NOTES: DECISION MAKING

Rational Thinking

- Thinking that is restricted to mathematics, statistics, and formal logic
- People use biases and heuristics which are adaptive
- Need to know outcomes + probability of those outcomes

Humans as irrational thinkers

- Decisions made under conditions of uncertainty
- Anchoring effects:
    - the starting point from which we begin reasoning can effect our thinking
    - Ex: first value when searching for bag was 120 bucks, so influenced expectations
    - Anchoring can happen with multiple irrelevant to the decision
        - Last two digits of social security (so really rand value)
        - Estimate the cost of each product
        - People who had lower numbers gave lower estimates, so 11 estimates $30 and 99 estimates $80
    - Using evidence
        - There are 100 times more salespeople than librarians, but people use representative heuristic, so it's more likely a person is a salesperson rather than a librarian.
- Representative heuristic gives greatest weight to occurences that resemble or are similar to past events (prototype or exemplar)
    - Ex:
        - HTHTHTHTH vs THHTHTTH vs HHHHHHH even though all are likely
- Confirmation bias (myside): decisions based on our own beliefs instead of objective evidence. Selection bias to choose evidence you "like"
    - People seek evidence to support their position
    - But they also disregard evidence that contradicts their view less weight
    - This emerges from illusory correlation.
- Illusory correlation: people perceive a relationship between vars, despite lack of evidence
    - Sugar + hyperactivity and Vaccines + autism
    - We only see the bolded ones because of confirmation bias

Sugar/Hyper	No sugar/Hyper
Sugar/not hyper	**No Sugar/not hyper**

- Overcoming Confirmation bias
    - Rational thinking and IQ/cognitive ability are UNRELATED. Smart people can be irrational.
        - Need practice and awareness.
        - Seek disconforming evidence.

- Inductive reasoning/statistical reasoning:
    - Ex:
        - Daughter keeps tracks patterns, 5> item, maybe >5 no
    - Draw conclusions from many pieces of info.
        - Law of large numbers: dangers of small sample size for true pattern: ex small number of reviews is sus
        - base rates
        - conjunction fallacy.
            - One thing happening is much more likely then two things happening at the same time.
- Choosing a
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