

Linguistics 4: Language as a Cognitive System

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Course Rationale and Objectives

Language has traditionally been identified as the distinguishing mark of our species. In the latter half of the 20th century, the study of language became a focal point of scientific research on human cognition, in hopes that it could provide us with a privileged window into the workings of the human mind. Since World War II, there have been tremendous advances in the fields of linguistics, cognitive psychology, neuroscience, and computer science. All of these disciplines have to varying degrees taken up the challenge of characterizing the human ability for language, and recent years have witnessed the advent of interdisciplinary studies of language, which allow us not only to fine tune our theories of language, but to constrain them as well.

This course will cover cognitive aspects of human language. Its purpose is to provide you with a body of sophisticated knowledge, based on current findings in the study of language, from which you can draw to:

- (1) critically evaluate articles on language appearing in the popular press; and
- (2) state the implications of language research for fundamental issues in cognitive science and linguistics.

Course Structure (tentative)

The course consists of two lectures of 80 minutes per week. Videotapes related to the topics that we cover will be shown in class.

The course will cover three different topics in language and cognition; each of these units will last for approximately three weeks. These topics cover the development of communicative and language abilities

- (1) across animal species,
- (2) across hominid species (the origins and evolution of language), and
- (3) across the human life span (language acquisition and loss).

After each of the first two topics there will be a test, which may include any of the following types of questions: multiple choice, fill-in-the-blank, and short answer. There will also be a cumulative final exam that covers the third topic in addition to material from the first two topics. The tests and final exam may include material from class lectures, the reading assignments, and videotapes designated as test material in class.

The first two tests will count for about 25% of your grade; the third test will constitute one half of the final exam, which itself will count for about 50% of your final grade. **The final exam will be on Thursday, March 18, from 3:00 to 6:00 p.m.**

Course Policies

Cheating on the homework, the tests, or the final exam will result in no credit for the homework, test, or exam in question, and you will be referred to your dean for disciplinary action. This is university policy and there will be no exceptions. **PLEASE NOTE:** If you turn in homework or a test/exam that resembles homework or a test/exam handed in by anyone else in this class or in previous classes like this one, that constitutes cheating. Also, plagiarism is also a clear violation of the university's academic integrity policy. Therefore, all work must be your own and no one else's. As there has been local media coverage of cheating on the UCSD campus in recent years, and as I have had to deal with several instances of cheating during this same time period, you should know that I feel very strongly about this issue and that I will handle all cases of cheating accordingly. I truly hope there will be no cause to discuss this issue any further this quarter, but if there is, I will strictly adhere to the policy outlined in this paragraph without exception.

Course Readings

All readings will be on electronic reserve at Geisel library. You can find the electronic reserves page for this course at:

<http://reserves.ucsd.edu>

Note that online materials like these are restricted by UCSD IP address, so you will only be able to view the readings from a campus computer, or from home if you are coming through the campus proxy. You can obtain information about off-campus proxy service from the library. If you have trouble with the proxy service, please contact the addresses listed in these handouts; we do not control the proxy service, and can do little to help you with it.

Syllabus and Readings

1. Sign System or Language?

The nature of sign systems; naturally occurring animal communication; trained animal communication; human and primate gesture; home sign systems; human sign languages.

Tuesday, 1/6: Overview of Course and Introduction—The Nature of Sign Systems

- *CEL*: Section 17, 'Semantics', pp. 100-102.
- *CEL*: Section 64, 'Language and other communication systems', pp. 400-402, 407 (first edition: 396-398, 403).
- *CEL*: 'Europe and America' (first paragraph), 'Saussurean principles', p. 411 (first edition: 407).

Thursday, 1/8: Naturally Occurring Animal Communication

- Wilson, E.O. (1972). 'Animal Communication'. Reprinted as Chapter 1 in Wang, W. S.-Y. (ed.), (1991), *The Emergence of Language: Development and Evolution; Readings from Scientific American Magazine*, pp. 3-15. New York, NY: W.H. Freeman.

- Milius, S. (1999). 'Look Who's Dancing: Check out the steps—and the songs—of honeybees' overlooked cousins'. *Science News* **155**, April 3, 1999, pp. 216-218.
- S.M. (1999). 'Nuptial balloons: Size doesn't matter'. *Science News* **155**, p. 267.
- Noad, M.J., Cato, D.H., Bryden, M.M., Jenner, M.-N., and Jenner, K.C.S. (2000). 'Cultural revolution in whale songs'. *Nature* **408**, p. 537.
- Zuberbühler, K. (2002). 'A syntactic rule in forest monkey communication.' *Animal Behaviour* **63** (2), pp. 293-299.

