

LING157 Psycholinguistics and Linguistic Theory

Meets: MWF, 11:00AM - 12:10PM
Crown 208

Instructor: Matt Wagers <mwagers@ucsc.edu>
Office Hours: 231 Stevenson, x9-1550
M, 1:00PM - 2:30PM
W, 1:00PM - 2:30PM

Teaching ass't: Nate Arnett <nvarnett@ucsc.edu>
Sections: W, 3:30PM - 4:40PM, Crown 202
Th, 8:30AM - 9:40AM, “ “

Office Hours: Th, 1:00PM - 2:00PM, Stevenson 232

Course Goals

The goal of psycholinguistics is to develop models of language cognition: how is language acquired? how is language comprehended? how is language produced? LING157 will introduce some of these foundational questions. **We will examine core properties of mental processes and representations involved in language processing**; consider how those properties constrain or interact with theories of linguistic knowledge; and how linguistic processes unfold over time-scales small and large.

An important goal of the course is that **participants will gain understanding about how knowledge is created in cognitive science**. Course participants will learn the basics of experimental design and core experimental techniques in psychology and linguistics. To do that, we will conduct several psycholinguistic experiments on ourselves and our friends. Although we use a textbook, we will also read a number of primary research articles, both classic and contemporary (see Course materials below). Throughout the course you will achieve facility in reading those articles through explicit guidance and practice.

There are three core domains we will examine: phonology and sound perception, word structure and word recognition, and syntactic structure and sentence comprehension. In each of these domains, we will explore issues in perception, production and acquisition. However, this course is not an exhaustive survey of the field; it is deeper rather than broader.

Coursework, requirements and grading

LABS. Participants will complete three labs: a speech perception lab on the categorical perception of voicing, a lexical access lab on morphologically complex words, and a sentence processing lab on agreement. There are some important features of these labs to be aware of:

1. Although there is a 'due date' for the lab reports, each lab will take 2 - 4 weeks to complete with a milestone assignment each week (except for week 7). The overall lab grade will depend in large part on the quality of the final report, but it will also heavily weight timely completion of the milestone assignments. These milestone assignments are designed to help you break a complicated task into a series of less complicated ones, and often include worksheets or screencasts to follow.
2. The labs get progressively more complex. Correspondingly, they will involve increasingly more collaboration. Each student will complete the first lab on their own, but the second and third labs must be done in collaboration with other students (in groups you will determine in Section).
3. The first lab is essentially 'canned' - it comes with extensive instructions which are followed step-by-step to completion. In the second lab, each workgroup will have to decide a few choice points in design and execution but it is also strongly constrained. In the third lab you will find the greatest latitude, and the final product will be a piece of independent research, consistent with the course's status as a capstone course for majors.

GRADING. You must complete all labs to pass. The course grade weights the labs as follows:

- Lab 1 (20%)
- Lab 2 (30%)
- Lab 3 (40%)

Scale

I expect you to work hard, but I also recognize the material is difficult. You will receive a grade that fairly reflects that fact. The grades and their numerical range are as follows:

A+ > 95 > A > 90 > A- > 85 > B+ > 80 > B > 75 > B- > 70
C+ > 65 > C > 60 > D > 50 > F

Note: I do not competitively scale your grades (i.e., curve them). However, if the early work is not strong, but there is a clear trajectory of improvement and responsiveness to feedback, I will re-weight the grade to reflect this fact.

SECTION. The remaining course credit comes from participation in Section (10%), where attendance is mandatory. The sections are set up to help you practice your new skills. They are excellent venues in which to solve technical problems (e.g., why isn't this program running? how do I take an average? etc.)

SUCCESS. Success is achievable for all students. Attendance at all class meetings and sections is a key determinant of success, as well as starting assignments and readings well in advance. Finally: come to office hours (either the instructor or the TAs). We genuinely like helping you in these one-on-one scenarios and they will usually always quickly dissolve a problem or anxiety that might otherwise grow in scope and severity.

Resources

- **REQUIRED TEXT:** Fernández, Eva M., & Cairns, Helen Smith (2010). *Fundamentals of Psycholinguistics*. Chichester, UK: Wiley-Blackwell. ISBN 9781405191470.
- eCommons: course docs, assignments, class communication

Schedule

- *Daily topics* are indicated by italic text.
- **Assignments** are indicated in bold face.
- Readings for that day indicating by ☞ symbol.

