Overall Note: Because of the nature of this book, these raw notes are compiled as a stream of consciousness rather than chapter by chapter like my previous notes.

Heuristics

- Humans have limited time and brain power. As a result, they use simple rules of thumb called heuristics to help them make judgments
    - Using these heuristics causes people to make predictable errors
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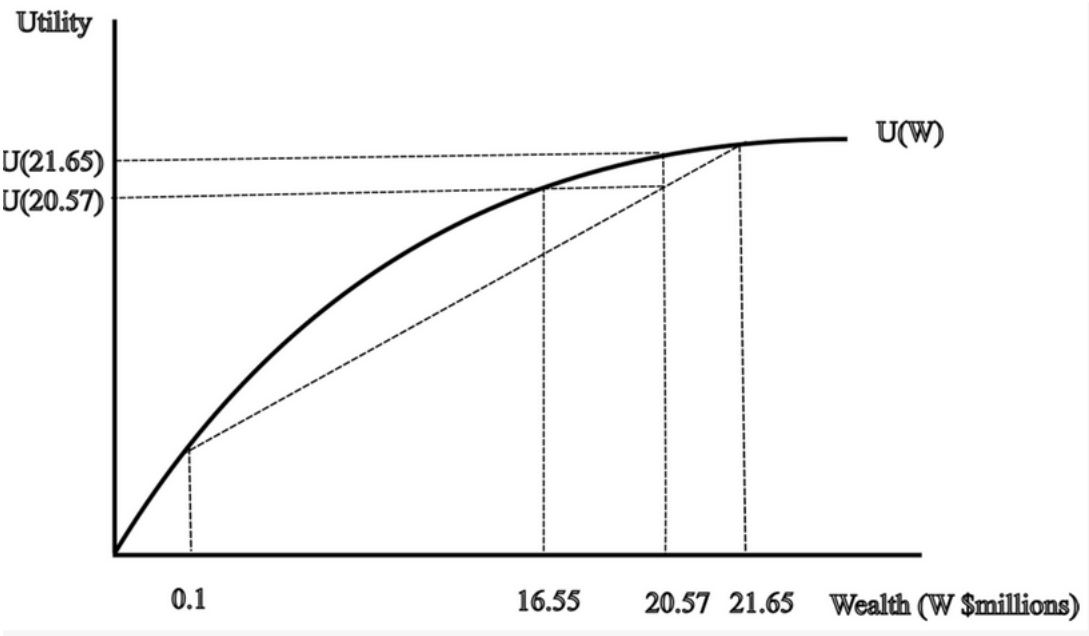
Value Theory

- Economists mistakenly use Economic Theory to serve both normative and descriptive purposes
- Expected utility is the correct way to make decisions (see graph below)



- The first thing I took from my early glimpse of prospect theory was a mission statement: **Build descriptive economic models that accurately portray human behavior**
- When we have adapted to our environment, we tend to ignore it and only pay attention when it extremely changes
- We think about life in terms of changes, not levels
- Weber-Fechner Law → Just noticeable differences – human perception and change

Sensitivity to Change

- In summary, we experience life in terms of changes, we feel diminishing sensitivity to both gains and losses, and losses sting more than equivalently-sized gains feel good.

- We have diminishing sensitivity to both gains and losses which means: **People will be risk-averse for gains, but risk-seeking for losses**
- Roughly speaking, losses hurt about twice as much as gains make us feel good → LOSS AVERSION

