GOV 355J: Human Behavior as Rational Action
Spring 2022 (Unique Number: 37965), TTH 2:00-3:30pm, PAR 103
First Two Weeks Online

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Online Office Hours: TTH 3:30-5:00pm <https://utexas.zoom.us/j/5757438701>

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Online Office Hours: TTH 11:00pm-12:30pm

Writing & Quantitative Reasoning Flags

This course carries both the Writing Flag and the Quantitative Reasoning Flag.

Writing Flag courses are designed to give students experience with writing in an academic discipline. In this class, you can expect to write regularly during the semester, complete substantial writing projects, and receive feedback from your instructor to help you improve your writing. You will also have the opportunity to revise one or more assignments, and you may be asked to read and discuss your peers' work. You should therefore expect a substantial portion of your grade to come from your written work. Writing Flag classes meet the Core Communications objectives of Critical Thinking, Communication, Teamwork, and Personal Responsibility, established by the Texas Higher Education Coordinating Board.

Quantitative Reasoning courses are designed to equip you with skills that are necessary for understanding the types of quantitative arguments you will regularly encounter in your adult and professional life. You should therefore expect a substantial portion of your grade to come from your use of quantitative skills to analyze real-world problems.

Course Objectives and Overview

The term "rational action" as used in the economic approach is generally equated with maximizing behavior. Individual human agents are assumed to have consistent and stable preferences over alternatives each of which is assigned some "utility." Maximization entails choosing the course of action that yields the highest expected utility. One is rational to the extent one uses the best means to achieve one's goals.

In this course we will learn a variety of social and political models based on such a notion of *individual rationality* and to investigate its *collective consequences*. In particular, we will find through the "Prisoner's Dilemma," the "Tragedy of the Commons," and the "Free-Rider Problem" a contrast between *rational man* and *irrational society*. Self-serving behavior of individuals does not usually lead to collectively satisfactory results.

So, this course is about the stories of the Prisoners, the Herdsmen, and the Free-Riders. As a matter of fact, we will show that the Dilemma, the Tragedy, and the Problem share essentially the same mathematical structure, and hence they are essentially the same story - a story about human destiny. We will then explore the ways by which we might be able to escape such a destiny.

The Prisoner's Dilemma: To C, Or Not To C?

This is the story of the Prisoners as told by Dennis Chong: "Two apprehended suspects to a serious crime are detained incommunicado and faced with the following choice: each has been given the opportunity to turn state's witness for the purpose of convicting the other; if one prisoner agrees to confess while the other keeps silent, the confessor will get off scot-free while the other prisoner will be convicted and sentenced to ten years in prison. If neither prisoner confesses, both will escape prosecution for the serious crime, but will nevertheless be prosecuted and convicted for a minor crime that carries a one-year prison term. Finally - and herein lies the dilemma - if both prisoners elect to confess to the authorities, both will end up being convicted for the crime, although they will receive a slightly reduced sentence (e.g., five years) for having cooperated with the police." (Chong, *Collective Action and the Civil Rights Movement*, p. 6)

The Classical Prisoner's Dilemma		Suspect 2	
		Stay Mum	Confess
Suspect 1	Stay Mum	(-1, -1)	(-10, 0)
	Confess	(0,-10)	(-5, -5)

The question is, of course, to C, or not to C?

The Tragedy of the Commons: the Remorseless Working of Things

Here is the story as told by Garrett Hardin: Picture a pasture open to all. It is to be expected that each herdsman will try to keep as many cattle as possible on the commons. Such an arrangement may work reasonably satisfactorily for centuries because tribal wars, poaching, and disease keep the numbers of both man and beast well below the carrying capacity of the land. Finally, however, comes the day of reckoning, that is, the day when the long-desired goal of social stability becomes a reality. At this point, the inherent logic of the commons remorselessly generates tragedy.

Required / Highly Recommended Textbooks:

1. Thomas C. Schelling (1978), *Micromotives and Macrobehavior* (Norton).
2. Robert Axelrod (1984), *The Evolution of Cooperation* (Basic Books).
3. Dennis Chong (1991), *Collective Action and the Civil Rights Movement* (Chicago).
4. Elinor Ostrom (1990), *Governing the Commons* (Cambridge).

