluating a specific topic, concept, method, or decision.



# Availability Heuristic in Action

- Are there more words that begin with “r” or that have “r” as their third letter?
- How long is the gestational period of the African elephant?”



# Representativeness

*An individual has been described by a neighbor as follows: "Steve is very shy and withdrawn, invariably helpful but with little interest in people or in the world of reality. A meek and tidy soul, he has a need for order and structure, and a passion for detail." Is Steve more likely to be a librarian or a farmer?*

"I think it only fair to warn you that I am a librarian."



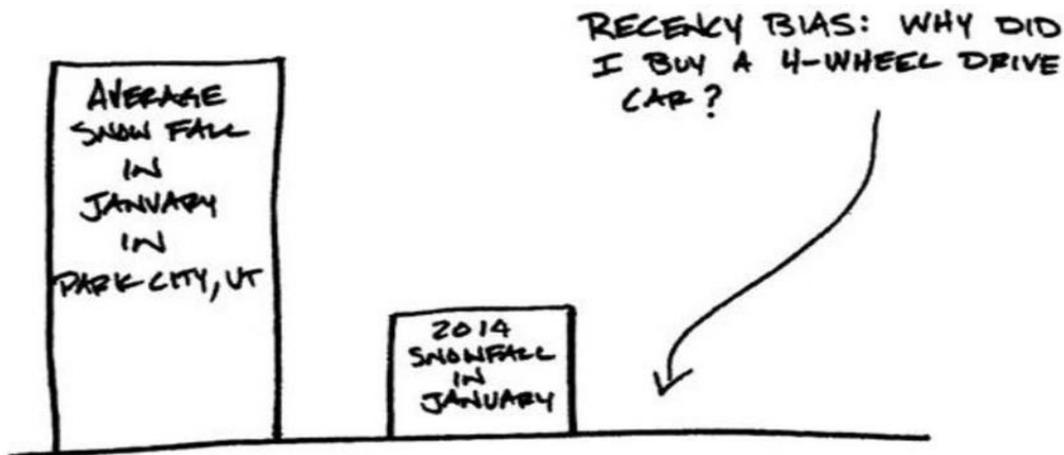
# Representativeness vs. Availability

- **While availability has more to do with memory of specific instances, representativeness has more to do with memory of a prototype, stereotype or average.**
- 10 People a year are killed by sharks worldwide
- Other large predators:
  - Lions (100)
  - Elephants (100)
  - Hippos (500)
  - Crocodiles (1,000)
  - Snakes (50,000)
  - Dogs (25,000) almost all due to rabies.



# Recency Bias

Occurs when we evaluate information based on recent results or on our perspective of recent results and make incorrect conclusions that ultimately lead to incorrect decisions.



# Substitution Effect

- The brain hates uncertainty—when confronted with difficult questions, it tends to search out easier ones instead in terms it can understand.
- Attribute substitution is a psychological process thought to underlie a number of cognitive biases and perceptual illusions. It occurs when an individual has to make a judgment (of a target attribute) that is computationally complex, and instead substitutes a more easily calculated heuristic attribute.
- If a satisfactory answer to a hard question is not found quickly, System 1 will find a related question that is easier and will answer it.

## Less-is-better effect

- Evaluating things separately = lesser option
- Evaluating things together = greater option
- e.g. choose 7 oz of ice cream in an overflowing cup vs. 8 oz in a larger cup when considered apart
- Why? People focus on things that are easier to evaluate when judging separately (attribute substitution)

