Foundations of Psychology and Economics

Meets: Wednesdays 12:00-3:00, 608-7 Evans
or, more precisely:
12:14 sharp to 2:59, with about 17-minute break shortly before 2:00

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WHAT IS THIS COURSE, AND CAN/SHOULD YOU TAKE IT?

This course explores ways to formally model the findings of psychological, experimental-economic, and other research demonstrating departures from perfect rationality, self interest, and other classical assumptions of economics. While the point of studying this material is to improve positive and normative economics, this course will focus a little on the behavioral evidence itself and mostly on formal assumptions reflecting this evidence in a way that can be used by economists; it will not focus on the economic applications. Economics 219B, taught in the spring, builds from and complements this course, and places greater emphasis on both economic applications and on empirical methods.

This course is intended for PhD students in the Economics Department and or other departments on campus who already have a solid background in microeconomic theory. This means that you have taken Economics 201A-B or their equivalents. Economics 201A-B is a year-long required Economics PhD sequence in microeconomics, including choice under uncertainty, incentive theory, and game theory. Microeconomic courses in other PhD programs on campus (and even many non-Berkeley Economics PhD courses) are generally not likely to be adequate substitutes. This course is simply not suitable for those unprepared or uninterested in basic PhD-level economics, no matter the intensity of interest in psychology or behavioral economics. Really.

Admission will be automatic for regular Berkeley PhD or undergraduate students in any department who have passed 201B with a grade of B or better, and is otherwise by my consent. Undergraduates with advanced training in microeconomic theory (having taken either Economics 104 or 201A) and who have an interest in Economics graduate studies are also encouraged to consider taking the course. Students from the regular Bonn and Mannheim German exchange program are almost always fully prepared, as well, and because of this and the official status of the exchange program are welcome and encouraged to take the course. Because of space, class-size, and resource limitations, the course is not open for credit (grades or pass-fail) to any other visiting students.
DETAILED COURSE DESCRIPTION

MORE ON WHETHER TO TAKE THE COURSE OR NOT

This course focuses on formal modeling. Students will be required on problem sets and exams to solve math problems of the form familiar from 201A-B, at a slightly more demanding level. The course will involve more words and more intuition and more classical middlebrow economic theory than the typical advanced theory field course. It will, of course, involve far more reading and discussion of the behavioral evidence and psychological foundations of our assumptions than do other theory courses—or any other economics courses. But, in the end, its emphasis is on formal modeling.

Economics 219A can be used as either part of a Psychology and Economics field or part of an Advanced Theory field. For the P&E field, it can in principle be combined with any one of Economics 219B (economic applications), 219D (experimental economics), or 219C (topics), but only 219B is being offered this year. For theory, it is most often used with Economics 206 or 209A, though it can also be combined in principle with 207A, 207B, 209B, or 296. While it will to some extent be oriented to those wishing to go into research in theory, it is probably even more useful for those who seek to apply behaviorally-inspired models for use in empirical work. It is also appropriate for those who wish merely to familiarize themselves with this material. I anticipate that many of those taking the class will not be planning to specialize in either theory or P&E, and I am enthusiastic about that fact.

While in principle the course is open to auditors with appropriate background, I have the unpleasant task of making the following rule: auditors should not take seats unless there are enough seats available for those taking the class for credit.

The topics covered in this course are listed later in the syllabus. Generally I will assign readings covering some of the evidence suggesting that new assumptions would improve economic analysis, discuss this evidence very briefly in class, and then use this evidence to develop new formal models. When available, I will assign papers that contain the formal models. To keep the workload manageable, the number of assigned readings will be minimal, and too little to give a full sense of the relevant evidence; students are encouraged to read further.

If after you have read the syllabus you have any questions about whether this course is appropriate for you, please come talk to me.

