

Reasoning, Problem Solving & Decision Making

01:830:409:01

Syllabus Spring 2015

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Gretchen Chapman is Professor of Psychology at Rutgers University, New Brunswick. Her research focuses on the cognitive mechanisms underlying decision making



Class time and location

Rutgers University Psychology 01:830:409:01

Spring 2015 semester

Mon & Thurs 2nd period (10:20 - 11:40 pm)

Hill Center room 009 (Busch Campus)

Course Description

This small upper-level undergraduate capstone seminar will examine current research on reasoning, problem solving, decision making as well as topics informed by this research, such as happiness, morality, and public policy. We'll be reading a recent fun popular press book which offers a number of interactive web-based features (see www.predictablyirrational.com) in addition to a selection of cutting-edge scholarly journal articles. The course will be highly interactive and based on discussions and in-class activities such as designing and running an original experiment to address current research questions in the psychology of reasoning and decision making.

How to reach the professor:

Office Hours: Mondays 3:30 – 4:30 pm in Psychology Building room 215, Busch Campus. Feel free to drop in; no appointment needed. If this time doesn't work for you, set up a meeting by e-mailing me with 3 suggested times you are available. I am also usually available to talk for a few minutes right before class, if you have a quick question.

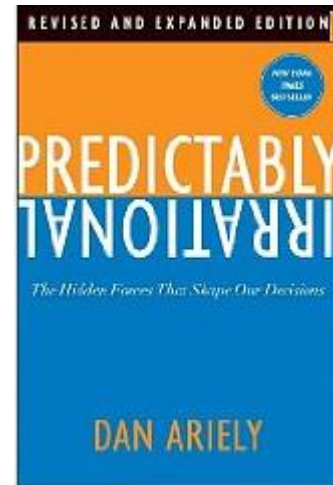
E-mail: gretchen.chapman@rutgers.edu . E-mail is an excellent way to reach me. When sending e-mail to me, use your Rutgers e-mail account. E-mail sent via other ISPs may be categorized as SPAM by my system and consequently would not reach me.

Phone: (848) 445-2640. Feel free to call. But if you don't reach me and need to leave a message, e-mail is more reliable way to get the message to me.

Readings

Book:

Ariely, Dan (2009). *Predictably Irrational: The Hidden Forces That Shape Our Decisions*. New York: Harper Perennial. ISBN 978-0-06-135324-6(pbk.) www.PredictablyIrrational.com
(Be sure to get the 2009 revised and expanded edition that has 15 chapters.)



Journal articles:

We'll also be reading some cutting edge journal article that are provided on-line on the course sakai website.

Journal article reading assignments

Due Date	Readings
Th 1/29	Frederick, S. W., & Mochon, D. (2011). A scale distortion theory of anchoring. <i>Journal of Experimental Psychology: General</i> , 141, 124-133.
M 2/02	Shampanier, K., Mazar, N., & Ariely, D. (2007). How small is zero price? The true value of free products. <i>Marketing Science</i> , 26, 742-757.
M 2/09	Schwartz, J., Mochon, D., Wyper, L., Maroba, J., Patel, D. & Ariely, D. (2014). Healthier by precommitment. <i>Psychological Science</i> , 25(2), 538-546.
M 2/09	Wansink, B., Just, D.R., & Payne, C.R. (2009). Mindless eating and healthy heuristics for the irrational. <i>The American Economic Review</i> , 99, 165-169.
Th 2/19	Hardman, D. (2009). <i>Judgment and Decision Making</i> . BPS Blackwell. Chapter
M 3/02	Chapman, G.B., Li, M., Colby, H., & Yoon, H. (2010). Opting in versus opting out of influenza vaccination. <i>JAMA</i> , 304(1), 43-44.
M 3/02	Johnson, E.J. & Goldstein, D. (2003). Do defaults save lives? <i>Science</i> , 302, 1338-1339.
Th 3/05	Loewenstein, G. (2005). Hot-cold empathy gaps and medical decision making. <i>Health Psychology</i> , 24, S49-S56.
M 3/09	Hardman, D. (2009). <i>Judgment and Decision Making</i> . BPS Blackwell. Chapter
Th 3/12	Milkman, K.L., Rogers, T., & Bazerman, M.H. (2008). Harnessing our inner angels and demons: What we have learned about want/should conflicts and how that knowledge can help us reduce short-sighted decision making. <i>Perspectives on Psychological Science</i> , 3(4), 324-338.
M 3/23	Peters, E. (2012). Beyond comprehension: The role of numeracy in judgments and decisions. <i>Current Directions in Psychological Science</i> , 21(1), 31 - 35.
Th 3/26	Hardman, D. (2009). <i>Judgment and Decision Making</i> . BPS Blackwell. Chapter 7
M 3/30	Goodwin, G. P., & Landy, J. F. (2014). Valuing different human lives. <i>Journal of Experimental Psychology: General</i> , 143, 778-803.

