Course description

We might have a reasonable idea of what the people around us think, but how they think is more mysterious. Information goes in, and words and behavior come out. What lies between? In this course, we will examine a variety of models of the causal processes that lie between “information in” and “behavior out.” In doing so, we will touch on many current debates about the nature of mental processes, including debates about innateness, modularity, domain-specificity, symbol manipulation versus connectionism, environment versus genes in development, and the role of natural selection in shaping cognitive architecture. This course will provide an introduction to what it means to have a cognitive, or computational, account of a psychological process. It will aim to provide students with a means of making more explicit their hypotheses about human behavior, psychology, and development, by making explicit the psychological capacities that their hypotheses entail. Each week, we will read papers that attempt to model some aspect of cognition or cognitive development, along with papers on the empirical phenomena they are meant to capture, as case studies in the cognitive method. In addition, each student will write a paper that develops a cognitive model of the particular psychological or behavioral phenomenon in which they are interested, with the goal of making the question of what lies between “information in” and “behavior out” a bit less mysterious.

Feel free to contact Prof Barrett for more information: barrett@anthro.ucla.edu

Schedule of topics (tentative)

Week 1 Computationalism
Week 2 Modularity
Week 3 Domain specificity
Week 4 Connections vs symbols
Week 5 Nativism
Week 6 Rethinking innateness
Week 7 Concepts
Week 8 Categorization and similarity
Week 9 Inference
Week 10 Choice and consciousness

List of readings (tentative)
Marr, D. *Vision.*
Cosmides, L., & Tooby, J. Beyond intuition and instinct blindness: Toward an evolutionarily rigorous cognitive science.
Braitenberg, V. *Vehicles.*
Fodor, J. *Modularity of mind.*
Sperber, D. *The Modularity of Thought and the Epidemiology of Representations.*
Pinker, S. *Language Learnability and Language Development.*
Spelke, E. *Origins of knowledge.*
Marcus, GF *Can connectionism save constructivism?*
Marcus, G.F. *The algebraic mind.*
Rumelhart, DE and McClelland, JL. *On Learning the Past Tenses of English Verbs.*
Steven Pinker and Alan Prince. *On language and connectionism: Analysis of a parallel distributed processing model of language acquisition.*
Laurence, S., & Margolis, E. *Concepts and cognitive science.*
Jackendoff, R. *What is a concept, that a person may grasp it?*
Rosch. *Principles of categorization.*
Humphreys, Glyn W. and Forde, Emer M.E. *Hierarchies, similarity and interactivity in object recognition: On the multiplicity of 'category-specific' deficits in neuropsychological populations.*
Santos, L.R., & Caramazza, A. *The domain-specific hypothesis: A developmental and comparative perspective on category-specific deficits.*
Holland, J., Holyoak, K., Nisbett, R., & Thagard, P. *Induction.*
Cosmides, L. & Tooby J. *A computational theory of social exchange.*
Dennett, D. *Elbow room.*
Jackendoff, R. *Consciousness and the computational mind.*