DETAILED COURSE NON-DESCRIPTION

Because it is designed as an introduction to modeling psychological phenomena that are not yet totally integrated into mainstream economic analysis, the material in this course is not entirely like what you’ve seen in most of your other courses. But it is not an alternative to mainstream economics. It is only about improving the psychological realism of formal economic assumptions, so as to use classical economic approaches to improve our answers to classical economic questions. Like all other courses, this course does not cover all topics that might be of interest. So, this course is …
not about the philosophy or methodology of economics

Maybe too little time is spent on methodology in graduate school. And some methodological quandaries inhere in the topics of this course. But beyond a brief discussion at the beginning, we will not spend time exploring methodological issues. Doing so takes time away from the substance. And I feel that usually when economists debate “Methodology” in the context of challenging existing assumptions, the debate ends up focusing on an abstract official line about appropriate methodology, rather than a realistic assessment of how workaday economic research is actually done. The maintained hypothesis of the course is that it is sensible for some economists to spend some of their time doing standard economic research that happens to incorporate some untraditional-within-economics elements of human nature that seem to be both true and economically relevant. (We also won’t spend time philosophically fretting about the nature of the terms “rationality” or “self interest”, etc.; we’ll try rather to be clear about the positive or normative content of claims of all particular assumptions.)

not about non-psychological models of bounded rationality

We won’t consider models of bounded rationality (based on computer science, artificial intelligence, etc.) that are meant to capture cognitive limits of economic actors, but not based on evidence that humans think this way. In some arenas (e.g., “unforeseen contingencies”) I think it makes tremendous sense to focus on these alternative models of bounded rationality, and more generally this can be a very useful research agenda. But that’s not what this course is about. We will consider those models based on research focused more narrowly on the empirical evidence of what humans are like.

not about savanna economics

Many people are interested in how the human species evolved to be the way we are, and most economists are most prone to think evolutionary arguments when being exposed to unfamiliar assumptions. Whatever the merits or demerits of an evolutionary perspective on social science, it is not what this course is about. Under the maintained hypothesis that in the (very long) “short run” we can treat the biological aspects of human nature as fixed, we won’t consider the biological dynamics of evolutionary change. We will try to figure out some facts about what humans are like, and see how that matters for the economy. Any empirical insights into how people are—from whatever source, including by researchers who find a focus on evolutionary pressures to be enlightening—is of course welcome. And presumably some researchers believe that the focus on evolutionary pressures will eventually yield high payoff in understanding humans as they currently are, at which point evolution-inspired insights into human nature about economically relevant behavior can be incorporated into a course like this. But this course will not emphasize why being the way we are was adaptive for our ancestors on the savanna.

not about experimental economics as such

Readings will include experimental papers, and as such we will when appropriate examine the nature of the experimental evidence. But the course won’t be about experimental methods per se. I can provide suggestions and references for how to get into experimental stuff if you are interested, and we are lucky to have qualified faculty now on campus to help (such as Shachar Kariv, John Morgan, Teck Ho, and Barb Mellers). But I am not qualified to give detailed guidance, and in any event this course is meant to use the results from experiments to motivate new economic assumptions, and to emphasize the potential for non-experimental research in these topics. We also won’t study experiments testing economic institutions in the laboratory, except insofar as they are either motivated by or informative about the underlying psychology of economic actors.

totally not an alternative to mainstream economics.

In the most important senses, the course won’t at all be a departure from mainstream economics. I am a devotee of mainstream economic methods: methodological individualism; formal, careful, mathematical articulation of assumptions; logical analysis of what conclusions follow from those assumptions; and thoughtful empirical testing of both the assumptions and the conclusions. This isn’t the only way to approach social science, and it is true that obsessions with methodological individualism and mathematics can sometimes damage research. It is a good thing that these methods and standards are not imposed on all social-science research. Indeed, much of the evidence for the formal models we will be developing doesn’t meet economists’ narrow criteria for good research—and it should humble us that so much useful insight is derived from modes of research we do not employ. But it is my belief that the best way for economists to do economics in general, and the best way for us to use this material in particular, is with careful formal theory and statistical analysis. In these regards, the course will be purposely, pointedly, persistently, proudly, and ponderously mainstream.
COURSE REQUIREMENTS

PROBLEM SETS

There will be four substantive problem sets. Each will involve primarily formal problems. Problems will range in difficulty from moderately easy to quite hard. You are encouraged to work together on the basic problems, and very encouraged to come see me for help before they are due. But you are not allowed to read others’ answers from past or present problem sets, and should only hand in answers that reflect your own understanding. These problems aren’t meant to be simple, and don’t panic if you struggle with them. But the problem sets will be graded for correctness, so please do seek help answering any problems you are struggling with before handing them in.

