

Ling 407: Atypical Language

Class info:

Time: TTh 11-12:20

Place: GFS 217

Instructor:

Prof. Roumyana Pancheva

Office: GFS 301S

Office hours: TTh 9:30-10:30 and by appointment

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Credit: National Aphasia Association

Synopsis:

This course is an introduction to language disorders throughout the lifespan. Its main goal is to elucidate the nature of the human faculty of language through the prism of genetic and acquired deficits. The emphasis is on theory, not clinical applications, although some issues of treatment, as well as larger social relevance will be briefly discussed. Mostly, the focus will be on the implications of atypical language for linguistic science, cognitive psychology and neuroscience.

The course is structured as follows: (i) A series of introductory lectures covers fundamental issues in the cognitive neuroscience of language, such as the biological basis of language, its relation to other cognitive capacities, its neural organization, and the methods for studying language in the brain. (ii) The second part of the course examines language loss in acquired neurological disorders, followed by an overview of language deficits caused by neurodegenerative diseases. (iii) The effects of sensory deprivation and neurodevelopmental disorders on language acquisition are studied next. (iv) In the final part of the course, students present projects on topics of their choice, pertaining to atypical language.

Requirements:

• Midterm Exams

There will be 2 *in-class* midterm exams, given on October 6 and November 12. The exams will include language samples for analysis, problem sets and questions based on the content of the readings and the discussions in class. The second exam will test material studied after the first, i.e., it will not be cumulative. If you have to be absent on the day of the exams (very good reasons only!), *let me know well in advance*, so that we can arrange for an alternate date.

- **Research Project**

You need to complete a research project on a topic pertaining to atypical language. The write-up will be due on December 15 by 10am (the scheduled time for an in-class final). Late submissions will be marked down by 10% for each day after the deadline, and will *not* be accepted after 10am on December 17. The project should be done independently and should be submitted electronically, through Blackboard. A critical review of the literature, an original analysis of language data, or a well-motivated proposal for an experiment are all possible options for your project. You should discuss with me your ideas by the end of October. There is no length requirement for the paper; about 8-10 single-spaced pages is reasonable.

- **Class Presentation**

In the last part of the course, you will give a class presentation of your project. Plan to speak for 20 minutes, and prepare a handout or slides to help guide your audience.

- **Quizzes**

There will be frequent quizzes based on the assigned papers, lecture notes, and discussions. If you've done the readings and paid attention in class, you'll have no problem completing the quizzes correctly.

- **Class attendance and participation**

You are expected to attend every class, unless some special circumstance arises, in which case you should let me know ASAP, ideally in advance. Attendance will be recorded. If you are absent *without a valid excuse* on the day of a quiz or an exam, you will receive 0. You should complete the assigned readings on time and comment on them in class, ask and answer questions, suggest ideas – i.e., participate actively.

Grading:

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|----------------------|-----|
| • Midterm Exam 1 | 20% |
| • Midterm Exam 2 | 20% |
| • Class Presentation | 15% |
| • Final Project | 25% |
| • Quizzes | 20% |

Readings:

There is no textbook for this course. Readings are general overview chapters or research articles, selected from the books listed below, or from journals, as referenced on the schedule. Some of the readings are available electronically, either through USC's library or on Blackboard. A master copy of the remaining readings is available on reserve at the Linguistics Department (301 GFS, 740-2986).

- A&L Anderson, S. and D. Lightfoot. 2002. *The Language Organ: Linguistics as Cognitive Physiology*. Cambridge University Press.
- E Emmorey, K. 2002. *Language, Cognition and the Brain*. Lawrence Erlbaum.
- F Fromkin, V. et al. 2000. *Linguistics: An Introduction to Linguistics Theory*. Blackwell.
- G Grodzinsky, Y. and K. Amunts (eds.). 2006. *Broca's Region: Mysteries, Facts, Ideas, and History*, Oxford University Press.
- GI Gleason, J.B. 2004. *The Development of Language*. 6th ed. Boston, MA: Allyn & Bacon.
- GI&M Gazzaniga, M. S., R. B. Ivry & G. R. Mangun (eds.). 2008. *Cognitive Neuroscience: The Biology of the Mind*. 3rd ed. New York: W. W. Norton & Company.
- H&S Hoff, E. and M. Shatz. 2009. *Blackwell Handbook of Language Development*. Wiley-Blackwell.
- I Ingram, J. 2007. *Neurolinguistics. An Introduction to Spoken Language Processing and its Disorders*. Cambridge University Press.
- J Jenkins, Lyle. (ed.) 2004. *Variation and Universals in Bilingualistics*. Elsevier.
- KS&J Kandel, E. Schwartz J., & Jessell T. (eds.) 2000. *Principles of Neural Science* 4th ed. McGraw-Hill.
- L Leonard, L. 2000. *Children with Specific Language Impairment*. Cambridge, MA: MIT Press.
- LP LaPointe, L. (ed.) 2004. *Aphasia and Related Neurogenic Language Disorders*. 3rd ed.
- T Tager-Flusberg, H. (ed.) 1999. *Neurodevelopmental Disorders*. Cambridge, MA: MIT Press.
- V Vinson, B. 2007. *Language Disorders Across the Lifespan*. Thomson Delmar Learning

Academic Integrity: You are expected to adhere to the principles of academic integrity. Any work submitted and ideas expressed need to be your own. If you use someone else's idea, this needs to be explicitly acknowledged. Quizzes and exams are to be done independently. You may discuss your final project with others but you need to write it up yourself. Any violation of academic integrity will be reported to the office of Student Judicial Affairs and Community Standards. Please consult The Undergraduate Guide for Avoiding Plagiarism at: <http://www.usc.edu/student-affairs/SJACS/forms/tig.pdf>

Students with Disabilities: Students requesting academic accommodations based on a disability are required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me early in the semester. DSP is located in STU 301; (213) 740-0776. http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html

Course Outline:

The schedule of topics and readings may undergo changes, which will be announced in class.

