

# Behavioral Economics

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- This lecture note compares and contrasts expected utility with behavioral economics.
- In 1979, Israeli psychologists Daniel Kahneman and Amos Tversky pioneered the field of behavioral economics with a groundbreaking paper published in *Econometrica*, one of the world's most prestigious economics journals.
- In 2002, Kahneman was awarded the Nobel Prize in Economics for integrating psychological insights into decision-making under uncertainty.

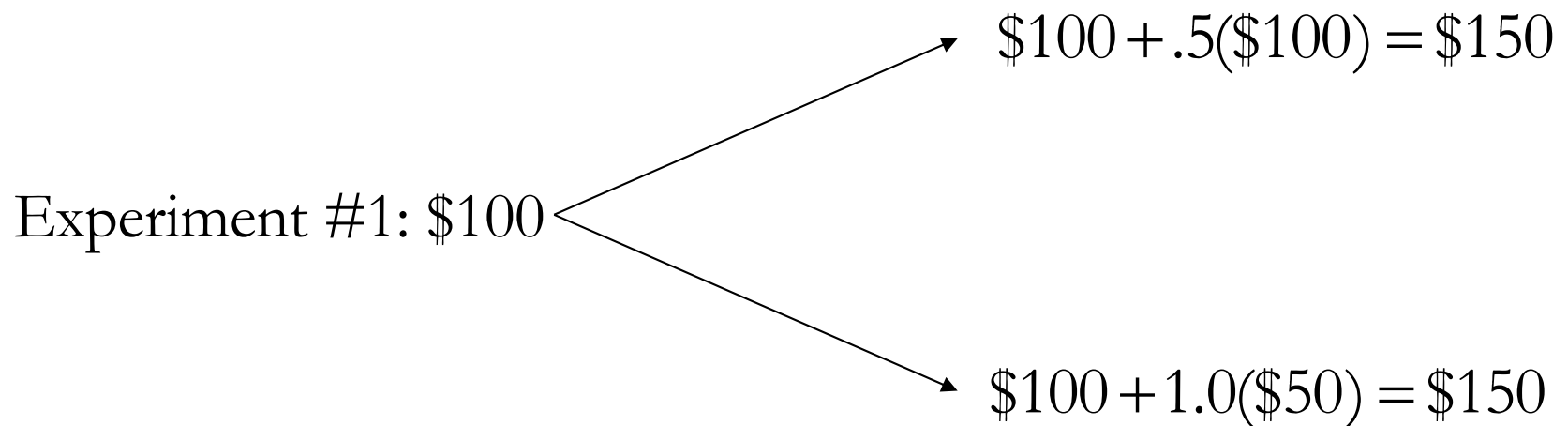
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- In their seminal 1979 *Econometrica* paper (and in various other papers, books, and lectures), Kahneman and Tversky (KT) showed
  - “Loss aversion” causes decision-makers to feel more pain and regret from losing \$100 than satisfaction from gaining \$100.
  - How gains and losses are communicated (framed) may cause this asymmetry between behavioral responses to gains and losses.

# Behavioral Economics

- Experiment #1: Kahneman and Tversky gave each of their subjects \$100. Then subjects were offered a choice between either a) a 50 per cent chance of winning an additional \$100 or b) a 100 per cent chance of winning an additional \$50.

