Strategic Thinking: Theory and Practice

Lecturer: Ole Jann, PhD

Course Description:

We will study theoretical tools and practical applications to sharpen our strategic thinking. Starting from examples in news stories, books or movies, we will introduce and apply concepts from game theory and information economics and discuss their real-life relevance. Examples provided by the students are an integral part of the course. Each part of the course will start from concrete practical problems that involve strategic thinking. These are usually interdependent decision situations in which all participants try to understand, analyze and predict the motivations and choices of the other participants.

Topics that come up in the course are, for example: Threats and promises (and how to make them believable), bank runs, credible communication, how to establish of trust among business partners, how to get customers to reveal their willingness to pay, and how to get an auction right. We will work with examples from news stories, movies, books, philosophical problems, everyday situations, and others.

For any such situation, we will practice doing four things: (i) Breaking it down into its essential parts, (ii) understanding the motivations and choices of those involved, (iii) gaining insights into the strategic structure of the situation and optimal decision making of the participants, and (iv) learning to recognize patterns that connect seemingly different situations with similar underlying structures.

A central part of the course will be student participation - both in class discussion, but also by trying to apply the ideas and concepts of the course to situations that they know from their own experience (or from the news, from movies, literature etc).

Course Prerequisites:

We will introduce and discuss concepts from game theory and economic theory. Some prior experience with these ideas (for example from an undergraduate game theory course) can be helpful but is not a requirement. Theoretical concepts are introduced in such a way that the familiarity with microeconomic reasoning that is gained from introductory undergraduate microeconomics courses is enough to follow the course. This is not a course in game theory, but it can be complementary to such a course for students who have either taken it or plan on taking it.

Grading:

Mandatory Completion Policy
Note that all mandatory assignments and exams must be completed to the best of your ability in order for your final grade to be issued. Failure to complete a mandatory assignment or exam may result in a failing grade.

Letter Grade	Percentage	Description
A+	97-100	Excellent Work
A	93-97	Outstanding Work
A-	90-92	
B+	87-89	Good work
B	83-86	
B-	80-82	
C+	77-79	Acceptable Work
C	73-76	
C-	70-72	
D+	67-69	Work that is significantly below average
D	63-66	
D-	60-62	
F	0-59	Work that does not meet the minimum standards for passing the course

AEP Academic Integrity Policy
Plagiarism and other forms of academic dishonesty are not tolerated. The use of Artificial Intelligence (AI) for the development of knowledge and learning is encouraged at many stages of the learning process. While we value technology for educational purposes, we also value originality and the retainment of knowledge, and thus using AI for assignments and examinations, even if rephrased, is strictly prohibited and considered an academic integrity violation, unless the instructor explicitly allows for it in the context of evaluated work

AEP Non-Discrimination/Harassment Policy
The AEP program in Prague promotes a diverse learning environment where the dignity, worth, and differences of each individual are valued and respected. Discrimination and harassment, whether based on a person's race, gender, sexual orientation, color, religion, national origin, age, disability, or other legally protected characteristics, are repugnant and completely inconsistent with our objectives. Retaliation against individuals for raising good faith claims of harassment and/or discrimination is prohibited.

AEP Diversity Policy
AEP is committed to fostering an inclusive and welcoming community that values diversity in all its forms. We believe that one of the most meaningful lessons of studying abroad is learning to navigate and appreciate differences with curiosity and an open mind. While engaging across differences can sometimes be challenging or uncomfortable, these moments are essential for growth and learning. We recognize that every member of our community, even with the best intentions, may occasionally make missteps. Our commitment is to provide a supportive environment where respectful and honest dialogue helps us learn from these experiences, ensuring that every student has the opportunity to thrive and broaden their perspective.

Weekly Schedule

Week 1

CEE Introductory Lecture Series

AEP Introductory Lecture Series

Week 2: Understanding strategic situations

- Gibbons ch 1, Osborne ch 2 and 3.
- Schelling, T. (2010). Game theory: a practitioner's approach. Economics & Philosophy, 26(1), 27-46.

Week 3: Beliefs and self-fulfilling expectations

- Schelling, T. (1960). The Strategy of Conflict. Harvard University Press. (Selected parts.)
- Schelling, T. (1978). Micromotives and Macrobehavior. WW Norton. (Selected parts.)
- Background: Diamond, D. W., & Dybvig, P. H. (1983). Bank runs, deposit insurance, and liquidity. Journal of Political Economy, 91(3), 401-419.

Week 4: Understanding sequential choices

- Gibbons ch 2.1 and 2.2, Osborne ch 5-7

Week 5: Cooperation and trust through repetition

- Gibbons ch 2.3 and Osborne ch 14
- Background: Friedman, J. W. (1971). A non-cooperative equilibrium for supergames.
- Review of Economic Studies, 38(1), 1-12.

Week 6: Commitment

- Schelling, T. (1960). The Strategy of Conflict. Harvard University Press. (Selected parts.)
- Schelling, T. (1966). Arms and Influence. Yale University Press. (Selected parts.)

Week 7: Strategic situations and information

- Gibbons ch 3.1, Osborne ch 9
- Background: Shannon, C. (1948) "A Mathematical Theory of Communication", Bell System Technical Journal, Vol. 27, pp. 379–423.

Week 8: How to be believed -- the theory of signals

- Gibbons ch 4.2, Osborne ch 10.5-10.7
- Spence, M. (1973). Job Market Signaling. Quarterly Journal of Economics, 87(3), 355-374.
- Gambetta, D. (2011). Codes of the Underworld. Princeton University Press. (Selected parts.)

Week 9: How to be believed -- the theory of communication

- Gibbons ch 4.3A, Osborne ch 10.8
- Farrell, J., & Rabin, M. (1996). Cheap talk. Journal of Economic Perspectives, 10(3), 103-118.

Week 10: Getting others to tell the truth -- the theory of screening

- Chapter 8.1 in Jehle, G. and Reny, P (2011). Advanced Microeconomic Theory 3rd Edition.Prentice Hall.
- Background: Stiglitz, J. E. (1975). The theory of "screening," education, and the distribution of income. American Economic Review, 65(3), 283-300.

Week 11: How to reveal information through prices: Auctions

- Gibbons ch 3.2, Osborne ch 9
- Klemperer, P. (2004). Auctions: Theory and Practice. Princeton University Press. (Selected parts.)

Week 12: Summary and discussion

Week 13: Final exam and feedback

Readings:

The course follows no fixed textbook. We will work with original research, newspapers articles and other sources. Where we will work with game theoretical concepts, the course materials will refer to appropriate chapters in textbooks like:

- Robert Gibbons: A Primer in Game Theory (Pearson 1992)
- Martin Osborne: An Introduction to Game Theory (Oxford 2003)

Further readings can be found in the class schedule below and will be made available through the course website.

Lecturer

Ole Jann, PhD, is assistant professor of economics at CERGE-EI. After studying at Humbold tUniversity Berlin (BSc) and the University of Copenhagen (MSc and PhD), he was Postdoctoral Prize Research Fellow at Nuffield College and the University of Oxford. He has visited Bocconi University (Italy) and Northwestern University (USA). He has taught game theory at the universities of Copenhagen and Oxford