



GAME THEORY AND INTERNATIONAL SECURITY

Course Number: 702.2173.B.01
Semester: Spring 2010
Class Time: Mondays, 12:00-15:00
Class Location: TBA

Office Hours: Wednesdays 15:00-16:00
Location: Room 4024, Madrega Bldg.
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Course Description:

This course presents the fundamentals of game theory and examines its applications to various aspects of international relations, such as arms races, deterrence, crisis bargaining, wars of attrition, terrorism, interstate cooperation, security regimes, war termination, conflict resolution, and peacemaking. The discussion will emphasize the paradoxical nature of strategic interaction and the need to incorporate non-linear logic into security analysis. The historical case studies will be drawn primarily, but not exclusively, from the Arab-Israeli conflict.

Course requirements:

Attendance: Students are required to attend at least 80% of the class meetings.

Class participation: Students are encouraged to take part in and contribute to class discussions. Class participation (as evaluated by the instructor—frequency and quality!) will be reflected in the final grade by a bonus of up to 10%.

Readings: See course schedule for required (denoted by *) and recommended readings. The items can be found in the reserve library.

Exercises: Optional exercises will be assigned from time to time, in order to provide hands-on experience with various aspects of the theory and as preparation for the exams. Students are strongly advised to complete the exercises *ahead* of the class in which they are solved.

Exams: Students are required to take a mid-term and a final exam, counting, respectively, as 40% and 60% of the final grade.



Course website (HighLearn system)

Materials related to the course, as well as various announcements, will be posted to the course's website on the HighLearn system, which can be accessed at the following address:

<http://online.haifa.ac.il/>.

Course schedule:

1. Decision-making as an approach in political research

* James N. Rosenau (1967). "The Premises and Promises of Decision-Making Analysis." In *Contemporary Political Analysis*, James C. Charlesworth (ed.). New York: The Free Press, pp. 189-211.

Duncan Snidal (2005). "Rational Choice and International Relations." In *Handbook of International Relations*, ed. by Walter Carlsnaes, Thomas Risse, and Beth A. Simmons. London: Sage, pp. 73-94.

Harold and Margaret Sprout (1957). "Environmental factors in the study of international politics." *Journal of Conflict Resolution* 1(4): 309-328.

Michael Brecher, Blema Steinberg, and Janice Stein (1969). "A Framework for Research on Foreign Policy Behavior." *Journal of Conflict Resolution* 13(1): 75-101.

David A. Lake and Robert Powell (eds.) (1999). *Strategic Choice and International Relations*. Princeton: Princeton University Press.

Edward N. Luttwak (1987). *Strategy: The Logic of War and Peace*. Cambridge, Mass.: Harvard University Press. pp. 3-65, 177-236.

Robert Jervis (1997). *System Effects: Complexity in Political and Social Life*. Princeton: Princeton University Press.

S. I. Benn and G. W. Mortimore (eds.) (1976). *Rationality and the Social Sciences*. London: Routledge and Kegan Paul.

Jon Elster (1979). *Ulysses and the Sirens: Studies in Rationality and Irrationality*. Cambridge: Cambridge University Press.

Jon Elster (ed.) (1986). *Rational Choice*. New York: NYU Press.

James C. March and Herbert A. Simon (1965). "The Concept of Rationality." In *Human Behavior and International Politics*, J. David Singer, ed. Chicago: Rand McNally, 340-347.

Alex Mintz (2007). "Behavioral IR as a Subfield of International Relations." *International Studies Review* 9: 157-172.



2. An introduction to game theory; the nature of rationality and rational choice

* Michael Nicholson (1992). *Rationality and the Analysis of International Conflict*. Cambridge, UK: Cambridge University Press. Ch. 3 (pp. 45-62).

* William Poundstone (1993). *Prisoner's Dilemma*. New York: Anchor Books – Doubleday, pp. 1-51, 65-99.

Frank C. Zagare (1984). *Game Theory: Concepts and Applications*. Sage Publications. Ch. 1.

Avinash Dixit and Barry J. Nalebuff (1993). *Thinking Strategically*. New York: W. W. Norton, ch. 2, pp. 31-55.

Thomas C. Schelling (1984). *Choice and Consequence*. Cambridge, MA: Harvard University Press (ch. 10, "What Is Game Theory?", pp. 213-242).

John C. Harsanyi (1969). "Game Theory and the Analysis of International Conflict." In *International Politics and Foreign Policy*, James N. Rosenau (ed.). New York: The Free Press, pp. 370-379.

