

Human Judgment and Decision Making¹

SPRING 2016

Instructor: Dr. Alex Imas

Time and Location: PH A22, Wednesdays, 1:30-4:20 PM.

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Office Hours: By Appointment, Room: Porter 319E

Outline and Objectives

OVERVIEW AND GOALS

This course will be taught seminar-style, with lectures on the judgment and decision making literature and interactive presentations of recent and original research. One of the main goals of the course is to familiarize students with both the historical and current research on judgment and decision making and provide them with hands-on experience on how to design and carry out their own experiments. To this end, active experimentation using both traditional and cutting-edge research methods will constitute a significant portion of the class.

Students will have an opportunity to critically discuss existing research as well as to present their own research ideas. Everyone will have an opportunity to run their own experiments.

By the end of the course, students should be able to:

- Demonstrate an understanding of the psychological processes involved in judgment and decision making, and when those processes lead to accurate and inaccurate judgments and optimal and suboptimal decisions.
- Assess the quality of empirical research in the field of judgment and decision making.
- Articulate a novel hypothesis related to the field of judgment and decision making, cite appropriate research supporting that hypothesis, and propose experiments to test it.

PREREQUISITES

While there are no formal requirements for the class, students should be comfortable with basic judgment and decision making concepts such as heuristics and biases.

For those not familiar with the topic, please review the following:

Gilovich, T., & Griffin, D. W. (2010). Judgment and decision making. In S. T. Fiske, D. T. Gilbert, and G. Lindzey (eds.) Handbook of Social Psychology, fifth edition, vol. 1 (pp. 542-589).

¹I would like to thank Carey Morewedge for sharing the materials which formed the basis of this class.

FORMAT

The course will be taught in a seminar format. Students are expected to interact, comment and challenge the lecturer and each other.

REQUIREMENTS AND GRADING

Attendance

Attendance is mandatory. If you miss any class for a non-professional reason (i.e., job interview, conference) other than sickness, you will not pass the course. If you miss class for a professional reason, please notify the instructor as far in advance as possible to discuss how you will make up the work.

Participation (20%)

Given the seminar format of this course, students are expected to play an active role in class discussions. Students should plan on preparing 2-3 questions on each of the required readings to be discussed. Each student should be actively involved in each and every class. Not only does it demonstrate that he or she is prepared for class, it helps identify what from the readings and topic they understand, and on which topics they need more guided instruction.

Critiques or Idea Briefs (20%)

For each class, students will write a short critique or idea brief (1-2 pages) focusing on an original research idea related to the topic or a critique of one of the assigned papers. An idea brief should focus on the big picture questions that the research aims to answer, with a focus on the motivation and the experimental design used to explore it. A critique does NOT summarize the findings. Critique the authors' theories, methods, analyses, and interpretation of the data. Come up with alternative theories, or if the authors' theory is solid, explain why. Describe the studies that should be included in the paper that seem to be missing. The goal of both idea briefs and critiques is to synthesize and think about the research being read and to spark discussion in class. Students will give a short (5-7 minute) presentation of the idea brief or critique on the day that they are due.

Idea briefs and critiques should be uploaded to Blackboard before the start of class. The student can choose which one he or she wants to do. Each is worth 2 points.

Experiments (20%)

Students will be expected to submit one original experimental idea or a replication of an existing experiment to run on Mechanical Turk. Proposals will be due before the beginning of the third class. Students will run the experiment, analyze the data and write a short report on the findings, to be turned in before the beginning of the last class.

Final Exam (20%)

The final exam will be posted to Blackboard at 9 a.m. Students will have 8 hours to complete it and submit an electronic copy.

Final Project

The final project is a paper (10-20 pages) on an original research topic of the students choice. The paper should be structured as a standard scientific article, with an introduction, literature review, procedures, results, discussion and conclusion. Actual data is not required. If no data was collected, the results section should contain a detailed plan on how such data would be analyzed. Students can work together, and are **HIGHLY** encouraged to make an appointment to discuss the final project with me.

Administrative Issues and Policies

EMAIL

The best way to reach me is via email. I will do my best to answer emails as soon as I receive them, but it is not always possible. In addition, I will send out class information to the email you have on file with the university (through blackboard), so make sure that email is correct and course emails do not go to the spam folder.

ASSIGNMENT POLICY

Students must turn in all the assignments by the due date, *before the beginning of the respective class*, to receive full credit. Late critiques or idea briefs will not be accepted. Late research papers will be penalized by one full letter grade for every day past the due date.