Please write legibly and clearly, crossing out anything not meant to be part of your answer, and clearly indicating your final answer. Please staple your problem set together—paper clips and folded corners are not a secure means of binding things together. And please remember that problem sets are due at the beginning of lecture on the due date. If you are not attending lecture or will be significantly late to lecture, please make sure I get the problem set prior to lecture. If you unexpectedly miss lecture or are late on the day a problem set is due, please send an e-mail explaining the reasons.

There are a very large number of students in this course, and some limits to the amount of time that I and a reader being hired to help grade the problem sets can spend on them. Answers requiring too much ocular, linguistic, or (avoidable) cognitive effort won’t be read. This doesn’t mean that you need perfect penmanship and cunning concision; just that you make a minimal effort to write/type legibly and present your results clearly and succinctly. Problems will frequently require substantial math; you are welcome and encouraged to hand in all the work you did to reach an answer, but please make some effort to provide guidance through your steps of reasoning, and to flag work that will be superfluous to the reader. (Annotating and organizing mathematical arguments is also a good skill to develop for presenting models and results in research papers.)

Planned (but likely to some degree altered, especially with experimental ordering of material) schedule of problem sets:

Bob: Handed out September 3; due September 17, 12:14 p.m.
     Answer key distributed September 24; yours returned September 24.
Emily: Handed out September 10; due September 24, 12:14 p.m.
     Answer key distributed October 1; yours returned October 1.
Carol: Handed out September 24; due October 8, 12:14 p.m.
     Answer key distributed October 8; yours returned October 15.
Jerry: Handed out October 15; due October 29, 12:14 p.m.
     Answer key distributed November 5; yours returned November 5.
Howard: Handed out October 29; due November 12, 12:14 p.m.
     Answer key distributed November 12; yours returned November 19.
Mr. Carlin: Handed out November 19; due December 10, 12:14 p.m.
     Answer key distributed December 10; yours returned whenever.
EXAMS

There will be two in-class three-hour exams. They are tentatively scheduled for:

Midterm: In Class, October 15
Final Exam: In Class, November 19

The exams will be closed book. They will be based on readings, lectures, and problem sets. They will be designed to be very passable for those doing the reading, seriously engaging the problem sets, and attending lectures. The final will be heavily weighted to the post-midterm material. The exams will mostly reflect the problems from the problem sets. They will also contain not-very-picky and not-many-points questions about the psychological evidence designed to check on whether you’ve read and understood the reading. I will distribute sample past exams.

GRADING

The course grade will be a weighted sum of the score you get on each of the 6 problem sets, and on the two exams. The problem sets will each count 10% of your final grade, the midterm 30%, and the final 30%, totaling 120%. The extra 20% will be removed from whichever of the 7 scores is your worst. Except for emergency excuses, late problem sets will not be accepted, and you will not be allowed to make up missed exams.

RESEARCH

You should now be beginning the shift away from learning the results of other peoples’ research into conducting your own research. A major reason for teaching this material is to positively influence your research. Yet: This course won’t focus on research. So: I encourage you to think about research on your own, with each other, and with faculty, including me. It is easy to shortchange this goal under the pressure of taking courses and other duties you have, so it requires some focus on your part to make sure to attend to it. I strongly encourage you to talk to me about ideas for research applying the material from this (or any) course. While I welcome discussions on any of your ideas, including theoretical or experimental research, I most strongly encourage ideas for “field-empirical” research, and especially ideas that do not merely test the validity of some of the principles and models discussed in the course, but are of direct general interest to economics. I enjoy talking to students about their ideas for empirical research.