Th 4/02	Kahneman, D. & Tversky, A. (1984). Choices, values, and frames. <i>American Psychologist</i> , 39, 341-350.
M 4/06	Gilbert, D.T. & Wilson, T.D. (2007). Propection: Experiencing the future. <i>Science</i> , 317, 1351-1354.
M 4/06	Hsee, C.K., Hastie, R., Chen, J. (2008). Hedonomics: Bridging decision research with happiness research. <i>Perspectives on Psychological Science</i> , 3, 224-243.
M 4/06	Medvec, V.H., Madey, S.F., & Gilovich, T. (1995). When less is more: Counterfactual thinking and satisfaction among Olympic medalists. <i>Journal of Personality and Social Psychology</i> , 69, 603-610.
Th 4/09	Lee, L., Frederick, S., & Ariely, D. (2006). Try it, you'll like it: The influence of expectation, consumption, and revelation on preferences for beer. <i>Psychological Science</i> , 17(12), 1054-1058.
M 4/13	Kosfeld, M., Heinrichs, M., Zack, P.J., Fischbacher, U. & Fehr, E. (2005). Oxytocin increases trust in humans. <i>Nature</i> , 435, 673-676.
Th 4/23	Falk, A. & Szech, N. (2013). Morals and markets. <i>Science</i> , 340, 707-711.
Th 4/23	Liljenquist, K., Zhong, C-B, & Galinsky, A.D. (2010). The smell of virtue: Clean scents promote reciprocity and charity. <i>Psychological Science</i> , 21(3), 381-383.
Th 4/23	Wheatley, T. & Haidt, J. (2005). Hypnotic disgust makes moral judgments more severe. <i>Psychological Science</i> , 16, 780-784.
M 5/04	Larrick, R.P. & Soll, J.B. (2008). The MPG illusion. <i>Science</i> , 320, 1593-1594.
M 5/04	Li, M. & Chapman, G.B. (2013). Nudge to health: Harnessing decision research to promote health behavior. <i>Social Psychology Compass</i> .

Schedule

Date		Topic or Activity	Readings & Assignments Due (PI = Predictably Irrational)
Th	1/22	What is rationality?	PI Introduction
M	1/26	Relativity	PI Chapter 1
Th	1/29	Anchoring	PI Chapter 2; Frederick & Mochon (2011)
M	2/2	Free	PI Chapter 3; Shampanier et al. (2007)
Th	2/5	Cost of social norms	PI Chapter 4; Human Subjects Certification due
M	2/9	Dietary decisions	Schwartz (2012), Wansink et al. (2009)
Th	2/12	Power of free	PI Chapter 5; Experiment proposal due by 10:00 am
M	2/16	Probability judgment	http://calibratedprobabilityassessment.org/
Th	2/19	Bayes' Theorem	Hardman, (2009) Chapter; Comments on others' proposals due
M	2/23	Class experiment design	No reading assignment; Read others comments on your proposal
Th	2/26	Utility bracketing	Reading TBA

M	3/2	Default Effect	Chapman et al. (2010); Johnson & Goldstein (2003)
Th	3/5	Drive states	PI Chapter 6; Loewenstein (2005)
M	3/9	Discounted Utility Theory	Hardman, (2009) Chapter;
Th	3/12	Self Control	PI Chapter 7; Milkman et al (2008); Take-home midterm due by 10:00 am
M	3/23	Numeracy	Peters (2012)
Th	3/26	Utility Theory	Hardman, (2009). Chapter 7; Colloquium critique plan due by 10:00 am
M	3/30	Value of Life	Goodwin & Landy (2014)
Th	4/2	Prospect Theory	PI Chapter 8; Kahneman & Tversky (1984)
M	4/6	Happiness	Gilbert & Wilson (2007); Hsee, Hastie & Chen (2008); Medvec et al. (1995)
Th	4/9	Expectations	PI Chapters 10 & 11; Lee, Frederick & Ariely (2006);
M	4/13	Game Theory	PI Chapter 12 Kosfeld et al (2005) Colloquium critique due by 10:00 am
Th	4/16	R&R conference	
M	4/20	Honesty and cheating	PI Chapters 13 and 14
Th	4/23	Moral decision making	Liljenquist, Zhong, & Galinsky (2010); Wheatley & Haidt (2005); Falk & Szech (2013)
M	4/27	trip to Phila for Peter Ubel talk	Loewenstein & Ubel (2010) NY Times
Th	4/30	Class experiment results	No reading assignment
M	5/4	Improving decision making	PI Chapter 15; Li & Chapman (2013); Larrick & Soll (2008), http://www.mpgillusion.com/
M	5/11	No class, just a due date	Take-home final due by 10:00 am

