

## ***HUMAN JUDGMENT AND DECISION MAKING 47-754***

<b>Professor:</b>	Dr. Carey K. Morewedge Tepper School of Business 237 Posner Hall morewedge@cmu.edu 412.268.6079 (office)
<b>Time:</b>	Mondays and Wednesdays, 3:30pm - 5:20pm
<b>Location:</b>	Scaife Hall 222
<b>Office Hours:</b>	Email for an appointment.

### **OVERVIEW**

Whether choosing what to have for breakfast, whom to marry, or what career to pursue, our choices are based on judgments and decisions. In this course we examine the affective, cognitive, and motivational processes involved in human judgment and decision making, and the accuracy of human judgment and decision making.

### **COURSE OBJECTIVES**

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

1. 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.
2. Assess the quality of empirical research in the field of judgment and decision making.
3. 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.

### **COURSE MATERIALS**

All readings are on BlackBoard.

**GRADES/ATTENDANCE**

Grades are not curved.

**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 (26%)**

This is a small seminar, and your active involvement in each and every class is important. Not only does it demonstrate that you are prepared for class, it helps identify what from the readings and topic you understand, and on which topics you need more guided instruction. I expect you to ask questions and participate in the discussion in every class.

**Online Critiques (24%)**

Due by midnight before each class (i.e., Sunday and Tuesday evenings), you must post a critique of the readings assigned for that day on its Blackboard Discussion Board. Do NOT summarize the findings; we have all read the papers. Critique the authors' theories, methods, analyses, and interpretation of the data. Come up with alternative theories, or if you believe the authors' theory, explain why. Think of new research projects that are related to this work, build on it, or challenge it. Describe the studies that would be included. The goal is for you to synthesize and think about the research that you're reading, and spark discussion in class. It is not to write a book report. Each critique is worth 2 points.

**Final Exam (25%) – In class on 10/14/2013**

To be sure that you have actually read the papers assigned for the semester, there will be a final exam on 10/14/2011. Think of it as practice for your generals.

**Research Paper (25%) – Due 11:59pm on 10/16/2013**

The primary goal of this class is to increase your proficiency in research. By 11:59pm on Wednesday October 16th, you will turn in a research paper (recommend length is ~4000 words, not including references) in which you have articulated a novel hypothesis directly relevant to human judgment and decision-making and have proposed rigorous experiments to test that hypothesis. The paper should be written in the style of the American Psychological Association and thus include a title page, abstract, introduction, methods and anticipated results section for each experiment, and a general discussion. If you are unfamiliar with APA style, please refer to the 5<sup>th</sup> edition of the APA publication manual for guidance. Be sure to carefully proofread and edit your paper before turning it in.

**Your research paper is your most important assignment for this class. Please schedule a meeting with me to discuss the project you intend to propose at least three weeks before the paper is due. I will expect that you will be able to describe the work and at least 1-2 studies that you plan to run.**

**Late Assignment & Extension Policy**

A late research paper will be penalized a full letter grade per day unless accompanied by a note from a doctor. **I will not accept critiques that are turned in late.**

**Laptop Policy**

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.

**Academic Honesty**

**You must be the sole author of work you submit in this course. You may NOT collaborate with other students on your final exam and you may NOT submit a collaborative research project as your research paper.** Plagiarism will result in a failing grade in the course and a referral to the Dean of Students' Office for further action. Please note that you may not submit or present any assignment completed in this class for credit in another course, and you may not submit collaborative work (e.g., with another student or advisor). Doing so will result in a failing grade in this course.

**If you are unfamiliar with the area, please read this in advance.**

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).