Miles Kahler (1998). "Rationality in International Relations." *International Organization* 52(4): 919-941.

Robert A. Pape (2003). "The Strategic Logic of Suicide Terrorism." *American Political Science Review* 97(3): 343-361.

Gordon H. McCormick (2003). "Terrorist Decision Making." *Annual Review of Political Science* 6: 473-507.

Morton D. Davis (1983). *Game Theory: A Nontechnical Introduction*. New York: Basic Books (rev. ed.). Introduction and Ch. 1.

Leonard, Robert J. (1995). "From Parlor Games to Social Science: von Neumann, Morgenstern, and the Creation of Game Theory 1928-1944." *Journal of Economic Literature* 33: 730-61.

3. Zero-sum games and applications

Dixit and Nalebuff, chs. 3, 7.

Zagare, Ch. 2.

Steven J. Brams (1975). *Game Theory and Politics*. New York: The Free Press. Ch.1.

4. Non-zero-sum games: basic principles; coordination games

Dixit and Nalebuff, ch. 9.



Davis, Ch. 5, pp. 75-108.

Steven J. Brams (1985). *Rational Politics*. Washington: Congressional Quarterly Press, pp. 7-23.

5. The theory of moves and the nonmyopic equilibrium

* Steven J. Brams and Walter Mattli (1993). "Theory of Moves: Overview and Examples." *Conflict Management and Peace Science* 12(2): 1-39 (read pp. 1-20 only).

Steven J. Brams (1994). *Theory of Moves*. Cambridge: Cambridge University Press, pp. 1-34.

6. Prisoner's Dilemma theory (3 lectures): arms races; cooperation under anarchy; security regimes; conflict resolution

* Poundstone, pp. 101-131, 215-255.

* Robert Axelrod (1984). *The Evolution of Cooperation*. New York: Basic Books. Pp. 73-87.

Dixit and Nalebuff, chs. 4, 6.

Zagare, Ch. 3 (pp. 36-63).

Brams, *Rational Politics*, Ch. 7 (pp. 139-150).

Robert Axelrod and Robert O. Keohane (1986). "Achieving Cooperation Under Anarchy: Strategies and Institutions." In Kenneth A. Oye (ed.), *Cooperation Under Anarchy*. Princeton: Princeton University Press, pp. 226-254.

Robert Jervis (1978). "Cooperation Under the Security Dilemma." *World Politics* 30(2): 167-214.

Robert Jervis (1988). "Realism, Game Theory, and Cooperation." *World Politics* 40: 317-349.

Robert Jervis (1983). "Security Regimes." In *International Regimes*, Stephen D. Krasner (ed.). Ithaca: Cornell University Press, pp. 173-194.

Arthur A. Stein (1983). "Coordination and Collaboration: Regimes in an Anarchic World." In *International Regimes*, Stephen D. Krasner (ed.). Ithaca: Cornell University Press, pp. 115-140.

Raymond Cohen (1981). *International Politics*. London: Longman. Pp. 50-63.

Davis, Ch. 5, pp. 108-119.

Ben D. Mor (2007). "The Heuristic Use of Game Theory: Insights for Conflict Resolution," *World Political Science Review* 3(2), Article 3.



7. Incomplete information and misperceptions: subjective games and conflict resolution

* Brams, *Theory of Moves*, Ch. 6.

Arthur A. Stein (1982). "When Misperception Matters." *World Politics* 34(4): 505-526.

Ben D. Mor (1995). "Crisis Initiation and Misperception." *Journal of Theoretical Politics* 7(3): 351-67.

8. Deterrence and bargaining in international crises (case study: the Cuban missile crisis, 1962): Allison's rational actor model; Schelling and the dynamics of Chicken

* Thomas C. Schelling (1966). *Arms and Influence*. New Haven: Yale University Press, ch. 3 (pp. 92-125).

* Graham T. Allison (1971). *Essence of Decision: Explaining the Cuban Missile Crisis*. Glenview, Ill.: Scott, Foresman and Company. See also 2nd ed., 1999, with Philip Zelikow. Ch. 1-2.

Poundstone, 133-166, 179-213, 257-278.

Jonathan Bendor and Thomas H. Hammond (1992). "Rethinking Allison's Models," *American Political Science Review* 86 (June), 301-322.