COMPUTERS, PHONES, AND FOOD

To avoid unnecessary distractions I ask you to please turn off (silent) cell phones. Laptop use is strongly discouraged as it is most likely to distract you from participating in the discussion. You may bring a laptop to class if you agree to use it to only take notes and refer to the readings. Eating, drinking coffee, water, or anything else (non-alcoholic) is perfectly fine.

Academic Integrity

Academic integrity is a serious issue. All things considered, a marginally better grade is not every worth engaging in academic dishonesty (copying, cheating, plagiarizing). Many of the assignments are collaborative by nature, and I encourage you to work with your classmates on them. However, each student should turn in their own assignment and clearly indicate who they had worked with. Copying, cheating, or plagiarizing are going to be penalized.

Approximate Course Outline

All readings will be posted on blackboard at least a week before the class. If a reading is not posted, please email me right away. I reserve the right to change the reading list and adjust the course accordingly.

Required readings are in **bold**. Readings not in bold are meant to supplement the lectures.

January 13

Introduction

- Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. *Science*, 185, 1124-1131.
- Weber, E., & Johnson, E. (2009). Mindful judgment and decision making. *Annual Review of Psychology*, 60, 53-85.

Awareness of Judgment and Decision Making

- Nisbett, R.E. & Wilson, T.D. (1977). Telling more than we know: Verbal reports on mental processes. *Psychological Review*, 84, 231-259.
- Johansson, P., Hall, L., Sikstrom, S., & Olsson, A. (2005). Failure to detect mismatches between intention and outcome. *Science*, 310, 116-119.
- Pronin, E. (2007). Perception and misperception of bias in human judgment. *Trends in Cognitive Sciences*, 11(1), 37-43.

January 20

Systems of Reasoning

- Kahneman, D. & Frederick, S. (2002). Representativeness revisited: Attribute substitution in intuitive judgment. In T. Gilovich, D. Griffin, and D. Kahneman, (Eds.) *Heuristics and Biases: The Psychology of Intuitive Judgment*, pp. 498-516. New York: Cambridge University Press.
- Evans, J. S. B., & Stanovich, K. E. (2013). Dual-process theories of higher cognition: Advancing the debate. *Perspectives on Psychological Science*, 8(3), 223-248.
- Gilbert, D. T. (1999). What the minds not. In S. Chaiken and Y. Trope (eds.) *Dual process theories in social psychology* (pp. 3-11). New York: Guilford.
- Kahneman, D. (2003) A perspective on judgment and choice: Mapping bounded rationality. *American Psychologist*, 58, 697-720.
- Evans, J. (2007). *Hypothetical thinking*. New York, NY: Psychology Press.
- Sloman, S. A. (1996). The empirical case for two systems of reasoning. *Psychological Bulletin*, 119, 3-22.
- Lieberman, M. D., Gaunt, R., Gilbert, D. T., & Trope, Y. (2002). Reflexion and reflection: A social cognitive neuroscience approach to attributional inference. In M. Zanna (Ed.), *Advances in experimental social psychology*, Vol. 34 (pp. 199-249). New York: Elsevier.
- Keren, G., & Schul, Y. (2009). Two Is Not Always Better Than One A Critical Evaluation of Two-System Theories. *Perspectives on Psychological Science*, 4(6), 533-550.

January 27**Experiment proposals due**

Intuition

- Kahneman, D., & Klein, G. (2009). Conditions for intuitive expertise: A failure to disagree. *American Psychologist*, 64, 515-526.
- Morewedge, C. K., & Kahneman, D. (2010). Associative processes in intuitive judgment. *Trends in Cognitive Sciences*, 14(10), 435-440.
- Dijksterhuis, A., & Nordgren, L. F. (2006). A theory of unconscious thought. *Perspectives on Psychological Science*, 1(2), 95-109.
- Gigerenzer, G., & Gaissmaier, W. (2015) Heuristic Decision Making. *Annual Review of Psychology*, 62, 451-482.
- Moors, A., & De Houwer, J. (2006). Automaticity: A theoretical and conceptual analysis. *Psychological Bulletin*, 132, 297-326.
- Shah, A. S., & Oppenheimer, D. M. (2008). The Path of Least Resistance: Using Easy-to-Access Information. *Current Directions in Psychological Science*, 18, 232-236.
- Topolinski, S., & Strack, F. (2009). The architecture of intuition: Fluency and affect determine intuitive judgments of semantic and visual coherence and judgments of grammaticality in artificial grammar learning. *Journal of Experimental Psychology: General*, 138, 39-63.

