

Experimental Game Theory

701-1520-00L
FS 2009, Tuesday, 15:15-17:00 h
ETH HG F 26.1

Prof. Dr. Andreas Diekmann, diekmann@soz.gess.ethz.ch

Abstract: This course introduces the foundations of game theory. It treats models of social interaction, conflict and cooperation, the origin of cooperation and concepts of strategic decision-making behavior. Examples, applications and the contrast between theory and empirical results are particularly emphasized.

Objective: To learn about concepts, models, and applications of game theoretic decision models:

- Basic concepts of game theory (matrix games, extensive form, strategies, Nash-equilibrium, subgame-perfectness etc.)
- Repeated games, games with incomplete information
- Applications to dilemma situations and the problem of cooperation
- Behavioral game theory and experimental research

Program

A. Lectures

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| Feb. 2nd | Basics of Game Theory |
| Feb. 24th | Mixed Motive Games and Nash Equilibrium |
| March 3rd | Sequential Games and Subgame Perfectness |
| March 10th | Repeated Games: Evolution of Cooperation |

B. Presentations

March 17th Altruism in Dictator and Ultimatum Games

- Forsythe et al. (1994): Fairness in Simple Bargaining Experiments (*Max Poprawe*)
- Cherry, Frykblom, Shogren (2002): Hardnose the Dictator (*Marc Guetg*)
- Henrich et al. (2005): "Economic man" in cross-cultural perspective: Behavioral experiments in 15 small-scale societies

March 24th Cooperation in Prisoner's Dilemma

- List (2006): Friend or Foe? A Natural Experiment of the Prisoner's Dilemma (*Gina Santos*)
- Wilkinson (1984): Reciprocal food sharing in the vampire bat (*Alberto Restuccia*)

March 31st Volunteer's Dilemma

- Darley, Latane (1968): Bystander Intervention in Emergencies: Diffusion of Responsibility (*Lars Willums*)
- Rapoport (1989): Social Traps (Decision Theory and Decision Behavior, chapter 14) (*Luc Grosheintz*)
- Barron, Yechiam (2002): Private e-mail requests and the diffusion of responsibility

April 7th Reciprocity

- Regan (1971): Effects of a Favor and Linking on Compliance (*Li Xilin*)
- Fehr, Fischbacher, Tougara (2002): Do High Stakes and Competition Undermine Fairness? Evidence from Russia (*Simon Schwarz*)
- Brosnan, de Waal (2003): Monkeys reject unequal pay (*Lis Cloos*)

April 21st Trust Games

- Dasgupta (2000): Trust as a commodity (*Helgi Hafsteinsson*)
- McCabe, Rigdon, Smith (2003): Positive reciprocity and intentions in trust games (*Nicolas Wieder*)
- Kosfeld et al. (2005): Oxytocin increases trust in humans (*Tilman Tröster*)

April 28th Trust and Signaling

- Bolle, Kaehler (2006): Who profits from a signalling institution? (*Tim Schlöndorn*)
- Johnston (1997): The evolution of animal signals (*Manuel Bonza*)

May 5th Public Good Games, Social Norms and Sanctions 1

- Voss (2001): Game-theoretical perspectives on the emergence of social norms (*Miriam Kittinger*)
- Fehr, Gächter (2002): Altruistic punishment in humans (*Adrienne Nelson*)

May 12th Public Good Games, Social Norms and Sanctions 2

- Gürer, Irlenbusch, Rockenbach (2006): The competitive advantage of sanctioning institutions (*Onur Saglam*)
- Herrmann, Thöni, Gächter (2008): Antisocial punishment across societies (*Korintha Bärtsch*)

May 19th Behavioral Game Theory

- Fehr, Schmidt (1998): A theory of fairness, competition and cooperation (*Mahdi Asadpour*)
- Charness, Rabin (2002): Understanding social preferences with simple tests (*Daufeng Qin*)

May 26th Evolutionary Game Theory

- Smith, Price (1973): The logic of animal conflict
- Nagel (1995): Unraveling in guessing

Requirements for credit points

1. Course attendance (you have to sign in the seminar attendance list; please note that no more than three times of unexcused absence is allowed), 2. presentation of research results, 3. written version of presentation (ca. 10 pages, I. Theory/hypotheses, II. Methods, III. Results, IV. Discussion, V. References/Appendix if any)

Reading

- Gintis, Herbert, 2000. Game Theory Evolving. A Problem-Centered Introduction to Modeling Strategic Interaction. Princeton, New Jersey: Princeton University Press.
- Rapoport, Anatol, 1998. Decision Theory and Decision Behaviour, London: Macmillan.
- Diekmann, Andreas, 2009. Spieltheorie. Einführung, Beispiele, Experimente. Reinbek: Rowohlt. (to appear in april 2009)

More readings and copies of slides on the sociology web-page

(<http://www.socio.ethz.ch/education/fs09>). Access with your ETH password.

Please, direct questions concerning organizational issues to naef@soz.gess.ethz.ch