

Psychology and Economics: Theory and Applications

Overview

(as taught in Fall 2022 by Professor Ben Bushong)

This course will demonstrate how decades of psychological research can be translated into models that can be incorporated into or examined by applied microeconomists. Topics include ways utility theory can be improved—such as incorporating reference dependence, social preferences, self image, and other belief-based tastes—and ways we can relax assumptions of perfect rationality—such as incorporating focusing effects, limited attention, biased prediction of future tastes, present-biased preferences, and biases in probabilistic judgment. As in other field courses, I insist on the importance of neoclassical theory as a benchmark. This course extends those theories to improve psychological realism and empirical predictions. Given the strengths of our graduate program at MSU, this class has largely an empirical orientation. We will explore empirical papers drawn from a variety of fields including but not limited to: asset pricing, corporate finance, consumption, development economics, environmental economics, health economics, industrial organization, labor economics, political economy, and public economics.

Who is this class for?

The class is primarily intended for applied students that do not intend to make psychology and economics one of their main focuses. Instead, it is intended for those who might want to apply a “behavioral” idea to their field of interest. The second main feature of the course will be its emphasis on transitioning students to research writing. Throughout the course I will do my best to point out what seem to me like good directions for research in behavioral economics (again, as applied to specific subfields). This course also covers a set of methodological topics, including “Thinking in Experiments” and a primer on structural behavioral economics.

Rules of the game

The prerequisites of this course are the same as any graduate-level field course; that is, an understanding of the economics of uncertainty and game theory at the graduate level is necessary. In addition, it is important that you have had exposure to econometrics and empirical research. You should be familiar with key econometrics topics like panel data models, discrete choice models, and the basics of maximum likelihood and minimum distance estimation. Although it is not a requirement for this course, I recommend all students take the set of courses including labor, public, and applied econometrics.

Grades should not be your motivation at this stage in your graduate career. Nevertheless, as a required element of instruction, I base grades on the following four components:

1. Three problem sets (30%). You are encouraged to work together on problem sets, but you must write up your solutions independently and indicate whom you worked with on the top of the relevant assignments.
2. “Weekly” paper reflections (30%). These reflections must be on one of the papers marked with a star on the syllabus; such papers will be discussed in the subsequent lecture. Reflections should be a page or two, but the emphasis is on thoughtful reading and commentary. The following may be useful prompts: (i) Why is the paper important? (ii) What are the core contributions of the paper? (iii) What did you like – or did not like – about the paper? (iv) What questions did you have about the paper? (v) Are there any additional ideas that you might want to pursue on this topic?
3. An extensive referee report (15%). The referee report can be written on a working paper or a published paper, but the published papers must be published in the last 7 years. I strongly encourage writing your referee report on a current-year job-market paper and will make relevant papers available to interested parties. The referee report should include the following: (i) a review of the empirical or theoretical methods used in the paper, (ii) careful discussion of which results/conclusions in the paper seem more or less robust, (iii) discussion of which results in the paper seem more or less novel in light of the broader literature (iii) suggestions for how this paper could be further improved. You should avoid being overly critical and instead write the type of referee report you would like to receive.
4. Empirical Paper (25%). I **strongly** encourage everyone to try to write an empirical paper related to topics in this course. This will help you to get started on your research, which is the ultimate purpose of this course. The

paper can be written with up to two other students in the class. A two-page written proposal is due by Fall Break. The paper is due on the day of the final exam. The *ideal* paper contains a novel idea, a careful discussion of the empirical strategy, and preliminary empirical results. Realistically, you can do significantly less as long as you show significant effort. Two key notes: (i) you must do at least some preliminary analysis with data, since one purpose of the requirement is to make sure that you use Stata or R; (ii) you must use “field data”, (as opposed to experimental data.)¹ Since this course is relatively short, replication or extension of existing studies is perfectly fine and encouraged. Replication, in fact, is a good way to start original research, and more and more replication data sets are available on the *AER*, *JPE*, and *QJE* websites. Again, I encourage you to think about this requirement as a way to get a jump on research rather than a burden. If you have a topic you’d like to examine that is afield from this course, you may be able to pursue it, but you must speak with me.

Class Conduct

I support diversity of thoughts, perspective and experience. I will respect your identity on any dimension (including ethnicity, ancestry, national origin, color, sex, gender, sexual orientation, religion, ideological persuasion, disability, height, weight, age, family or veteran status) while understanding that you do not speak for any group. I expect you to do the same.

You may refer to me as “Ben” or as “Professor Bushong”, but I would prefer the former. My last name is pronounced boo-shong, where the second syllable rhymes with a piece of music from the 1990s by Sisqó.