	Monday	Wednesday	Friday
Week 1 Speech perception	January 6 <i>Introduction</i> <i>Information processing</i> Marslen-Wilson 1975	8 <i>Properties of speech signal; spectrograms</i> Office hours poll ☞ FP.2§: "The Speech Signal"; 5§: "Producing Speech After It is Planned"	10 <i>Context, acoustic features, phonetic values</i> Vowel measurements ☞ FP.6§: "Perceiving Speech - Phonemic Inventory ..."

	Monday	Wednesday	Friday
Week 2 Speech perception	Jan 13 <i>AV Speech</i> <i>Experimental design</i> ☺ FP.Appendix “Experimental designs”	15 <i>Phonological effects on speech perception</i> ☺ FP.2§:“Phonological Component”; Kazanina et al. 2006	17 <i>Phonological + lexical effects, cont.</i> Categorical perception lab data
Week 3 Speech perception	Jan 20 <i>MLK, Jr. Day</i> <i>(No class)</i> ☺ Jusczyk, 1997	22 <i>Acquiring phonological contrast</i> ☺ Stager & Werker '97; Yeung & Werker '09	24 <i>Acq. phonology, cont.</i> <i>Lexical access</i> Categorical perception lab report
Week 4 Lexical processing	Jan 27 <i>Lexical access, cont.</i> <i>Eye tracking</i> ☺ FP.6§ "Accessing the Lexicon - The cohort model ..."	29 <i>Lexical access in context</i> <i>Ambiguity</i> Corpus worksheet ☺ FP.6§ "Lexical ambiguity"	31 <i>Morphological structure</i> ☺ FP.2§:“Morphological Component” Hankamer, 1989
Week 5 Lexical processing	February 3 <i>Morphology cont. - MEG expts.</i> Lexical lab wksht	5 <i>Intro statistical reasoning</i>	7 <i>Bilingual lexicon</i>
Week 6 Sentence processing	Feb 10 <i>Incrementality: sources, timecourses</i> ☺ FP.7§: “Psychol. reality ... - Attaching new constituents”	12 <i>Incrementality, cont.</i> ☺ FP.7§: “Information used to build structure - Summing up”	14 <i>Matt away at AAAS: Nate lectures</i> Lexical lab report

	Monday	Wednesday	Friday
Week 7 <i>Sentence processing</i>	Feb 17 <i>President's Day</i> <i>(No Class)</i> ☞ Bock & Miller 1991	19 <i>Producing and processing agreement</i> ☞ Bock & Miller 1991	21 <i>Agreement, cont.</i> ☞ Wagers, Lau, Phillips '09
Week 8 <i>Sentence processing</i>	Feb 24 <i>In-class workshop on Agreement Lab</i>	26 <i>Wh-movement</i> Agreement lab wksht ☞ FP.2§: "Movement" FP.7§: "Filling gaps"	28 <i>Child parsing</i> ☞ Omaki et al. 2014
Week 9 <i>Production</i>	March 3 <i>Statistical reasoning, II</i> Agreement lab materials	5 <i>(Back to) production Selection, word order</i> ☞ FP.5§: "Producing speech - building simple sentence structure"; van Turenout et al. 98	7 <i>Production, cont. Priming</i> ☞ FP.5§: "Building complex structure"
Week 10 <i>Discourse interactions</i>	Mar 10 <i>Memory for sentences in conversation</i> Initial agreement lab data files ☞ FP.8§: "Discourse - Making inferences"	Mar 12 <i>Reference in production and comprehension</i> ☞ FP.8§: "Anaphoric reference" FP.7§: "Locating pronominal referents"	14 <TOPIC UNSCHEDULED>
Week 11 (Exam week)	Mar 17 <i>Conclusion</i> Agreement lab report	<i>No meetings</i>	

Readings

'FP' refers to readings in *Fundamentals of Psycholinguistics*. Chapter number is given followed by the section (§) title. When a range is given (indicated by two hyphenated section titles), the range is inclusive: i.e., read *through* the second section. Chapter 2 is strongly recommended as general 'refresher' reading for key concepts in phonology, morphology and syntax.

Unless otherwise indicated, these readings are available via the library's online subscriptions. If you are on-campus, or authenticated for off-campus access, then the simplest route is usually to use Google Scholar <<http://scholar.google.com/>> to search for the citation (use the digital object identifier, *doi*, when available). See the following guide on off-campus access: <<http://guides.library.ucsc.edu/offcampusaccess>>. In the reference list below, sources are given in APA format (e.g., <<https://owl.english.purdue.edu/owl/resource/560/07/>>). This is the convention I expect you to follow in your written work.

