Eco212B: Information Economics

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Website

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This is a topics course in information economics. It is self-contained but of course the micro theory sequence as well as the other 2nd year classes will be helpful, in particular the contract theory course taught in the fall by Simon Board. Realistically, we may cover ~3 of the 6 below topics in the course. We can emphasize topics according to students’ interest. For those enrolled, there will be problem sets and a final examination, possibly as a presentation in class or a mock referee report.

All the papers below should be available online, most of them on JSTOR. I will post lecture notes.

1 Value of Information

Overview: Information enables better decisions. We will study the basic properties of the demand for information such as comparing the value of two signals, the (non-monotonic) marginal value of information and conditions under which signals are substitutes or complements. As applications we will study information acquisition incentives in pricing, auctions, committee decision problems, and security design.

Mathematical Nuggets: Blackwell’s sufficiency theorem

References:
Athey, Levin (2001), “The Value of Information in Monotone Decision Problems”, *mimeo*
Börgers, Hernando-Veciana, Krähmer (2013), “When are Signals Complements of Substitutes?”, *JET*, 107; 421-452
Gershkov, Szentes (2009), “Optimal voting schemes with costly information acquisition”, *JET*, 144; 36-68
Moscarini, Smith (2008), “The Law of Large Demand for Information”, *Econometrica*, 70 (6); 2351-2366

2 Experimentation:

**Overview:** Often the best way to learn about some new activity or product is to try it out. Even if the chances of success are low, the option value of learning one’s tastes may outweigh static preference consideration. We start with the introduction of the famous Gittins index for “bandit problems” and proceed to applications in IO, labor economics and finance.

**Mathematical Nuggets:** Gittins’ index theorem, Martingale convergence theorem

**References:**

Bergemann, Välimäki (1996) “Learning and Strategic Pricing”, *Econometrica*, **64** (5); 1125-1149
Alessandro Bonatti, Johannes Horner (2009) “Collaborating”, *AER*, **101** (2); 632-663
Steven Callander (2008) “Searching for Good Policies” *APSR*, **105** (4); 643-662
Frazier, Kempe, Kleinberg, Kleinberg (2014) “Incentivizing Exploration”. *EC*
Jovanovic (1979), “Job Matching and the Theory of Turnover”, *JPE*, **87** (5); 972-990
Strulovici (2009), “Learning While Voting: Determinants of Collective Experimentation”, *Econometrica*, **78** (3); 933-971
3 Social Learning:

Overview: In many settings in financial economics, IO and political economics exhibit learning from the behavior of others. If the others’ information can be deduced from their past actions, learning will eventually occur and the decision makers will take the optimal actions. If on the other hand individuals orient their actions too much on past actions and too little on own information “informational cascades” and herds occur and learning stops.

References:
Gale (1996), “What have we learned from social learning”, *EER*, 40; 617-628
Hendricks, Sorensen, Wiseman (2009), “Observational Learning and Demand for Search Goods”, *AEJ*, 4 (1); 1-31
Smith, Sorensen (2012), “Informational Herding, Optimal Experimentation, and Contractanism”, *mimeo*
Song (2014), “Social Learning with Endogenous Network Formation”, *mimeo*

4 Strategic Communication:

Overview: Conflicts of interests can hinder communication. If a division manager, say, anticipates that headquarters will divert funds from his division if he communicates problems, he will try to shade such problems. Similarly in court, an attorney may be reluctant to call a witness if he is uncertain about the testimony and its effect on the jury. These problems are alleviated if talk can be backed up by facts and the only way to lie is by withholding information.

References:
Baliga, Ely “Torture”, *mimeo*
Benabou, Larroque “Using privileged information to manipulate markets: Insiders, gurus, and credibility”, *QJE*, 107, 921-958
5 Reputation

Overview: In the absence of formal contracts, one channel that keeps economic agents honest is their reputational concerns. A firm that doesn’t fight back when others eat its lunch invites further entry; a firm that is found to sell shady quality loses customers; a manager (or a tenured professor) who fails to deliver will be inferred to be inept and punished by the labor market.

Topics: Commitment types, inept types, mimicking, monitoring, trade-marks, career-concerns, reputational incentives, reputational dynamics.

References:
Huang (2014), “Defending Against Speculative Attacks: Reputation, Learning, and Coordination”, mimeo


6 Information Aggregation:

References:
Lauermann, Wolinsky (2013) “Search with Adverse Selection”, *mimeo*
Ekmecki, Lauermann (2014) “Manipulated Electorates and Information Aggregation”, *mimeo*
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7 Global Games:

References:
more to come

8 Dynamic Mechanism Design

Topics: pricing externalities, learning demand, Coasian dynamics

References:
Gerskov, Szentes (2009), “Optimal voting schemes with costly information acquisition”, *JET*, 144; 36-68

9 Dynamic Signalling

Topics: repeated and dynamic signalling.

References:
Kaya (2009), “Repeated Signaling Games”, *Games*.
Mailath (1987), "Incentive Compatibility in Signaling Games with a Continuum of Types", *Econometrica*
Noldeke and van Damme (1990), “Signaling in a dynamic labor market,” *RERed*.

6
10 Foundations of Incomplete Contracts

Topics: holdup problem, ownership, message games, specific performance contracts, option contracts, strategic ambiguity, complexity, describability.

References:

Bolton and Dewatripont, Chapter 11 and 12.

Hart (1995), Firms, Contracts and Financial Structure, OUP.


Che and Haush (1999), “Cooperative Investments and the Value of Contracting,” AER.


11 Common Agency

Topics: Complete information multilateral contracting.

References:

Bolton and Dewatripont, Chapter 13.3.


Segal (1999), “Contracting with Externalities,” QJE.