

Last update: August 19, 2009

# In a Word

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Time: T, TH, 11:00-12:20

Location: THH 102

Instructor: Prof. Hagit Borer

Office hours—Th. 1-3pm GFS 301A and by appt.

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Words, the most fundamental building blocks of sentences, are the most natural, accessible units of our language. The existence of words as discreet units seems very intuitive and straightforward to us, and intimately connected to our thought processes. But as it turns out, words present a huge mystery to modern scientists. For instance, the number of words known by adults is typically underestimated, and most people believe that vocabulary size is directly linked to literacy. And yet, linguists have determined that an average, normal adult, regardless of his or her level of education, knows approximately 50,000 words (although, of course, these words may vary according to type of education and background). But how is it possible for a child to learn so many words, in what appears to be a relatively short period of time? Others believe that our vocabulary determines how we think, and that as a result, the nature of thought itself may vary from one language community to the next. But linguists now believe that most language systems are fundamentally similar to one another, and that there is no evidence that our speech patterns determine our thinking.

When scientists attempt to make more explicit what it means for all of us to routinely use and understand so many words, they are faced with many important, non-trivial questions. How do we extract words, with their specific meaning, from the acoustic jumble of speech? How do we know when strike is a noun and when it is a verb? How do we know that *transformationalize* is probably a word in English, even if we don't know what it means, but that *transformize* is not? How do children, at such a young age, learn all this? And most puzzling of all, how have humans evolve to have such a unique ability which is not shared by our closest primate relatives, smart as they no doubt are.

At the very least, finding the answers to these questions gives us a very special window to the workings of the human mind. In this course, we will explore what makes using language in general and words in particular a difficult task in principle, and how we think humans do it. We will learn how to assign structure to words, and how they interact with other words, we will look at how children acquire words and what goes wrong when the ability to use words is lost as a result of illness or aging. We will investigate how words are used in different social groups, including gender, class, race, and age, and finally, we will share some informed speculations on how language may have evolved.

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## Why Take this Class?

The goals of this course are to help:

- gain a scientific understanding of human language as a system of complex mental computation.
- develop the ability to analyze complex phenomena in precise terms.
- assess critically the way in which scientific discoveries in various fields can interact to give rise to the understanding of a single phenomenon.

Even if you don't plan to pursue a career in language or a language-related area, an awareness of the nature of the subject-matter and its complexity will enhance your ability to assess critically any other aspect of human behavior which you may choose to study.

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# Course Outline

The course will be structured around various word-related tasks that humans carry out effortlessly every day (recognizing words in a sound wave; segmenting a complex word into its parts; assessing the meaning of a word in a social context; etc.). As we examine each task and see what makes it complex or difficult, we will discuss how linguists, psycholinguists, evolutionary biologists, sociolinguists and philosophers explain this behavior. In lab, you'll have an opportunity to explore data bases both of adult and child speech, and to apply the analytic tools you learned in class. In addition, you will be engaged in manipulating and editing sound waves, practicing knowledge that was acquired in class.

This class will be using **Blackboard**. All students are expected to have an active personal aludra account, and to know how to log into it.

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## Reading

Reading for the course consist of a textbook and articles and links that are posted on Blackboard

- The text book, *The Language Instinct* by Stephen Pinker, is available at the bookstore and is on reserve in the Leavy Library.
- Supplementary readings, optional but highly recommended, are posted at the end of the syllabus, and as links in the links part of Blackboard.

Readings are due for the class that they are listed with.

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## Course requirements and grades:

- Exams (midterm, final): 42 points (21 points each) (final is NOT cumulative)
- Quizzes: 10 points (lowest quiz dropped)
- Homework Assignments 1-4: 5 points each (lowest assignment dropped)
- Homework Assignment, Morphology: 12 points
- Lab assignments 1-4: 7 points each (lowest assignment dropped)

Attendance is expected in lectures and in lab/section meetings.

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## Discussion Sections

Discussion sections meet weekly at the time specified in your schedule of classes. They are sometimes devoted to discussion and review of class material, at which times they meet in the room advertized in the schedule. At other times they are devoted to lab exercises, and meet in computer labs. Please consult the syllabus of your section to find out where your lab meetings are held!

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## Quizzes:

The purpose of the quizzes is twofold: to encourage you to review previous class material before you come to the next lecture, and to reward class attendance. There will be up to 10 quizzes during the term. If you ARE in class during the quiz, and if you have been attending class regularly and you do the readings, you should have no problem getting perfect scores in the quizzes.

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# Homework and lab assignments:

## Homework Assignments:

Some homework assignments will be distributed in discussion sections and some in lectures, but all will be collected in lab/discussion sections or, when required, submitted using the Blackboard digital drop box. All assignments are to be done independently. Assignments will be handed out at least one week prior to due date, and are to be turned in at (or before) the beginning of section on the date due. Late assignments will not be accepted without a very good reason (e.g. demonstrable illness or a life-changing event). If you know you need to turn something in late or if you know you will miss an exam, you are strongly advised to contact the professor or to the teaching assistants ahead of time. Remember, the lowest homework assignment (excluding morphology) will be dropped .