February 3

Guest Lecture by Professor Christopher Olivola

Readings TBA

February 10

Deliberation

- Payne, J. W., Samper, A., Bettman, J. R., & Luce, M. F. (2008). Boundary conditions on unconscious thought in complex decision making. *Psychological Science*, 19(11), 1118-1123.
- Stanovich, K. E., & West, R. F. (2008). On the relative independence of thinking biases and cognitive ability. *Journal of Personality and Social Psychology*, 94(4), 672-695.
- Wilson, T.D. & Schooler, J.W. (1991). Thinking too much: Introspection can reduce the quality of preferences and decisions. *Journal of Personality and Social Psychology*, 60, 181-192.
- Schooler, J. W. (2002). Re-representing consciousness: Dissociations between experience and meta-consciousness. *Trends in Cognitive Sciences*, 6, 339-344.
- Shafir, E., Simonson, I., & Tversky, A. (1993). Reason-based choice. *Cognition*, 49, 11-36.
- Mercier, H., & Sperber, D. (2011). Why do humans reason? Arguments for an argumentative theory. *Behavioral and Brain Sciences*, 34, 57-73.

February 17

Experimental Methods

No readings due. Watch Qualtrics tutorial and bring laptops to class.**February 24**

Affect and Emotion

- **Loewenstein, G., & Lerner, J. S. (2003). The role of affect in decision making. In R. J. Davidson, K. R. Schnerer, & H. H. Goldsmith (Eds.), Handbook of Affective Sciences (pp. 619-642). Oxford University Press.**
- **Zeelenberg, M. (1999). Anticipated regret, expected feedback, and behavioral decision making. Journal of Behavioral Decision Making, 12, 93-106.**
- **Lerner, J. S., Small, D. A., & Loewenstein, G. (2004). Heart Strings and Purse Strings: Carryover effects of emotions on economic decisions. Psychological Science, 15, 337-341.**
- **Bechara, A., Damasio, H., Tranel, D., & Damasio, A. R. (1997). Deciding advantageously before knowing the advantageous strategy. Science, 275, 1293-1295.**
- **Finucane, M. L., Alhakami, A., Slovic, P., & Johnson, S. M. (2000). The affect heuristic in judgments of risks and benefits. Journal of Behavioral Decision Making, 13, 1-17.**
- **Frederick, S. & Loewenstein, G. (1999). Hedonic adaptation. In D. Kahneman, E. Diener, & N. Schwartz, Well-being: The foundations of hedonic psychology (pp. 302-330). New York: Russell Sage.**
- **Haidt, J. (2001). The emotional dog and its rational tail: A social intuitionist approach to moral judgment. Psychological Review, 108(4), 814-834.**
- **Zajonc, R. B. (1980). Feeling and thinking: Preferences need no inferences. American Psychologist, 35, 151-175.**

March 2

Anchoring Bias and Categorization

- **Epley, N., & Gilovich, T. (2006). The anchoring and adjustment heuristic: Why adjustments are insufficient. Psychological Science, 17, 311-318.**
- **Frederick, S. & Mochon, D. (in press). A scale distortion theory of anchoring. Journal of Experimental Psychology: General.**
- **Henderson, P. & Peterson, R. (1992). Mental Accounting and Categorization. Organizational Behavior and Human decision Processes, 51, 92-117.**
- **Mussweiler, T., & Strack, F. (2000). The use of category and exemplar knowledge in the solution of anchoring tasks. Journal of Personality and Social Psychology, 78, 1038-1052.**

March 9 - Spring Break No Class**March 16**

Confirmatory Hypothesis Testing

- **Nickerson, R. S. (1998). Confirmation bias: A ubiquitous phenomenon in many guises. *Review of General Psychology*, 2(2), 175-220.**
- **Johnson, E. J., Hubl, G., & Keinan, A. (2007). Aspects of endowment: A query theory of value construction. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 33, 461-474.**
- Gilbert, D. T. (1991). How mental systems believe. *American Psychologist*, 46, 107-119.
- Klayman, J., & Ha, Y. W. (1987). Confirmation, disconfirmation, and information in hypothesis testing. *Psychological Review*, 94, 211-22.
- Fischhoff, B. & Beyth-Marom, R. (1983). Hypothesis evaluation from a Bayesian perspective. *Psychological Review*, 90, 239-260.
- Fischhoff, B. (1975). Hindsight foresight: The effect of outcome knowledge on judgment under uncertainty. *Journal of Experimental Psychology: Human Perception and Performance*, 1, 299.
- Koriat, A., Lichtenstein, S., & Fischhoff, B. (1980). Reasons for confidence. *Journal of Experimental Psychology: Human Learning & Memory*, 6, 107-118.
- Shafir, E. (1993). Choosing versus rejecting: Why some options are both better and worse than others. *Memory and Cognition*, 21(4), 546-556.