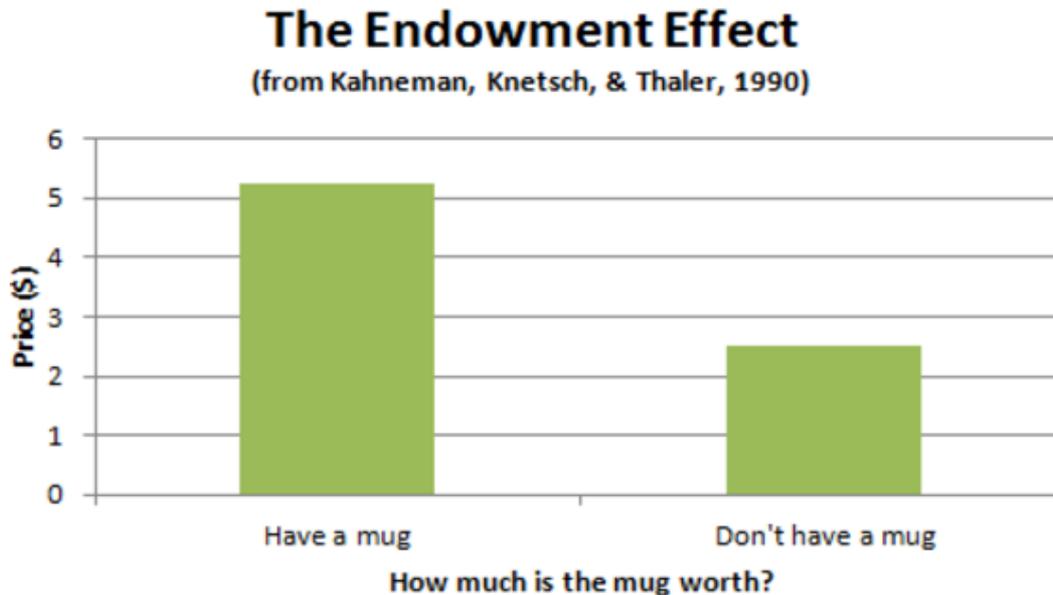
# Some Examples

- *How much would you contribute to save an endangered species? **becomes** How much emotion do I feel when I think of dying dolphins?*
- *How happy are you with your life these days? **becomes** What is my mood right now?*
- *How popular will the president be six months from now? **becomes** How popular is the president right now?*
- *How should financial advisors who prey on the elderly be punished? **becomes** How much anger do I feel when I think of financial predators?*



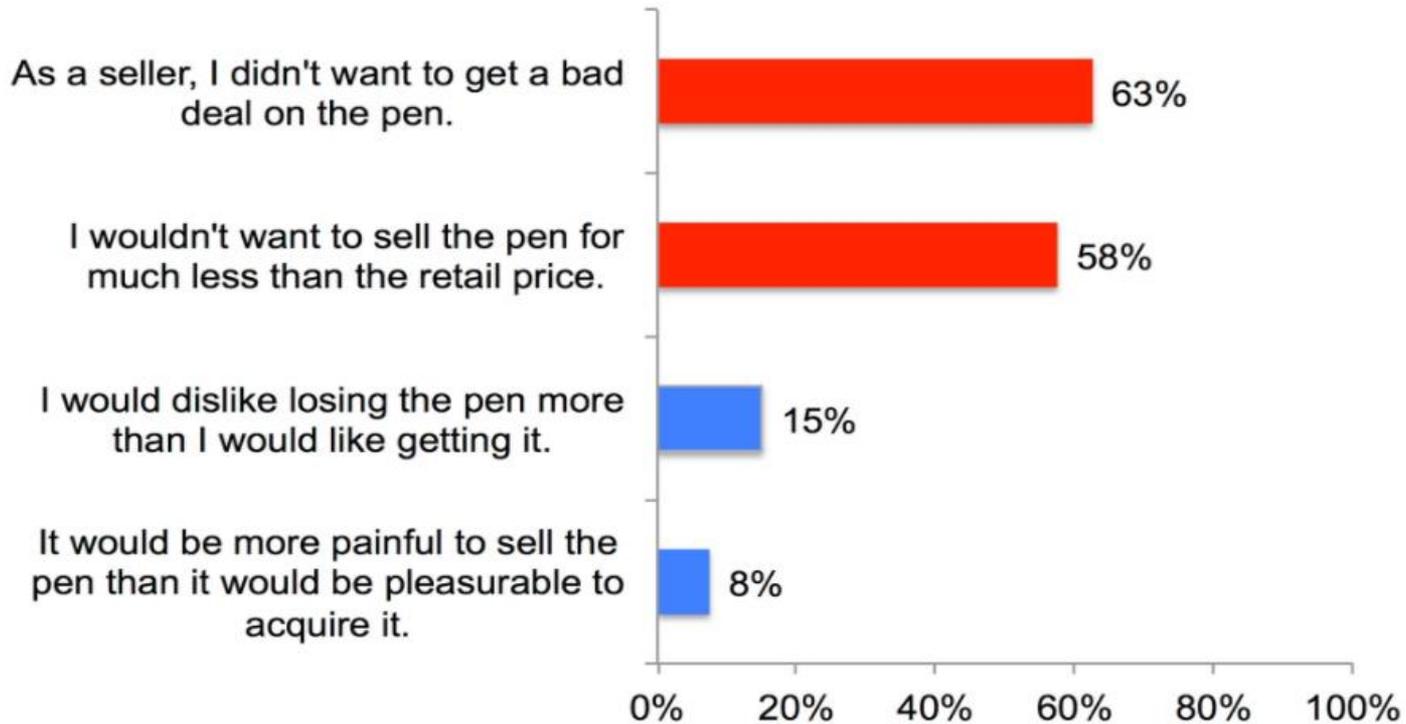
# Endowment Effect

The hypothesis that people ascribe more value to things merely because they own them.



