Seminar in Semantics: Experimental Methods
16:615:535
Rutgers University, Spring 2022

Time: Wednesdays 2:00pm - 5:00pm (weekly)
Location: 1 Spring St Room 309

Instructor: Dorothy Ahn (dorothy.ahn@rutgers.edu)
Office Hours: Thursdays 2:00pm–3:00pm (1 Spring St Rm 241; sign up on Calendly)

1 Course Description

The last decade has seen a surge of experimental studies implemented to evaluate existing theories and models as well as to investigate language processing and how language interacts with the rest of the cognitive system. This course will be an introduction to experimental linguistics, asking what kind of data can be collected, how they can be collected, and how they should be analyzed. We will start with the basics of determining the kind of question we can ask, how to formulate a testable hypothesis, and how to decide the type of experiment to implement. Another aspect of this course will be on reading and evaluating experimental work in linguistics. We will have several guest lectures by experimentalists in different subfields, and students will have an opportunity to engage with real data and analysis and discuss how the experimental data inform our theory of language. At the end of the term, students will be asked to design their own experiments and submit an experiment proposal.

Expected background: Basic knowledge of Syntax, Semantics, and Phonology

Required text: There is no required textbook for this course. All required readings will be posted on Canvas as pdfs. The list of assigned readings can be found in the weekly schedule.

Course Learning Goals:

1. To learn
   - become familiarized with the basic methods used in experimental linguistics
   - identify which methodologies best address different kinds of theoretical questions
   - learn the effect that experimental design has on the conclusions drawn

2. To apply
   - critically evaluate experimental studies and design follow-up studies that fill the research gap
   - engage with ongoing experimental studies by interacting with guest lecturers
   - design an experimental study and present to an audience
2 Requirements

Participation and Attendance 10% Each week, students will actively take part in learning and presenting on the methodology in question and interacting with guest speakers.

Abstract Evaluation 20% Students will write a review of an experimental abstract submitted to a conference.

Presentations 20% Students will be expected to present at least two experimental papers during the course of the semester. Please come ready to present the main findings of the paper and the methodology used.

Experiment proposal 50% You will be asked to write an experiment proposal that carefully lays out the hypothesis, the predictions, and the methodology. The last meeting will feature short presentations.

- Week 6: Meet with the instructor to discuss the research question to be addressed (bring a short lit review of 3-4 papers)
- Week 8: Submit a short abstract motivating your study; Review two abstracts and give feedback
- Week 12: Submit a first draft that includes the literature review and the methodology
- Week 14: Present on your proposal

3 Weekly Topics and Readings

I. Starting the dialogue
Objective: Motivate experimental work to address theoretical questions; Learn how experimental work should be evaluated by discussing methodology and data analysis

1. Introduction January 18, 2023
   - Motivating experimental research; Introduction to different methodologies used in linguistics
   - Organizational meeting

2. How experimental should we be? January 25, 2023
   - Evaluating the need for experimental work; Connecting experimental methodologies to theoretical questions
   - Readings:
     - Matthewson, Lisa. 2022. Semantic fieldwork: How experimental should we be? Semantic Field Methods 4
3. **Evaluating empirical data** February 1, 2023
   *Intro. to Experimental Linguistics* ch.6
   - Discussing the effect that stimuli and methodology has on conclusions; Learning about different statistical tests used to evaluate data
   - Readings:

II. Offline methods
Objective: Discuss three offline methods commonly used for language comprehension: metalinguistic judgments, corpus studies, and production studies; Follow dialogues that raise questions about experimental design and data analysis.

4. **Metalinguistic judgments in syntax** February 8, 2023
   - Introductory chapter on explicit methods: Gillioz & Zufferey 2020 chapter 4
   - Readings:

5. **Metalinguistic judgments in semantics** February 15, 2023
   - Readings:
     - Geurts, Bart & Bob Van Tiel. 2013. Embedded scalars

6. **Corpus studies** February 22, 2023
   - Readings:
- van Dooren, Annemarie, Anouk Dieuleveut, Ailís Cournane & Valentine Hacquard. 2022. Figuring out root and epistemic uses of modals: The role of the input. *Journal of Semantics*

7. **Production studies** March 1, 2023
   - Introductory chapter on production studies: Gillioz & Zufferey 2020 chapter 3
   - Readings:

8. (no class) **Submit proposal drafts** March 8, 2023
   - Submit a short abstract motivating your study
   - Review two abstracts and give feedback (by March 22, 2023)

III. **Online methods for language processing**
   **Objective:** Learn about methods used to investigate incremental processing of language;

9. **Self-paced reading** March 22, 2023
   - Introductory chapter on reading studies: Gillioz & Zufferey 2020 chapter 5
   - Readings:

10. **Eye-tracking** March 29, 2023
    - Readings:
III. Mini-Conference

Objective: Engage in a dialogue with experimentalists by reading their work and attending their talks; Learn how to present an experimental work

(*Dates will change around the speakers’ schedule)

11. Shannon Bryant (Rutgers) [TBD]
   • Readings TBA
   • grammaticality judgment tasks and analysis

12. Florian Schwarz (Penn) [March 29th, 2023]
   • Readings:
     - Schwarz, Florian. 2014. Presuppositions are fast, whether hard or soft-evidence from the visual world. In Semantics and linguistic theory, vol. 24, 1–22
   • experimental semantics/pragmatics

13. Zuzanna Fuchs (USC) [April 5th, 2023]
   • Readings: TBD
   • eye-tracking, methodology

14. Kristen Syrett (Rutgers) [TBD]
   • Readings:
   • language acquisition and psycholinguistics

15. Gašper Beguš (UC Berkeley) [TBD]
   • Readings:
     - Begus, Gasper, Alan Zhou & Christina Zhao. 2022. Encoding of speech in convolutional layers and the brain stem based on language experience. bioRxiv
   • deep-learning models and behavioral studies in phonetics/phonology
IV. Presentations
Objective: Present a proposal that discusses how the research question can be addressed by the experimental method proposed; Give feedback to peers’ work

16. Experiment proposal presentations 4/26

- 10-20 min presentation on your experiment proposal
- Final papers due May 12

4 Other specifics

Academic integrity The university’s Academic Integrity policy can be found at the following link: http://academicintegrity.rutgers.edu. Please review the following principles:

- properly acknowledge and cite all use of the ideas, results, or words of others
- properly acknowledge all contributors to a given piece of work
- make sure that all work submitted as his or her own in a course or other academic activity is produced without the aid of unsanctioned materials or unsanctioned collaboration
- treat all other students in an ethical manner, respecting their integrity and right to pursue their educational goals without interference

Violations of academic integrity will be treated in accordance with university policy, and sanctions for violations may range from no credit for the assignment, to a failing course grade to (for the most severe violations) dismissal from the university.

Respect for diversity: It is my intent that students from all diverse backgrounds and perspectives be well served by this course, that students’ learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength and benefit. I intend to present materials and activities that are respectful of diversity: race/ethnicity, gender identities, gender expressions, sexual orientation, socio-economic status, age, disabilities, religion, regional background, veteran status, citizenship status, nationality and other diverse identities.


Schwarz, Florian. 2014. Presuppositions are fast, whether hard or soft-evidence from the visual world. In *Semantics and linguistic theory*, vol. 24, 1–22.