If you are in the second year of the Economics PhD program, you should be attending at least one or two seminars regularly. This is invaluable for you to start your transformation into a research-focused life. I encourage you to attend the Psych and Econ seminar, Economics 218, Tuesdays 2-3:30 in 608-7 Evans. But I would also very strongly encourage you to attend at least one other seminar in some specific area of economics.

HANDOUTS

I am an anachronism in so many ways. One is my unwebbedness: handouts, lecture notes, etc. will not be posted on the web (nor sent by e-mail). Students will be responsible for knowing what handouts have been distributed and getting these handouts. The primary source of such information should be attending class, of course (and showing up on time when you do so). But you should also contact a fellow student when you miss a lecture (and have him or her collect handouts for you if you know in advance you will miss it). In addition, I will post outside my office after each lecture a list of the handouts so far, and have leftover handouts in an envelope for 1 or 2 weeks after the lecture.
OFFICE HOURS

Subject to announced changes, I plan to have open office hours through October 11 at the following times (these are also posted on my web page and on my office door):

Thursday, August 28, 11.30 to 1.30 (all welcome – 219A priority)
Tuesday, September 2, 4.30 to 5.30 (all welcome – 219A priority)
Friday, September 5, 3.15 to 4.30 (all welcome – 219A priority)
Tuesday, September 9, 4.30 to 5.30 (all welcome – 219A priority)
Friday, September 12, 3.15 to 4.30 (all welcome – 219A priority)
Tuesday, September 16, 4.30 to 5.30 (all welcome – 219A priority)
Friday, September 19, 3.15 to 4.30 (all welcome – 219A priority)
Tuesday, September 23, 4.30 to 5.30 (all welcome – 219A priority)
Friday, September 26, 3.15 to 4.30 (all welcome – 219A priority)
Tuesday, September 30, 4.30 to 5.30 (all welcome – 219A priority)
Friday, October 3, 3.15 to 4.30 (all welcome – 219A priority)
Tuesday, October 7, 4.30 to 5.30 (all welcome – 219A priority)
Friday, October 10, 3.15 to 4.30 (all welcome – 219A priority)

Office hours after October 11 will be posted and announced by the end of September, but are likely to continue much the same.

I am teaching two courses the 2nd half of the term, and the “priority” listed indicates which topics I will address first if students from both classes happen to show up.
COMMUNICATING WITH ME

In class and elsewhere, please address me by some variant of my first name. Don’t call me Professor Rabin. (If you insist on addressing me formally, please address me as “The Legendary Patsy Cline.”)

There is no GSI for this course, so I am your GSI. Please use my office hours, including and especially for help on the problem sets. It would be remarkable if you didn’t need some assistance with the material, and I am here to help. Also, one of the benefits of open office hours is to accommodate many students at once; if fellow 219A students are in my office, please join in (I’ll say so if for some reason I need to talk privately to a current visitor), and feel very free to show up in groups.

In addition to drop-in office hours, I always have sign-up office hours for advising and other purposes. The sign-up sheets are outside my office. Please do not sign up for these slots for course-related help as a general rule. If my scheduled office hours are always infeasible for you, let me know, and then I will encourage you to make appointments with me. But I ask that you schedule your studying so that you are prepared to ask questions during office hours, and do not attempt to schedule extra sessions merely because of poor timing in preparation.

The course is also meant to generate research ideas, which means you should talk to me about research as well. If you wish to talk about research, please freely sign up to do so. More generally, if for some reason you need to talk to me about something for which open office hours aren’t appropriate, you should feel free to sign up. Also, for those in the Economics Ph.D. program, I and other faculty are always available to discuss any issues regarding the program.

Some gentle requests regarding office hours and on contacting me. First, my office hours end sharply at the end. E.g., don’t arrive at 5:25 on Tuesday and expect a full session. Please arrive early if you have lengthy questions, or if you don’t want to risk not having time due to others’ questions. Also, you are very free to ask me some stuff by e-mail, especially to schedule things (e-mail better than phone messages) or if you think there is a typo or something on a problem set or handout. But please be aware that e-mail sucks for answering many types of questions. “How do I do Question 4?” or “What’s up with bounded rationality?” are short questions with long answers. Also, please be aware that I typically don’t respond at all to any e-mail concerning substantive course material right before exams (though accessible for panic attacks, emergencies, etc.).