Assignments & Grading

The assignments in this class will focus on take-home written exams, attending a colloquium and writing a critique, and in-class projects and activities. Following is a list of assignments that will be evaluated for the purposes of determining course grades:

Points	Assignment	Due Date
5	Class attendance	
5	Reading quizzes	
5	Participation in class discussions	
3	Human subjects certification	Thurs. Feb 5
5	3-min media example	
7	Experiment proposal and data collection	Thurs Feb 12
20	Take-home midterm exam	Thurs Mar 12
3	Preliminary plan for colloquium critique	Thurs Mar 26
20	Final colloquium critique	Mon April 13
7	Small group presentation of experiment results	Thurs April 30
20	Take-home final exam	Mon May 11

Grading Scheme

Total Points	Course Grade
90.00 – 100.00	A
87.00 – 89.99	B+
80.00 – 86.99	B
77.00 – 79.00	C+
70.00 – 76.99	C
60.00 – 69.99	D
59.99 or less	F

Laptops and tablet computers are welcome in class but should never be used for activities unrelated to class, such as social media, e-mail, checking sports scores, surfing, etc. No texting or use of cell phones, either, please.

Description of Assignments

- **Attendance policy.** I expect you to attend virtually every class and to participate actively in discussions. I will take attendance at all class meetings. Up to 3 absences are acceptable with no documentation needed, to accommodate the inevitable illnesses, transportation problems, etc. If you are absent more frequently than that, I will need documentation for all absences. Please speak with me about what is keeping you from class. If you miss 3 or fewer class sessions, you will receive full points for class attendance. Except in unusual circumstances, a student who misses more than 10 classes will fail the course, regardless of performance on other assignments.
- **Reading quizzes.** I expect you to read all assigned chapters and articles before the date on which they will be discussed. I will frequently give very brief quizzes on the reading material just to confirm that you have done the reading.
- **Class discussion.** This is a seminar-style discussion-based class, so your input is crucial.
- **Human subjects certification.** Because we will be designing and running an original survey study, all class members must receive human subjects certification. Please go to this website: <https://orra.rutgers.edu/irb-human-subjects-certification> where you will be directed to the CITI for a 3-hour on-line course and test. After completing the course and

passing the test, print out or save your certificate and submit it to Prof. Chapman during class or via the class sakai page.

- **Media example.** We'll start each class with one or two 3-minute presentations from students. Please sign up for a date to do yours. You should find an example in the media (advertisement, newspaper story, non-scholarly website, etc.) that illustrates a principle of decision making.
- **Experiment proposal.** Small groups from the class will each design and run its own questionnaire experiment on a decision making topic. Each of you will submit a brief proposal for an experiment you think the class should run. You need to read and comment on others' proposals and then read other's comments on your proposal. Each small group we will then select the most viable idea and construct a questionnaire. Each student will be responsible for getting 10 people they know to complete the brief web-based questionnaire study. Small groups will be responsible for analyzing and interpreting the results. We'll devote a class period to small group presentations of the results.
- **Take-home exams.** The take-home midterm and final exams will consist of several essays for you to write on your own, with full use of class notes, readings, etc. These exams will give you the opportunity to digest and integrate the class material and are designed to take about 2 hours each to complete. Each exam will be posted on sakai one week before it is due.
- **Colloquium Critique.** Your paper assignment is to attend a colloquium related to this course and write a critical review. If you cannot attend any of the recommended colloquia, then you may write a 10-page literature review on a focused topic related to the course. A one page description of your topic and references list is due on March 26. The final paper is due April 27. If you need an extension, please speak to the professor well in advance. Some recommended colloquia that you could attend for this assignment include:
 - **Kevin Volpp** speaking at CINJ Auditorium A on Wed Jan 21 at 4:00 pm
 - **Janet Schwartz** speaking in the Psychology building room 101 (Busch Campus) on Tuesday Feb. 10 at 1:00 pm
 - **Ellen Peters** speaking at the Institute for Health (112 Paterson Street, New Brunswick) room 120 on Tuesday March 24 at 12:00 noon
 - **Geoff Goodwin** speaking in the Psychology building room 101 (Busch Campus) on Tuesday March 31 at 1:00 pm