Prospect Theory Paradox

- A key prediction of prospect theory is that people react differently to losses than they do to gains
- Kahneman and Tversky clearly showed with prospect theory that people did not act "as if" they were choosing under the rational economic model
- A paradox confronted me: I had what I thought was a big idea, but research proceeds through a series of small steps.
    - Big ideas are fine, but I needed to publish papers to stay employed
- It is clear that people do not have as well-defined preferences as they say they do
    - Without stable preferences, traditional economic theory struggles to optimize
    - Also prospect theory assumes that at high stakes people get stuff right
- I had a "slow hunch"
    - A slow hunch is not one of those "aha" insights when everything becomes clear
    - Instead, it is more of a vague impression that something is interesting going on and an intuition that there could be something important lurking not far away
- **The major problem with Prospect Theory is that it assumes people are experts,** not regular people
    - Many of life's problems do not offer opportunities to practice and provide immediate feedback.
    - If learning is crucial, then as the stakes go up, decision-making quality is likely to go down since there are fewer reps available

Main Street's Resistance to Change and New Behavioral Economics

- Economists had their way of doing things and would resist change, if for no other reason than that they had invested years building their particular corner of this edifice
- A good theory, it seemed, could not be defeated using just survey data, even if the defenders of the theory presented no data of their own

"Rational" Agent and Market Prices

- There is no logical way to conclude that markets transform people into rational agents
- As cruel as the market can be, it cannot make you rational
- And, except in rare circumstances, failing to act by the rational agent model is not fatal
- Many people have made money selling magic potions and Ponzi schemes, but few have gotten rich selling the advice "Don't Buy That Stuff."
- Instead, argue the following: **Market prices will still be rational even if many individuals are decidedly Human**

Mental Accounting: Opportunity Cost & Sunk Costs

- The psychology of spending, saving, and other household financial behaviors is gummed up in the term "mental accounting"
- Econs think of everything in terms of opportunity costs
    - If you buy a ticket to a game for $200 and the same ticket is now worth $1,000, the opportunity cost is what $1,000 could be spent on vs. going
- **The poor come the closest to thinking about opportunity cost like actual Econs**
- Acquisition utility is based on standard economic theory and is equivalent to what economists' call "consumer surplus"
    - The surplus remaining after we measure the utility of the object gained and then subtract the opportunity cost of what has been given up
- Humans on the other hand also weigh another aspect of the purchase: the perceived quality of the deal – this is transaction utility
- Humans have trouble with this concept and find it hard to ignore sunk costs
- How long does the memory of past purchases linger?
- Always remember that the opportunity cost of drinking the wine is the $75 (current selling price) or what you could get for that wine today
- Mental accounting works this way… the original payment is an investment (not a purchase).
    - The annual maintenance fee is a nuisance but future vacations at the property are "free"
- When you purchase at a price that does not produce any transaction utility you do not feel that purchase price is a loss
- 40% off sounds like a great deal … Lots of transaction utility
- Advanced purchases decouple the purchase decision from the decision to do the thing (i.e. go skiing)
    - The initial purchase can be viewed as an "investment" that saves money
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Risk-Seeking vs. Risk Adverse and Poker Games

- The existence of budgets can violate another first principle of economics: money is fungible
- Remember people are risk-seeking when it comes to losses and risk-averse when it comes to gains
- My impression was that players who were behind were attracted to small bets that offered a slim chance of a big win, but disliked big bets that risked a substantial increase in the size of their loss, even though they offered a higher probability of breaking even
- Once you recognize the break-even effect and the house money effect, it is easy to spot in everyday life
- Gambling when behind in an effect to break even can also be seen in the behavior of professional investors
    - Mutual fund portfolio managers take more risks in the last quarter of the year when the fund they are managing is trailing the benchmark index

- A good rule of thumb to remember is that people who are threatened with big losses and have a chance to break even will be unusually willing to take risks, even if they are normally quite risk-adverse

Self-Control and Will Power

- Economic theory presumes that self-control problems do not exist

  ECON: Why did you remove the cashews?