# Endowment Effect

## % Endorsing Reason For Why Their Selling Price Was Higher Than Their Buying Price



# Priming

The implicit memory effect in which exposure to a stimulus influences response to a later stimulus. It is a technique in psychology used to train a person's memory both in positive and negative ways.

Fill in the missing word

1. Red
2. Blue
3. Orange
4. Yellow
5. Gr \_ \_ \_

Now fill in the missing word

1. Plum
2. Nectarine
3. Pear
4. Apple
5. Gr \_ \_ \_

# Priming Alternative



So\_p

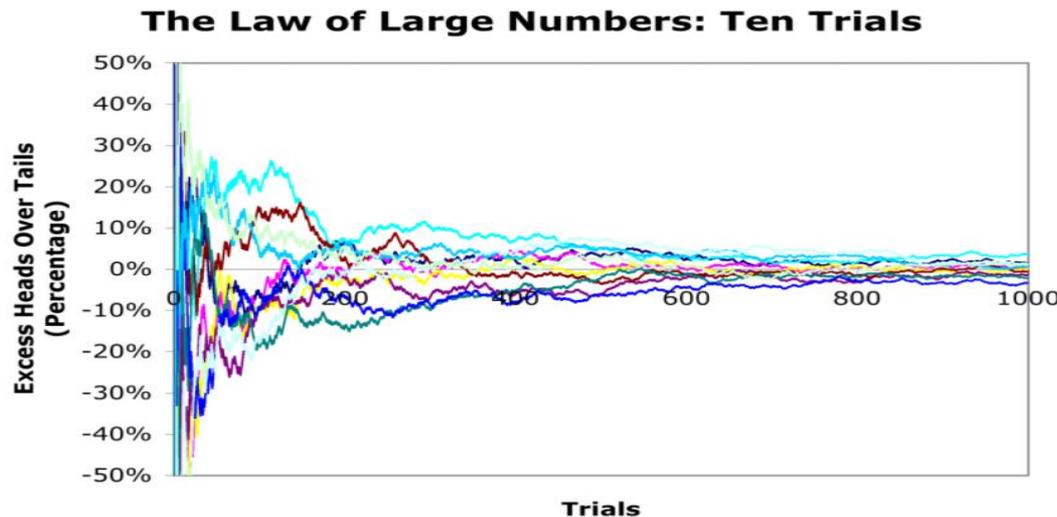
So\_p



# Law of small numbers

The tendency to generalize from small amounts of data.

About 50% of all babies are boys. In the larger hospital about 75 babies are born each day, and in the smaller hospital about 15 babies are born each day. Which is likely to have a greater percentage of boys?



# Hindsight Bias

**Hindsight bias**, also known as the knew-it-all-along effect or creeping determinism, is the inclination, after an event has occurred, to see the event as having been predictable, despite there having been little or no objective basis for predicting it.



# Sunk Cost Fallacy

The Misconception: You make rational decisions based on the future value of objects, investments and experiences. The Truth: Your decisions are tainted by the emotional investments you accumulate, and the more you invest in something the harder it becomes to abandon it.

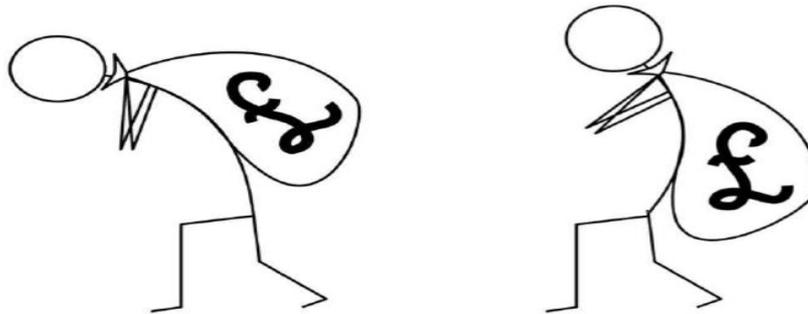
Why change now?

We've already wasted  
so much money.



# Mental Accounting

The tendency for people to separate their money into separate **accounts** based on a variety of subjective criteria, like the source of the money and intent for each account.