Kazanina, N., Phillips, C., & Idsardi, W. (2006). The influence of meaning on the perception of speech sounds. *Proceedings of the National Academy of Sciences USA*, 103(30), 11381–6. doi:10.1073/pnas.0604821103.

Jusczyk, P. (1997). How speech perception develops during the first year. In *The Discovery of Spoken Language* (pp. 73-110). Cambridge, MA: MIT Press. Available via MITCogNet: <http://cognet.mit.edu/library/books/view?isbn=0262600366>.

Hankamer, J. (1989). Morphological parsing and the lexicon. In W. Marslen-Wilson, Ed., *Lexical Representation and Process*. Cambridge, MA: MIT Press. Available via MITCogNet: <http://cognet.mit.edu/library/books/view?isbn=0262631423>.

Stager, C.L., Werker, J.F. (1997). Infants listen for more phonetic detail in speech perception than in word-learning tasks. *Nature*, 388, 381-382.

Yeung, H.H., Werker, J.F. (2009). Learning words' sounds before learning how words sound: 9-month-olds use distinct objects as cues to categorize speech information. *Cognition*, 113, 234-243. doi:10.1016/j.cognition.2009.08.010.

Bock, K., Miller, C. (1991). Broken agreement. *Cognitive Psychology*, 23, 45-93. doi: 10.1016/0010-0285(91)90003-7.

Wagers, M., Lau, E., & Phillips, C. (2009). Agreement attraction in comprehension: representations and processes. *Journal of Memory and Language*, 61, 206-237. doi: 10.1016/j.jml.2009.04.002

Omaki, A., Davidson White, I., Goro, T., Lidz, J., Phillips, C. (2014). No fear of commitment: children's incremental interpretation in English and Japanese Wh-Questions. *Language, Learning and Development*. doi:10.1080/15475441.2013.844048.

van Turenout, M., Hagoort, P., Brown, C. (1998). Brain activity during speaking: from syntax to phonology in 40 milliseconds. *Science*, 280, 572-574. doi:10.1126/science.280.5363.572.

Policies

Late Work Policy

Every assignment will specify its due date and time. Once 20 minutes have elapsed past the time, the work is late. Late work is penalized as follows:

20% deduction, if turned in within 24 hours;
45% deduction, thereafter.

You are granted one exemption. You can postpone exactly one due date, on an assignment of any size, without being subject to the 25% deduction (except the final lab report). Please indicate you are taking your exemption when you turn in the relevant assignment. Please email any questions about assignments to me well in advance of the due date. Not understanding an assignment -- when you have not asked for help -- is not an acceptable excuse.

As a complement to the late work policy, it is the instructor's responsibility to return your work in a timely manner.

What are my responsibilities?

You are expected to take responsibility for your own learning. So here are the usual reminders for optimizing your performance in the class.

Attend class. You are responsible for material in your readings as well as those presented in lecture. Keep in mind that readings will often be primary sources or professional reviews, and it is during class that unfamiliar concepts will be explained and discussed.

Participate. Ask questions and offer ideas in class. Take responsibility in group work.

Complete your written work in a timely manner. Pay attention to instructions and due dates so you can plan the required research. Even in short responses or technical lab reports, the quality of your prose writing matters. It is an important goal of this class to hone your skills in communicating scientifically. You will be in a better position to do so, the less you have to rush. The late work policy is spelled out above.

Adhere to standards of academic honesty. This class involves a fair amount of collaboration in the form of lab work. For each assignment, I will make it clear what is expected of each individual. I will also ask you to list who you worked with. But here are the general guidelines: I encourage you to work together to understand material, to work out design of experiments, to share the responsibility for

collecting data, and to help one another understand how to execute the data analysis afterwards. However, all analysis and written work must be completed by the individual.

The Academic Integrity web site contains the policies and procedures that bind us both for suspected academic dishonesty: <http://www.ucsc.edu/academics/academic_integrity/>

Request accommodation if necessary. If you qualify for classroom accommodations because of a disability, please obtain an Accommodation Authorization from the Disability Resource Center (DRC) and submit it to me in person within the first two weeks of the quarter. Contact DRC at 459-2089 (voice), 459-4806 (TTY), or <<http://drc.ucsc.edu>> for more information on the requirements and process.

Communicate. Lastly, but importantly, never hesitate to get in touch. If you get into difficulty, it is entirely appropriate to seek help. Come by office hours, or send me an email. Likewise, if you are having a problem that adversely affects your classroom participation, contact me.