**I will be excited to suggest other readings on topics related to the course, if you are interested. Please do not hesitate to ask.**

<b>Date</b>	<b>Topic and Required Readings</b>
<b>8/26</b>	<p><b>Day 1: Awareness of our judgment and decision making</b></p> <p>Nisbett, R.E. &amp; Wilson, T.D. (1977). Telling more than we know: Verbal reports on mental processes. <i>Psychological Review</i>, 84, 231-259.</p> <p>Johansson, P., Hall, L., Sikstrom, S., &amp; Olsson, A. (2005). Failure to detect mismatches between intention and outcome. <i>Science</i>, 310, 116-119.</p> <p>Pronin, E. (2007). Perception and misperception of bias in human judgment. <i>Trends in Cognitive Sciences</i>, 11(1), 37-43.</p>
<b>8/28</b>	<p><b>Day 2: Systems of Reasoning</b></p> <p>Kahneman, D. &amp; Frederick, S. (2002). Representativeness revisited: Attribute substitution in intuitive judgment. In T. Gilovich, D. Griffin, and D. Kahneman, (Eds.) <i>Heuristics and Biases: The Psychology of Intuitive Judgment</i>, pp. 49–81. New York: Cambridge University Press.</p> <p>Evans, J. S. B., &amp; Stanovich, K. E. (2013). Dual-process theories of higher cognition: Advancing the debate. <i>Perspectives on Psychological Science</i>, 8(3), 223-241.</p> <p><b>Further Recommendations:</b></p> <p>Gilbert, D. T. (1999). What the mind’s not. In S. Chaiken and Y. Trope (eds.) <i>Dual process theories in social psychology</i> (pp. 3-11). New York: Guilford.</p> <p>Kahneman, D. (2003) A perspective on judgment and choice: Mapping bounded rationality. <i>American Psychologist</i>, 58, 697-720.</p> <p>Evans, J. (2007). <i>Hypothetical thinking</i>. New York, NY: Psychology Press.</p> <p>Slooman, S. A. (1996). The empirical case for two systems of reasoning. <i>Psychological Bulletin</i>, 119, 3-22.</p> <p>Lieberman, M. D., Gaunt, R., Gilbert, D. T., &amp; Trope, Y. (2002). Reflexion and reflection: A social cognitive neuroscience approach to attributional inference. In M. Zanna (Ed.), <i>Advances in experimental social psychology</i>, Vol. 34 (pp. 199-249). New York: Elsevier.</p> <p>Keren, G., &amp; Schul, Y. (2009). Two Is Not Always Better Than One A Critical Evaluation of Two-System Theories. <i>Perspectives on Psychological Science</i>, 4(6), 533-550.</p>
<b>9/4</b>	<p><b>Day 3: Intuition</b></p> <p>Kahneman, D., &amp; Klein, G. (2009). Conditions for intuitive expertise: A failure to disagree. <i>American Psychologist</i>, 64, 515-526.</p> <p>Morewedge, C. K., &amp; Kahneman, D. (2010). Associative processes in intuitive judgment. <i>Trends in Cognitive Sciences</i>, 14(10), 435-440.</p> <p>Dijksterhuis, A., &amp; Nordgren, L. F. (2006). A theory of unconscious thought. <i>Perspectives on Psychological Science</i>, 1(2), 95-109.</p> <p><b>Further Recommendations:</b></p> <p>Moors, A., &amp; De Houwer, J. (2006). Automaticity: A theoretical and conceptual analysis. <i>Psychological Bulletin</i>, 132, 297-326.</p>