  HUMAN: Because I did not want to eat any more of them

  ECON: If you did not want to eat any more nuts, then why go to the trouble of removing them? You could have simply acted on your preferences and stopped eating

  HUMAN: I removed the bowl because if the nuts were still available, I would have eaten more

  ECON: IN that case, you prefer to eat more cashews, so removing them was stupid

- Our passions are myopic and short-sided… Will power is needed to deal with this myopia
- The pleasure which we are to enjoy 10 years hence, interests us so little in comparison with that which we may enjoy today – Adam Smith
- Notice that as we go from Keynes to Friedman to Modigliani, the economic agents are thinking further ahead and are implicitly assumed to be able to exert enough will-power to delay consumption
- The idea of modeling the world as if it consisted of a nation of Econs who all have PhDs in economics is not the way psychologists would think about the problem.
- Two important tools that people use to confront self-control problems:
  1. Remove the cues that would tempt them to do something stupid
  2. Out of sight, out of mind
- One course of action is commitment: removing the cashews or tying yourself to the mast like Odysseus listening to the sirens
- Another is to raise the cost of submitting to temptation
- Here is the question: if I know I am going to change my mind about my preferences, when and why would I take some action to restrict my future choices?
- Self-control is, centrally, about conflict → battle between our passions and our impartial spectator
- We propose that at any point in time an individual consists of two selves:
  1. Forward-Looking Planner → cares about the future
     - The planer is completely altruistic and cares about the utility of the series of doers
  2. Devil-May-Care-Doer → lives for the present
     - Doer is more of a passive creature who simply lives for the moment
- Principal-Agent Model

    - Principal is the boss (owner of the firm)
    - Agent is someone to whom authority is delegated
    - Agents are a series of short-lived doers who enjoy themselves and are selfish. They do not care about future doers
    - We can only get the current doers to behave through employing will power which requires effort
    - Even if you arrange to get a healthy dinner delivered to your home each night, ready to eat, there will be nothing stopping you from also ordering a pizza
- Most of us realize that we have self-control problems, but we underestimate the severity

What Seems Fair?

- What makes an economic transaction seem "fair"?
- One of the things MBAs learn in business school is to think like an Econ, but they also forget what it is like to think like a Human
- Price gouging is a purely Econ practice tailed by Humans
- In many situations, the perceived fairness of an action depends not only on who it helps or harms but also on how it is framed
- One principle that emerged from our research is that perceptions of fairness are related to the endowment effect:
    - Both buyers and sellers feel entitled to the terms of trade to which they have become accustomed and treat any deterioration of those terms as a loss
- One implication is that raising prices because costs have increased is almost always judged to be fair
- 40% off sounds like a great deal because there is lots of transaction utility
- Advanced purchases decouple the purchase decision from the decision to do the thing (i.e. skiing trip)
    - The initial purchase can be viewed as an investment that saves money
- In the case when demand has suddenly risen, the seller has to trade off short-term gain against possible long-term loss of goodwill which can be hard to measure

The Fairness Games and What Mugs Can Teach Us

- The rational, selfish strategy in the Public Goods Game is to contribute nothing
    - Notice that by being selfishly rational in this way, the group ends up with half as much money as they would have if everyone contributed their entire stake
- People who always give nothing are rational fools who blindly follow material self-interest
- **Economic Theory = Rational Fools**
- A large proportion of people are "conditional cooperators," meaning that they are willing to cooperate if enough other do
- The Punishment Game shows that people are willing to spend some of their own money to punish and teach bad actors a lesson

- Economists need to adopt a more nuanced view of human nature
- **Endowment Effect: This means that people are more likely to keep what they start with than to trade it, even when the initial allocations were done at random**
    - If the endowment effect is true, it will reduce the volume of trade in a market
    - This is because it serves as a type of "inertia" or baseline starting position
        - People stick with what they have unless there is some good reason to switch
    - Those who start with some object will not be that keen to buy one
    - Buyers are willing to pay about half of what sellers would demand, even with markets and learning
        - Why → because losses are roughly 2x as painful as gains are pleasurable
    - The endowment effect experiments show that people tend to stick with what they have, at least in part because of loss aversion
    - Once I have the mug, I think of it as mine, and giving it up would be a loss

Let The Debate Begins: Narrow Framing is Everything?

