PHIL 444: Groups and Choices

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Winter 2022

Course Description

This course has three parts.

1. **Game Theory** - We will review the basics of game theory, with a special focus on the philosophical assumptions that game theorists make, and the ways in which game theory can model the development of cooperative activity. This will be the longest unit, taking up the first half of the course.
2. **The Origins of Inequality** - We will look at recent work using game theoretic techniques to model how inequality, and in particular gender inequality, could have arisen out of an equal society. This will take up the third quarter of the course.
3. **Group Attitudes** - We will look at what it could mean for groups to have beliefs, desires, plans, intentions and knowledge. This will take up the last quarter of the course.

Canvas

There is a Canvas site for this course, which can be accessed from https://canvas.umich.edu. Course documents (syllabus, lecture notes, assignments) will be available from this site. Please make sure that you can access this site. Consult the site regularly for announcements, including changes to the course schedule. And there are many tools on the site to communicate with each other, and with me.

Required Materials

There are two textbooks for the course. The first is open access, but the second has to be purchased.

- Game Theory by Giacomo Bonanno, available at http://faculty.econ.ucdavis.edu/faculty/bonanno/GT_Book.html.
- The Origins of Unfairness by Cailin O'Connor. (Oxford University Press, 2019)

For the O'Connor book, you can either get an electronic or a paper version of the book, it shouldn't matter which. (I'll be teaching off of the Kindle version, but I will refer to page numbers not Kindle locations.)

The other readings will all be available through the university library, and will be linked on Canvas.

Course Requirements

1. Do the readings! There will be video lectures that explain and expand on the readings, but they are less important than actually reading.
2. Watch the video lectures. These will take the place of the part of class where I stand up front and monologue. I hope being able to do this in your own time, at 1.5x if it's too easy or boring, or rewinding to repeat things if you've missed them, will be more useful than being in a room listening to me talk at you.
3. Come to 'lectures', i.e., the classes I'll be running, and ask questions. The point of the lectures will be to go over anything that was unclear, and to interact with other students. I hope that most of them will consist of students asking questions - anything from wanting something explained more slowly, to someone explaining to me why I've got something wrong, to talking about how the material relates to othe courses or the outside world. I'll also have questions for you, to encourage more interaction. Since you'll have spent time watching videos of me talking, I don't think we'll usually go the full 80 minutes - I expect 55-60 will be more common - but I'll stay as long as people have questions and we have the room.
4. Participate in the discussion sections. It is really important that you interact with the discussion section leader, especially in the early part of the course. Some of this material is hard, and you can only grasp it by talking it through in small groups.
5. Complete 5 of the 6 weekly assignments from part 1 of the course. (You should complete all six, but only the best five will count for credit - this is to allow you to drop one if there is some emergency one week. If 2022 is anything like 2020-21, I suspect this will be something many of us need.)
6. Write short papers (5-6 pages, or about 1500 words) for both the second and third parts of the course. The topics for these will be distributed in advance. The first is due on **April 1** and the second is due on **April 27**.

Both of the papers may be co-written with one other student in the class. But you may not co-author both papers with the same other student.

Summary of Grading System

1. Weekly assignments - 10% each, 5 assignments, 50% total.
2. Two papers - 25% each, 2 papers, 50% total.

Plagiarism

Although team-work, and even co-authorship, is encouraged, plagiarism is strictly prohibited. You are responsible for making sure that none of your work is plagiarized. Be sure to cite work that you use, both direct quotations and paraphrased ideas. Any citation method that is tolerably clear is permitted, but if you'd like a good description of a citation scheme that works well in philosophy, look at http://bit.ly/VDhRJ4.

You are encouraged to discuss the course material, including assignments, with your classmates, but all written work that you hand in under your own name must be your own. If work is handed is as the work of two people, you are affirming that each person did a fair share of the work. (Note that when you're submitting work on Canvas, you have to each submit the paper, even if it is co-authored. That way Canvas knows that everyone has turned in work.)