Ben D. Mor (1991). "Nasser's Decision-Making in the 1967 Middle East Crisis: A Rational-Choice Explanation." *Journal of Peace Research* 28(4): 359-375.

Brams, *Rational Politics*, Ch. 6, pp. 109-138.

Thomas C. Schelling, *The Strategy of Conflict* (1960). Cambridge: Harvard University Press, pp. 187-203 (use 1980 edition).

Christopher J. Fettweis (2007-08). "Credibility and the War on Terror." *Political Science Quarterly* 122(4): 607-633.

Zeev Maoz (1990). *Paradoxes of War: The Art of National Self-Entrapment*. Boston: Allen and Unwin, pp. 65-134.

Glenn H. Snyder (1971). "'Prisoners' Dilemma' and 'Chicken' Models in International Politics." *International Studies Quarterly* 15: 66-103.

9. Sociological games and rhetorical bargaining

* Frank Schimmelfennig (2001). "The Community Trap: Liberal Norms, Rhetorical Action, and the Eastern Enlargement of the European Union." *International Organization* 55(1): 47-80.

Martin Hollis and Steve Smith (1990). *Explaining and Understanding in International Relations* (Oxford: Oxford University Press), Ch. 8 (pp. 171-195).



- Michael N. Barnett (1998). *Dialogues in Arab Politics*. New York: Columbia University Press, pp. 25-53 (ch. 2).
- Thomas Risse (2000). "Let's Argue!": Communicative Action in World Politics." *International Organization* 54(1): 1-39.
- Roland Paris (2002). "Kosovo and the Metaphor War." *Political Science Quarterly* 117(1): 423-450.
- Harald Müller (2004). "Arguing, Bargaining and All That: Communicative Action, Rationalist Theory and the Logic of Appropriateness in International Relations." *European Journal of International Relations* 10(3): 395-435.
- Harald Müller (2001). "International Relations as Communicative Action." In *Constructing International Relations: The Next Generation*, ed. by K. M. Fierke and K. E. Jørgensen (Armonk, NY: M. E. Sharpe), pp. 160-178.
- Lars G. Lose (2001). "Communicative Action and the World of Diplomacy." In *Constructing International Relations: The Next Generation*, ed. by K. M. Fierke and K. E. Jørgensen (Armonk, NY: M. E. Sharpe), pp. 179-200.
- Amy Gershkoff and Shana Kushner (2005). "Shaping Public Opinion: The 9/11-Iraq Connection in the Bush Administration's Rhetoric." *Perspective on Politics* 3(3): 525-537.
- Brian Frederking (2003). "Constructing Post-Cold War Collective Security." *The American Political Science Review* 97(3): 363-378.
- Karin M. Fierke and Michael Nicholson (1999). "Divided by a Common Language: Formal and Constructivist Approaches to Games." Paper presented at the *International Studies Association Conference*, Washington D. C., February 16-20.
- Karin M. Fierke (1998). *Changing Games, Changing Strategies*. Manchester: Manchester University Press (esp. Part I, pp. 16-92).
- Ben D. Mor (2007). "Power and Rhetorical Bargaining: The UN Security Council Debate on the Iraq War." *Global Society* 21(2): 229-247.

10. Summary and evaluation: critiques of game theory

* Poundstone, pp. 167-177.

Stephen M. Walt (1999). "Rigor or Rigor Mortis? Rational Choice and Security Studies." *International Security* 23(4): 5-48. For rejoinders, see *International Security* 24(2), fall 1999.

Daniel Little (1991). *Varieties of Social Explanation*. Boulder: Westview Press, pp. 146-158.

Miles Kahler (1998). "Rationality in International Relations." *International Organization* 52(4): 919-941.



K.M Fierke and Michael Nicholson (1999). "Divided by a Common Language: Formal and Constructivist Approaches to Games" (see topic 9).

Kristen Renwick Monroe (2001). "Paradigm Shift: From Rational Choice to Perspective." *International Political Science Review* 22(2): 151-172.

Aaron Wildavsky (1994). "Why Self-Interest Means Less Outside of a Social Context: Cultural Contributions to a Theory of Rational Choices." *Journal of Theoretical Politics* 6(2): 131-159.

John Gerard Ruggie (1998). "What Makes the World Hang Together? Neo-Utilitarianism and the Social Constructivist Challenge." *International Organization* 52(4): 855-885.

Martin Hollis and Steve Smith (1990). *Explaining and Understanding International Relations*. Oxford: Clarendon Press, chs. 6, 8.