Mu Sigma

Behavioral Economics – Real time Applications

Current Applications of Behavioral Economics in Industry

<u>Do The Math</u>

Chicago, IL
Bangalore, India
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Introduction to Behavioral Economics - Humans make decisions through feelings, experience, opinions and insights, not just data

The term homo economicus, or economic man, is the portrayal of humans as agents who are consistently rational, narrowly self-interested, and who pursue their subjectively-defined ends optimally.

Human beings are Human Beings… flesh, blood, emotional and imperfectly rational

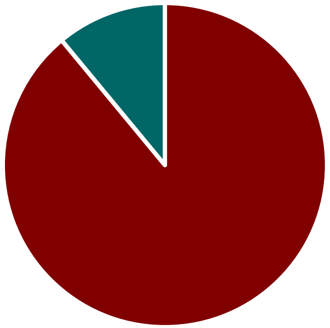
Introduction to Behavioral Economics – Allais paradox

- Choice A. Choose between the following:
  1. $1 million for sure
  2. 89 percent chance of winning $1 million; 10 percent chance of winning $5 million; 1 percent chance of winning $0

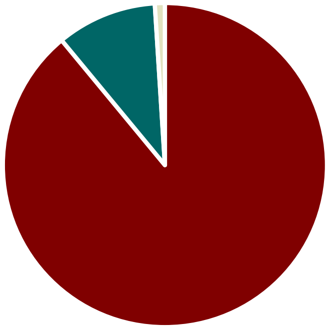
- Choice B. Choose between the following:
  1. 11 percent chance of winning $1 million, with an 89 percent chance of winning $0.
  2. 10 percent chance of winning $5 million, with a 90 percent chance of winning $0.

Choice A				Choice B			
Gamble 1A		Gamble 2A		Gamble 1B		Gamble 2B	
Winnings	Chance	Winnings	Chance	Winnings	Chance	Winnings	Chance
$1 million	89%	$1 million	89%	Nothing	89%	Nothing	89%
$1 million	11%	Nothing	1%	$1 million	11%	Nothing	1%
		$5 million	10%			$5 million	10%

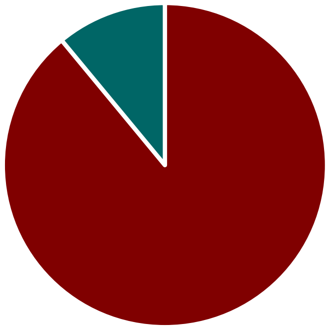
Choice A -1



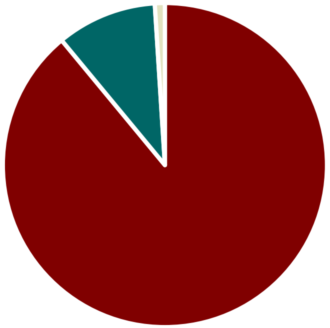
Choice A - 2



Choice B - 1



Choice B - 2



Introduction to Behavioral Economics – Allais paradox

- Allais presented his paradox to Leonard Savage, Paul Samuelson, and other economists in Paris in 1952.
- Several studies involving hypothetical and small monetary payoffs, have supported the assertion that when presented with a choice between 1A and 1B, most people would choose 1A. Likewise, when presented with a choice between 2A and 2B, most people would choose 2B. Allais further asserted that it was reasonable to choose 1A alone or 2B alone.
- However, that the same person (who chose 1A alone or 2B alone) would choose both 1A and 2B together is inconsistent with expected utility theory. According to expected utility theory, the person should choose either 1A and 2A or 1B and 2B.
- Presented the first time that our expected utility is not aligned to what we need consistently

Biases and Heuristics – Causes of Irrationality

Anchoring

Numbers influence us even if not relevant.

Framing

The way the situation is presented influences us.

Availability heuristics

We give more weight to vivid memories even if they are uncommon.

Confirmation Bias

We seek comforting information and ignore negative ones.

Commitment escalation

We carry on taking the same decision again and again even if it causes a loss.

Hindsight Bias

We cannot remember when we learned something new.