Part I: Fundamental Issues in the Cognitive Neuroscience of Language

8/25 **Overview of the Course**

8/27 **Language as a Cognitive Faculty**

Reading:

- Anderson and Lightfoot 2002. "Studying the Human Language Faculty" in A&L, chapter 1, pp. 1-17. [Electronic access at USC library]
- Anderson and Lightfoot 2002. "Language as a Mental Organ" in A&L, chapter 2, pp. 18-40. [Electronic access at USC library]
- *Optional:* Fromkin, V. et al. 2000. "Linguistics: The Scientific Study of Human Language" in F, chapter 1, pp. 3-21. (A brief overview of key linguistic concepts and terms) [Electronic copy on Blackboard]

9/1 **Goals and Methods of Cognitive Neuroscience. Overview of Brain Structure and Cognitive Function**

Reading:

- Gazzaniga, Ivry & Mangun 2008. "The Methods of Cognitive Neuroscience", in GI&M, chapter 4, 110-117, 125-126, 129-163.
- Gazzaniga, Ivry & Mangun 2008. "Neuroanatomy and Development", in GI&M, chapter 3, 59-84, 101-109.

9/3 **The Biological Bases of Language**

Reading:

- Gazzaniga, Ivry, & Mangun 2008. "Language", in GI&M, chapter 10, 389-444.
 - Poeppel, D. and Hickok, G. 2004. "Towards a New Functional Anatomy of Language". *Cognition* 92, 1-12.
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Part II: Language Loss in Acquired and Neurodegenerative Disorders

9/8 **Overview of Aphasia Syndromes**

Reading:

Dronkers, Pinker and Damasio 2000. "Language and the Aphasias" in KS&J, chapter 59, 1169-1187.

9/10 **Broca's and Wernicke's Aphasia**

Reading:

- Kearn's 2005 "Broca's Aphasia" in LP, chapter 8, 117-141
 - Caspari 2005 "Wernicke's Aphasia" in LP, chapter 9, 142-154
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9/15 **Syntactic Deficits in Aphasia**

Reading:

Grodzinsky 2006. "A Blueprint for a Brain Map of Syntax" in G, chapter 6, 83-107.

9/17 **Lexical Deficits in Aphasia**

Reading:

- Ingram 2007. "Lexical Semantic Disorders in Aphasia" in I, chapter 11, 221-238.
 - Caramazza and Shapiro 2004. "The Representation of Grammatical Knowledge in the Brain" in J, chapter 7, 147-170.
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9/22 **Phonological Deficits in Aphasia**

Reading:

Ingram 2007. "Disorders of Auditory Processing" in I, chapter 8, 155-175.

9/24 **Sign Language Aphasia**

Reading:

Hickok, G. et al. 2002. "Sign Language in the Brain" *Scientific American*, 284 (6), 58-65.

9/29 **Acquired Dyslexia and Agraphia**

Reading:

- Webb 2005. "Acquired Dyslexias: Reading Disorders Associated with Aphasia" in LP, chapter 6, 83-96.
- McNeil and Tseng 2005. "Acquired Neurogenic Agraphias: Writing Problems" in LP, chapter 7, 97-116.

10/1 **Alzheimer's Disease and Other Neurodegenerative Disorders**

Reading:

Vinson 2007. "Alzheimer's Disease and Other Types of Dementia" in *Language Disorders Across the Lifespan*, chapter 12, 417-447.

10/6 **In-class Midterm Exam 1**

10/8 **Synthesis**

Part III: Atypical Language Acquisition

10/13 **Overview of Atypical Language Acquisition.**

Reading:

Ratner 2004. "Atypical Language Development" in GI, chapter 9, 347-408.

10/15 **Specific Language Impairment - General Characterization**

Reading:

- Leonard 2000. "The Genetics and Neurobiology of SLI", in L, chapter 7, 149-162.
- Leonard 2000. "Characterizing the Language Deficit: Basic Concepts", in L, chapter 2, 27-39.

10/20 &
10/22 **Deficits of Grammar in Specific Language Impairment**

Reading:

Rice 1999. "Specific Grammatical Limitations in Children with Specific Language Impairment", in T, ch.14, pp. 331-359.

10/27 & **Williams Syndrome**
10/29
Reading:
Bellugi et. al. 1999. "Linking Cognition, Brain Structure and Brain Function in Williams Syndrome" in T, chapter 5, pp. 111-136.

11/3 **Autism and Down Syndrome**
Reading:
Tager-Flusberg 2006. "Atypical Language Development: Autism and Other Neurodevelopmental Disorders" in H&S, chapter 21, pp. 432-453.

11/5 **The Impact of Sensory Deficits on Language Acquisition**
Reading:
Emmorey 2002. "The critical period hypothesis and the effects of late language acquisition" in E, ch 6, 205-226.

11/10 **Developmental Dyslexia and Agraphia**
Reading:
Vinson 2007. "Spelling and Reading Disorders" in V, ch. 7, 245-292

11/12 **In-class Midterm Exam 2**

11/17 **Conclusions**

Part IV: Project Presentations

11/19 & **Student Presentations**
11/24

11/26 **No class - Thanksgiving**

12/1 & **Student Presentations**
12/3

12/15 **Research project due by 10am, on Blackboard**