Final Thoughts

I’m fully committed to making sure that you succeed in this class. I will make whatever accommodations I can to help you finish your exercises, do well on your projects, and learn and understand the class material. Deadlines, while firm, are there to help you. And

¹ Of course, I strongly endorse and value lab experiments—it’s my main research area. Experiments are great. However, this class focuses on field data.

under ordinary conditions, I am flexible and lenient with grading and course expectations when students face difficult challenges. Given the challenges of the past few years, that flexibility and leniency is intensified.

If you feel like you're behind or not understanding everything, do not suffer in silence. Please contact me. I'm available via e-mail, or come see me.

Finally, as noted below, this term may have abrupt and wild changes. If such a change happens, I will do my best to ensure that this course is useful and thought-provoking. That said, I hope you will extend a bit of leeway in such a circumstance.

Schedule of classes

The schedule will surely not meet my aspirations and I will adjust as needed. If required, the syllabus will be updated to reflect any major changes.

Part I: Non-Standard Preferences

Week 1. Introduction

- Psychology and Economics: The Methodologies
- Psychology and Economics: The Fields
- **Methodological Topic:** Reading the Psychology Journals

Weeks 2-4. Making Choices over Time

- Warm-Up: Household Finance in the United States
- Theory and (Intuitive) Evidence on Present Bias
- Procrastination
- Extended Applications:
 - Investment Goods
 - Job Search
- Homework #1 Assigned
- Extended Applications, Part II:
 - Work and Effort
 - Credit Card Borrowing
 - Alcoholism and Other Bad Choices
 - Commitment Devices — Evidence from the Field
- **Methodological Topic:** Commitment Field Experiment Designs
- Common Errors in Applying Present-Biased Preferences
- Laboratory Evidence

- **Methodological Topic:** Experimental Design and Your Future Research

Week 5-7. Reference-Dependent Preferences

- Theory and (Intuitive) Evidence on Reference Dependence
- Extended Applications:
 - Housing Market
 - Evidence of Excess Bunching in Running, Taxes, Mergers, and Job Search.
- Homework #2 Assigned
- The Taxi Wars
- Extended Applications, Part II:
 - Daily Labor Supply
 - Employment and Effort
- **Methodological Topic:** Paths Toward a Winning Job-Market Paper
- Extended Applications, Part III:
 - Domestic Violence
 - Golf
 - Job Search
 - Insurance Choices
- Laboratory Evidence
 - Forward vs Backward Reference Points
 - The Endowment Effect
- **Meet with Ben to Discuss Paper Topic**

Part II: Errors in Reasoning

Week 8. Biases in Statistical Reasoning

- Representativeness
- Availability
- Overconfidence
- Law of Small Numbers
- Extended Applications:
 - Corporate Finance
 - Extrapolation and Flood Insurance
- Homework #3 Assigned

Week 9. Heuristic Choice

- Theory and Intuitive Evidence of Heuristic Choice
 - Anchoring
 - Narrow Bracketing
 - Mental Accounting
 - Ironing and spotlighting
 - Projection bias

Week 10. Guest Lecture + Limited Attention

- Extended Applications:
 - A Simple Model of Shipping Costs
 - (In)Attention to Taxes
 - Left-Digit Inattention in Financial Markets
 - Choice Avoidance
 - Preference for Familiar Things (Non-Novelty Bias)

Week 11. Context-Dependent Choices

- Competing Theories of Context-Dependent Choices
 - Salience
 - Relative Thinking
 - Focusing
- Applications in Empirical Work
- Laboratory Evidence
- **Paper Topic Due**

Part III: Non-Standard Preferences

Week 11/12. Errors in Simple Choices

- Confusion
- Choice of Dominated Options
- Mental Accounting
- (Erroneous) Persuasion
- Emotional Choices: Moods, Arousal, and Other Effects

Weeks 12-13. Social Preferences

- Altruism

- Altruism within the Workplace
 - Shaping Social Preferences
- Warm Glow and Charitable Giving
- Inequity Aversion and Reciprocity
 - Workplace Effort
- Inequity Aversion and Reciprocity Gift Exchange in the Lab and Field
- Social Pressure, Signaling, and Social Norms
- **Methodological Topic:** Running a (Field) Experiment

Part IV: Applications of Psychology and Economics Across the Discipline

Week 14. Applications to Public Economics and Welfare Measurement

- Illustrative Policy Questions
- The (Behavioral) Public Economics Framework
 - Key Concepts for Welfare Analysis
 - Simple Theoretical Framework(s)
- Extended Examples:
 - Energy Efficiency
 - Tax Salience
 - Soda Taxes
 - State-Run Lotteries
 - Income Tax Misunderstanding
 - Payday Lending
 - “Nudges”

Week 15. Behavioral IO

- Psychology and Economics in Industrial Organization
 - “Behavioral” Consumers
 - “Behavioral” Firms
- **Methodological Topic:** Markets and Non-Standard Behavior
- Behavioral Political Economy
- Behavioral Economics in Equilibrium

Finale. Behavioral Structural Estimation.