March 23

Subjective Value

- **Morewedge, C. K. (in press). Utility: Anticipated, Experienced, Remembered. In G. Keren and G. Wu (Eds.), *Blackwell Handbook of Judgment and Decision Making* (2nd Edition). Malden, MA: Blackwell Press.**
- **Vlaev, I., Chater, N., Stewart, N., & Brown, G. D. (2011). Does the brain calculate value? *Trends in Cognitive Sciences*, 15(11), 546-554.**
- **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.**
- Rangel, A., Camerer, C., & Montague, P. R. (2008). A framework for studying the neurobiology of value-based decision making. *Nature Reviews Neuroscience*, 9(7), 545-556.
- Frederick, S., & Loewenstein, G., 1999. Hedonic adaptation. In: Kahneman, D., Diener, E., Schwarz, N. (Eds.), *Foundations of Hedonic Psychology: Scientific Perspectives on Enjoyment and Suffering*. Russell Sage Foundation, New York, pp. 302-329.
- Parducci, A. (1965). Category judgment: A range-frequency model. *Psychological Review*, 72, 407-418.

- Stevens, S. S. (1975). *Psychophysics: Introduction to its perceptual, neural, and social prospects*. New Brunswick, NJ: Transaction Publishers.
- Kahneman, D. (1999). Objective happiness. In D. Kahneman, E. Diener, & N. Schwartz, *Well-being: The foundations of hedonic psychology* (pp. 3-26). New York: Russell Sage.
- Schwarz, N. (1999). Self-reports: How the questions shape the answers. *American Psychologist*, 54, 93-105.

March 30

Comparison in Judgment

- **Kahneman, D., & Miller, D. (1986). Norm theory: Comparing reality to its alternatives. *Psychological Review*, 93, 237-251.**
- **Sagi, A., & Friedland, N. (2007). The cost of richness: The effect of the size and diversity of decision sets on post-decision regret. *Journal of Personality and Social Psychology*, 93, 515-524.**
- **Hsee, C. K., Loewenstein, G. F., Blount, S. & Bazerman, M. H. (1999). Preference reversals between joint and separate evaluation of options: A review and theoretical analysis. *Psychological Bulletin*, 125, 576-590.**
- Medvec, V. H., Madey, S. F., & Gilovich, T. (1995). When less is more: Counterfactual thinking and satisfaction among Olympic medalists. *Journal of Personality and Social Psychology*, 69, 603-610.
- Morewedge, C. K., Gilbert, D. T., Myrseth, K. O. R., Kassam, K. S., & Wilson, T. D. (2010). Consuming experiences: Why affective forecasters overestimate comparative value. *Journal of Experimental Social Psychology*, 46, 986-992.
- Mussweiler, T. (2003). Comparison processes in social judgment: Mechanisms and Consequences. *Psychological Review*, 110, 472-489.
- Miller, D. T., & Taylor, B. R. (1995). Counterfactual thought, regret, and superstition: How to avoid kicking yourself. In N. J. Roese and J. M. Olson (eds.) *What might have been: The social psychology of counterfactual thinking* (pp. 305-331). Hillsdale, NJ, England: Lawrence Erlbaum Associates.
- De Martino, B., Kumaran, D., Seymour, B., & Dolan, R. J. (2006). Frames, biases, and rational decision-making in the human brain. *Science*, 313(5787), 684-687.
- Trueblood, J. S., Brown, S. D., Heathcote, A., & Busemeyer, J. R. (2013). Not just for consumers: Context effects are fundamental to decision making. *Psychological Science*, 24, 901-908.