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## Lab Assignments:

While taking labs, you will be given an assignment involving the use of a computer and special software. Lab assignments are due by the beginning of the next discussion section meeting, and may often be submitted through the drop box in Blackboard. Normally, students are expected to complete lab assignments during the lab session but failing that, they may continue working on their assignment, providing such work is completed by the due date and is submitted by the deadline. Remember, the lowest lab assignment will be dropped.

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## **Academic Integrity:**

We expect that all students will uphold the USC Student Conduct Code. Because violations of the code harm every other student in the class, the instructors will aggressively prosecute any student who cheats on an exam or homework or who allows others to cheat on an exam or homework.

- Please Note: SCampus 2002-2003 (p. 95 under Academic Policies): "Notes or recordings made by students based on a university class or lecture may only be made for purposes of individual or group study, or for other non-commercial purposes...This restriction also applies to any information distributed, disseminated or in any way displayed for use in relationship to the class, whether obtained in class, via email or otherwise on the Internet, or via any other medium. Actions in violation of this policy constitute a violation of the Student Conduct Code, and may subject an individual or entity to university discipline and/or legal proceedings."

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## **Students with Disabilities:**

Students who need to request accommodations based on a disability are required to register each semester with the Disability Services and Programs. In addition, a letter of verification to the instructor from Disability Services and Programs is needed. If you have any questions, please consult the instructor and Disability Services & Programs (213 740-0776, STU 301).

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# Course Outline and Schedule

Week/Lect	Date	Lecture and Reading
1.1	8/25	Organizational Matters. An Introduction to the Scientific Study of Language and Words I. <b>Required Reading:</b> 1. Pinker, Ch. 1,2 2. Hotz, "Scalpel, a Life, and Language", from the LA Times, January 24, 2000.
1.2	8/27	An Introduction to the Scientific Study of Language and Words II <b>Reading:</b> Pinker, Ch. 1,2
2.1	9/1	Film: Colorless Green Ideas
2.2.	9/3	Concepts (I): Concepts and Prototypes <b>Reading:</b> Aitchinson pp. 41-58, 66-74
3.1	9/8	Concepts (II): Semantic Networks. <b>Reading:</b> J. Aitchinson 84-101
3.2	9/10	Parts of Speech I: free forms vs. bound forms. Lexical words vs. functional words and morphemes. <b>Optional Reading:</b> Pinker Ch. 5
4.1	9/15	Parts of Speech II <b>Optional Reading:</b> Pinker Ch. 5

4.2	9/17	<p>Morphology and Word Structure (I)</p> <p><b>Reading:</b> "Morphology: The Study of Word Structure," ODA Ch. 4, pp. 111-136, 143-146 .</p> <p><b>Optional Reading:</b> Pinker Ch. 5</p>
5.1	9/22	<p>Morphology and Word Structure (II)</p> <p><b>Reading:</b> "Morphology: The Study of Word Structure," ODA Ch. 4, pp. 111-136, 143-146</p> <p><b>Optional Reading:</b> Pinker Ch. 5</p>
5.2	9/24	<p>Morphology and Word Structure (III)</p> <p><b>Reading:</b> "Morphology: The Study of Word Structure," ODA Ch. 4, pp. 111-136, 143-146 .</p> <p><b>Optional Reading:</b> Pinker Ch. 5</p>
6.1	9/29	<p>Morphology and Word Structure (IV)</p> <p><b>Reading:</b> "Morphology: The Study of Word Structure," ODA Ch. 4, pp. 111-136, 143-146 .</p> <p><b>Optional Reading:</b> Pinker Ch. 5</p>
6.2	10/1	<p>The Acquisition of Words</p> <p><b>Reading:</b></p> <ol style="list-style-type: none"> <li>1. M. Bowerman: "The Child's Expression of Meaning", F&amp;B pp. 106-117</li> <li>2. E. Clark: "Lexical Innovations", F&amp;B pp. 118-129</li> </ol>
7.1	10/6	Midterm review

7.2	10/8	<b>Midterm</b>
8.1	10/13	Guest Lecture: Phonetics, Professor Dani Byrd
8.2	10/15	open
9.1	10/20	The Sound of Words: Syllables and stress Relevant Linguistics pp. 51-57
9.2	10/22	Film: Playing the Language Game
10.1	10/27	The Acquisition of Words – sound <b>Reading:</b> to be assigned
10.2	10/29	Semantics (I): Set Theoretical Considerations <b>Reading:</b> to be assigned
11.1	11/3	Semantics (II): The Interpretation of Quantifiers <b>Reading:</b> to be assigned
11.2	11/5	Semantics (III): The Interpretation of Disjunction and Conjunction <b>Reading:</b> to be assigned
12.1	11/10	The Acquisition of Quantifiers <b>Reading:</b> <a href="#">Acquisition of Semantics</a> (S. Crain; <i>MIT Encyclopedia of Cognitive Sciences</i> )
12.2	11/12	Guest Lecture: L2 Acquisition and Bilingualism, Ms. Emily Hinch
13.1	11/17	Brain and Language I <b>Reading:</b>

