Reasoning, Problem Solving & Decision Making

01:830:409:01 (Writing Intensive)

Syllabus Fall 2011

Last updated July 14, 2011

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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

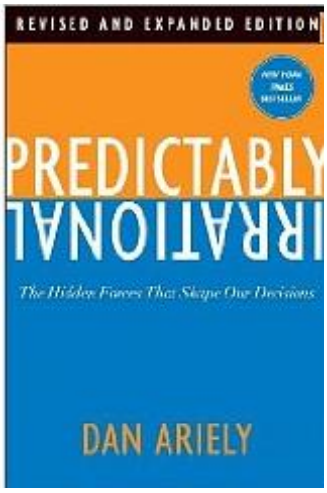
Class time and location

Rutgers University Psychology 01:830:409:01
Fall 2011 semester
Mon & Wed 5th period (3:20 - 4:40 pm)
Alison Road Classroom Building room 206 (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. This writing intensive class will entail at least 15 pages of writing assignments during the semester.

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.)

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
M 9/12	Critcher, C.R. & Gilovich, T. (2008). Incidental environmental anchors. *Journal of Behavioral Decision Making, 21*, 241-251.
W 9/14	Chapman, G.B., Li, M., Colby, H., & Yoon, H. (2010). Opting in versus opting out of influenza vaccination. *JAMA, 304*(1), 43-44.
W 9/14	Johnson, E.J. & Goldstein, D. (2003). Do defaults save lives? *Science, 302*, 1338-1339.
M 9/19	Shampanier, K., Mazar, N., & Ariely, D. (2007). How small is zero price? The true value of free products. *Marketing Science, 26*, 742-757.
W 9/21	Haisley, E., & Mostafa, R., Loewenstein, G. (2008). Subjective relative income and lottery ticket purchases. *Journal of Behavioral Decision Making, 21*, 283-295.
W 9/21	Vohs, K., Mead, N. & Goode, M. (2006). The psychological consequences of money. *Science, 314*, 1154-1156.
M 9/26	DeVoe, S.E. & Iyengar, S.E. (2010). Medium of exchange matters: What's fair for goods is unfair for money. *Psychological Science, 21*(2), 159-162.
W 10/05	Ginges, J., Atran, S., Medin, D., & Shikaki, K. (2007). Sacred bounds on rational resolution of violent political conflict. *Proceedings of the National Academy of Sciences, 104*, 7357–7360.
W 10/05	McGraw, A.P. & Tetlock, P.E. (2005). Taboo trade-Offs, relational framing, and the acceptability of exchanges. *Journal of Consumer Psychology, 15*(1), 2-15.
W 10/12	Wang, X.T. & Dvorak, R.D. (2010). Sweet future : Fluctuating blood glucose levels affect future discounting. *Psychological Science, 21*(2) 183-188.
M 10/17	Zhong, C-B. & DeVoe, S.E. (2010). You are how you eat : Fast food and impatience. *Psychological Science, 21*(5), 619-622.

M 10/17	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. *Perspectives on Psychological Science, 3*(4), 324-338.
W 10/19	Peters, E., Vastfjall, D., Slovic, P., Mertz, C.K., Mazzocco, K., & Dickert, S. (2006). Numeracy and decision making. *Psychological Science, 17*(5), 407-413.
W 10/19	Pope, D. & Simonsohn, U. (2011). Round numbers as goals : Evidence from baseball, SAT takers, and the lab. *Psychological Science, 22*(1), 71-79.
M 10/24	Boothe, J., Schwartz, J.A., & Chapman, G.B. (2007). Preference reversals resulting from a market value heuristic. *Marketing Theory, 7*(1), 27-38.
W 10/26	Kassam, K.S., Morewedge, C.K., Gilbert, D.T., & Wilson, T.D. (2011). Winners love winning and losers love money. *Psychological Science, 22*(5), 602-606.
W 10/26	Li, M., Vietri, J., Galvani, A., & Chapman, G.B. (2010). How lay people value life. *Psychological Science, 21*(2), 263-167.
W 10/26	McGraw, A.P., Larson, J.T., Kahneman, D. & Schkade, D. (2010). Comparing gains and losses. *Psychological Science, 21*(10), 1438-1445.
M 11/14	Iyengar, S. & Lepper, M. (2000). When choice is demotivating: Can one desire too much of a good thing? *Journal of Personality and Social Psycholog*y, 79(6), 995-1006.
W 11/16	Lee, L., Frederick, S., & Ariely, D. (2006). Try it, you'll like it: The influence of expectation, consumption, and revelation on preferences for beer. *Psychological Science*, 17(12), 1054-1058.
W 11/16	Waber, R.L., Shiv, B., Carmon, Z. et al. (2008). Commercial features of placebo and therapeutic efficacy. *JAMA, 299*(9) 1016-1017.
M 11/21	Kosfeld, M., Heinrichs, M., Zack, P.J., Fischbacher, U. & Fehr, E. (2005). Oxytocin increases trust in humans. *Nature, 435*, 673-676.
M 12/05	Haidt, J. (2008). Morality. *Perspectives on Psychological Science*, 3, 65-72.
M 12/05	DeScioli, P., Christner, J., & Kurzban, R. (2011). The omission strategy. *Psychological Science, 22*(4), 442-446.
W 12/07	Li, Y., Johnson, E.J., & Zaval, L. (2011). Local warming : Daily temperature change influences belief in global warming. *Psychological Science, 22*(4) 454-459.
W 12/07	Center for Research on Environmental Decisions. (2009). *The Psychology of Climate Change Communication: A Guide for Scientists, Journalists, Educators, Political Aides, and the Interested Public*. New York. cred.columbia.edu/guide
W 12/07	Gertner, J. (2009). Why isn't the brain green? *New York Times*, April 19, 2009.
M 12/12	Peters, E., Baker, D.P., Dieckmann, N.F., Leon, J., & Collins, J. (2010). Explaining the effect of education on health : A field study in Ghana. *Psychological Science, 21*(10), 1369-1376.
M 12/12	Larrick, R.P. & Soll, J.B. (2008). The MPG illusion. *Science, 320*, 1593-1594.