You should also be familiar with the academic integrity policies of the College of Literature, Science & the Arts at the University of Michigan, which are available here: http://www.lsa.umich.edu/academicintegrity/. Violations of these policies will be reported to the Office of the Assistant Dean for Student Academic Affairs, and sanctioned with a course grade of F.

Disability

The University of Michigan abides by the Americans with Disabilities Act of 1990, Section 504 of the Rehabilitation Act of 1973, and other applicable federal and state laws that prohibit discrimination on the basis of disability, which mandate that reasonable accommodations be provided for qualified students with disabilities.

If you have a disability, and may require some type of instructional and/or examination accommodation, please contact me early in the semester. If you have not already done so, you will also need to register with the Office of Services for Students with Disabilities. The office is located at G664 Haven Hall.

For more information on disability services at the University of Michigan, go to http://ssd.umich.edu.

Class Schedule

Most of the readings are from the two textbooks. The other readings are all in the UM library or online. You might have to be logged in to UM to get them though. The names of the papers are links to a source where you can get a copy of the paper.

The video lectures will have a number of the form *x*.*y*, where *x* is the week they are for, and the *y* is their order in the week. You should watch these **before** class, and we can discuss the material in class.

I'm away January 27 which complicates the schedule for a while, especially since the classes are meant to go in pairs. For a couple of weeks the units will start on Thursday and end on the following Tuesday, until we'll have a short unit on Probability to catch back up.

Week 1: Introduction

Tuesday, January 04	**Thursday, January 06**
	Topic Introduction **Reading** Bonanno, Chapter 1
No class, classes start on Wednesday	**Video lectures** 1.1

Week 2: What are Games

Tuesday, January 11	**Thursday, January 13**
Topic Games, Payouts and Utilities **Reading** Bonanno, Sections 2.1 and 2.2. **Video lectures** 2.1-2.5	**Topic** Dominant Strategies and Equilibria **Reading** Bonanno, Sections 2.5 and 2.6. **Video lectures** 2.6-2.10

- Weekly assignment 1 due on Friday, January 14 at 5pm.

Week 3: Games and Time

Tuesday, January 18	**Thursday, January 20**
Topic Dynamic Games **Reading** Bonanno, Sections 3.1-3.3. **Video lectures** 3.1-3.4	**Topic** Backward Induction **Reading** Bonanno, Sections 3.4 and 3.5. **Video lectures** 3.5-3.7

- Weekly assignment 2 due on Friday, January 21 at 5pm.

Unit 4: Information and Utility

Tuesday, January 25

Topic Games with Imperfect Information
Reading Bonanno, Sections 4.1-4.4.
Video lectures 4.1-4.5

Thursday, January 27

No class - Professor away at conference

Tuesday, February 01

Topic Utility
Reading Bonanno, Sections 5.1-5.3.
Video lectures 4.6-4.8

- Weekly assignment 3 due on Friday, February 04 at 5pm.

Unit 5: Games with Cardinal Payoffs

Thursday, February 03

Topic Nash Equilibria
Reading Bonanno, Sections 6.1-6.3
Video lectures 5.1-5.4

Tuesday, February 08

Topic Rationalizable Strategies
Reading Bonanno, Section 6.4.
Video lectures 5.5-5.8.

Unit 6: Probability

Thursday, February 10

Topic Probability
Reading No new reading
Video lectures 6.1-6.5

- Weekly assignment 4 due on Friday, February 11 at 5pm.