- Rationality (meaning optimization) is neither necessary nor sufficient to do good economic theory
- The create a real paradigm shift, behavioral economics would require a whole bunch of anomalies, each calling for its own ad hoc explanation
- If there is ever to be a successful field called behavioral economics, it would have to be truly interdisciplinary with psychologists and economists working together
- Most of the advancements in behavioral economics have been to figure out how best to modify the tools of economics to accommodate Humans as well as Econs
- When are economic events or transactions combined, and when are they treated separately?
- When do people get themselves into trouble by treating events one at a time, rather than as a portfolio?
- When the expert is thinking about the problem as a member of a project team, he is locked in the inside view – caught up in the optimism that comes with group endeavors
    - If the outside view is fleshed out carefully and informed with appropriate baseline data, it will be far more reliable than the inside view
- It is risky to be a contrarian
- Worldly wisdom teaches that it is better for reputation to fail conventionally than to succeed unconventionally
- De Bondt was, and is, a true intellectual, interested only in finding truth
- Narrow framing prevents the CEO from getting the 23 projects he would like, and instead getting only three
    - "Timid choice" – each manager is loss adverse regarding any outcome that will be attributed to him

Principal-Agent Problem

- The real culprit is the boss not the worker
- In order to get managers to be willing to take risks, it is necessary to create an environment in which those managers will be rewarded for decisions that were value-maximizing ex ante

- The misbehavior is in failing to create an environment in which employees feels that they can take good risks and not be punished if the risks fail to pay off
- If it does not pay to do an act once, it will not pay to do it twice, thrice, or at all → Samuelson's Conclusion
- Myopic loss aversion: The only way you can ever take 100 attractive bets is by first taking the first one, and it is only thinking about the bet in isolation that fools you into turning it down
- The more often people look at their portfolio, the less willing they will be to take risk, because if you look more often, you will see more losses
- **our analysis implies that the equity premium – or required rate of return on stocks – is so high because investors look at their portfolios too often**

Finance: 1983 – 2023: Beauty Contest, Efficient Market Hypothesis & Stock Market Overactions

- Efficient Market Hypothesis (**EMH)**
  - Prices are rational
  - You cannot beat the market because there is no such thing as a free lunch
- At first in the 1970s when it came to financial markets, the invisible handwave was damn convincing, and no one was putting up much resistance
- Keynes: As shares become more widely dispersed "the element of real knowledge in the valuation of investments by those who own them or contemplated purchasing them seriously declines."
  - Keynes was also skeptical that professional money managers would serve the role of the "smart money" that EMH defenders rely upon to keep markets efficient
  - Instead, Keynes thought that professional money managers were playing an intrinsic guessing game
- **The only question that matters: "Who are the other players, and how much math and game theory do they know?**
  - Many investors call themselves "value managers" meaning they try to buy cheap stocks
  - Others call themselves "growth managers" meaning they try to buy stocks that will grow quickly
- **Ultimately the stock market is one big beauty contest:**
  - People try to buy stocks that will go up in value – or, in other words, stocks that they think other investors will later decide should be worth more. And these other investors, in turn are making their own bets on other's future valuations
  -
- **In a world of Econs it is hard to explain why shares would turn over at a rate of about 5% per month, especially if everything is "correctly priced." Why trade so much?**
  - The market "works" with high trading volumes because every investor thinks he is smarter than the next guy
- Using P/E ratios, cheap stocks are unpopular or out of favor, while expensive stocks are fashionable.
  - By being a contrarian Graham argued you could beat the market some of the time
- The EMH says that **Regression Toward the Mean** cannot happen

