

Instructor: Lara Buchak

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Office Hours: Fridays, 1-2:30pm or by appointment

HETERODOX DECISION THEORY, PHI 533

COURSE DESCRIPTION

Over the past few decades, challenges have arisen to the orthodox theory of rational decision-making (sometimes known as Bayesian decision theory, or expected utility theory). These challenges include arguments to the effect that that some options might not be comparable, that some probabilities might not be sharp, that some outcomes might be infinitely valuable, and that decision-makers can have a variety of attitudes towards risk. We will examine the standard theory, the challenges, and some alternative theories that have been proposed to respond to them. We will look in depth at both philosophical arguments and the mathematical foundations of the theories under discussion. We will consider these theories in the context of both epistemology and ethics.

MEETING TIMES AND LOCATION

Meeting Time: Wednesdays, 9:00-11:50am

Location: Marx 201

GRADING AND EVALUATION

Grading: */Audit – philosophy graduate students may choose to earn a unit credit¹, and non-philosophy graduate students and undergraduate students may choose to take the course for credit and get a grade by doing the following things:

- Participate in class (20%)
- Give a class presentation during one course session on one of the readings for that week. (10%)
- Write a 5000-7500 word paper, due by May 3, 2022 (Dean's Date)
OR write two 2500-4000 word papers, due March 25th and May 3rd. (70%)

¹ "Units" are a requirement specific to the Philosophy Department. They are final papers that are submitted and evaluated for credit toward their degree program. Although units *may* be associated with a particular course, they do not *have* to be. Graduate students in PHI do not earn credit for graduate courses, and all courses offered by the Department are AUD/*/ungraded.

SCHEDULE OF COURSE MEETINGS

Week 1 (Jan 26): Orthodox Decision Theory and Challenges

Further Reading: Marin Peterson, 2009, *An Introduction to Decision Theory*, pp.64-103.

Further Reading: Frank Ramsey, 1926, "Truth and Probability," pp.25-37.

Week 2 (Feb 2): Decision Theory with Incomparability

Robert Aumann, "Utility Theory without the Completeness Axiom," pp.445-53

Caspar Hare, "Take the Sugar"

Ruth Chang, "The Possibility of Parity"

Joshua Gert, "Value and Parity"

Optional: John Broome, "Is Incommensurability Vagueness?"

Optional: Wlodek Rabinowicz, "Value Relations"

TWO-WEEK BREAK DUE TO COVID

Week 3 (Feb 23): Decision Theory with Imprecise Probabilities

Lara Buchak, notes on imprecise probabilities

Daniel Ellsberg, "Risk, Ambiguity, and the Savage Axioms"

Miriam Schoenfield, "Can Imprecise Probabilities Be Practically Motivated?"

Further Reading: Itzhak Gilboa, "Expected Utility with Purely Subjective Non-Additive Probabilities"

Further Reading: Isaac Levi, "On Indeterminate Probabilities"

Week 4 (Mar 2): Accuracy and Imprecise Probabilities

*guest presenter: David Builes

Mike Titelbaum, "Accuracy Arguments"

Miriam Schoenfield, "The Accuracy and Rationality of Imprecise Credences"

Builes et al, "Dilating and Contracting Arbitrarily"

Further Reading: Richard Pettigrew, "Epistemic Utility and Norms for Credences"

Further Reading: Jennifer Carr, "Chancy Accuracy and Imprecise Credences"

SPRING BREAK: March 7th--11th

Week 5 (Mar 16): Imprecise Probabilities and Diachronic Decisions

Adam Elga, "Subjective Probabilities should be Sharp"

Seamus Bradley and Katie Steele, "Should Subjective Probabilities be Sharp?"

Sarah Moss, "Credal Dilemmas"

Further Reading: Peter J. Hammond, "Consequentialist Foundations for Expected Utility"

Further Reading: Lara Buchak, *Risk and Rationality*, Ch. 6.

Week 6 (Mar 23): Decision Theory with Risk-Attitudes

Leonard Savage, "Allais' Paradox"
Lara Buchak, *Risk and Rationality*, excerpts

Week 7 (Mar 30): Ethics of Risk-Taking

*guest presenter: Johanna Thoma
Johanna Thoma, "Taking Risks on Behalf of Another"
Lara Buchak, "Risk and Ambiguity in Ethical Decision-Making"
Further Reading: Lara Buchak, "Philosophical Foundations of Worse-Case Arguments"

Week 8 (Apr 6): Accuracy and Risk-Attitudes

*guest presenter: Richard Pettigrew
Richard Pettigrew, *Epistemic Risk and the Demands of Evidence*
Catrin Campbell-Moore and Bernhard Salow, "Avoiding Risk and Avoiding Evidence"
Further Reading: Catrin Campbell-Moore and Bernhard Salow, "Accurate Updating for the Risk-Sensitive"

Week 9 (Apr 13): Risk and Ambiguity as Objects of Preference

*guest presenters: Orri Stefánsson and/or Richard Bradley
READINGS TBD, AMONG THE FOLLOWING:
Richard Bradley, "Ellsberg's Paradox and the Value of Chances."
Richard Bradley and H. Orri Stefánsson, "Counterfactual Desirability."
H. Orri Stefánsson and Richard Bradley, "What is risk aversion?"
John Broome, "Expected Utility and Rationality"

Week 10 (Apr 20): Decision Theory with Infinite Utility

READINGS TBD, AMONG THE FOLLOWING:
Harris Nover and Alan Hajek, "Vexing Expectations"
Kenny Easwaran, "Strong and Weak Expectations"
Paul Bartha, "Taking Stock of Infinite Values"
Mark Colyvan, "Relative Expectation Theory"
Chris Meacham, "Too Much of a Good Thing" OR "Difference Minimizing Theory"

Week 11 (Apr 27): Infinite Utility in Ethics. [NOTE: This is during reading week]
TBD