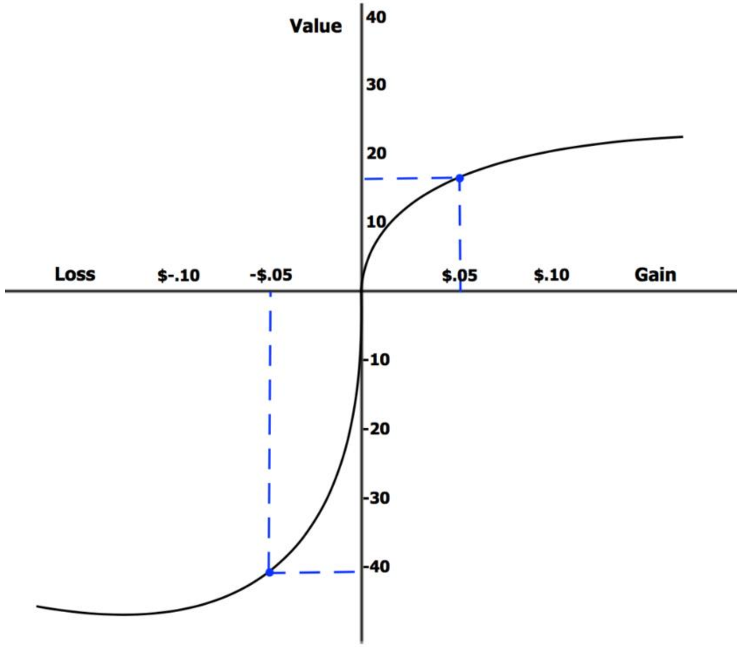
Nudge and Prospect Theory – Nobel Prize winning behavioral economics theories

"A nudge is any aspect of the choice architecture that alters behavior in a predictable way without forbidding any options or significantly changing their economic incentives." -Thaler & Sunstein (2008)

- Bulls Eye : Small fly shape stickers in the urinals and men had something to aim for. 80% reduction in spillage
- Decoy effect: Retailers and Restaurants display a very expensive item (purse or wine). They expect you to buy the next expensive item as that looks like a bargain
- Opt in: The effort need to opt out is way greater and people tend to stay. Organ donation, gym memberships
- Social Normative Messages: Wikipedia and Charity organizations use this to exploit people's willingness to confirm to normality or mean.
- Up Sell: Extra fries with the order? Or Insurance and Extra Warranty? Apple Care?

Nudge and Prospect Theory – Nobel Prize winning behavioral economics theories

- Prospect Theory - The prospect theory explains that people react differently between potential losses and potential gains.
  - Faced with a risky choice leading to gains, individuals are risk-averse, preferring solutions that lead to a lower expected utility but with a higher certainty
  - Faced with a risky choice leading to losses, individuals are risk-seeking, preferring solutions that lead to a lower expected utility if it has the potential to avoid losses



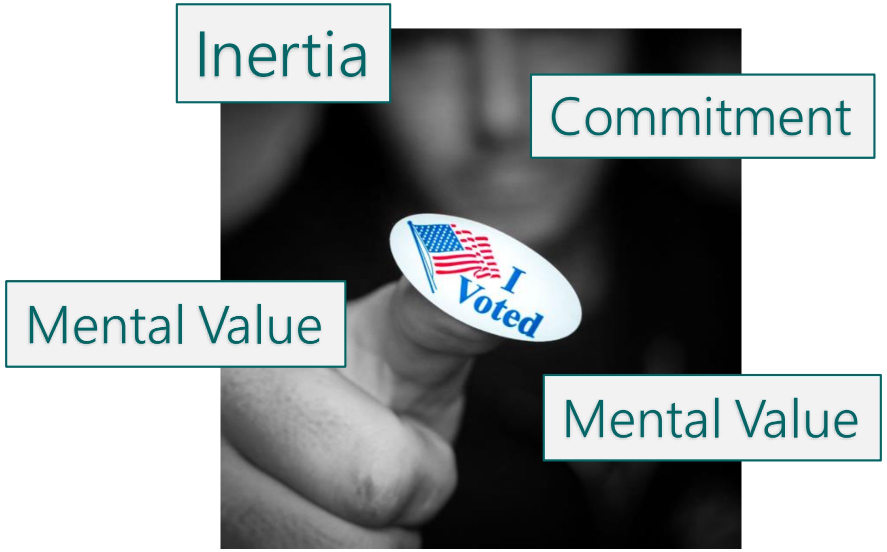
You have $1000	You have 50% chance of winning $1000 and 50% nothing	You will win $500
You have $2000	You have 50% chance of losing $1000 and 50% nothing	You will lose $500