Optional Textbooks:

1. William Poundstone (1992), *Prisoner's Dilemma* (Doubleday)
2. Martin A. Nowak with Roger Highfield (2011), *SuperCooperators* (Free Press).
3. Paul Raeburn & Kevin Zollman (2016), *The Game Theorist's Guide to Parenting* (Scientific American)
4. Howard Rheingold (2002), *Smart Mobs: The Next Social Revolution* (Basic Books)
5. Eyal Winter (2014), *Feeling Smart: Why Our Emotions Are More Rational Than We Think* (BBS)

The readings include journal articles and book chapters that are not in the required texts but are available online. The following are the internet sites at which you can search for these readings:

* Canvas <canvas.utexas.edu>
* JSTOR <www.jstor.org>
* UT Libraries <www.lib.utexas.edu >

Course Requirements and Grading:

Warning: This course requires analytical skills, including mathematics, logical deduction, tabulating & diagraming, and mastery of abstract concepts.

1. First Paper (6-8 pages): A case of the two-person, one-shot prisoner's dilemma (30%).
2. Second Paper (7-9 pages): A substantial revision of the first paper (20%).
3. Third Paper (8-10 pages): Option 1: A case of two-person, iterated prisoner's dilemma, ***or*** Option 2: A case of n-person prisoner's dilemma (30%).
4. PowerPoint Presentation (slides to be posted on Canvas): One of your papers (10%).
5. Instructor Discretion (class participation) (10%)

Detailed paper assignments will be posted on Canvas. The first paper is due on March 4 (by noon), the second on April 1 (by noon), and the third on May 6 (by noon). PowerPoint Presentation slides are due on April 29 (by noon).

Notes: (1) Attendance and participation during scheduled sessions are strongly encouraged. (2) During on-line sessions, please show your face when the instructor speaks to you or when you speak. (3) Suspected issues of academic dishonesty may be referred to Student Judicial Services. (4) Plus/minus grades will be assigned for the final grade.

Students with Disabilities:

Students with disabilities may request appropriate academic accommodations from the Division of Diversity and Community Engagement, Services for Students with Disabilities, 512-471-6259. For more information, visit http://diversity.utexas.edu/disability/.

Policy on Academic Integrity:

Students who violate University rules on academic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and / or dismissal from the University. Since such dishonesty harms the individual, all students, and the integrity of the University, policies on academic dishonesty will be strictly enforced. For further information, please visit the Student Conduct and Academic Integrity website at: http://deanofstudents.utexas.edu/conduct/

Sharing of Course Materials is Prohibited:

No materials used in this class, including, but not limited to, lecture hand-outs, videos, assessments (quizzes, exams, papers, projects, homework assignments), in-class materials,

review sheets, and additional problem sets, may be shared online or with anyone outside of the class unless you have my explicit, written permission. Unauthorized sharing of materials promotes cheating. It is a violation of the University's Student Honor Code and an act of academic dishonesty. I am well aware of the sites used for sharing materials, and any materials found online that are associated with you, or any suspected unauthorized sharing of materials, will be reported to Student Conduct and Academic Integrity in the Office of the Dean of Students. These reports can result in sanctions, including failure in the course.

FERPA and Class Recordings:

Class recordings are reserved only for students in this class for educational purposes and are protected under FERPA. The recordings should not be shared outside the class in any form. Violation of this restriction by a student could lead to Student Misconduct proceedings.

Accommodations for Religious Holidays:

By UT Austin policy, you must notify me of your pending absence at least fourteen days prior to the date of observance of a religious holy day. If you must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, you will be given an opportunity to complete the missed work within a reasonable time after the absence.

Course Outline and Assignments: ('#' indicates articles that are available online.)

Week 1: Introduction

W. Poundstone, "Prisoner's Dilemma." In his *Prisoner's Dilemma*. New York, Doubleday, 1992, pp. 101-131. [Canvas]
Schelling, 1, 3
Lecture Note No. 1: The Economic Approach, Models, and Equilibrium Analysis

Week 2: The 2-Person Prisoner's Dilemma I

Avinash K. Dixit and Barry J. Nalebuff. 2008. "Prisoners' Dilemma and How to Resolve Them." Chapter 3 of *The Art of Strategy: A Game Theorist's Guide to Success in Business & Life* (New York: W. W. Norton and Company).
Lecture Note No. 2: An Introduction to the Prisoner's Dilemma
Lecture Note No. 3: The Prisoner's Dilemma & Related Models

Week 3-4: The 2-Person Prisoner's Dilemma II

Schelling, 7 (skim)
Lecture Note No. 4: The N-Person Prisoner's Dilemma (skim)
Lecture Note No. 5: Varieties of Two-Person, One-Shot PD Games
Lecture Note No. 6: One-Sided PD Game