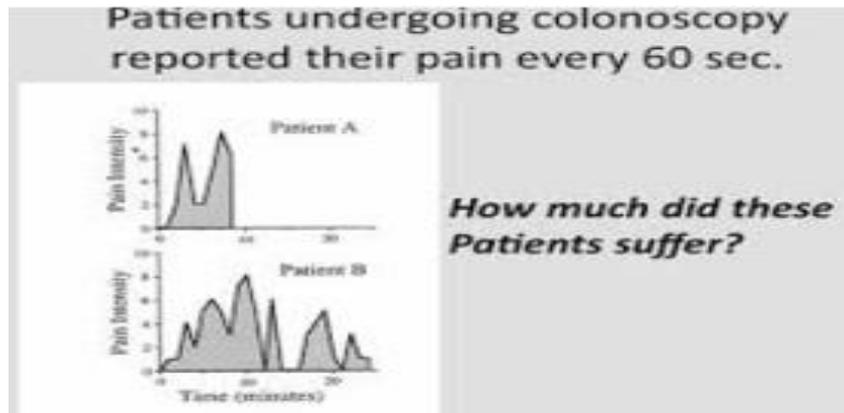


This is **mental** accounting.

It occurs when **we** assign different **values** to equal **monetary** amounts due to **psychological** reasons.

# Remembering Self Vs. Experiencing Self

- “The experiencing self lives in the moment; it is the one that answers the question, ‘Does it hurt?’ or ‘What were you thinking about just now?’ The remembering self is the one that answers questions about the overall evaluation of episodes or periods of one’s life, such as a stay in the hospital or the years since one left college.” (p. 381)
- Cruise ship experience



# Framing Effects

Different ways of presenting the same information often evoke different emotions:

Odds of surviving 1 month after surgery are 90%

vs.

Mortality within one month of surgery is 10%.

Only the framing changed

600 people expected to die...

600 people expected to die...

1/3 chance that nobody will die.  
2/3 chance that 600 people will die.

=

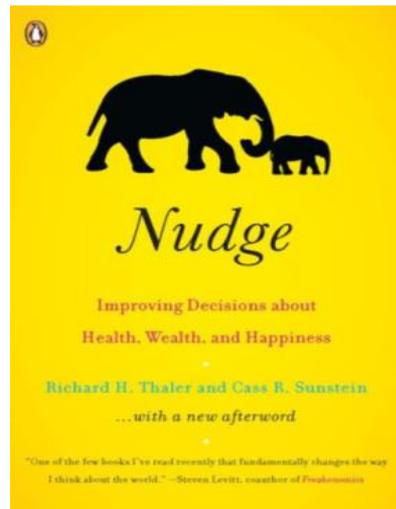
1/3 chance that 600 people will be saved.  
2/3 chance that no people will be saved.

**78%**    ≠    **28%**

We will take great risks to avoid a loss. Reframing the same option as a loss changes the choices.

# What Is a Nudge?

- A **nudge**, is any aspect of the choice architecture that alters people's behavior in a predictable way without forbidding any options or significantly changing their economic incentives.
- How people make choices and what processes and structures might lead to better choices.
- Strategies that do not force anyone to do anything, yet effectively promote good choices.



# How Can Nudges Help?

- The false assumption is that almost all people, almost all of the time, make choices that are in their best interest or at the very least are better than the choices that would be made by someone else.
- Don't force anyone to do anything.
- Automatic enrollment often results in more than 90% of eligible workers being enrolled.
- The bottom line is that Humans are easily nudged by other Humans. Why? One reason is that we like to conform.



# Principles Guiding the Use of Nudges

- All nudging should be transparent and never misleading.
- It should be as easy as possible to opt out of the nudge, preferably with as little as one mouse click.
- There should be good reason to believe the behavior being encouraged will improve the welfare of those being nudged.

	Financial Incentives	Social & Intrinsic Incentives	Nudging Behavior
Water and Energy Use	<p>Rebate</p>  <p>© Creative Commons</p>	<p>Social Comparison</p> <p>Efficient Neighbor </p> <p><b>YOU</b> </p> <p>All Neighbors </p>	<p>Default: Renewable Energy</p>  <p>© Kent Mason</p>
Littering	<p>Fine</p> <p><b>NO LITTERING</b> (including cigarettes)</p> <p><b>\$500 FINE</b></p> <p>© Creative Commons</p>	<p>Self-image</p> <p>Don't Mess With Texas UP TO \$2000 FINE FOR LITTERING</p> <p>© Creative Commons</p>	<p>Accessibility</p>  <p>© Creative Commons</p>
Land Conservation	<p>Tax Benefit-Easements</p>  <p>© TNC</p>	<p>Attachment to Place</p>  <p>© TNC</p>	<p>Default: 100% cost-share</p> <p>Online bid for cost-share of conservation contract</p> <p>Treatment 1:  100%</p> <p>Treatment 2:  100%</p>

