In the modern world, people are faced with difficult decisions on an almost daily basis. From consumer purchases to college choices to romantic commitments to health care options to career paths, decisions must be made in the face of plentiful but incomplete information and uncertain outcomes. In this course, we will examine both how people should go about making decisions and how they do go about making decisions. We will see that there is often quite a substantial gap between what people should do and what people do do, and we will examine what, if anything, can be done to close that gap. The aim of the course is both to familiarize students with exciting contemporary research on judgment and decision making, and to give them tools that might help them to improve their own decision making.

What makes the study of judgment and decision making so interesting and exciting to me is that it studies basic psychological processes in a way that is extremely closely connected to real life application. By studying how people formulate goals, determine values, gather and evaluate evidence, think about uncertainty, make choices, think about the results of those choices, and revise their goals and values, we will simultaneously (I hope) make ourselves more conscious of our own decision making processes so that we can improve upon them.

Requirements

The course will include a midterm exam, a final exam, and a term paper (8 pages). The term paper assignment will be described in class. In addition, there will be occasional written assignments and exercises scattered throughout the course.

Readings

There is one required text. Baron, J., *Thinking and Deciding* (Third Edition). New York, Cambridge University Press, 2000. There will also be assignments of primary source material available on electronic reserve [access password is “DECISION”]. Finally, there is a small packet of readings from recent newspapers and magazines available for purchase at the Psychology office in Papazian Hall. The point of these readings is to illustrate the practical relevance of what we will be discussing. You will be asked to write short essays on this material, and we will discuss it in class.

Class Format

Generally, the class will be lecture format. My preference is for interactive lectures, so I hope and expect that people will come to class prepared to make comments and ask questions about the material under discussion.
I. Introduction

A. What do we think about?
   1. Goals
   2. Beliefs
   3. Decisions
B. A framework for thinking
C. Thinking about goals
D. Thinking about beliefs
E. Studying thinking
F. Training thinking
G. Normative aims
   1. Truth
   2. Effectiveness
H. What it means to be 'rational’
   1. Reason and emotion

Reading

Baron, Chapter 1 (5-17); Chapter 2 (31-43); Chapter 3 (53-66)
[read through page 175].

Assignments

1. Keep a 2-day ‘decision diary,’ noting every time you made a decision. Feel free to include the sorts of considerations that influenced the decisions you actually made.

2. Write a 1-2 page description of how you went about making an important decision in the last year or so. Indicate the kinds of things you thought about in making the decision, and your best guess about why you finally decided as you did. MAKE SURE YOU KEEP AN ELECTRONIC COPY OF THIS BECAUSE WE WILL BE RETURNING TO IT.

3. Do the ‘Intuitive Thinking’ survey.

II. Logical Thinking

A. Types of logic
B. Difficulties in logical thinking
C. Representing the problem
D. The logic of hypothesis testing
Reading

Baron, Chapter 4

III. Thinking About Probability

A. What is probability
B. Basic principles of probability
C. How much should evidence alter beliefs? Bayes Theorem
D. How accurate are probability judgments?
   1. Probabilities and frequencies
   2. Anchoring and adjustment
E. The ‘Representativeness Heuristic’
   1. Base rates
   2. Conjunction fallacy
   3. Gambler's fallacy
F. The ‘Availability Heuristic’
G. Hindsight bias

Reading

Baron, Chapter 5 (93-114); Chapter 6

Assignment

1. Do exercises on the handout. Show all your work.
2. Read the articles by Sally Satel, Jodie Morse, and Patricia Williams (‘Better Safe…?and ‘Racial Prescriptions’). Write a 1-page essay defending or criticizing ‘racial profiling’ based on these articles and on our discussion of Bayes Theorem.

**IV. Hypothesis Testing**

A. Role of hypothesis testing in science  
B. Role of hypothesis testing in daily life  
C. Confirmation and falsification  
D. Necessity and sufficiency  
E. Bias in hypothesis testing  
   1. Biased gathering of evidence  
   2. Biased evaluation of evidence  
   3. Resistance to change  
F. Role of counterfactual thinking

**Reading**

Baron, Chapter 7  

**Assignment**

1. Recruit two friends and give them (separately) the Wason and Johnson-Laird rule discovery task. Record each of their “experiments”; when they made guesses, what the guesses were, what the relation was between the guesses and their previous “experiments”; and whether (and when) they guessed the rule. Follow the format used in the Wason and Johnson-Laird reading.  
2. Read the Nunberg article and write a 1-page essay on it. Are the media biased? How does the technical literature bear on Goldberg’s hypothesis and on Nunberg’s critique of it?
V. Evaluating Evidence: Correlation and Contingency

A. What correlations are
   1. Continuous variables
   2. Dichotomous variables
B. Correlations vs. causes
   1. Selection effects and treatment effects
C. Importance of correlations in everyday life
D. Correlations and the 2X2 table
E. Theory driven assessment of correlation: illusory correlation
F. Clinical vs. actuarial prediction
G. Appreciating randomness
   1. Regression to the mean
   2. Anchoring and adjustment
H. “My side” bias and belief persistence
I. Primacy effects
J. Wishful thinking

Reading

Baron, Chapter 8; Chapter 9, pp. 195-203, 206-212.

