Cognitive Science 153 and 253
Language Comprehension
Winter, 2011

Instructor

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Course Description

This class is an introduction to the cognitive processes and representations that underlie language comprehension. We will look at how comprehenders access and represent the entities, events, or categories that language refers to, what grammar contributes and how it's processed, how people take context into account, how they make predictions over the course of an utterance about what will come next, whether and how they maintain multiple possible interpretations of an utterance, and how they deal with figurative language.

Who this class is for

Students will most likely get the most out of COGS 153 if they have already taken a number of lower-division COGS, PSYC, or LIGN classes, as well as COGS 101C, though none of these are obligatory prerequisites. Other classes that might prepare the student for this class, but are also not required, include COGS 151 or LIGN 4, 101, 130, 170, or 172.

Time and location

COGS 153 and 253:	WLH 2207 M,W,F 11-11:50
COGS 253	CSB 003 F 9-11

Expectations

1. Attend all class meetings, and do all readings before the assigned class meeting.

2. Conduct yourself according to the UCSD regulations on academic honesty: http://senate.ucsd.edu/manual/appendices/app2.htm

3. Be an active learner: ask questions, participate in discussions, delve into things you're interested in

Coursework and evaluation

Homework assignments	60%
Of varying form and content	
Project proposal	30%
Detailed description of a novel research project on language comprehension (including research question, hypothesis, method, and expected results)	
Attendance and participation	5%
Be here, be active, get used to it.	
Research beyond the classroom	5%
Either participate in 1 hour of language-related research (through Experimetrix: https://experimetrix2.com/ucsd/ or other approved studies) or read a designated research article. Submit a summary of the study.	

Schedule *(provisional!)*

Date	*Topic*	*Reading*	*Assignment*
1.3	Introduction	R1	
1.5	Word meaning 1: The mental lexicon	R2	HW1 assigned
1.7	Word meaning 2: Grounding meaning	R3	
1.10	Word meaning 3: More grounding meaning	R4	
1.12	Grammar and meaning 1	R5	HW1 due
1.14	Grammar and meaning 2	R6	HW2 assigned
1.17	*MLK Day holiday*		
1.19	Grammar and meaning 3	R7	
1.21	Incrementality	R8	HW2 due
1.24	Prediction 1	R9	HW3 assigned
1.26	Prediction 2	R10	
1.28	The brain 1	R11	
1.31	The brain 2	R12	HW3 due
2.2	Ambiguity	R13	HW4 assigned
2.4	Memory	R14	
2.7	Serial or parallel processing?	R15	
2.9	Physical context 1	R16	HW4 due
2.11	Physical context 2	R17	HW5 assigned
2.14	Discourse context	R18	
2.16	Gesture	R19	
2.18	Prosody	R20	HW5 due
2.21	*Presidents Day holiday*		
2.23	Metonymy	R21	
2.25	Metaphor 1	R22	HW6 assigned
2.28	Metaphor 2	R23	
3.2	Metaphor 3	R24	
3.4	Fictive motion 1	R25	
3.7	Fictive motion 2	R26	HW6 due
3.9	Depth of processing	R27	
3.11	Wrap-up		Final project due

Readings *(all available online)*

R1 Tanenhaus, M.K., & Trueswell, J.C., (1995). Sentence comprehension. In J.L. Miller and P.D. Eimas (Eds.) *Handbook of Perception and Cognition*, 2nd edition. Vol. 11: Speech, Language, and Communication. NY: Academic Press. Pp. 217-262. http://www.nbu.bg/cogs/events/2008/tanenhaustrueswell.pdf

R2 Elman, J. (2004) An alternative view of the mental lexicon. *Trends in Cognitive Sciences*, 8(7):301-306. http://crl.ucsd.edu/~elman/Papers/elman_tics_opinion_2004.pdf

R3 Barsalou, L.W., Simmons, W.K., Barbey, A., & Wilson, C.D. (2003). Grounding conceptual knowledge in modality-specific systems. *Trends in Cognitive Sciences* 7, 84-91. http://www.psychology.emory.edu/cognition/barsalou/papers/Barsalou_et_al_TICS_2003_grounding_knowledge.pdf

R4 Symbol grounding and meaning: A comparison of high-dimensional and embodied theories of meaning. Glenberg, A. M.; Robertson, D. A.; *Journal of Memory & Language*, Vol 43(3), Oct 2000. pp. 379-401. http://psych.wisc.edu/glenberg/Papers/Symbol%20grounding.pdf

R5 Adele E. Goldberg. 2003. Constructions: A new theoretical approach to language. *Trends in Cognitive Science*. http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.123.3311&rep=rep1&type=pdf

R6 Kaschak, Michael P. and Arthur M. Glenberg 2000, Constructing meaning: The role of affordances and grammatical constructions in sentence comprehension, *Journal of Memory and Language* 43: 508-529. http://www.psy.fsu.edu/~kaschaklab/ConstructingMeaning.pdf

R7 Bergen, Benjamin and Kathryn Wheeler (2010). Grammatical Aspect and Mental Simulation. *Brain & Language* 112:150-158. http://www.cogsci.ucsd.edu/~bkbergen/papers/bergenwheelerBL.pdf

R8 Sedivy, J. C., M. K. Tanenhaus, G. C. Chambers, and G. N. Carlson. Achieving incremental semantic interpretation through contextual representation. *Cognition* 71 (1999): 109-147. http://www.bcs.rochester.edu/people/mtan/publications/1999Sedivy_etal.pdf

