

## *15.312 MANAGERIAL DECISION MAKING*

Spring, 2001  
MW 8:30-10:00am, E51-376  
TA: TBA

John S. Carroll  
253-2617  
E52-563  
[jcarroll@mit.edu](mailto:jcarroll@mit.edu)

This course is about understanding and improving the decision making processes of managers and other professionals. We examine how decision makers think about difficult problems and characterize the limitations of human decision making ability. By understanding how decisions are made, we can provide guidelines and techniques for overcoming limitations and improving the quality of decision making. Some of these more structured decision aids involve mathematical models or computer software; others involve increased awareness and thoughtfulness. The goal of this course is to provide insights and tools that will enable you to support and improve your own decision making and to understand the decision making of others.

We begin by viewing a manager as a decision maker who identifies problems, assembles information, chooses courses of action, and implements these choices. We build from the individual level to consider how decisions are made by groups, in organizations, and by negotiators and market actors. Thus, managers must make decisions and implement them within a context of decisions and actions by others inside and outside their organization.

The course content is both conceptual and managerial: we will read and talk about ideas and research as well as practical situations and applications. Lectures and readings will review substantive material. Experiential exercises and case discussions will help generate involvement and appreciation for the complexities of application. A team project will focus on understanding and analyzing actual decisions in real companies.

This course is most typically taken as a Master's elective after 15.311 Organizational Processes. Although it is desirable to have taken 15.311, there are no required prerequisites for the course and students at all levels are welcome. It is also desirable, but not essential, to have completed an introductory statistics course.

Grading has several components. The midterm quiz will count 25%. As a substitute for the quiz, students may write a 5-8 page paper on a relevant in-depth topic (or conduct a modest research project on a topic of interest). Each team project (2-4 team members, 10-12 page paper) will analyze a real decision or set of decisions (e.g., which strategic partner to choose, when to launch a new product, how to implement a change, whether to leave the company) in a real company, which will count 25%. Smaller-scale written case analyses and exercises will collectively count 25%. Class participation (including 10-minute team reports) will count 25%.

The textbook is Plous, S. The Psychology of Judgment and Decision Making. New York: McGraw Hill, 1993. Additional readings are available as xerox packets. READINGS SHOULD BE COMPLETED PRIOR TO CLASS. For those interested in further reading, good places to start are:

- Hogarth, R. Judgment and Choice, 2nd ed. New York: Wiley, 1987.
- March, J. G. A Primer on Decision Making: How Decisions Happen. NY: Free Press, 1994.
- Russo, J. E. & Schoemaker, P. J. H. Decision Traps. New York: Doubleday, 1989.
- Hammond, J. S. et al. Smart Choices. Boston: HBS Press, 1999.

## **COURSE SCHEDULE**

### **Wednesday 2/7 INTRODUCTION**

Isenberg, D. J. How Senior Managers Think. Harvard Business Review, November-December 1984, pp. 80-90.

The Economist. Rational Economic Man. Dec. 24, 1994-Jan. 6, 1995, pp. 90-92.

Eisenhardt, K. M. Speed and strategic choice: How managers accelerate decision making. California Management Review, 1990, 32, 1-16.

### **Monday 2/12 LINEAR MODELS OF JUDGMENT AND OUTCOMES**

Dawes, R. The Robust Beauty of Improper Linear Models in Decision Making. American Psychologist, 1979, 34, 571-582.

Passell, P. "Wine Equation Puts Some Noses Out of Joint." New York Times, March 4, 1990, p. 1, 27. (Handout)

Ebert, R. & Kruse, T. Bootstrapping the Security Analyst. Journal of Applied Psychology, 1978, 63, 110-119.

### **Wednesday 2/14 INTUITION AND EXPERTISE**

Klein, G. Sources of Power. Cambridge, MA: MIT Press, 1998. Ch. 3: Recognition-primed decision model, Ch. 4: The power of intuition.

### **Tuesday 2/20 UTILITY THEORY (Monday Holiday; Tuesday has Monday schedule)**

Plous, S. The Psychology of Judgment and Decision Making. New York: McGraw Hill, 1993. Ch. 7: Expected Utility Theory.

Coombs, C. et al. Mathematical Psychology: An Elementary Introduction. New York: Prentice-Hall, 1970. Ch. 5, pp. 113-129.

**Wednesday 2/21                      PROBLEMS WITH UTILITY THEORY**

Plous, S. The Psychology of Judgment and Decision Making, 1993. Ch. 8: Paradoxes in Rationality.  
Slovic, P. & Tversky, A. Who Accepts Savage's Axiom? Behavioral Science, 1974, 6, 368-373.  
Thaler, R. The Winner's Curse: Paradoxes and Anomalies of Economic Life. New York: Free Press, 1992.  
Ch. 7: Preference Reversals (pp. 79-91).

**Monday 2/26                      FRAMING**

Plous Ch. 6: Question Wording and Framing and Ch. 9: Descriptive Models of Decision Making  
Thaler, R. Mental Accounting and Consumer Choice. Marketing Science, 1985, 4, 199-214.