	<p>Shah, A. S., &amp; Oppenheimer, D. M. (2008). The Path of Least Resistance: Using Easy-to-Access Information. <i>Current Directions in Psychological Science</i>, 18, 232-236.</p> <p>Topolinski, S., &amp; 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. <i>Journal of Experimental Psychology: General</i>, 138, 39-63.</p>
<p><b>9/9</b></p>	<p><b>Day 4: Deliberation</b></p> <p>Payne, J. W., Samper, A., Bettman, J. R., &amp; Luce, M. F. (2008). Boundary conditions on unconscious thought in complex decision making. <i>Psychological Science</i>, 19(11), 1118-1123.</p> <p>Stanovich, K. E., &amp; West, R. F. (2008). On the relative independence of thinking biases and cognitive ability. <i>Journal of Personality and Social Psychology</i>, 94(4), 672-695.</p> <p>Wilson, T.D. &amp; Schooler, J.W. (1991). Thinking too much: Introspection can reduce the quality of preferences and decisions. <i>Journal of Personality and Social Psychology</i>, 60, 181-192.</p> <p><b>Further Recommendations:</b></p> <p>Schooler, J. W. (2002). Re-representing consciousness: Dissociations between experience and meta-consciousness. <i>Trends in Cognitive Sciences</i>, 6, 339-344.</p> <p>Shafir, E., Simonson, I., &amp; Tversky, A. (1993). Reason-based choice. <i>Cognition</i>, 49, 11-36.</p> <p>Mercier, H., &amp; Sperber, D. (2011). Why do humans reason? Arguments for an argumentative theory. <i>Behavioral and Brain Sciences</i>, 34, 57-73.</p>
<p><b>9/11</b></p>	<p><b>Day 5: Correction Processes</b></p> <p>Wilson, T. D., &amp; Brekke, N. (1986). Mental contamination and mental correction: Unwanted influences on judgments and evaluations. <i>Psychological Bulletin</i>, 116, 117-142.</p> <p>Hernandez, I., &amp; Preston, J. (2013). Disfluency disrupts the confirmation bias. <i>Journal of Experimental Social Psychology</i>, 49(1), 178–182.</p> <p>Loersch, C., &amp; Payne, B. K. (2011). The Situated Inference Model An Integrative Account of the Effects of Primes on Perception, Behavior, and Motivation. <i>Perspectives on Psychological Science</i>, 6(3), 234-252.</p> <p><b>Further Recommendations:</b></p> <p>Alter, A. L., Oppenheimer, D. M., Epley, N., Eyre, R. N. (2007). Overcoming intuition: Metacognitive difficulty activates analytic reasoning. <i>Journal of Experimental Psychology: General</i>, 136, 569-576.</p> <p>Lerner, J. S., &amp; Tetlock, P. E. (1999). Accounting for the effects of accountability. <i>Psychological Bulletin</i>, 125, 255-275.</p>
<p><b>9/16</b></p>	<p><b>Day 6: Heuristics</b></p> <p>Tversky, A., &amp; Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases.</p>

	<p style="text-align: center;"><i>Science, 185, 1124-1131.</i></p> <p>Shah, A. K., &amp; Oppenheimer, D. M. (2008). Heuristics made easy: An effort-reduction framework. <i>Psychological Bulletin, 134, 207-222.</i></p> <p>Todd, P. T., &amp; Gigerenzer, G. (2000). Précis of “Simple heuristics that make us smart.” <i>Behavioral and Brain Sciences, 23, 727–741.</i> <b>*Do not read beyond 741.</b></p> <p><b>Further Recommendations:</b>          Schwarz, N., Bless, H., Strack, F., Klumpp, G., Rittenauer-Schatka, H., &amp; Simons, A. (1991). Ease of retrieval as information: Another look at the availability heuristic. <i>Journal of Personality and Social Psychology, 61, 195-202.</i></p> <p>Kruger, J., Wirtz, D., Van Boven, L., &amp; Altermatt, T. W. (2004). The effort heuristic. <i>Journal of Experimental Social Psychology, 40(1), 91-98.</i></p> <p>Finucane, M. L., Alhakami, A., Slovic, P., &amp; Johnson, S. M. (2000). The affect heuristic in judgments of risks and benefits. <i>Journal of behavioral decision making, 13(1), 1-17.</i></p>
<p><b>9/18</b></p>	<p><b>Day 7: Anchoring Bias</b></p> <p>Mussweiler, T., &amp; Strack, F. (2000). The use of category and exemplar knowledge in the solution of anchoring tasks. <i>Journal of Personality and Social Psychology, 78, 1038-1052.</i></p> <p>Epley, N., &amp; Gilovich, T. (2006). The anchoring and adjustment heuristic: Why adjustments are insufficient. <i>Psychological Science, 17, 311-318.</i></p> <p>Simmons, J. P., LeBoeuf, R. A., Nelson, L. D. (2010). The effect of accuracy motivation on anchoring and adjustment: Do people adjust from provided anchors? <i>Journal of Personality and Social Psychology, 99, 917-932.</i></p>
<p><b>9/23</b></p>	<p><b>Day 8: Confirmatory Hypothesis Testing</b></p> <p>Nickerson, R. S. (1998). Confirmation bias: a ubiquitous phenomenon in many guises. <i>Review of General Psychology, 2(2), 175-220.</i></p> <p>Johnson, E. J., Häubl, G., &amp; Keinan, A. (2007). Aspects of endowment: A query theory of value construction. <i>Journal of Experimental Psychology: Learning, Memory, and Cognition, 33, 461-474.</i></p> <p><b>Further Recommendations:</b>          Gilbert, D. T. (1991). How mental systems believe. <i>American Psychologist, 46, 107-119.</i></p> <p>Klayman, J., &amp; Ha, Y. W. (1987). Confirmation, disconfirmation, and information in hypothesis testing. <i>Psychological Review, 94, 211-22.</i></p> <p>Fischhoff, B. &amp; Beyth-Marom, R. (1983). Hypothesis evaluation from a Bayesian perspective. <i>Psychological Review, 90, 239-260.</i></p> <p>Fischhoff, B. (1975). Hindsight ≠ foresight: The effect of outcome knowledge on judgment under uncertainty. <i>Journal of Experimental Psychology: Human Perception and Performance, 1, 299.</i></p>

