Econ 211

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Wesleyan University

Warm-up Exercise

Auction

- I have a $10 bill
- Bidding starts at $5.00 and must go up by at least $0.25 increments
- Highest bidder pays me their bid and receives the bill
- Second-highest bidder also pays me their bid
- Bidders cannot collude

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What happens if the bidding starts at $10?

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  - ▶ One player bids exactly $10 and then game is over (Shubik, 1971)
- ▶ What actually happened?
  - ▶ Individual rationality is not enough for equilbrium
  - ▶ Players may not have purely selfish preferences
- ▶ This problem is not so rare:
  - ▶ http://www.dealdash.com/

Administrative Details

What This Course is About

- Introduction to behavioral and experimental economics
- Behavioral economics
    - Study of human behavior that falls outside of the "standard model" of economic theory (more on this later)
    - Heavy influence from psychology
- Experimental economics
    - Application of experimental methods to economic questions
    - Experiment: a *designed* procedure for collecting data with the goal of testing a scientific hypothesis

What I Hope You Get out of This Course

- ▶ Explain how humans make decisions involving judgement, risk, time, and social factors at the level that another Wes student would be able to understand
- ▶ Make hypotheses about novel experiments or economic settings involving individual or group decision-making
- ▶ Design your own lab, field, or online experiment

Who I Am

- My name: Prof. Jeff Naecker
- My contact info
  - jnaecker@wesleyan.edu
  - (860) 685-2503
  - PAC 321, Wednesday 2:00p-4:00p (or email me)
- A little about me
  - Born and raised in California
  - Berkeley undergraduate (econ and physics), Stanford graduate (econ)
  - Research interests: behavioral and experimental economics, microeconomic theory, public economics

Who You Are

- Introduce yourselves
  - First name
  - Major(s)
  - Where you're from
  - Fun fact about yourself

Who You Are

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    - ▶ Fun fact about yourself
- ▶ Poll: how many have taken Econ 301?

Details

- Moodle review
- Syllabus review

Survey Results

Cognitive Reflective Test

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- In a lake, there is a patch of lily pads. Every day, the patch doubles in size. If it takes 48 days for the patch to cover the entire lake, how long would it take for the patch to cover half of the lake? *47 days (not 24)*

System 1 vs System 2

- System 1: Fast, intuitive
- System 2: Slow, analytical

System 1 vs System 2

- System 1: Fast, intuitive
- System 2: Slow, analytical

Percent correct:

	Regular font	Small font
Bat/ball	33%	83%
Widgets	67%	67%
Lake	80%	75%

The Trolley Problem

- There is a runaway trolley barreling down the railway tracks. Ahead, on the tracks, there are five people tied up and unable to move. The trolley is headed straight for them.
- You are standing some distance off in the train yard, next to a lever. If you pull this lever, the trolley will switch to a different set of tracks. However, you notice that there is one person on the side track.
- You have two options:
  1. Do nothing, and the trolley kills the five people on the track.
  2. Pull the lever, diverting the trolley onto the side track where it will kill one person.

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- You have two options:
    1. Do nothing, and the trolley kills the five people on the track. (0%)
    2. Pull the lever, diverting the trolley onto the side track where it will kill one person. (100%)

The Trolley Problem

- There is a runaway trolley barreling down the railway tracks. Ahead, on the tracks, there are five people tied up and unable to move. The trolley is headed straight for them.

- You are on a bridge under which it will pass, and you can stop it by putting something very heavy in front of it. As it happens, there is a very fat man next to you and your only way to stop the trolley is to push him over the bridge and onto the track.

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- You have two options:
  1. Do nothing, and the trolley kills the five people on the track. (73%)
  2. Push the fat man over the bridge and onto the track, and the trolley kills him. (27%)

Why Are These Situations So Different?

- Outcome is the same in both (5 deaths vs 1 death)
- What is different?

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- Outcome is the same in both (5 deaths vs 1 death)
- What is different?
    - Framing
    - Agency
    - Conceptions of fairness

iPad Purchase

- ▶ Imagine that you are about to purchase an iPad for $500 and an iPad case for $25.
- ▶ The salesman tells you that the case comes with the iPad at another branch of the store, located 20 minutes away.
- ▶ The iPad is the same price at this other store.
- ▶ Would you make the trip to the other store?
    1. Yes
    2. No

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- ▶ Would you make the trip to the other store?
    1. Yes (60%)
    2. No (40%)

iPad Purchase

- Imagine that you are about to purchase an iPad for $500 and an iPad case for $25.
- The salesman tells you that the iPad is on sale for $475 at another branch of the store, located 20 minutes away.
- The case is the same price at this other store.
- Would you make the trip to the other store?
    1. Yes
    2. No

iPad Purchase

- Imagine that you are about to purchase an iPad for $500 and an iPad case for $25.
- The salesman tells you that the iPad is on sale for $475 at another branch of the store, located 20 minutes away.
- The case is the same price at this other store.
- Would you make the trip to the other store?
    1. Yes (55%)
    2. No (45%)

What is Going on Here?

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- This is an example of a *heuristic* that leads to a *bias*

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- ▶ Heuristic
    - ▶ Definition: A decision rule that is easy to apply but does not follow from standard economic theory
    - ▶ Often leads to an adequate answer in most settings but very wrong answers in other settings
    - ▶ Example: discounts on more expensive items are better

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- ▶ Heuristic
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  - ▶ Often leads to an adequate answer in most settings but very wrong answers in other settings
  - ▶ Example: discounts on more expensive items are better
- ▶ Bias
  - ▶ Definition: A systematic error
  - ▶ Errors are common in standard economics, but they usually average out
  - ▶ Example: People are more attracted to the discount on the bigger-ticket item even when benefit to them is the same

Course Overview

The Standard Model

- ▶ What assumptions does the standard economic model make?

The Standard Model

- ▶ What assumptions does the standard economic model make?
    - ▶ Correct beliefs
        - ▶ About the world
        - ▶ About your own abilities
        - ▶ About others' level of sophistication
    - ▶ Risk averse, but no reference points
    - ▶ Purely selfish
    - ▶ Demonstrate patience and self-control in decisions over time
    - ▶ Infinite computational power
    - ▶ Frame-insensitive

The Behavioral Approach

- What are more realistic assumptions?

The Behavioral Approach

- ► What are more realistic assumptions?
    - ► Persistently incorrect beliefs about the world: Non-Bayesian updating
    - ► Incorrect beliefs about the rationality of others: Behavioral game theory
    - ► Non-classical risk preferences: prospect theory, loss aversion, ambiguity aversion
    - ► Social preferences
    - ► Non-classical time preferences: hyperbolic discounting, self-control issues
    - ► Limited computational power: bounded rationality, heuristics
    - ► Frame-sensitivity

Types of economic data

1. Naturally occurring data
   - Data that is observational, ie not designed by researcher
   - Includes so-called "natural" experiments
2. Controlled data
   - Natural field experiment: subjects don't know they are in experiment
   - Framed field experiment: subjects know they are in experiment, but are in a familiar setting
   - Artifactual field experiment: subjects in the lab, but doing familiar activities (eg doctors in the lab choosing treatment options)
   - Lab experiment

See List and Reiley (2008), *Field Experiments* for more details