**Wednesday 2/28                      VALUES AND PREFERENCES**

Schein, E. Individuals and Careers. In J. Lorsch (ed.) Handbook of Organizational Behavior. Englewood Cliffs, NJ: Prentice-Hall, 1987, pp. 155-162.  
Keeney, R. L. & Raiffa, H. Decisions with Multiple Objectives: Preferences and Value Tradeoffs. New York: Cambridge, 1993, pp. 34-45.  
March, J. G. Bounded rationality, ambiguity, and the engineering of choice. Bell Journal of Economics, 1978, 2, 595-599. (Handout)

**Monday 3/5                      HEURISTICS FOR JUDGMENT**

Plous Ch. 10: The Representativeness Heuristic, Ch. 11: The Availability Heuristic, Ch. 13: Anchoring and Adjustment

**Wednesday 3/7                      RISK**

Plous Ch. 12: Probability and Risk  
Slovic, P. Perception of risk. Science, 1987, 236, 280-285.  
Cooper, A., Woo, C., & Dunkelberg, W. Entrepreneurs' perceived chances for success. Journal of Business Venturing, 1988, 3, 97-108.

**Monday 3/12                      HEURISTICS FOR CHOICE**

Hogarth Ch. 4: Combining Information for Evaluation and Choice (pp. 62-85)  
Russo, J. The Decision to Use Product Information at the Point of Purchase. In R. Stampfl & E. Hirschman (eds.) Theory in Retailing: Traditional and Nontraditional Sources. Chicago: American Marketing Association, 1981.

**Wednesday 3/14                      SENSEMAKING**

Langer, E. The Illusion of Control. Journal of Personality and Social Psychology, 1975, 32, 311-328.  
Carroll, J. S. Organizational learning activities in high-hazard industries: The logics underlying self-analysis. Journal of Management Studies, 1998, 35, 699-717.

**Monday 3/19                    QUIZ (open book, open notes, open mind)**

**Wednesday 3/21            No class - Sloan School Spring vacation**

**Monday 3/26 and Wednesday 3/28      Spring Break !!**

**Monday 4/2                    DECISION ANALYSIS AND DECISION AIDS**

Behn, R. & Vaupel, J. Quick Analysis for Busy Decision Makers. New York: Basic Books, 1982. Ch. 2.  
Wack, P. Scenarios: Uncharted waters ahead. Harvard Business Review, September-October, 1985, 73-89.

**Wednesday 4/4 CREATIVITY (Film: IDEO)**

Hogarth, Ch. 8  
Von Oech, R. A Whack on the Side of the Head. New York: Warner Books, 1983. pp. 20-26, 104-110, 122. (Handout)

**Monday 4/9                    NEGOTIATION**

Bazerman, M. Fairness in Decision Making, Making Rational Decisions in Two-Party Negotiations, and Negotiator Cognition. In Judgment in Managerial Decision Making, 3rd ed. New York: John Wiley, 1994.

**Wednesday 4/11            NEGOTIATION AND MARKETS**

DeBondt, W. & Thaler, R. Financial decision-making in markets and firms: A behavioral perspective. NBER Working Paper #4777. Cambridge, MA: National Bureau of Economic Research, 1994, pp. 10-33.

**Monday 4/16                    PATRIOTS' DAY HOLIDAY!**

**Wednesday 4/18            GROUP DECISION MAKING: CONFORMITY AND INFLUENCE**

Plous Ch. 17: Social Influences and Ch. 18: Group Judgments and Decisions  
Huseman, R. & Driver, R. Groupthink: Implications for Small-Group Decision Making in Business. In Houseman & Carroll (eds.) Readings in Organizational Psychology. Boston: Allyn and Bacon, 1979.

**Monday 4/23                    GROUP DECISION MAKING: DECISION RULES**

Allison, S. & Messick, D. From Individual Inputs to Group Outputs, and Back Again: Group Processes and Inferences About Members. In C. Hendrick (ed.) Group Processes. Newbury Park, CA: Sage, 1987. pp. 116-132 only.

Snizek, J. An examination of group process in judgmental forecasting. International Journal of Forecasting, 1989, 5, 171-8.

**Wednesday 4/25            ORGANIZATIONAL POLITICS**

Pfeffer, J. Managing With Power: Politics and Influence in Organizations. Boston: HBS Press, 1994. Ch. 1: Decisions and Implementation (pp. 17-28 only, Handout), Ch. 5: Resources, Allies, and the New Golden Rule (pp. 83-110).

Thomas, R. J. What Machines Can't Do. Berkeley, University of California Press, 1994. pp. 47-65, 82-7.

**Monday 4/30                ORGANIZATIONAL DECISION MAKING**

Nutt, P. C. Surprising but true: Half the decisions in organizations fail. Academy of Management Executive, 1999, 13, 75-90.

Heath, C., Larrick, R. P., & Klayman, J. Cognitive repairs: How organizational practices can compensate for individual shortcomings. Research in Organizational Behavior, Vol. 20. JAI Press, 1998, pp. 1-37.

**Wednesday 5/2 LEARNING FROM EXPERIENCE**

Plous Ch. 20: Self-Fulfilling Prophecies

**Monday 5/7                LEARNING FROM EXPERIENCE (Fishbanks game)**

Sterman, J. Learning in and about complex systems. System Dynamics Review, 1994, 10, 291-330.

**Wednesday 5/9 DYNAMIC DECISION MAKING (Fishbanks debrief)**

**Monday 5/14                TEAM PRESENTATIONS #1 (each team gives a 10-minute report)**

**Wednesday 5/16            TEAM PRESENTATIONS #2 AND COURSE SUMMARY**

**Monday 5/21                Written Team Reports Due**