    - Those bad companies are not as bad as they look, and on average are likely to do surprisingly well in the future
- **By whatever measure one used, "value-stocks" outperformed "growth stocks" and to the consternation of EMH advocates, the value stocks were also less risky, as measured by beta**
- The stock price today is just a forecast – the market's expectations of the present value of all future dividend payments
    - The present value of dividends was stable but the stock price moved all over the place
- The imprecision of these forecasts does not mean they are useless
- Intrinsic value cannot be determined with precision, which makes it hard to prove that stock prices derive from intrinsic value
- Close end funds blatantly violate the law of one price (discount on NAV) vs. market price
- Two ingredients are necessary for a violation of the law of one price to emerge and persist:
    1. You need some investors with an inexplicable desire to own a pure unadulterated version of Pam → noise traders
    2. Something must prevent "smart money" from coming in to correct the price

Welcome to Chicago: 1995 – Present: Law Schooling, Football & Game Shows

- The traditional law and economics approach is based exclusively on models of Econs
- Standard law and economics assume that people have correct beliefs and choose rationally
- **The real point of behavioral economics is to highlight behaviors that are in conflict with the standard rational model**
- When people are given what they consider to be unfair offers, they can get angry enough to punish the other party, even at some cost to themselves
- The core principle underlying the Chicago School's libertarian beliefs is consumer sovereignty: The notion that people make good choices, and certainly better choices than anyone else could make for them
- Theoretically, teams with the first pick should trade it because it is equivalent to 5 picks in the second round. Those 5 picks in the second round could completely change the fortune of a team in a much more robust way than just the #1 overall player
    - In reality, across the entire draft, the chance that an earlier player will be better is only 52% and 56% in the first round. That is basically a coin flip
    - **Simple rule of thumb is used for future trades: a pick in a given round this year fetches a pick one round earlier the following year**
        - **This rule of thumb implies that teams are discounting the future at 136% per year**
- So, our research yielded 2 simple pieces of advice to teams. First, trade down
    - Trade away high 1st round picks for additional picks later in the drat especially 2nd rounders
    - Lend picks this year for better picks next year
- We found that trading down yielded a large increase in games started with no sacrifice in the number of all-star seasons
- Teams should go for it more than they do on 4th down

    - Of course, coaches are Humans. They tend to do things the way it has always been done, because those decisions will not be 2nd guessed by the boss
- **The more we understand how difficult it is to get everyone in the organization to adopt strategies that maximize profits especially if those strategies violate conventional wisdom, the better off we will be**
- House money effect says that people are more willing to take chances when they think they are ahead in the game
    - There is path dependence: contestants clearly reacted not just to the gambles they were facing but also to the gains and losses along the way
    - Young men are distinctly less likely to split. Never trust a man under thirty

Helping Out: 2004 to Present: Save More Tomorrow, Going Public, and What is Next?

- Recall that people tend to be risk-seeking in the domain of losses when they a have a chance to break even
- A key finding from the research on this topic is that we have more self-control when it comes to the future than the present
- Tie increases in savings rates to increases in pay to avert loss aversion and mitigate present bias
- Goal: 10-15% of your income in savings
- Automatic enrollment or default policies that nudge individuals to save more could have larger impacts on national savings at lower fiscal costs
- Libertarian Paternalism
    - In our increasingly complicated world people cannot be expected to have the expertise to make anything close to optimal decisions in all the domains in which they are forced to choose
    - Paternalism – trying to help people achieve their own goals
    - Libertarian – helping without limiting choices
- A nudge is some small feature in the environment that affects our attention and influences behavior
- Nudging in the UK
    - If you want to encourage someone to do something, make it easy
    - We cannot do evidence-based policy without evidence
- Behavioral Finance has thrived because:
    1. There are tightly specified theories
    2. There is fantastic data that can be used to test those theories
- Remember: A theory of the behavior of Econs cannot be empirically based, because Econs do not exist
- Why aren't we able to sell this idea that you do not have to amplify the payoff of risk to gain success in this country, you need to soften the damage of risk?