Week 7: Games with Time and Uncertainty

Tuesday, February 15

Topic Extensive Form Games
Reading Bonanno, Chapter 7
Video lectures 7.1-7.2

Thursday, February 17

Topic Signaling Games
Reading Bonanno and Spence papers below.
Video lectures 7.3-7.6

- Weekly assignment 5 due on Friday, February 18 at 5pm.
- Giacomo Bonanno, Spence's model of Signaling in the job market
- Michael Spence, Job Market Signaling

Week 8: Famous Cooperation Games

Tuesday, February 22

Topic Prisoners Dilemma
Reading Axelrod and Hamilton paper below
Video lectures 8.1-8.2

Thursday, February 24

Topic Stag Hunt
Reading Skyrms paper below
Video lectures 8.2-8.5

- Weekly assignment 6 due on Friday, February 25 at 5pm.
- Robert Axelrod and William Hamilton, The Evolution of Cooperation
- Brian Skyrms, The Stag Hunt

Week 9: Games with Types

Tuesday, March 08

Topic Gender and Coordination
Reading O'Connor, Intro and Chapter 1
Video lectures 9.1

Thursday, March 10

Topic Equilibria Involving Types
Reading O'Connor, Chapters 2 and 3
Video lectures 9.2

Week 10: The Evolution of Gender

Tuesday, March 15

Topic Gender and Convention
Reading O'Connor, Chapter 4
Video lectures 10.1

Thursday, March 17

Topic Convention and Power
Reading O'Connor, Chapter 5
Video lectures 10.2

Week 11: The Evolution of Gender

Tuesday, March 22

Topic First Mover Advantage and Disadvantage
Reading O'Connor, Chapter 6
Video lectures 11.1

Thursday, March 24

Topic Discrimination
Reading O'Connor, Chapters 7-10
Video lectures 11.2

Week 12: Group Intention

Tuesday, March 29

Topic Gilbert's Theory
Reading Gilbert Paper and First Bratman paper
Video lectures 12.1

Thursday, March 31

Topic Bratman's Theory
Reading Second Bratman paper
Video lectures 12.2

- Margaret Gilbert, Walking Together: A Paradigmatic Social Phenomenon
- Michael Bratman, Shared Intention
- Michael Bratman, Shared Cooperative Activity

Week 13: Group Knowledge

Tuesday, April 05

Topic Group Knowledge and Individual Knowledge
Reading Lackey paper and Bird paper
Video lectures 13.1

Thursday, April 07

Topic Public Virtue and Private Vice
Reading Levy and Alfano paper
Video lectures 13.2

- Jennifer Lackey, Socially Extended Knowledge
- Alexander Bird, Social knowing: The social sense of 'scientific knowledge'
- Neil Levy and Mark Alfano, Knowledge From Vice: Deeply Social Epistemology

Week 14: Group Belief

Tuesday, April 12

Topic Group probability aggregation
Reading Russell et al paper
Video lectures 14.1

Thursday, April 14

Topic Social Wisdom
Reading Sullivan et al paper
Video lectures 14.2 (not yet posted)

- Jeffrey Sanford Russell, John Hawthorne and Lara Buchak, Groupthink
- Emily Sullivan et al, Can Real Social Epistemic Networks Deliver the Wisdom of Crowds?

Week 15: Revision

No new material - we'll just discuss anything that people felt went by too quickly, or that they would like to revise for essays.

Full List of Papers

- Robert Axelrod and William Hamilton, The Evolution of Cooperation
- Alexander Bird, Social knowing: The social sense of 'scientific knowledge'
- Michael Bratman, Shared Intention
- Michael Bratman, Shared Cooperative Activity
- Giacomo Bonanno, Spence's model of Signaling in the job market
- Margaret Gilbert, Walking Together: A Paradigmatic Social Phenomenon
- Jennifer Lackey, Socially Extended Knowledge
- Neil Levy and Mark Alfano, Knowledge From Vice: Deeply Social Epistemology
- Jeffrey Sanford Russell, John Hawthorne and Lara Buchak, Groupthink
- Brian Skyrms, The Stag Hunt
- Michael Spence, Job Market Signaling
- Emily Sullivan et al, Can Real Social Epistemic Networks Deliver the Wisdom of Crowds?