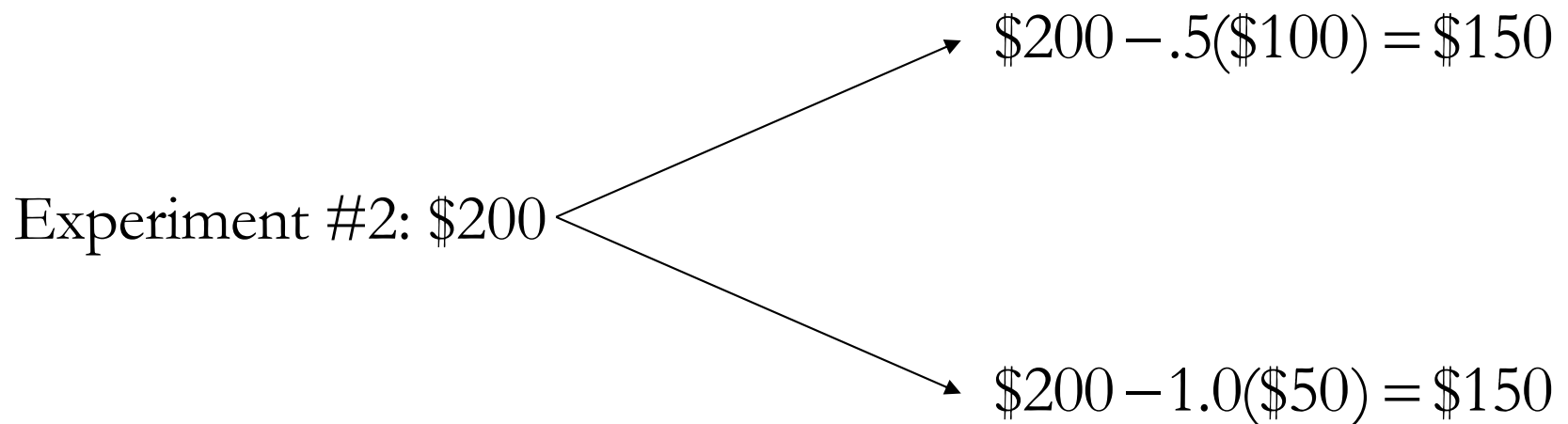
# Behavioral Economics



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- Experiment #2: In this experiment, the subjects from experiment #1 receive an additional \$100, and are given another choice: between either c) a 50 per cent chance of losing \$100 or d) a 100 per cent chance of losing \$50.

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# Decision-making biases

- Loss Aversion:
  - What it is: The preference for avoiding losses over acquiring equivalent gains.
  - What it looks like: Feeling more pain from losing than satisfaction from gaining.
  - Why it could be a problem: Fear of losses may cause people to take more risk in loss states and less risk in gain states, thereby limiting opportunities for growth and expanding opportunities for failure.



# Decision-making biases

- *Confirmation bias* refers to the tendency to seek out information that confirms existing beliefs and ignore contradictory information.
- *Overconfidence bias* involves overestimating one's abilities, leading the decision-maker to conflate 'best case' with 'most probable' scenarios.
- *Optimism bias* is a form of wishful thinking in which the likelihood of negative (positive) outcomes is underestimated (overestimated).

# Decision-making biases

- *Availability bias* refers to the tendency for people to rely on information that comes readily to mind when making decisions.
- *Hindsight bias* refers to the tendency for people to attach higher probabilities to events *after* they have occurred (*ex-post*) than *before* (*ex-ante*).
- *Anchoring bias* refers to the tendency to rely too heavily on the first piece of information encountered (the "anchor") rather than considering all available evidence.

# Decision-making biases

- *Conjunction bias* is the tendency to think that a combination of statistically independent events is more or as likely to occur than one of those events.
- Example: Individuals often *overestimate* the probability that six of seven statistically independent events of 90 percent probability will occur, while *underestimating* the probability that one of seven statistically independent events of 10 percent probability will occur (odds of both are the same - 37.2%).

# Decision-making biases (Summary)

- **Loss Aversion:** Preferring to avoid losses over acquiring gains.
- **Confirmation Bias:** Seeking information that confirms existing beliefs.
- **Overconfidence Bias:** Overestimating abilities and knowledge.
- **Optimism Bias:** Underestimate probability of bad outcomes, overestimate probability of good outcomes.
- **Availability Bias:** Rely on readily available information.
- **Anchoring Bias:** Clinging to specific values when making decisions.
- **Conjunction Bias:** Difficulty in calculating and interpreting probabilities.