# Choice Architecture

iNcentives

UUnderstand Mappings

DDefaults

GGive Feedback

EExpect Error

SStructure Simple Choices

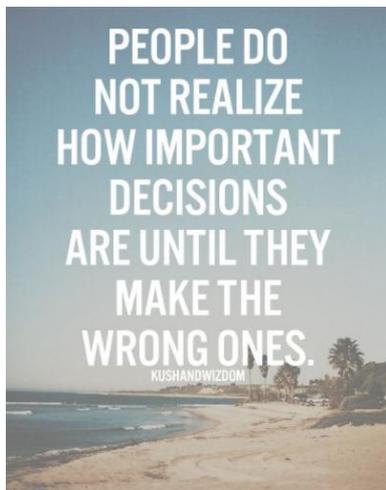
## GPS: Choice Architecture

A design that leads people to make more informed, deliberate decisions. Provides “default choices” that are in the person’s best interest given his or her educational goals



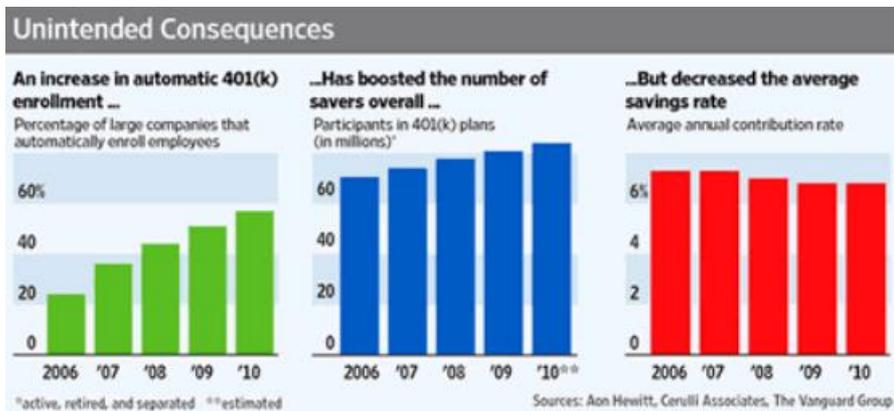
# Making Choices in our Best Interest?

“The false assumption is that almost all people, almost all of the time, make choices that are in their best interest or at the very least are better than the choices that would be made by someone else.” (Page 9)



# An Example

- Automatic Enrollment in company-sponsored 401(k) plans vs. opt in
- Participants join sooner
- More participants join eventually
- 20%/65% vs. 90%/98%



# Organ Donation

“Would you like to be an organ donor?”

– Asking this question doubled the number of program participants in Illinois

What are the arguments for and against opt-out?

## For

- It would increase the pool of donors
- Strong utilitarian arguments to save lives
- Takes pressure off families
- Increases autonomy of donor
- Same choice, just changes default position
- Actually fulfills many people's wishes

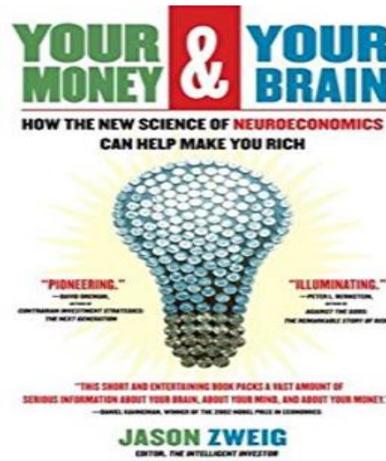


## Against

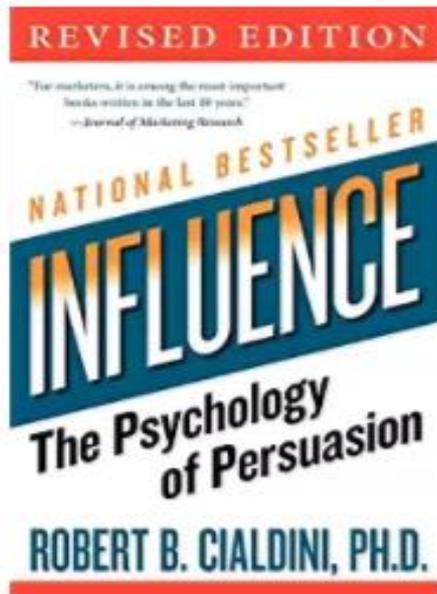
- Reduces autonomy if don't actively opt-out
- Vulnerable people would not opt-out
- Changes nature of 'gift' of organ donation
- May induce backlash and reduce donations
- Mixed evidence about whether it would increase pool

# Your Money & Your Brain

- Your brain consumes 20% of your oxygen, and the calories you burn when you're resting. So, when you start to think heavily it can go into overdrive and wear you out.
- The brain activity of a person making money on their investments is indistinguishable from a person high on cocaine or morphine.
- Financial losses are processed in the same area of the brain that responds to mortal danger.
- Our brains automatically and unconsciously expect a third repetition after it sees 2 in-a-row.
- The anticipation of a gain evokes a much larger response than actually receiving the gain.
- The bigger the potential gain the greedier you feel (regardless of how poor the odds might be).



