Behavioral Economics and Decision Making

Decisions

- What car do I buy?
- How to select a post-graduation job?
- How much money to save?
- How much am I willing to pay for this item?
- Who to hire for your company?
- Should our firm invest into a new product?

Classical economics: Rational Choice Model

Rational Homo-economicus:
1. Selfish, no emotion, does not care about others
2. Chooses the most preferred option (optimal solution)
3. Compares costs and benefits of all options out of the entire universe of alternatives
4. Has well understood and stable preferences, not influenced by others
5. Knows the results of all potential choices
6. Has no regrets, does not change his mind
7. Updates his beliefs given new information

Six Steps to Rational Decisions
1. Define the problem
2. Identify the criteria
3. Weight the criteria
4. Generate alternatives
5. Rate each alternative on each criterion
6. Compute the optimal decision

Assumptions Of Rationality

- Single, well-defined goal
- Preferences are clear
- All alternatives and consequences are known
- No time or cost constraints exist
- Final choice will maximize payoff
- Problem is clear and unambiguous

What Is Behavioral Economics?

- Studies the effects of psychological, social, cognitive, and emotional factors on the economic decisions of individuals and institutions
- We fail to think clearly
- We make "cognitive errors" = systematic deviation from logic from optimal, rational, reasonable thought and behavior
- "Systematic" = not just occasional errors in judgment, but rather routine mistakes, barriers to logic we stumble over time and again, repeating patterns through generations and through the centuries.
- Example: it is much more common that we overestimate our knowledge than we underestimate it.
Classical economics is lost here: Increased Number of Choices

- Can you be worse off if the number of options for you to choose from is increased?
- Rational choice model: “No!”
- The Medicare Drug Prescription Plan offers over 1,000 additional insurance choices. Most beneficiaries want fewer options.
- How many options do you want on a restaurant menu? How hard do you want to have to work at ordering a meal?

Classical economics is lost here: Learning About Preferences

- Rational choice model assumes that you already completely know your preferences & there is nothing to learn.
- Trying a new food, or a new drink = learning about your preferences
- New product on the market

Classical economics is lost here: Self Control

- Rational choice model assumes that your preferences are known to you and do not alter over time.
- A decision you make today about future behavior should be a decision you do not change as time goes by.
  - Today New Year’s resolution to exercise regularly
  - Tomorrow: you choose to watch TV instead.

How do we make decisions?

- Are our departures from perfect rationality predictable?
- Improve decision making by finding predictable patterns of irrational thinking
- Policy making: How to nudge people to behave a certain way?
  - to file taxes on time?
  - to save more for retirement?
  - to eat healthier?
  - to exercise?

Methods of B.E.: Experiments

- Advantages
  - Easier to determine whether people’s choices are consistent with standard economic theory by ruling out alternative explanations
  - Researchers can double-check their assumptions and conclusions by testing and debriefing subjects
  - Often possible to obtain information not available in the real world

- Disadvantages
  - Decisions made in the lab differ from decisions made in the real world
  - Subjects try to conform to what they think are the experimenter’s expectations
  - Most subjects are students, not representative of general population
  - Scale of experiment is limited by the available resources

Example of experiments: Risk-aversion

1. Choose your preferred option:
   A. get $10 million for sure
   B. flip a coin, get $20 million for heads, 0 for tails

2. Choose your preferred option:
   A. get $10 million for sure
   B. flip a coin, get $22 million for heads, 0 for tails
Example of experiment

- Write down the last 2 digits of your phone number
- Estimate the population of Turkey, in millions.

Treatment and control groups:
Nursery pickup by Gneezy and Rustichini (2000)
- Problem: parents picking their children up late, the school must play the role of a babysitter. Experiment in day care centers in Haifa, Israel.
- Late pickup fine introduced in week 4, removed in week 17.
- Result: more parents leaving their children late
- The fine makes it "ok" to put a burden on the school.