Assignment
1. Write a 1-page essay that either defends Swarthmore’s current admissions practices or criticizes them and offers a substitute.
2. Write a 1-page essay on the Patterson article on evidence-based medicine. What does he think is the relation between evidence based medicine and patient autonomy? What do you think of this relation?

VI. Making Decisions: Choice, Uncertainty, and Mental Accounting

A. Normative theory of decision making
   1. Expected utility
   2. Tradeoffs
   3. Intertemporal utility
   4. Social utility (utilitarianism)
B. Determinants of value
1. Decision utility, experienced utility, remembered utility
2. Mispredicting happiness
3. Adaptation
4. Role of emotion

C. Prospect theory
   1. Objective and subjective probability
   2. Gains and losses and costs
   3. Decision frames
   4. Endowment effects, sunk costs, regret
   5. Anchoring and adjustment

D. Mental Accounting
   1. Prominence
   2. Evaluability
   3. Intransitivity
   4. Omission bias and opportunity costs

Reading

Baron, Chapter 10; Chapter 11, Chapter 12

Assignment

1. Read the article by Gladwell (‘Blowing up’) and write a 1-page essay relating it to what we know from prospect theory about the psychology of gains and losses.
2. Read the article by Smiley and write a 1-page essay defending or criticizing the claim that ‘you can never have too much information.’
VII. Making Decisions: Utility, Tradeoffs, and Moral Thinking

A. Decision analysis vs. cost-benefit analysis: Utility vs. money
B. Cost-benefit analysis vs. cost-effectiveness analysis
C. Contingent valuation
   1. WTP and WTA
   2. Scope insensitivity
D. Multi-Attribute Utility Analysis (MAUT)
   1. Opportunity costs
E. Rules, Tradeoffs, and Commensurability
F. Utilitarianism
   1. Interpersonal comparison of utility
G. Rights
   1. Lexicographic preferences
H. Rule vs. act utilitarianism
   1. Second-order decisions
I. Biases in moral thinking
J. Moral reasoning vs. moral intuitions

Reading

Baron, Chapter 13 (pp.303-309, 327-330); Chapter 14, Chapter 16

Assignment
1. Revisit the paper you wrote at the start of the semester describing a recent important decision. Subject that decision to a MAUT analysis. Compare the outcome with what you described in your original analysis.
2. Write a 1-page essay on any aspect of the Baron/Schwartz“debate” you find interesting or challenging. In the essay, you should state a position on some aspect of the debate and defend it.
3. Read the articles by Bivens, Pollan, Lemann, and Brownlee. Write a 1-page essay on one of them that discusses how we should assess the costs and benefits of various forms of electric power, of meat production, or of early tumor detection.
VIII. Making Decisions: Fairness and Justice

A. Equity theory
B. Utilitarianism and fairness
   1. Declining marginal utility
   2. Incentive and deterrence
   3. Social comparison and envy
   4. Rights
C. Intuitions about fairness
   1. Equality
   2. Equity
   3. Need
   4. Maximizing efficiency
   5. Punishment
D. Social dilemmas
   1. Ultimatum game
   2. Prisoners' dilemma
   3. Trust

Reading

Baron, Chapter 17, pp. 409-426; Chapter 18

Assignment
1. Write a 1-page essay on the Frank/Yezer 'debate' you find interesting or challenging. In the essay, you should state a position on some aspect of the debate and defend it.
2. Read the Schulz and Ignatieff articles on torture and write a 1-page essay. Should torture be legal? If so, under what circumstances? If not, why not? Relate your view to the "slippery slope" arguments that arose in the Baron/Schwartz debate.
IX. Making Decisions: Current and Future Selves

A. Plans, policies, and self-control
B. Reasons for sticking to or abandoning plans
C. Biases
   1. Sunk costs, endowment effects and loss aversion
   2. Omission bias
   3. Risk aversion
   4. Regret aversion
D. Temporal discounting and self-control
   1. Calculations vs. rules

Reading

Baron, Chapter 19

Assignment

1. Read the Cottle article and the Allen article, and write a 1-page essay on one of them. What are the practical and moral issues involved in regulating fat content in foods. Should we do it? If so, under what circumstances? And how much risk can we tolerate in vaccines? How should it be calculated?

X. Making Decisions: Analysis of Risk

A. Assessment of risk
   1. Availability
   2. Pseudocertainty
B. Response to risk
   1. Prospect theory: Loss aversion and risk aversion
   2. Insurance
   3. Torts
C. Intuitions about risk
   1. Known vs. unknown
   2. Voluntary vs. involuntary
   3. Natural vs. artificial
   4. Individual vs. statistical
   5. Omission vs. commission
Reading

Baron, Chapter 20


Assignment

1. Read the articles by Meyerson, Rosen, Easterbrook, and Myers. Write a 1-page essay on risk perception and/or risk compensation that applies what we know to the content of one or more of these articles.

XI. Learning to Judge and Decide

A. Training

B. Retention

C. Transfer

1. Domain specificity

D. Social context of judgment and decision

Reading