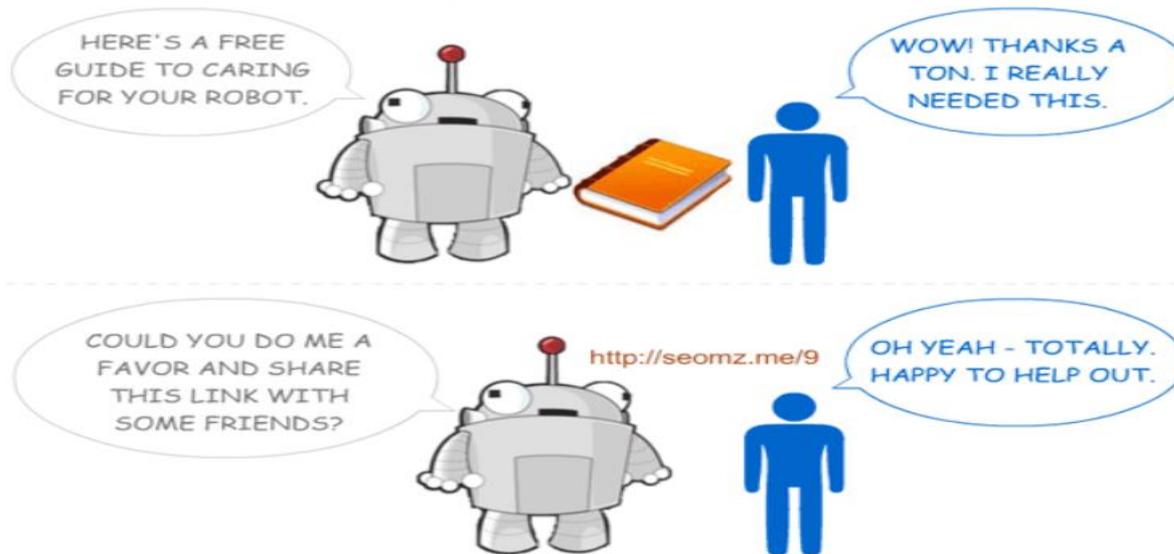
# Influence: 6 Principles



# Reciprocity

What happens if you give somebody something or do something for them?

## Reciprocation in Action



# Commitment and Consistency

- Does placing a bet change the prospects of success?
- Getting more volunteers.

## Commitment & Consistency in Action

**Question 1:**

Do You Consider Yourself a Champion of Human Rights?

Yes  No



ABSOLUTELY! I BELIEVE BASIC FREEDOMS MUST BE PROTECTED.

**Make a difference.**

Donate today to support the human rights campaign.



I SHOULD REALLY MAKE A DONATION.

# Social Proof

- Laugh track
- Looking to others to figure out how we should behave
- Creating long lines outside a disco

**Social Proof Influence**

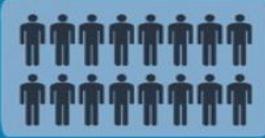
Social Proof tells consumers the reasonable and reliable facts without having to exert too much effort.



Google ranks you higher when you have more social proof such as tweets on Twitter



The more people who perform the same behavior, the higher influence it can bring.



Having your content shared across social networks will bring you traffic



source: [susangilbert.com](http://susangilbert.com)

con/ert

# Liking

- People prefer to say yes to someone they know or like as a person.
- Good grooming can help you land a job.

## **Liking: Similarity and Likable**

We are more likely to be influenced by people we know and like.

Who do we like? We like people:

1. Who are similar to us (Similarity Principle)
2. Who like us.

“Like” = We like people who are positive, respectful, empathetic.

Are you liked? That is, do you like others?



appreciative,

# Authority

People tend to listen to a person in a position of power whether it's the right thing to do or not.



# Scarcity

- Opportunities seem more valuable to us when their availability is limited
- We want it even more when we are in competition for it.



# The Science of Persuasion

- <https://youtu.be/cFdCzN7RYbw>



# James Montier

- The Seven P's

- Perfect **p**lanning and **p**reparation **p**revent **p**iss **p**oor **p**erformance
- Do your investment research when in a cold, rational state
  - and when nothing is happening in the markets –and then pre-commit to following our own analysis and prepared action steps.

