LIN 392: Experiments in Linguistics

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Course website: On Blackboard  
  Includes Syllabus, class handouts, assignments, and useful links

Outline of the course

In this course, we will go step by step through the process of doing an experiment, which can be on any topic in linguistics.

Steps:
- Coming up with a hypothesis
- Doing measurements using Praat
- Designing an experiment
- Recording speech
- Formulating and submitting a human subjects research proposal
- Running the experiment
- Doing basic statistical analysis in R
- Presenting results of experimental work - orally and in print.

In order to learn how your work can be interpreted and evaluated, we will read and critique published work from the experimental literature on phrasing, i.e. how the stream of speech is broken up into smaller units like utterances, phrases, and words. Issues we will look at include the following:

- What determines the location and location of pauses in speech?
- How is phrasing affected by syntactic constituent structure?
- How does phrasing affect the acoustic signal?
- How does it affect articulation?
- How do listeners use phrasing cues to disambiguate structurally ambiguous expressions?
- How do infants get going on segmenting speech into words?

The readings will be made available in electronic form.
Outline schedule

<table>
<thead>
<tr>
<th>Weeks</th>
<th>Material covered in class</th>
<th>Tasks for students</th>
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</thead>
<tbody>
<tr>
<td>1-4</td>
<td>• What experiments are and what they are good for</td>
<td>• Submit human subjects research proposal to IRB</td>
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<td></td>
<td>• Experimental design</td>
<td>• Formulate experimental plan</td>
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<td></td>
<td>• Recording and measuring</td>
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<td>5-13</td>
<td>• Statistics: Descriptive statistics, graphs, statistical tests, using R</td>
<td>• Read assigned papers</td>
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<tr>
<td></td>
<td>• Reading experimental work</td>
<td>• Run the experiment (once it's approved by the IRB)</td>
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<tr>
<td>14-15</td>
<td>• How to present experimental work</td>
<td>• Oral presentation</td>
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<td>• Short paper</td>
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Grade

The grade for the course will be based primarily on two presentations of the results of your class project: one oral presentation in the last week of classes, and a short written paper due one week after the end of classes (May 14).

Criteria for evaluation:

- Were all preliminary steps, e.g. submission of the experimental design and the human subjects proposal, completed in a timely fashion?
- Is the statement of the hypothesis clear?
- Is the hypothesis persuasively motivated?
- Is it clear exactly what you did, so that the experiment could be replicated on the basis of your statement?
- Is the experiment a fair test of the hypothesis?
- Is the statement of results clear?
- Are the general inferences you draw from the results valid?
- Do you show how your results relate to previous findings?

Students with disabilities

Students with disabilities may request appropriate academic accommodations from the Division of Diversity and Community Engagement, Services for Students with Disabilities, 471-6259.