	<p>Koriat, A., Lichtenstein, S., &amp; Fischhoff, B. (1980). Reasons for confidence. <i>Journal of Experimental Psychology: Human Learning &amp; Memory</i>, 6, 107-118.</p> <p>Shafir, E. (1993). Choosing versus rejecting: Why some options are both better and worse than others. <i>Memory and Cognition</i>, 21(4), 546-556.</p>
<p><b>9/25</b></p>	<p><b>Day 9: Subjective Value</b></p> <p>Morewedge, C. K. (in press). Utility: Anticipated, Experienced, Remembered. In G. Keren and G. Wu (Eds.), <i>Blackwell Handbook of Judgment and Decision Making</i> (2nd Edition). Malden, MA: Blackwell Press.</p> <p>Vlaev, I., Chater, N., Stewart, N., &amp; Brown, G. D. (2011). Does the brain calculate value? <i>Trends in Cognitive Sciences</i>, 15(11), 546-554.</p> <p>Lee, L., Frederick, S., &amp; 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.</p> <p><b>Further Recommendations:</b></p> <p>Stewart, N., Chater, N., &amp; Brown, G. D. (2006). Decision by sampling. <i>Cognitive psychology</i>, 53(1), 1-26.</p> <p>Rangel, A., Camerer, C., &amp; Montague, P. R. (2008). A framework for studying the neurobiology of value-based decision making. <i>Nature Reviews Neuroscience</i>, 9(7), 545-556.</p> <p>Frederick, S., Loewenstein, G., 1999. Hedonic adaptation. In: Kahneman, D., Diener, E., Schwarz, N. (Eds.), <i>Foundations of Hedonic Psychology: Scientific Perspectives on Enjoyment and Suffering</i>. Russell Sage Foundation, New York, pp. 302–329.</p> <p>Parducci, A. (1965). Category judgment: A range-frequency model. <i>Psychological Review</i>, 72, 407-418.</p> <p>Stevens, S. S. (1975). <i>Psychophysics: Introduction to its perceptual, neural, and social prospects</i>. New Brunswick, NJ: Transaction Publishers.</p> <p>Kahneman, D. (1999). Objective happiness. In D. Kahneman, E. Diener, &amp; N. Schwartz, <i>Well-being: The foundations of hedonic psychology</i> (pp. 3-26). New York: Russell Sage.</p> <p>Schwarz, N. (1999). Self-reports: How the questions shape the answers. <i>American Psychologist</i>, 54, 93-105.</p>
<p><b>9/30</b></p>	<p><b>Day 10: Comparison in Judgment</b></p> <p>Kahneman, D., &amp; Miller, D. (1986). Norm theory: Comparing reality to its alternatives. <i>Psychological Review</i>, 93, 237-251.</p> <p>Sagi, A., &amp; Friedland, N. (2007). The cost of richness: The effect of the size and diversity of decision sets on post-decision regret. <i>Journal of Personality and Social Psychology</i>, 93, 515-524.</p> <p>Hsee, C. K., Loewenstein, G. F., Blount, S. &amp; Bazerman, M. H. (1999). Preference reversals between joint and separate evaluation of options: A review and theoretical analysis. <i>Psychological Bulletin</i>, 125, 576-590.</p>