*“Don't wait until you are ready to take action. Instead, take action to be ready.”*

Jensen Siaw  
1 Mar 2013 4:39 pm

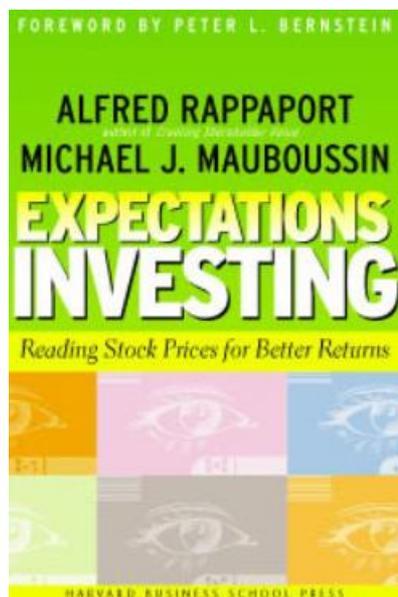
# The Folly of Forecasting

- The consensus of economists has completely failed to predict any of the last four recessions (even once we were in them).
- In 1927, a year before the first talking motion picture, the head of Warner Brothers, said “Who the hell wants to hear actors talk?”
- In 1943, Thomas Watson, president of IBM, said “I think there is a world market for maybe five computers.”
- In 1981, Bill Gates, defending the capacity of the first-generation floppy disk, claimed that “640 kilobytes ought to be enough for anyone.”

**As counterintuitive as it may seem, when it comes to investing or trading (however you term it), forecasting is outright dangerous.**

# Expectations Investing

- All investors should devote themselves to understanding the nature of the business and its intrinsic worth, rather than wasting their time trying to guess the unknowable future.
- Try taking the current market price and backing out what it implies for future growth.



# Pay Less Attention to Short-Term Events

“Closely following daily fluctuations is a losing proposition, because the pain of frequent small losses exceeds the pleasure of frequent small gains...in addition to improving the emotional quality of life, the deliberate avoidance of exposure to short-term outcomes improves the quality of both decisions and outcomes. The typical reaction to bad news is increased loss aversion. Investors who get aggregated feedback receive such news much less often and are likely to be less risk averse and end up richer.” (p. 339)

## Which of the following most closely describes your investment objectives?

- **Build wealth considerably**  
I want to build my wealth considerably; i.e., multiply my investment over the long run. For this I am willing to accept greater fluctuations (over 20%) in the value of my investment.
- **Build wealth moderately**  
I want to build my wealth moderately and expect returns above regular interest rates. For this I am willing to accept fluctuations in my portfolio value of around 10-20%.
- **Preserve wealth**  
I want to maintain my wealth and protect against inflation. For this, I am willing to bear single-digit fluctuations in the performance of my portfolio.
- **To build cash for short-term needs**  
I want a secure return on my investment with no potential for losses, not even if they are only short term.

# Additional Reading

- Thinking Fast & Slow – Daniel Kahneman
- Nudge – Richard Thaler
- Your Money & Your Brain – Jason Zweig
- Think Twice: Harnessing the Power of Counterintuition – Michael Mauboussin
- The Little Book of Behavioral Investing: How Not to be Your Own Worst Enemy – James Montier
- The Black Swan – Nassim Nicholas Taleb
- Predictably Irrational – Dan Ariely
- The Psychology of Human Misjudgment – Charlie Munger (audio: <https://www.youtube.com/watch?v=pqzcCfUglws>; transcript: [http://web.archive.org/web/20151004200748/http://law.indiana.edu/instruction/profession/doc/16\\_1.pdf](http://web.archive.org/web/20151004200748/http://law.indiana.edu/instruction/profession/doc/16_1.pdf))
- Influence: The Psychology of Persuasion – Robert B. Cialdini
- The Undoing Project: *A Friendship That Changed Our Minds* – Michael Lewis

# Additional Reading (Blog Posts)

- February 18, 2014: <https://www.bwfa.com/articles/recency-bias/>
- March 10, 2014: <https://www.bwfa.com/articles/outcome-vs-process/>
- July 7, 2014: <https://www.bwfa.com/articles/confirmation-bias/>
- July 21, 2014: <https://www.bwfa.com/articles/news-or-noise/>
- February 3, 2015: <https://www.bwfa.com/articles/january-2015/behavioral-investing/>
- May 11, 2015: <https://www.bwfa.com/articles/forecasting-is-too-hard-especially-in-the-short-term/>
- August 3, 2015: <https://www.bwfa.com/articles/beware-of-the-cycle-of-market-emotions/>
- November 16, 2015: <https://www.bwfa.com/articles/myopic-loss-aversion/>
- March 31, 2016: <https://www.bwfa.com/articles/thinking-fast-and-slow/>
- May 2, 2016: <https://www.bwfa.com/articles/reveal-your-inner-skeptic/>