Tuesday, 1/13: Trained Animal Communication I

- Terrace, H.S., Petitto, L.A., Sanders, R.J., and Bever, T.G. (1979). 'Can an Ape Create a Sentence?' *Science* **206**, pp. 891-902.
- 'Transcript of the Chat with Koko'.
- 'Koko's World: Transcript for Webcast held November 29, 2000 at 3 p.m. PST'.

Thursday, 1/15: Trained Animal Communication II

- Linden, E. (1993). 'Can Animals Think?' (Cover Story), *Time*, March 22, 1993, pp. 54-61.
- Savage-Rumbaugh, S. and Lewin, R. (1994). 'Talking to Each Other'. Chapter 3 of *Kanzi: The Ape at the Brink of the Human Mind*, pp. 59-92. New York, NY: John Wiley and Sons.
- Keller, H. (1954). *The Story of My Life*, pp. 22-24, 316-317. Garden City, NY: Doubleday.
- Schaller, S. (1991). *A Man Without Words*, pp. 40-45. Berkeley, CA: University of California Press.

Tuesday, 1/20: Sign Language

- *CEL*: Section 35, 'Sign language', pp. 222-223 (first edition: 220-221).
- *CEL*: Section 36, 'Sign language structure', pp. 224-225 (first edition: 222-223).
- *CEL*: Section 37, 'Types of sign language', pp. 226-227 (first edition: 224-225).

Thursday, 1/22: Human and Primate Gesture, Home Sign Systems

- Iverson, J.M., and Goldin-Meadow, S. (1999). 'Why people gesture when they speak'. *Nature* **396**, p. 228.

Tuesday, 1/27: TEST ON UNIT 1

2. The Origins and Evolution of Language

The history of thought on the origins of language; hominid evolution; the evolution of the vocal tract; the bioprogram theory; gesture-based theories; language and brain evolution.

Thursday, 1/29: History of Thought on Language Origins

- *CEL*: Section 49, 'The origins of language', pp. 290-291 (first edition: 288-289).
- Pinker, S. (1994). 'The Big Bang', Chapter 11 of *The Language Instinct*, pp. 332-369. New York, NY: William Morrow and Company.
- Hauser, M.D., Chomsky, N., and Fitch, W.T. (2002). 'The Faculty of Language: What Is It, Who Has It, and How Did It Evolve?' *Science* **298**, pp. 1569-1579.

Tuesday, 2/3: Current Theories of Hominid Evolution

- D'Emilio, F. (1996). 'John Paul II backs theory of evolution'. *San Diego Union-Tribune*, October 25, 1996, pp. A1, A19.
- —(1996). 'New view says animals arose 1 billion years ago'. *San Diego Union-Tribune*, October 25, 1996, pp. A1, A19.
- Ritter, M. (1997). 'A bit closer to a common human-ape ancestor'. [no further reference available]
- Lafee, S. (1997). 'Bipedalism stories abound, but reason for adaptation remains trait secret' and 'Back to the future'. *The San Diego Union-Tribune*, July 30, 1997, pp. E1, E4.
- Holtz, R.L. (1995). 'Bones of New Human Ancestor Found in Africa'. *Los Angeles Times*, August 17, 1995, pp. A1 & A18.
- Wilford, J.N. (1998). 'Pre-Humans Stood Up and Walked 4 Million Years Ago, Researchers Say'. *New York Times*, May 10, 1998, p. B10.
- Wilford, J.N. (1999). 'Bones in Ethiopia May Help to Settle the Ape-Man Link'. *New York Times*, April 23, 1999, pp. A1 & A19.
- Wilford, J.N. (1999). 'Discovery Suggests Man Is a Bit Neanderthal'. *New York Times*, April 25, 1999, pp. A1 & A21.
- Lemonick, M.D. and Dorfman, A. (1999). 'Up From the Apes: Remarkable New Evidence is Filling In the Story of How We Became Human'. *Time Magazine*, August 23, 1999, pp. 50-58.
- Okoko, T. (2000). 'World's Oldest Fossil Hominids Discovered in Kenya'. <http://allafrica.com/stories/200012040191.html>