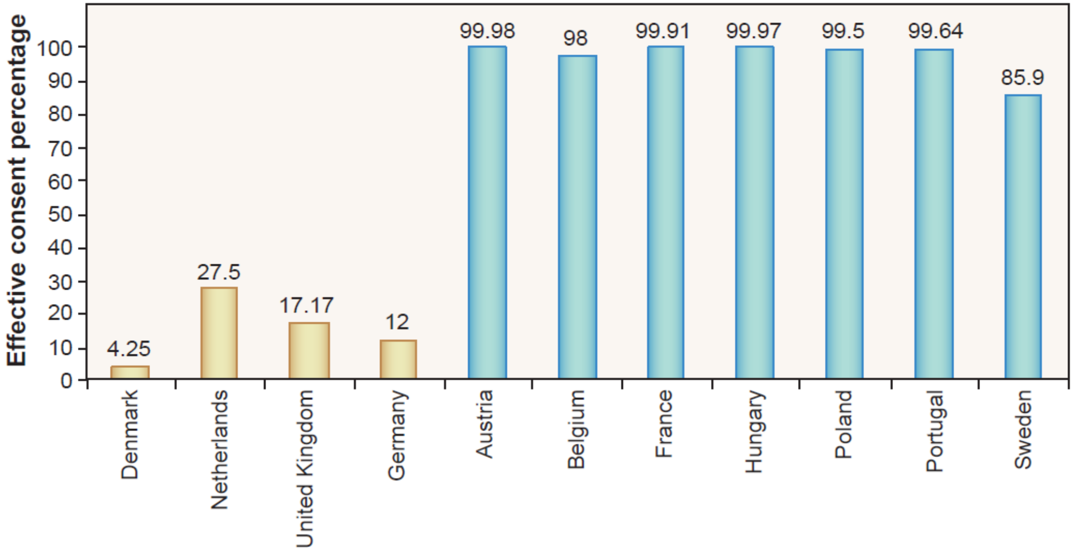
Facebook, Amazon, Google – B2C Companies

- Facebook conducts many experiments, dynamically conducting A/B testing, on day-to-day basis. Example, Facebook understands Ads work better when your friends' name appear next to them and have monetized it.
- Amazon perfected the art of nudge theory with respect to scarcity and next availability.
- Google experimented with its employees to increase their health and wellness through persuasion, nudging through imagery, and exploiting availability by repackaging M&Ms.
- Luxury brands don't want to dilute their image through cheaper offerings. Mental Accounting takes place here
- Costco does a brilliant job of less choice and membership value. The power of default option
- Supermarkets bundle products and understand shopping behaviors. Milk + Beer. Ice cream is preferred by brands, flavor and price. You will see them stacking brands and flavor together with high price at eye level.

Government Organizations and Social Economics

Poverty and mental bandwidth is a strong connection. From last mile enablement, to drop in IQ points and bad decision making due to availability heuristic. Awareness of this is required to help take the resource the extra mile





Effective consent rates, by country. Explicit consent (opt-in, gold) and presumed consent (opt-out, blue).

Are Emily and Greg More Employable than Lakisha and Jamal?

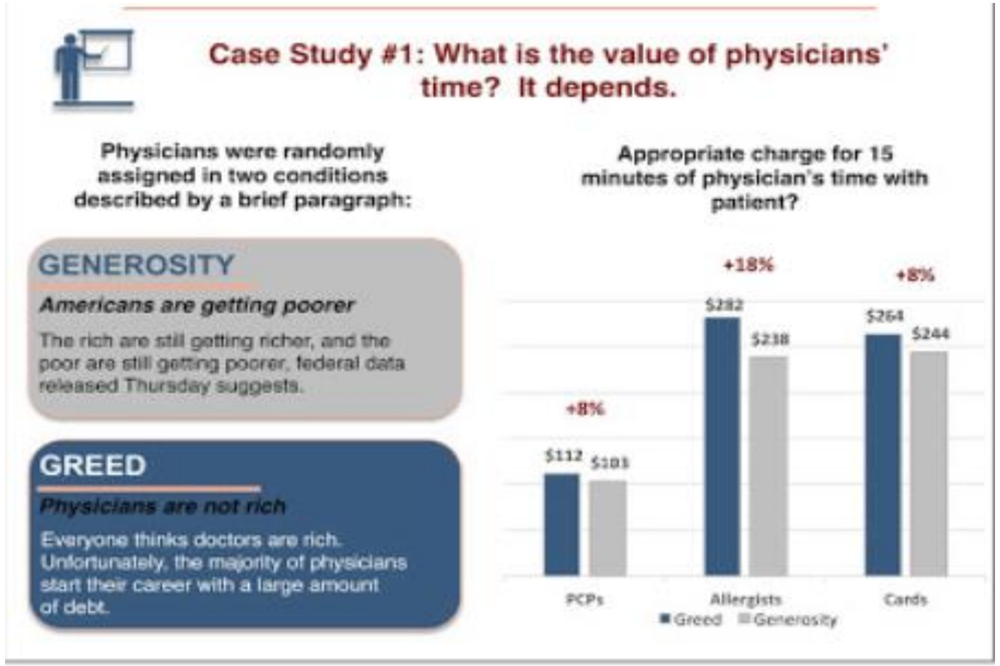
Pharma and Healthcare Sector

"We do small stuff often enough to learn to get it right. Because learning takes practice, we are more likely to get things right at small stakes." - Richard Thaler