R9 Tanenhaus at al. (1996) http://acl.ldc.upenn.edu/P/P96/P96-1007.pdf
Kamide, Yuki, Gerry Altmann, and Sarah L. Haywood. 2003. The time-course of prediction in incremental sentence processing: Evidence from anticipatory eye movements. *Journal of Memory and Language* 49, 133-156. http://web.me.com/silvia_gennari/page1/assets/kamide_et_al03.pdf plus Corrigendum: http://homepage.mac.com/gerry_altmann/research/papers/files/erratum.pdf

R10 McRae, K., Hare, M., Elman, J.L., & Ferretti, T. (2006). A basis for generating expectancies for verbs from nouns. *Memory and Cognition*, 33, 1174-1184. http://crl.ucsd.edu/~elman/Papers/McRae_Hare_Elman_Ferretti-MemCog.pdf

R11 Kutas, M. and Schmitt, B.M. Language in microvolts, In: Banich, M.T. and Mack, M. (Ed). *Mind, brain, and language: Multidisciplinary perspectives*, Lawrence Erlbaum Associates: NJ, 2003, pp. 171-209. http://kutaslab.ucsd.edu/people/kutas/pdfs/2003.MBL.171.pdf

R12 Kaan, E. and Swaab, T. 2002. The brain circuitry of syntactic comprehension. *Trends in Cognitive Sciences*, 6. http://faculty.washington.edu/losterho/kaan_and_swaab.pdf

R13 Altmann, G.T.M. (1998). Ambiguity in sentence processing. *Trends in Cognitive Sciences*, 2, 146-151. http://www.coli.uni-saarland.de/courses/FLST/2007/slides/tics-altmann.pdf

R14 Gordon, P.C., R. Hendrick, and W. H. Levine. Memory-load interference in syntactic processing. *Psychological Science* 13 (2002): 425-430. http://www.jstor.org/stable/40063874

R15 Gibson, E., and N. Pearlmutter. "Distinguishing serial and parallel parsing." *Journal of Psycholinguistic Research* 29 (2000): 231-240. http://springerlink.metapress.com/content/r8ju662781p13855/fulltext.pdf

R16 Tanenhaus, M., M. Spivey-Knowlton, K. Eberhard, and J. Sedivy. Integration of visual and linguistic information in spoken language comprehension. *Science* 268 (1995): 1632-1634. http://www.bcs.rochester.edu/people/mtan/publications/1995Tanenhaus_Sci.pdf

R17 Michael J. Spivey, Michael K. Tanenhaus, Kathleen M. Eberhard and Julie C. Sedivy. 2002. Eye movements and spoken language comprehension: Effects of visual context on syntactic ambiguity resolution. *Cognitive Psychology* 45:4, 447-481. http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.131.8166&rep=rep1&type=pdf

R18 Wolf, F., E. Gibson, and Desmet. Discourse coherence and pronoun resolution. *Language and Cognitive Processes* 19 (2004): 665-675. http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.114.5294&rep=rep1&type=pdf

R19 Wu, Y.C. & Coulson, S. (2007). How iconic gestures enhance communication: An ERP study. *Brain & Language* **101**:234-245. http://www.cogsci.ucsd.edu/~coulson/Papers/wu-coulson07b.pdf

R20 Frazier, L., Carlson, K., and Clifton, C. Jr. 2006. Prosodic phrasing is central to language comprehension. *Trends in Cognitive Sciences*, Volume 10, Issue 6, Pages 244-249. http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.140.2678&rep=rep1&type=pdf

R21 Frisson, S. & Pickering, M. J. (1999) The processing of metonymy: Evidence from eye movements. *Journal of Experimental Psychology: Learning, Memory, and Cognition* 25:1366–83. http://www.psy.ed.ac.uk/people/martinp/pdf/frisson-pickering-jeplmc-99.pdf

R22 Glucksberg, S. (2003). The Psycholinguistics of Metaphor. *Trends in Cognitive Science*, 7, 92-96. http://www.colorado.edu/linguistics/courses/LAM5430/More5430e-reserves/PSYCHOLING_METAPHOR.pdf

R23 Gibbs, R. (2006). Metaphor interpretation as embodied simulation. *Mind & Language*, 21, 434-458. http://onlinelibrary.wiley.com/doi/10.1111/j.1468-0017.2006.00285.x/abstract

R24 Bowdle, B. Gentner, D. 2005. Career of metaphor. *Psychological Review* Vol. 112(1): 193-216. http://groups.psych.northwestern.edu/gentner/newpdfpapers/BowdleGentner05.pdf

R25 Matlock, T. (2004). Fictive motion as cognitive simulation. *Memory & Cognition*, 32, 1389-1400. http://faculty.ucmerced.edu/tmatlock/papers/memcog-final.pdf

R26 Richardson, D. C., & Matlock, T. (2006). The integration of figurative language and static depictions: An eye movement study of fictive motion. *Cognition*. http://faculty.ucmerced.edu/tmatlock/papers/RichardsonMatlockInPress.pdf

R27 Sanford, A.J. and Sturt, P. (2002) Depth of Processing in language comprehension: Not noticing the evidence. *Trends in Cognitive Sciences*, 6 (9). pp. 382-386. http://dx.doi.org/10.1016/S1364-6613(02)01958-7