Thursday, 2/5: Evolution of the Vocal Tract

- *CEL*: Section 49, 'Scientific approaches', p. 292 (first edition: 290).
- Fitch, W.T. (2000). 'The evolution of speech: a comparative review'. *Trends in Cognitive Sciences* 4 (7), pp. 258-267.
- Bell, A.G., quoted in Winefield, R. (1987). *Never the Twain Shall Meet: Bell, Gallaudet, and the Communications Debate*, p. 70. Washington, D.C.: Gallaudet University Press.
- Wilford, J.N. (1998). 'Early man had gift of gab, so to speak'. *San Diego Union Tribune*, May 13, 1998, pp. E1, E4.
- Schmid, R.E. (1999). 'Could Neanderthals speak? Berkeley scientists skeptical'. *San Diego Union Tribune*, February 16, 1999, p. A5.
- ____ (2001). 'In the Beginning was the Vowel'. http://news.bbc.co.uk/1/hi/english/world/monitoring/media_reports/newsid_1480000/1480303.stm

Tuesday, 2/10: The Bioprogram Theory

- Bickerton, D. (1983). 'Creole Languages'. Reprinted as Chapter 5 in Wang, W. S.-Y. (ed.), (1991), *The Emergence of Language: Development and Evolution; Readings from Scientific American Magazine*, pp. 59-69. New York, NY: W.H. Freeman.

Thursday, 2/12: Gesture-Based Theories

- *CEL*: Section 49, 'Homo loquens', p. 293 (first edition: 291).
- Begley, S. (1999). 'Talking From Hand to Mouth'. *Newsweek*, March 15, 1999, pp. 56-58.
- Corballis, M.C. (1999). 'The Gestural Origins of Language'. *American Scientist* 87 (2), pp. 138-145.

- Meiselas, S. (1999). 'A Linguistic Big Bang'. *New York Times Magazine*, October 25, 1999.

Tuesday, 2/17: Language and Brain Evolution

Thursday, 2/19: TEST ON UNIT 2

3. Language Development in the Individual

First language acquisition; language attrition in bilinguals; language and aging.

Tuesday, 2/24: Theories of Language Acquisition—Nature vs. Nurture

- *CEL*: Section 38, 'Investigating children's language', pp. 230-237 (first edition: 228-235).
- Gould, J.L. and Marler, P. (1987). 'Learning by Instinct'. Reprinted as Chapter 7 in Wang, W. S.-Y. (ed.), (1991), *The Emergence of Language: Development and Evolution; Readings from Scientific American Magazine*, pp. 88-103. New York, NY: W.H. Freeman.
- Thomson, J. (2001). 'Squeak first'. <http://www.nature.com/nsu/011227/011227-11.html>

Thursday, 2/26: Phonetic and Phonological Development

- *CEL*: Section 39, 'The first year', pp. 238-241 (first edition: 236-239).
- Eimas, P.D. (1985). 'The Perception of Speech in Early Infancy'. Reprinted as Chapter 9 in Wang, W. S.-Y. (ed.), (1991), *The Emergence of Language: Development and Evolution; Readings from Scientific American Magazine*, pp. 117-127. New York, NY: W.H. Freeman.
- *CEL*: Section 40, 'Phonological development', pp. 242-243 (first edition: 240-241).

Tuesday, 3/3: Grammatical and Semantic Development

- *CEL*: Section 41, 'Grammatical development', pp. 244-245 (first edition: 242-243).
- *CEL*: Section 42, 'Semantic development', pp. 246-247 (first edition: 244-245).
- *CEL*: Section 43, 'Pragmatic development', pp. 248-249 (first edition: 246-247).
- Moskowitz, B.A. (1978). 'The Acquisition of Language'. Reprinted as Chapter 10 in Wang, W. S.-Y. (ed.), (1991), *The Emergence of Language: Development and Evolution; Readings from Scientific American Magazine*, pp. 131-149. New York, NY: W.H. Freeman.

Thursday, 3/5: Language Attrition in Bilinguals (guest lecture)

- Fishman, J.A. (1981). 'Language policy: past, present, and future'. Chapter 23 in Ferguson, C.A. and Heath, S.B. (eds.), *Language in the USA*, pp. 516-526. New York, NY: Cambridge University Press.

Tuesday, 3/10: Language and Aging

- Kolata, G. (1995). 'Research Links Writing Style to the Risk of Alzheimer's'. *New York Times*, February 21, 1995, p. A7.

Thursday, 3/12: REVIEW

THE FINAL EXAM WILL BE ON THURSDAY, MARCH 18, FROM 3:00 P.M. TO 6:00 P.M.