# Other Blog Posts

- Asset Location:  
<https://www.apprisewealth.com/news/putting-the-pieces-together-an-often-overlooked-part-of-the-investing-puzzle>
- Health Savings Accounts:  
<https://www.apprisewealth.com/news/health-savings-accounts-an-often-overlooked-tax-benefit>
- Financial Document Retention:  
<https://www.apprisewealth.com/news/how-long-should-i-keep-financial-documents>
- A Look at Financial-Related Fees:  
<https://www.apprisewealth.com/news/fee-transparency-you-may-be-paying-more-than-you-think>

# Helpful Tools

- Focus on making better decisions rather than looking for an informational advantage that will guarantee a sure thing.
- Create an investment thesis for each investment.
- Create a decision diary.
- Establish the metrics that matter.
- Look for support to both sides of the argument.
- Be data driven.
- Put on a frown.
- Prepare a pre-mortem.
- Slow down and ask for reinforcement from System 2.
- Take breaks, avoid media.
- Try to preoccupy yourself less with the topic (availability).



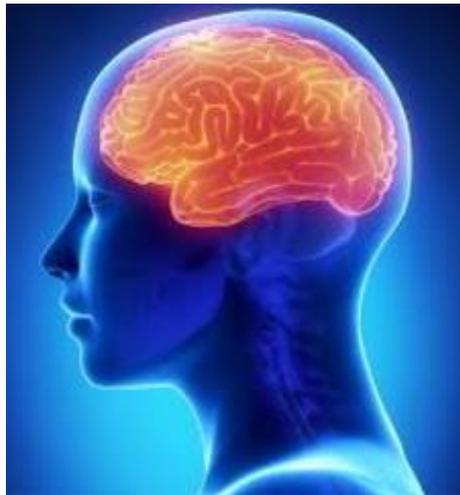
# Some Tips

- Be disciplined.
- Don't trade – rebalance.
- Be humble.
- Stay with your strategy (avoid “style drift”).
- Don't make or rely on forecasts.
- Ignore the pundits.



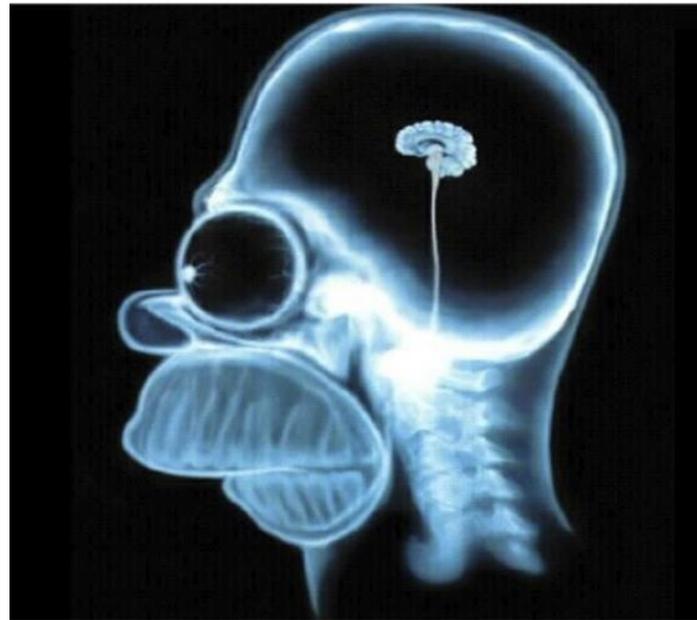
# Your Brain

Your brain weighs three pounds and is 100,000 years old. It is a “dynamic, opportunistic, self-organizing system of systems. MRIs have revealed to neurologists what our brain looks like when making decisions. We can observe it 1) in real time; 2) under actual conditions; and 3) in reaction to financial risk/reward stimuli.



# Your Brain on Stocks

Once we begin trading stocks, however, our brains begin to undergo subtle physical change that we can actually see in the MRIs of Traders...



# A Closing Thought



# Q&A

Thank you for coming.



By: Philip H. Weiss, CFA, CPA

<http://www.apprisewealth.com>

[philweiss@apprisewealth.com](mailto:philweiss@apprisewealth.com)

<https://www.apprisewealth.com/contact>

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