April 6

Guest Lecture by Professor Jeff Galak
Readings TBA

April 13

Time

- **Gilbert, D. T., & Wilson, T. D. (2007). *Prospection: Experiencing the future*. *Science*, 317, 1351-1354.**
- **Trope, Y., & Liberman, N. (2010). *Construal-level theory of psychological distance*. *Psychological review*, 117(2), 440-463.**
- **Morewedge, C. K., Kassam, K. S., Hsee, C. K., & Caruso, E. M. (2009). *Duration sensitivity depends on stimulus familiarity*. *Journal of Experimental Psychology: General*, 138(2), 177-186.**
- **Buckner, R. L., & Carroll, D. C. (2007). *Self-projection and the brain*. *Trends in cognitive sciences*, 11(2), 49-57.**
- **Schacter, D. L., Addis, D. R., & Buckner, R. L. (2007). *Remembering the past to imagine the future: the prospective brain*. *Nature Reviews Neuroscience*, 8(9), 657-661.**
- **Bartels, Daniel M. & Lance J. Rips (2010), *Psychological Connectedness and Intertemporal Choice*. *Journal of Experimental Psychology: General*, 139, 49-69.**
- **Morewedge, C. K., Gilbert, D. T., & Wilson, T. D. (2005). *The least likely of times: How remembering the past biases forecasts of the future*. *Psychological Science*, 16, 626-630.**
- **Kahneman, D., Fredrickson, B. L., Schreiber, C. A., & Redelmeier, D. A. (1993). *When more pain is preferred to less: Adding a better end*. *Psychological Science*, 4, 401-405**

April 20

Estimating Probability

- **Dawes, R. M., Faust, D., & Meehl, P. E. (1989). *Clinical versus actuarial judgment*. *Science*, 243 (No. 4899), 1668-1674.**
- **Simmons, J. P., & Massey, C. (2012). *Is optimism real?* *Journal of Experimental Psychology: General*, 141, 630-634.**
- **Oskarasson, A. T., Van Boven, L. V., McClelland, G. H., & Hastie, R. (2009). *Whats next? Judging sequences of binary events*. *Psychological Bulletin*, 135, 262-285.**
- **Simmons, J. P., & Nelson, L. D., (2006). *Intuitive confidence: Choosing between intuitive and nonintuitive alternatives*. *Journal of Experimental Psychology: General*, 135, 409-428.**
- **Moore, D. A., & Healy, P. J. (2008). *The trouble with overconfidence*. *Psychological Review*, 115(2), 502-517.**
- **Weinstein, N. D. (1980). *Unrealistic optimism about future life events*. *Journal of personality and social psychology*, 39(5), 806-820.**
- **Tversky, A., & Koehler, D. J. (1994). *Support theory: A nonextensional representation of subjective probability*. *Psychological Review*, 101, 547-567.**

- Gilovich, T., Valone, R., & Tversky, A. (1985). The hot hand in basketball. On the misperception of random sequences. *Cognitive Psychology*, 17, 295-314.
- Langer, E. J. (1975). The illusion of control. *Journal of Personality and Social Psychology*, 32, 311-328.

April 27

Final Papers Due

Motivated Reasoning

- **Kunda, Z. (1990). The case for motivated reasoning. *Psychological Bulletin*, 108, 480-498.**
- **Ditto, P. H., Scepansky, J. A., Munro, G. D., Apanovitch, A. M., & Lockhart, L. K. (1998). Motivated sensitivity to preference-inconsistent information. *Journal of Personality and Social Psychology*, 75, 53-69.**
- **Kassam, K. S., Morewedge, C. K., Gilbert, D. T., & Wilson, T. D. (2011). Winners love winning and losers love money. *Psychological Science*, 22, 602-606.**
- **Lieberman, M. D., Ochsner, K. N., Gilbert, D. T., & Schacter, D. L. (2001). Do amnesics exhibit cognitive dissonance reduction? The role of explicit memory and attention in attitude change. *Psychological Science*, 12, 135-140.**
- Taylor, S. E., & Brown, J. D. (1988). Illusion and well-being: A social-psychological perspective on mental health. *Psychological Bulletin*, 103, 193-210. Colvin, C. R., & Block, J. (1994). Do positive illusions foster mental health? An examination of the Taylor and Brown formulation. *Psychological Bulletin*, 116, 3-20.
- Morewedge, C. K., & Norton, M. I. (2009). When dreaming is believing: The (motivated) interpretation of dreams. *Journal of Personality and Social Psychology*, 96, 249-264.
- Balcetis, E., & Dunning, D. (2006). See what you want to see: Motivational influences on visual perception. *Journal of Personality and Social Psychology*, 91, 612-625.
- Dana, J., & Loewenstein, G. (2003). A social science perspective on gifts to physicians from industry. *JAMA*, 290, 252-255.
- Dawson, E., Gilovich, T., & Regan, D. T. (2002). Motivated reasoning and performance on the Wason selection task. *Personality and Social Psychology Bulletin*, 28, 1379-1387.