Week 5: The Evolution of Cooperation I

Axelrod, 1-4
K. Schneider, "Unbending Regulations Incite Move to Alter Pollution Laws." *The New York Times*, November 29, 1993. [UT Libraries]
C. C. Mann and M. L. Plummer, "The Butterfly Problem" *Atlantic Monthly*, January 1992, Vol. 269, No. 1, pp. 47-70. [UT Libraries]
Lecture Note No. 7: The Evolution of Cooperation

Week 6: The Evolution of Cooperation II

Axelrod, 5-9
R. B. Parks, "What if 'Fools Die'?: A Comment on Axelrod." *American Political Science Review*, December 1985, Vol. 79, No. 4, pp. 1173-1174. [JSTOR]
M. A. Nowak, R. M. May, and K. Sigmund, "The Arithmetics of Mutual Help." *Scientific American*, June 1995, Vol. 272, No. 6, pp. 76-81. [UT Libraries]
M. Milinsky, "Tit for Tat in Sticklebacks and the Evolution of Cooperation." *Nature*, January 29, 1987, Vol. 325, No. 6103, pp. 433-435. [UT Libraries]
C. Packer and A. E. Pusey, "Divided We Fall: Cooperation among Lions." *Scientific American*, May 1997, Vol. 276, No. 5, pp. 52-59. [UT Libraries]
G. S. Wilkinson, "Food Sharing in Vampire Bats." *Scientific American*, February 1990, Vol. 262, No. 2, pp. 76-82. [Canvas]
Lecture Note No. 8: TFT as an Equilibrium Strategy
Lecture Note No. 9: Critiques of Axelrod

Week 7: Super Cooperators

Martin A. Nowak with Roger Highfield, entire book
Lecture Note No. 10: Summary of Martin A. Nowak's *SuperCooperators*

First Paper Due on Friday, March 4, by Noon

Week 8: Reputational Concerns

M. Deutsch, "Trust and Suspicion." In *The Journal of Conflict Resolution*. December 1958, Vol. 2, No. 2, pp. 265-279. [JSTOR]
D. M. Kreps, "Corporate Culture and Economic Theory." In J. E. Alt & K. A. Shepsle, eds., *Perspectives on Positive Political Economy*. Cambridge: Cambridge, 1990. [Canvas]
K. Hafner, "Seeing Fakes, Angry Traders Confront EBay." *The New York Times*, January 29, 2006. [Canvas]
Lecture Note No. 11: Corporate Culture

Week 9: Spring Break

Week 10: The N-Person Prisoner's Dilemma

Schelling, 7 (review)
Lecture Note No. 4: The N-Person Prisoner's Dilemma (review)

Week 11: The Problem of Collective Action I

Chong, 1-2.
R. Hardin, "Collection Action and Prisoner's Dilemma." In his *Collective Action*, Baltimore, Johns Hopkins University Press, 1982, pp. 16-37. [Canvas]
Lecture Note No. 12: The Logic of Collective Action

Second Paper Due on Friday, April 1, by Noon

Week 12: The Problem of Collective Action II

Chong, 3-6
Lecture Note No. 13: Collective Action as an Assurance Game
Lecture Note No. 14: Institutional Solutions for Collective Action (Optional)

Week 13: Governing the Commons I

Ostrom, 1-2
G. Hardin, "The Tragedy of the Commons," *Science* (New Series), December 13, 1968, Vol. 162, No. 3859, pp. 1243-1248. [Canvas]
Lecture Note No. 15: The CPR Problem

Week 14: Governing the Commons II

Ostrom, Huertas & San Bernardino Cases. [Canvas, texts and audios]
M. Ridley and B. S. Low, "Can Selfishness Save the Environment?" *Atlantic Monthly*, September 1993, Vol. 272, No. 3, pp. 76-86. [Canvas, text & audio]
Eric Dexheimer, "Crooks off the Hook," *Austin American Statesman*. [Canvas, text & audio]

Week 15: Governing the Commons III

E. Ostrom, J. Walker, and R. Gardner, "Covenants with and without a Sword: Self-Governance Is Possible." *American Political Science Review*, June 1992, Vol. 86, No. 2, pp. 404- 417. (Optional) [JSTOR]
Lecture Note No. 16: Ostrom's CPR Experiment
Lecture Note No. 17: Managing the Virtual Commons

PowerPoint Presentation Due on Friday, April 29, by Noon

Week 16: PowerPoint Presentations (Online Posters)

Third Paper Due on Friday, May 6, by Noon (No Final Exam)