Review Lecture

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Lecture One

- ***Opportunity Cost:***
  - There ain't no such thing as a free lunch. (TANSTAAFL)
- ***Fixed Cost and Variable Cost***
- ***Marginal Cost***
- ***Sunk costs***
- ***The Sunk Cost Fallacy***

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Lecture Two

- Using Marginal Analysis to guide decisions.
- Decision Trees
- How to draw
- Why they are useful (good to organize data, simplify the decision process. Communicate decisions to others)
- Examples:
  - Sunk cost dilemma
  - Nebraska versus Miami (1984 Orange Bowl)
- Thinning Strategically games against yourself.

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Lecture Three

- Decision Trees again
- Games against Nature?
- Solving games back to front
- Fredo and Charlie Brown
- Examples:
  - Line Item Vetoes
  - The game of NIM.
  - Ultimatum games and “Bargaining”
  - Dictator games
  - Cut and choose

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Lecture Four

- Commitments, Threats and Promises.
- Fredo and Charlie again.
- Predatory Pricing.
- "If you do not do your homework, you are NOT going to sleep-away camp this year!"
- Reconstructing the game:
  - Contracts
  - Reputation,
  - Burning Bridges
  - Cutting off communication
  - Incrementalism (small steps)
  - Teamwork and agents.

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Lecture Five

- Simultaneous versus Dynamic Games
- Simultaneous? Not necessarily
  - examples
- Strategies
- Dominant and dominated strategies
  - examples
- Eliminating dominated strategies
- Solving or simplifying games.

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Lecture Six

- http://www.youtube.com/watch?v=S2iNGFRtLkI
- Best Responses.
- The “Beautiful Equilibrium”, Nash Equilibrium
  - defining the NE
  - finding NE -examples
  - How many?
  - Are there any?
- Randomizing behavior
  - Motivation
  - explanation
  - computation.
  - examples.

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Lecture Seven

- Two main types of private information: knowledge (information about type) and intent (information about action).
- We focus on the first
- When does private information matter?
- Screening versus signalling
- Separating versus pooling
- Semi-separating?

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Lecture Eight

- Auctions as a “screening” device
  - example
- The many uses of auctions
- Four examples of “Simple” auctions
- How to bid in a Second Price auction.

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Lecture Eight B

- The Independent, Private Values Assumption
- Optimal behavior In Auctions
  - second price auctions
  - first price auctions
- Equivalence of FP and Dutch Auctions
- “Equivalence” of SP and English Auctions
- “Equivalence” of Expected Revenues
- The Winner’s Curse and the Dependence of Values.
- Real World Application: The FCC Spectrum Auctions

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Lecture Nine

- Some information, p, is common knowledge when it is the case that, for all the agents involved,
  - each agent knows p,
  - each agent knows that each agent knows p
  - each agent know that each agent knows that each agent knows p
  - ..... ad infinitum
    - The email game
    - The anthropologist
    - The surprise quiz.

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