Please do come to my office hours. I also like students to come by at least once early in the semester to introduce themselves—no need to have a particular agenda. I try to always have candy. I have toys as well, but you must earn my trust before I let you play with them.
Tentative Schedule of Lectures

There will be 12 three-hour lectures. The following schedule is tentative (and the actual schedule will typically lag this; the schedule represents the earliest a topic will be covered).

**August 27—Lecture 1**
- Introduction: perspectives of the course & conceptual framework
- Introduction to belief-based preferences

**September 3—Lecture 2**
- Anticipatory utility and ego utility
- Belief-based preferences and personal equilibrium
- Reference-dependent preferences

**September 10—Lecture 3**
- Reference-dependent preferences and risk attitudes

**September 17—Lecture 4**
- Reference-dependence: expectations as the reference point
- Prospective Utility, monetary preferences, and narrow framing

**September 24—Lecture 5**
- Introduction to Social Preferences
- Distributional Social Preferences

**October 1—Lecture 6**
- Social Preferences: self-image, ego utility, and reciprocity
- Attention, Framing Effects, and Mental Accounting
- Focusing and Bracketing Effects

**October 8—Lecture 7**
- Misprediction of future utility: principles and evidence
- Misprediction of future utility: modeling

**October 15**
- NO LECTURE – EXAM

**October 22—Lecture 8**
- Misprediction of future utility: applications
- Introduction and principles of present-biased preferences

**October 29—Lecture 9**
- Procrastination.

**November 5—Lecture 10**
- Applications of present-biased preferences

*Lecture from 12.10 to 2.00, no break*

**November 12—Lecture 11**
- Introduction to heuristics and biases in judgment
- Quasi-Bayesian models: framework

**November 19**
- NO LECTURE – EXAM

**November 26**
- NO LECTURE

**December 3—Lecture 12**
- Quasi-Bayesian models: examples

**December 10—Lecture 13**
- Welfare Economics Revisited and the P-word
- Hedonics and the measurement of happiness
- Research topics and approaches
Readings

Required Reading

The required text is Kahneman, Daniel and Tversky, Amos (editors), Choices, Values, and Frames, Cambridge University Press, New York, NY, US, 2000. (Referred to as CVF below.) It should be stocked at ASUC bookstore (and may be popular enough to be available elsewhere). The book is a collection of “recent classics” in psychological economics, and a few specially commissioned new writings. Many of the required readings in the course are from this book, serving by far as the main source for the psychological foundations (as opposed to formal modeling) topics in the course—both because I have made some effort to choose those chapters for your ease, and (more) because it happens to contain many of the awesomest writings in psychology & economics. I urge you to buy it and read it even if you are just auditing.

Below is a list of the anticipated required reading, in approximate order they will be covered. Any revisions will be announced in class. Even auditors should do as many of the required readings from CVF as possible. (And I highly recommend virtually every chapter in the book, including chapters that I am not assigning.) Ideally I will have separate more-detailed handouts of optional readings for specific topics.

0. Rabin, M. “Syllabus”
14. Thaler, R. “Mental Accounting Matters,” CVF Chapter 14
Suggestions for Other Reading

Beyond CVF and other specific articles I suggest, I’d also recommend those interested to do some more general psychological reading. For psychological background, just try picking up an undergraduate text in psychology. Three journals you might most want to look at are *Journal of Personality and Social Psychology*, *Cognition*, and *Journal of Behavioral Decision-Making*. You may also want to look at stuff written over the years by economists paying attention to psychology. The best source is Richard Thaler; a couple of his books are listed below, and you can always look at his anomalies columns in the *Journal of Economic Perspective*. Spanning psychology and economics, virtually any of the papers written by Danny Kahneman, Amos Tversky, George Akerlof, George Loewenstein, or Colin Camerer is worth reading.

Here are some of the books most worth looking at:


- **Cialdini, R. Influence, the psychology of persuasion**, 1993, Quill. A classic in psychology. Somebody stole my copy of it.