Schedule

Date	Topic or Activity	Readings & Assignments Due (PI = *Predictably Irrational*)
W 9/07	What is rationality?	PI Introduction
Th 9/08	Relativity	PI Chapter 1
M 9/12	Anchoring	PI Chapter 2; Critcher & Gilovich (2008)
W 9/14	Default Effect	Chapman et al. (2010); Johnson & Goldstein (2003)
M 9/19	Free	PI Chapter 3; Shampanier et al. (2007); Human Subjects Certification due by 3:20 pm
W 9/21	Psychology of money	Haisley, Mostafa, & Loewenstein (2008); Vohs et al. (2006);
M 9/26	Cost of social norms	PI Chapter 4; DeVoe & Iyengar (2010)
W 9/28	Power of free	PI Chapter 5
M 10/03	Guest lecture	
W 10/05	Taboo trade-offs	Ginges et al. (2007); McGraw & Tetlock (2005); Experiment proposal due by 3:20 pm
M 10/10	Class experiment design	No reading assignment
W 10/12	Drive states	PI Chapter 6; Wang & Dvorak (2010)
M 10/17	Self Control	PI Chapter 7; Zhong & DeVoe (2010); Milkman et al (2008)
W 10/19	Numeracy	Peters (2006); Pope & Simonsohn, 2011
M 10/24	Endowment Effects	PI Chapter 8; Booth, Schwartz, & Chapman (2007); Take-home midterm due by 3:20 pm
W 10/26	Gains vs. losses	Kassam et al (2011); Li et al (2010); McGraw et al (2010)
M 10/31	Decision Analysis I	http://www.stylusandslate.com/decision_trees/index.html; Start work on decision analyses in class
W 11/02	Decision Analysis II	Work on decision analyses in class
M 11/07	Talks on video	No reading assignment; (start working on your term paper)
W 11/09	Decision analysis III: presentations	Decision analysis presentations
M 11/14	Keeping doors open	PI Chapter 9; Iyengar & Lepper (2000)
W 11/16	Expectations	PI Chapters 10 & 11; Lee, Frederick & Ariely (2006); Waber et al (2008)
M 11/21	Game Theory	PI Chapter 12 Kosfeld et al (2005)
W 11/23	No Class	
M 11/28	Class experiment results	No reading assignment
W 11/30	Honesty and cheating	PI Chapters 13 and 14
M 12/05	Moral decision making	Haidt (2008); DeScioli (2011)

W 12/07	Decisions about Climate Change	Li, Johnson, Zaval (2011); CRED (2009); Gertner (2009) NY Times
M 12/12	Improving decision making	PI Chapter 15; Peters et al. (2010); Larrick & Soll (2008), http://www.mpgillusion.com/; Term paper due by 3:20 pm
M 12/19	No class, just a due date	Take-home final due by 9:00 am

Assignments & Grading

The assignments in this class will focus on take-home writing assignments and a paper, 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
15	Class attendance and participation in class discussions	
5	Human subjects certification	Sept. 19
5	3-min media example	
10	Experiment proposal and data collection	Oct. 5
20	Take-home midterm exam	Oct. 24
10	Small group decision analysis	Nov. 9
15	Final term paper	Dec. 12
20	Take-home final exam	Dec. 19

If you have a laptop computer, please bring it to class as much as you can. It will assist with many of our in-class activities.
Note that during class, laptops should never be used for activities unrelated to class, such as Facebook, 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, please speak with me about what is keeping you from class. I also expect you to read all chapters and articles before the date on which they will be discussed.

- **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: http://orsp.rutgers.edu/Humans/hscpletter.php where you will be directed to a sakai site with a 3-hour on-line course and a 40-question 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. Due Sept. 19 at 3:20 pm.

- **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 a example in the media

(advertisement, newspaper story, non-scholarly website, etc.) that illustrates a principle of decision making.

- **Experiment proposal**. The class will design and run its own questionnaire experiment on a decision making topic. On October 5 each of you will submit a brief proposal for an experiment you think the class should run. As a class we will 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. Once the results are in, we'll devote a class period to analyzing and interpreting the results, and we'll have a collaborative write-up 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.
- **Decision analysis.** You'll work with a small group of classmates to apply the principles of decision analysis to real-world decision of your choice. Each small group will make a brief presentation of their project to the entire class.
- **Term paper**. A 15-page term paper will give you the opportunity explore in depth a focused topic related to the course.

How to reach the professor:

Office Hours: Mondays 10:00– 11:00 am 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 or after class, if you have a quick question.

E-mail: gbc (at) rci (dot) rutgers (dot) 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.