

## CG152: Thinking Syllabus

CM: Causal models: How we think about the world and its alternatives.

### 1/24 Introduction to thinking

CM 1-3.

### 1/30, 2/1 Categorization

CM 9.

Rosch, E. (1978). Principles of categorization. In E. Rosch & B. B. Lloyd (Eds.) Cognition and Categorization. Hillsdale NJ: Erlbaum.

Smith, E. E. (1995). Concepts and categorization. In E. E. Smith & D. N. Osherson (Ed.). *Invitation to Cognitive Science: Thinking (Vol. 3)*. Cambridge, MA: MIT Press.

Borghi, A.M., Glenberg, A., Kaschak, M. (2004). Putting words in perspective. Memory and Cognition, 863-873.

Barsalou, L.W. (2005). Situated conceptualization. In H. Cohen & C. Lefebvre (Eds.), *Handbook of categorization in cognitive science*. St. Louis: Elsevier.

### 2/6, 2/8 Categorization and causal models

CM 4-5.

Gelman, S. A., & Hirschfeld, L. (1999). How biological is essentialism? In D. L. Medin & S. Atran (Eds.), *Folkbiology* (pp. 403–446). Cambridge, MA: MIT Press.

Rips, L. (2001). Necessity and natural categories. Psychological Bulletin, 127, 827-852.

Rehder, B. (in press). Essentialism as a generative theory of classification. To appear in Gopnik, A., & Schultz, L. (Eds.), *Causal learning: Psychology, philosophy, and computation*.

### 2/13, 2/15 Similarity

Shepard (1980). Multidimensional scaling, tree-fitting, and clustering. Science, 210, 390-398.

Tversky, A. (1977). Features of similarity. Psychological Review, 84, 327-352.

Medin, D. L., Goldstone, R. L., & Gentner, D. (1993). Respects for similarity. Psychological Review, 100, 254-278.

### 2/20, 2/22 Categorical induction

CM 10.

Sloman, S.A., & Lagnado, D. (2005). The problem of induction. In K. Holyoak and R. Morrison (Eds.). The Cambridge handbook of thinking & reasoning. New York: Cambridge University Press. pp. 95-116.

Medin, D.L., Coley, J.D., Storms, G. & Hayes, B. (2003). A relevance theory of induction. Psychonomic Bulletin and Review, 10, 517-532.

Lo, Y., Sides, A., Rozelle, J., & Osherson, D. (2002). Evidential diversity and premise probability in young children's inductive judgment. Cognitive Science, 26, 181-206.

### 2/27, 3/1 Reasoning

CM 11.

Evans, J. St. B. T. & Over, D. E. (2004). If, Chapter 4: The mental logic and mental models of indicative conditionals. Oxford: Oxford University Press.

Evans, J.St.B.T. (2003). In two minds: dual process accounts of reasoning. Trends in Cognitive Sciences, 7, 454-459.

### **3/6, 3/8 Presentations I**

### **3/13, 3/15 Presentations II (papers due Thursday, March 22)**

### **3/20, 3/22 Causal and counterfactual reasoning**

CM 6.

Byrne, R.M.J. (2002). Mental models and counterfactual thoughts about what might have been. Trends in Cognitive Sciences, 6, 426-431.

Goldvarg, E., & Johnson-Laird, P. (2001). Naive causality: A mental model theory of causal meaning and reasoning. Cognitive Science, 25, 565-610.

### **4/3, 4/5 Causal learning (guest lectures by Phil Fernbach)**

CM 12.

Keil, F.C. (2003) Folkscience: Coarse interpretations of a complex reality, Trends in Cognitive Sciences, 7, 368-373.

Tenenbaum, J., & Griffiths, T. L. (2001). Structure learning in human causal induction. Advances in Neural Information Processing Systems 13, Cambridge, MA.

### **4/10, 4/12 Judgment**

CM 8.

Tversky, A. & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. In D. Kahneman, P. Slovic, & A. Tversky (Eds.) Judgment under Uncertainty: Heuristics and Biases. Cambridge: Cambridge University Press.

Kahneman, D. & Frederick, S. (2002). Representativeness revisited: Attribute substitution in intuitive judgment. T. Gilovich, D. Griffin, & D. Kahneman (Eds.). Heuristics & Biases: The Psychology of Intuitive Judgment.

Lieberman, M. D. (2003). Reflective and reflexive judgment processes: A social cognitive neuroscience approach. In J. P. Forgas, K. R. Williams, & W. von Hippel (Eds.), Social judgments: Implicit and explicit processes (pp. 44-67). New York: Cambridge U. Press.

### **4/17, 4/19 Decision making**

CM 7, 13

Kahneman, D. & Tversky, A.(1984). Choices, values, and frames. American Psychologist, 39, 341-350.

Slovic , P., Finucane , M. L., Peters , E., & MacGregor, D.G. (2002). The affect heuristic. In Heuristics & Biases: The Psychology of Intuitive Judgment.

Quattrone, G. & Tversky A. (1984). Causal versus diagnostic contingencies: On self-deception and on the voter's illusion. Journal of Personality and Social Psychology, 46, 237-248.

### **4/24, 4/26 Presentations I**

**5/1, 5/3 Presentations II (papers due following week)**