

PHIL 444: Groups and Choices

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Winter 2021

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. Participate in the discussion sections. You do not have to attend the lectures. The actual lecturing will all be by pre-recorded slides/videos, and will be posted ahead of time. I will turn up for the time of the scheduled lectures, but I'll just be taking questions, and I suspect we'll often finish early. Participation in these effectively open office hours is encouraged, but voluntary. But participation in the discussion sections is required.
3. 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 2021 is anything like 2020, I suspect this will be something many of us need.)
4. 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 5** and the second is due on **April 26**.

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 in 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>.

Virtual

This course is being taught virtually because of the still raging pandemic. Hopefully we all learned a bit from virtual teaching/learning in the Fall, but it's still new for a lot of us. I suspect I'll get some things wrong, and I'll have to make adjustments on the fly. If/when that happens, I'll do everything I can to make sure everything is done fairly - but if I don't, you should let me know that I'm messing up.

The college has put a lot of things in place for this rather distinctive semester, including extended add/drop deadlines, and a new grade of NRC. I won't repeat here all of what they've done, in part because I suspect that will be changing as the semester goes along. But I wanted you to know that I know this semester will be a challenge for all of us. And I'll do what I can to make it as productive an educational experience as it can be - even if that isn't as good as what you'd have hoped for.

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. There will typically be 8-10 lectures each week, each of them roughly 10-12 minutes. (Especially after the break, the number of lectures each week is subject to change; I'll let you know if/when it updates.)

Week 1: Introduction

Monday, January 18

No class, Martin Luther King Jr Day.

Wednesday, January 20

Topic Introduction

Reading Bonanno, Chapter 1

Lectures 1.1

Week 2: What are Games

Monday, January 25

Topic Games, Payouts and Utilities

Reading Bonanno, Sections 2.1 and 2.2.

Lectures 2.1-2.5

Wednesday, January 27

Topic Dominant Strategies and Equilibria

Reading Bonanno, Sections 2.5 and 2.6.

Lectures 2.6-2.10

- Weekly assignment 1 due on Friday, January 29 at 5pm.

Week 3: What are Games

Monday, February 01

Topic Dynamic Games

Reading Bonanno, Sections 3.1-3.3.

Lectures 3.1-3.4

Wednesday, February 03

Topic Backward Induction

Reading Bonanno, Sections 3.4 and 3.5.

Lectures 3.5-3.7

- Weekly assignment 2 due on Friday, February 05 at 5pm.

Week 4: Information and Utility

Monday, February 08

Topic Games with Imperfect Information

Reading Bonanno, Sections 4.1-4.4.

Lectures 4.1-4.5

Wednesday, February 10

Topic Utility

Reading Bonanno, Sections 5.1-5.3.

Lectures 4.6-4.9

- Weekly assignment 3 due on Friday, February 12 at 5pm.

Week 5: Games with Cardinal Payoffs

Monday, February 15

Topic Nash Equilibria

Reading Bonanno, Sections 6.1-6.3

Lectures 5.1-5.4

Wednesday, February 17

Topic Rationalizable Strategies

Reading Bonanno, Section 6.4.

Lectures 5.5-5.8.

- Weekly assignment 4 due on Friday, February 19 at 5pm.

Week 6: Probability

Monday, February 22

Topic Probability

Reading No new reading

Lectures 6.1-6.4

Wednesday, February 24

No class - Wellness break

Week 7: Games with Time and Uncertainty

Monday, March 01

Topic Extensive Form Games

Reading Bonanno, Chapter 7

Lectures 7.1-7.4

Wednesday, March 03

Topic Signaling Games

Reading Bonanno and Spence papers below.

Lectures 7.5-7.8

- Weekly assignment 5 due on Friday, March 05 at 5pm.
- Giacomo Bonanno, Spence's model of Signaling in the job market
- Michael Spence, Job Market Signaling

Week 8: Famous Cooperation Games

Monday, March 08

Topic Prisoners Dilemma

Reading Axelrod and Hamilton paper below

Lectures 8.1-8.5

Wednesday, March 10

Topic Stag Hunt

Reading Skyrms paper below

Lectures 8.6-8.8

- Weekly assignment 6 due on Friday, March 12 at 5pm.
- Robert Axelrod and William Hamilton, The Evolution of Cooperation
- Giacomo Bonanno, Spence's model of Signaling in the job market
- Brian Skyrms, The Stag Hunt

Week 9: Games with Types

Monday, March 15

Topic Gender and Coordination

Reading O'Connor, Intro and Chapter 1

Lectures 9.1-9.3

Wednesday, March 17

Topic Equilibria Involving Types

Reading O'Connor, Chapters 2 and 3

Lectures 9.4-9.6

Week 10: The Evolution of Gender

Monday, March 22

Topic Gender and Convention

Reading O'Connor, Chapter 4

Lectures 10.1-10.3

Wednesday, March 24

Topic Convention and Power

Reading O'Connor, Chapter 5

Lectures 10.4-10.6

Week 11: The Evolution of Gender

Monday, March 29

Topic First Mover Advantage and Disadvantage

Reading O'Connor, Chapter 6

Lectures 11.1-11.2

Wednesday, March 31

Topic Discrimination

Reading O'Connor, Chapters 7-10

Lectures 11.3-11.6

Week 12: Group Intention

Monday, April 05

Topic Gilbert's Theory

Reading Gilbert Paper and First Bratman paper

Lectures 12.1-12.3

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

Wednesday, April 07

Topic Bratman's Theory

Reading Second Bratman paper

Lectures 12.4-12.6

Week 13: Group Knowledge

Monday, April 12

Topic Group Knowledge and Individual Knowledge

Reading Lackey paper and Bird paper

Lectures 13.1-13.3

- 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

Wednesday, April 14

Topic Public Virtue and Private Vice

Reading Levy and Alfano paper

Lectures 13.4-13.6

Week 14: Group Belief

Monday, April 19

Topic Group probability aggregation

Reading Russell et al paper

Lectures 14.1-14.3

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

Wednesday, April 21

Topic Social Wisdom

Reading Sullivan et al paper

Lectures 14.4-14.6

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?