	<p><b>Further Recommendations:</b>  Medvec, V. H., Madey, S. F., &amp; Gilovich, T. (1995). When less is more: Counterfactual thinking and satisfaction among Olympic medalists. <i>Journal of Personality and Social Psychology</i>, <i>69</i>, 603-610.</p> <p>Morewedge, C. K., Gilbert, D. T., Myrseth, K. O. R., Kassam, K. S., &amp; Wilson, T. D. (2010). Consuming experiences: Why affective forecasters overestimate comparative value. <i>Journal of Experimental Social Psychology</i>, <i>46</i>, 986-992.</p> <p>Mussweiler, T. (2003). Comparison processes in social judgment: Mechanisms and Consequences. <i>Psychological Review</i>, <i>110</i>, 472-489.</p> <p>Miller, D. T., Taylor, B. R. (1995). Counterfactual thought, regret, and superstition: How to avoid kicking yourself. In N. J. Roeser and J. M. Olson (eds.) <i>What might have been: The social psychology of counterfactual thinking</i> (pp. 305-331). Hillsdale, NJ, England: Lawrence Erlbaum Associates.</p> <p>De Martino, B., Kumaran, D., Seymour, B., &amp; Dolan, R. J. (2006). Frames, biases, and rational decision-making in the human brain. <i>Science</i>, <i>313</i>(5787), 684-687.</p> <p>Trueblood, J. S., Brown, S. D., Heathcote, A., &amp; Busemeyer, J. R. (2013). Not just for consumers: Context effects are fundamental to decision making. <i>Psychological Science</i>, <i>24</i>, 901-908.</p> <p><b>Further recommendations:</b>  Bhatia, S. (2013). Associations and the Accumulation of Preference. <i>Psychological Review</i>. doi: 10.1037/a0032457</p>
<p><b>10/2</b></p>	<p><b>Day 11: Time</b>  Gilbert, D. T., &amp; Wilson, T. D. (2007). Propection: Experiencing the future. <i>Science</i>, <i>317</i>, 1351-1354.</p> <p>Trope, Y., &amp; Liberman, N. (2010). Construal-level theory of psychological distance. <i>Psychological review</i>, <i>117</i>(2), 440-463.</p> <p>Morewedge, C. K., Kassam, K. S., Hsee, C. K., &amp; Caruso, E. M. (2009). Duration sensitivity depends on stimulus familiarity. <i>Journal of Experimental Psychology: General</i>, <i>138</i>(2), 177-186.</p> <p><b>Further recommendations:</b>  Buckner, R. L., &amp; Carroll, D. C. (2007). Self-projection and the brain. <i>Trends in cognitive sciences</i>, <i>11</i>(2), 49-57.</p> <p>Schacter, D. L., Addis, D. R., &amp; Buckner, R. L. (2007). Remembering the past to imagine the future: the prospective brain. <i>Nature Reviews Neuroscience</i>, <i>8</i>(9), 657-661.</p> <p>Bartels, Daniel M. and Lance J. Rips (2010), Psychological Connectedness and Intertemporal Choice. <i>Journal of Experimental Psychology: General</i>, <i>139</i>, 49-69.</p> <p>Morewedge, C. K., Gilbert, D. T., &amp; Wilson, T. D. (2005). The least likely of times: How remembering the past biases forecasts of the future. <i>Psychological Science</i>, <i>16</i>, 626-630.</p> <p>Kahneman, D., Fredrickson, B. L., Schreiber, C. A., &amp; Redelmeier, D. A. (1993). When more pain is preferred to less: Adding a better end. <i>Psychological Science</i>, <i>4</i>,</p>