		<ol style="list-style-type: none"> <li>1. Pinker, Ch. 10</li> <li>2. H. Gardner: "The Loss of Language" CER Ch. 12 226-237</li> </ol> <p>Additional readings to be assigned</p>
13.2	11/19	<p>Brain and Language II</p> <p><b>Readings:</b></p> <ol style="list-style-type: none"> <li>1. Pinker, Ch. 10</li> <li>2. H. Gardner: "The Loss of Language" CER Ch. 12 226-237</li> </ol> <p>Additional readings to be assigned</p>
14.1	11/24	<p>The Evolution of Language</p> <p><b>Reading:</b> Hauser, Chomsky and Fitch, Science vol. 298, pp. 1569-1579</p> <p>Additional readings to be assigned</p>
	11/26	THANKSGIVING
15.1	12/1	Film: American Tongues
15.2	12/3	<p>Words in a Social Context: Dialects of Languages</p> <p><b>Reading:</b> "Language Variation among Social Groups: Dialects," Finegan Ch.11, pp. 369-425</p>



## References:

Aitchinson, J. *Words in the Mind*, 2nd edition. Oxford: Blackwell. Relevant parts on Blackboard.

Clark, V. P. Eschholz and A. Rosa, *Language: Introductory Readings*, 5th edition. New York: St. Martin's Press, 1994 (CER). Relevant parts on Blackboard.

Franklin, M.B. and S. Barten *Child Language, a Reader*. Oxford: Oxford University Press, 1988 (F&B). Relevant parts on Blackboard.

Finegan, E. *Language: Its Structure and Use*, 3rd edition. Harcourt Brace College Publishers. Relevant parts on Blackboard.

Hauser, M., N. Chomsky and W. T. Fitch, "The faculty of language: what is it, who has it, and how did it evolve", *Science* vol. 298, pp. 1569-1579

O'Grady, W., M. Dobrovolsky, and M. Aronoff, *Contemporary Linguistics: an Introduction*, 2nd edition. New York: St. Martin's Press (ODA). Relevant parts on Blackboard.

Pinker, S. *The Language Instinct*. New York: William Morrow and Company. Required Textbook.

Justice, P. *Relevant Linguistics*. Chicago: Chicago University Press. Relevant parts on Blackboard.

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# Background Reading (Optional)

## Week 1:

['Children Creating Core Properties of Language: Evidence from an Emerging Sign Language in Nicaragua'](#) [Senghas et al., *Science* 17 September 2004: Vol. 305. no. 5691, pp. 1779 - 1782]

['Word Learning in a Domestic Dog: Evidence for "Fast Mapping"'](#), [Kaminsky et al., *Science* 11 June 2004: Vol. 304. no. 5677, pp. 1682 - 1683]

## Weeks 4-6:

['Computational Constraints on Syntactic Processing in a Nonhuman Primate'](#) [Fitch and Hauser., *Science* 16 January 2004: Vol. 303. no. 5656, pp. 377 - 380]

## Weeks 9-10:

['Language Discrimination by Human Newborns and by Cotton-Top Tamarin Monkeys'](#) [Ramus et al., *Science* 14 April 2000: Vol. 288. no. 5464, pp. 349 - 351]

[Phonetics: The Sounds of English and Spanish \(University of Iowa\)](#)

[Alexander Melville Bell's Visible Speech \(Wikipedia article, with links\)](#)

## Week 14:

['FOXP2 in focus: what can genes tell us about speech and language?'](#) [Marcus & Fisher, *Trends in Cognitive Sciences, Volume 7, Issue 6, June 2003, Pages 257-262*]

['The Faculty of Language: What Is It, Who Has It, and How Did It Evolve?'](#) [Hauser, Chomsky & Fitch, *Science* 22 November 2002: Vol. 298. no. 5598, pp. 1569 - 1579]

[Linguistics and Language](#) (*MIT Encyclopedia of Cognitive Sciences* - Various Entries)

**Week 15:**

[Speaking in Tongues](#) [Pennisi., *Science* 27 February 2004: Vol. 303. no. 5662, pp. 1321 - 1323]

[Genes, Peoples and Languages](#) [Cavalli-Sforza, *Proc. Natl. Acad. Sci. USA*, Vol. 94, pp. 7719-7724, July 1997]

[Farmers and their Languages: the First Expansions](#) [Diamond and Bellwood, *Science* 25 April 2003: Vol. 300. no. 5619, pp. 597 - 603]

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[The USC Linguistics Department home page](#)

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