How do we make decisions?
Intuition vs Thinking

- The power of thinking without thinking
- Intuition is a brain function that matches patterns from the environment with elements of experience or knowledge within the brain
- Among senior managers, intuition is used as much as facts to make decisions

System 1 and System 2 Thinking

System 1 Thinking
- Intuitive
- Fast
- Automatic
- Effortless
- Implicit
- Emotional

System 2 Thinking
- Slow
- Conscious
- Effortful
- Explicit
- Logical

For important decisions, we should rely on System 2

Heuristics

- Mental shortcuts, rules of thumb
- To speed up the process of finding a satisfactory solution
- To ease the cognitive load of making a decision
- Where finding an optimal solution is impossible or impractical
  - Intuitive judgement
  - Educated guess
  - Stereotyping, profiling

Example:
- You are looking to hire a marketing MBA grad for your company.
  You decide to limit your search to new MBA’s from the top six schools.
  - Reduces search costs.
  - In most circumstances, will yield quality decisions.
  - Sub-optimal because it does not consider all possible hires.
Example of heuristics: Rule of Thumb in Saving

• People may follow a rule of thumb: save 10% of income
  • ignore factors that theory says should be important, such as expected future income
  • In economic models finding the best rate of savings involves complex calculations
  • Using 10% rule is not necessarily a mistake
  • Popular rules may be choices that are nearly optimal

Four General Heuristics

• Availability heuristic
  • Associating frequency, probability, or likely causes of events with how easy they are to recall
    • after seeing news reports about car thefts, you make a judgment that vehicle theft is much more common than it really is in your area.
    • after hearing shark attack stories you think that such incidences are relatively common and refuse to swim in the ocean
    • Are there more words that begin with R or words that have R as the third letter?
    • Are there more homicides or suicides?

• Representativeness heuristic = Reliance on stereotypes
  • We judge people according to the extent to which they match up with a stereotype.
  • We estimate the likelihood of an event by comparing it to an existing prototype that already exists in our minds.
  • Individual characteristics and jobs
    • Good looking young females are better waitresses
    • I meet someone with a laid back attitude and long hair, I assume they are Californian
  • Startups
    • determine whether to invest in a new venture by comparing it to similar prior ventures that were either successful or unsuccessful.
  • Representative information is often insufficient to make accurate judgments

• Confirmation Heuristics
  • We look for evidence that confirms our intuitions rather than evidence that refutes it
  • We interpret new information as being supportive of our currently held beliefs
    • Conservatives claim: mainstream media has a liberal bias.
    • Liberals claim: mainstream media is all corporate owned, so has a conservative bias.
  • People are inattentive to new info contradicting their opinion:
    • ignore contradictory evidence
    • misread info as supporting their hypothesis
    • tend to see confirmation in data when none exists
  • Self-serving Bias
    • People interpret information in a self-serving way

Affect Heuristic

• Our emotions guide our decision-making.
  • A manager may be more likely to give positive performance evaluations when in a good mood.
  • A person interviewing a job applicant may not view the applicant favorably if he or she is reminiscent of a painful former relationship.
  • Sunny weather makes people feel optimistic, which increases stock prices.
  • Justices allow their outrage at the defendant to dictate their sentencing recommendations.
Bounded rationality

• Rationality is constrained by individual and environmental factors
  • There are limits on our human mind and abilities to gather, process and understand all the information needed to optimize a decision.
• People do not optimize
• They choose solutions that are “good enough” = satisficing
  • Satisficing is selecting the first alternative that meets minimum requirements.
• Rational Ignorance
  • If the cost to acquire information exceeds the benefits that can be derived from the information, it is rational to remain ignorant
  • Extra information is not worth the effort.

Change Blindness

• We can fail to notice very obvious changes in our environment
  http://www.youtube.com/watch?v=vBPG_OBgTWg

  • Auditor of a company may approve some statements that stretch the boundaries of ethical standards one year.
  • Next year, the auditor may approve statements that are clearly unethical and possibly illegal.

Bounded Awareness

Inattentional Blindness

• https://www.youtube.com/watch?v=IGQmdoK_ZFY

  • The general tendency to not notice what you are not looking for, even when you are looking directly at it
  • Other examples of inattentional blindness.
    - An airplane pilot failing to notice another plane on the runway as he is focused on his controls.
    - A driver on their cellphone failing to notice another car in front of them.
    - Not noticing something that your spouse told you while you were paying attention to something else.