	401–405
10/7	<p><b>Day 12: Estimating Probability</b>  Dawes, R. M., Faust, D., &amp; Meehl, P. E. (1989). Clinical versus actuarial judgment. <i>Science</i>, 243 (No. 4899), 1668-1674.</p> <p>Simmons, J. P., Massey, C. (2012). Is optimism real? <i>Journal of Experimental Psychology: General</i>, 141, 630-634.</p> <p>Oskarasson, A. T., Van Boven, L. V., McClelland, G. H., &amp; Hastie, R. (2009). What's next? Judging sequences of binary events. <i>Psychological Bulletin</i>, 135, 262-285.</p> <p><b>Further Recommendations:</b>  Simmons, J. P., &amp; Nelson, L. D., (2006). Intuitive confidence: Choosing between intuitive and nonintuitive alternatives. <i>Journal of Experimental Psychology: General</i>, 135, 409-428.</p> <p>Moore, D. A., &amp; Healy, P. J. (2008). The trouble with overconfidence. <i>Psychological Review</i>, 115(2), 502-517.</p> <p>Weinstein, N. D. (1980). Unrealistic optimism about future life events. <i>Journal of personality and social psychology</i>, 39(5), 806-820.</p> <p>Tversky, A., &amp; Koehler, D. J. (1994). Support theory: A nonextensional representation of subjective probability. <i>Psychological Review</i>, 101, 547-567.</p> <p>Gilovich, T., Valone, R., Tversky, A. (1985). The hot hand in basketball. On the misperception of random sequences. <i>Cognitive Psychology</i>, 17, 295-314.</p> <p>Langer, E. J. (1975). The illusion of control. <i>Journal of Personality and Social Psychology</i>, 32, 311-328.</p>
10/9	<p><b>Day 13: Motivated Reasoning</b>  Kunda, Z. (1990). The case for motivated reasoning. <i>Psychological Bulletin</i>, 108, 480-498.</p> <p>Ditto, P. H., Scepansky, J. A., Munro, G. D., Apanovitch, A. M., &amp; Lockhart, L. K. (1998). Motivated sensitivity to preference-inconsistent information. <i>Journal of Personality and Social Psychology</i>, 75, 53-69.</p> <p>Kassam, K. S., Morewedge, C. K., Gilbert, D. T., &amp; Wilson, T. D. (2011). Winners love winning and losers love money. <i>Psychological Science</i>, 22, 602-606.</p> <p>Lieberman, M. D., Ochsner, K. N., Gilbert, D. T., &amp; Schacter, D. L. (2001). Do amnesics exhibit cognitive dissonance reduction? The role of explicit memory and attention in attitude change. <i>Psychological Science</i>, 12, 135-140.</p> <p><b>Further Recommendations:</b>  Taylor, S. E., &amp; Brown, J. D. (1988). Illusion and well-being: A social-psychological perspective on mental health. <i>Psychological Bulletin</i>, 103, 193-210.</p> <p>Colvin, C. R., &amp; Block, J. (1994). Do positive illusions foster mental health? An examination of the Taylor and Brown formulation. <i>Psychological Bulletin</i>, 116, 3-20.</p>

	<p>Morewedge, C. K., &amp; Norton, M. I. (2009). When dreaming is believing: The (motivated) interpretation of dreams. <i>Journal of Personality and Social Psychology</i>, 96, 249-264.</p> <p>Balceris, E., &amp; Dunning, D. (2006). See what you want to see: Motivational influences on visual perception. <i>Journal of Personality and Social Psychology</i>, 91, 612-625.</p> <p>Dana, J., &amp; Loewenstein, G. (2003). A social science perspective on gifts to physicians from industry. <i>JAMA</i>, 290, 252-255.</p> <p>Dawson, E., Gilovich, T., &amp; Regan, D. T. (2002). Motivated reasoning and performance on the Wason selection task. <i>Personality and Social Psychology Bulletin</i>, 28, 1379 – 1387.</p>
<b>10/14</b>	<b>FINAL EXAM.</b>
<b>10/17</b>	<b>Research Paper Due</b>