Language and Mind, Spring 2009
First Meeting 9 am. March 31, 2009 Sem 2 D1107
Check Program website for additional updates before the first meeting
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All Level Program. Prerequisite: Background in biology, linguistics or psychology and an interest in philosophy of mind as well the ability to work with formal systems, for example, manipulate simple algebraic expressions.

PROGRAM DESCRIPTION:
Language can serve as a window on the mind; the study of mind can illuminate the nature of language. During the last half century there has been a transformation in the study of language that has been intertwined with a transformation of our understanding of the human mind and brain. This program will explore this dual relation by studying the features of the human mind that are revealed by systematic study of our ability to speak and understand language as well as the aspects of language that are illuminated by our contemporary science of mind and brain.

Intellectual Background for the program
Two simultaneous intellectual events marked the beginning of this interchange between the study of language and the study mind. Linguistics was revolutionized by the ideas of Noam Chomsky and (not entirely independently) the study of mind was altered by the ascendancy of cognitive psychology (at the expense of the behaviorist version of psychology that preceded it). The study of language has been significantly changed by Chomsky's ideas and by others who embraced his revolutionary theories. Chomsky argued for a "universal grammar" as an   explanation of rapid language acquisition and similarity among languages. The goal of linguists working within Chomsky's framework was to characterize specialized language "organs" or modules within the human mind. Even critics of this approach to language have been forced to situate their views in the intellectual space he created. We will compare Chomskyian theories of generative grammar (which focus on structural properties specific to language) with ideas from within cognitive linguistics (which focuses more on the relationship between linguistic and non-linguistic cognitive capacities). In particular we will focus on a debate between those who emphasize rules and those who don't, as well as those who propose language modules and those who see the architecture of the mind as a case of distributed processing.

At the same time that the study of language was being transformed, the study of the mind was also undergoing significant changes. The field of cognitive psychology developed new experimental techniques for the systematic study of mind that complemented Chomskyian linguistics. By the 1980's growth in these fields as well as interdisciplinary collaboration by computer scientists interested in artificial intelligence and philosophers of mind resulted in the emergence of cognitive science as a science of mind. Concurrently, the field of neurobiology produced increasingly greater understanding of the human brain. By the end of the 20th century the methods and results of such scientific advances were incorporated in a cognitive neuroscience that pursued understanding of a complex mind/brain. Advances in brain science, especially in brain imaging, have provided a new basis for investigating the neural correlates of language and more broadly of consciousness. These scientific advances have provided a new avenue to tackle philosophical issues about the nature of mind and its relationship to the human brain.

Program Topics and Themes
The program will cover some major issues confronting linguistic research through an examination of the history of generative linguistics (focusing on Chomsky). We will also explore issues in cognitive science, evolutionary biology, cognitive neuroscience and philosophy of mind, focusing on the contributions these fields make to our understanding of language. Our readings will cover debates on the concept of linguistic rules, the nature of animal communication, and the acquisition of language by human infants. Further

topics include the evolution of language in human beings and the relationship of the human language capacity to music. We will discuss fundamental questions about consciousness and the relationship between mind and brain as we read both scientific and philosophical studies of the nature of cognition in relationship to the human capacity for language.

Although the program will spend considerable time understanding some of the results and methods of contemporary linguistics, it will not contain a "course" on linguistics. Rather it will attempt to embed the study of language in the larger enterprise of understanding the nature of the human mind and brain. It will address this task in an interdisciplinary way that draws from linguistics, cognitive science and philosophy (both philosophy of mind and philosophy of science).

Program Pedagogy
Program activities will include two structured seminars a week. These seminars will typically involve small group (4 person) discussion of a series of seminar questions, followed by a seminar of the full group assigned to each faculty member that will explore wider questions about the assigned readings and their implications for larger themes of the program. Three sessions per week will involve some combination of lecture and structured workshops. The quarter will culminate in a team project involving more extensive work with some topic related to the program. This will involve an individual paper and a group presentation on the topic growing out of individual research. One team might, for example, look at recent work on autism and language acquisition, another might explore communication in whales, another, might examine recent debates about the role of language in understanding human consciousness; and a fourth might examine recent work in computer translation of language or sociolinguistics.

Program READINGS (Books available from the bookstore to be read roughly in the order listed)
Noam Chomsky, *On Nature and Language*
Stephen Pinker, *Words and Rules: The Ingredients of Language*
Ray Jackendoff, *Language, Consciousness, Culture*
V S Ramachandran, *A Brief Tour of Human Consciousness: From Impostor Poodles to Purple Numbers*
Sue Savage-Rumbaugh, et. al., *Apes, Language and the Human Mind*
Paul Bloom, *How Children Learn the Meaning of Words*
Steven Mithen, *The Singing Neanderthals: The Origin of Music, Language, Mind, and Body*
Philip Lieberman, *Human Language and Our Reptilian Brain*
   (plus some additional reading of material available as handouts or web postings.

Program MEETING SCHEDULE
 Tuesday, 9-12 Lecture/Workshop (Sem 2 D1107); **Tuesday 1-4**   Seminar (Rachel, Sem 2 3107;
                   David,   Sem 2 3109
 Wednesday 9-1 Lecture/Workshop (Sem 2 D1107);
 Friday 9-12 Seminar (Rachel, Sem 2 3107; David, Sem 2 3109; **Friday 1-4** Lecture/Workshop
                   (Sem 2 D1107);

Program REQUIREMENTS (for credit and evaluation)
- Regular attendance and participation (more than 3 days of unexcused absence may result in loss of credit)
- Participation in 2 web discussions, 2 brief papers (3-page) based on seminar discussion questions
- An individual research paper (6-8 pages) related to team research project
- Participation in team research project, project presentation, and submission of related written material

Please note that this program will involve a substantial amount of reading outside of class, and the readings will generally be scientific or philosophical in nature, and often quite challenging. Furthermore, small-group activities in class will be a major component of our work, and will rely on students' having carefully read the assigned books in advance of our meetings. Therefore you will need to make sure that your schedule allows you to give considerable attention to your program work outside of class hours.