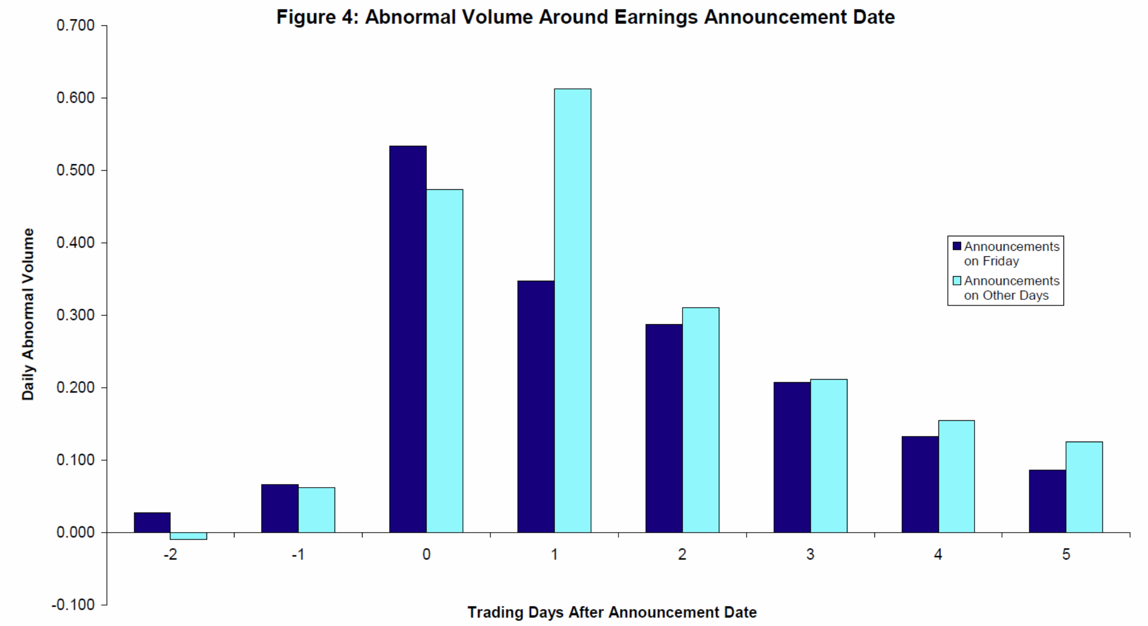
Adherence to medicines can be achieved by rewarding small steps to create long term value – Loss aversion and Hyperbolic Discounting

Confirmation bias and Over confidence can lead to patients continuing patient treatment more than they should

"I can write a prescription and you'll get better in seven days, or I can not write a prescription and you'll get better in a week." – Action Bias, The Idiot Patient



Finance



My cousin recently drove 20 miles to a supermarket because of a 50% off sale. He bought $100 worth of groceries for $50. The next day he bought a $1,500 grill from the local hardware store because it was "only" $75 more than the one at Home Depot, which was 10 miles away and "not worth the trip."

Investors will be reluctant to sell investments after they have fallen in value. This is known as the **breakeven** or **disposition effect**. You associate a stock with the purchase price when you shouldn't.

How can we apply it in our daily delivery?

- Negotiations and Deal Making
  - Bundling
    - Availability Heuristic, Mental Accounting and Price Priming
  - Contract Negotiations
    - Why POCs are important? Commitment Escalation
    - Importance of perspective – Simply offering a discount or incentive is not useful
    - Shift the perspective to value – What is that you bring to the table? The five whys you see in RCA applies here very well

How can we apply it in our daily delivery?

- Team Management
  - Power of the Situation – Don’t judge people based on your experience
  - Social beliefs create social reality – Stereotyping and mental shortcuts don’t help
  - Identifying bias difficult but critical
  - Cynicism kills – If you seek to influence others, try to understand your teammates
  - The decision journey is better with teammates – Commitment

Our brain uses hundreds of mental shortcuts to make decisions

Thank You!