

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:
 - Arunachalam, Sudha. 2013. Experimental methods for linguists. *Language and Linguistics Compass* 7(4). 221–232
 - Davidson, Kathryn. 2020. Is “experimental” a gradable predicate. *Proceedings of North East Linguistics Society (NELS)* 50
 - 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:
 - Schütze, Carson T. 2005. Thinking about what we are asking speakers to do. In Stephan Kepser & Marga Reis (eds.), *Linguistic evidence: Empirical, theoretical, and computational perspectives*, 457–485. Mouton de Gruyter Berlin. doi: <https://doi.org/10.1515/9783110197549>
 - Ahn, Dorothy & Jesse Snedeker. 2021. Early acquisition of plural morphology in a classifier language: Data from Korean 2-4 year olds. *Language Learning and Development* doi: 10.1080/15475441.2021.1922280
 - Syrett, Kristen & Adrian Brasoveanu. 2019. An experimental investigation of the scope of object comparative quantifier phrases. *Journal of Semantics* 36(2). 285–315

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:
 - Myers, James. 2017. Acceptability judgments. In *Oxford research encyclopedia of linguistics*, doi: <https://doi.org/10.1093/acrefore/9780199384655.013.333>
 - Sprouse, Jon, Troy Messick & Jonathan David Bobaljik. 2022. Gender asymmetries in ellipsis: An experimental comparison of markedness and frequency accounts in English. *Journal of Linguistics* 58(2). 345–379. doi: <https://doi.org/10.1017/S0022226721000323>

5. **Metalinguistic judgments in semantics** February 15, 2023

- Readings:
 - Cremers, Alexandre & Emmanuel Chemla. 2017. Experiments on the acceptability and possible readings of questions embedded under emotive-factives. *Natural Language Semantics* 25(3). 223–261. doi: <https://doi.org/10.1007/s11050-017-9135-x>
 - Geurts, Bart & Bob Van Tiel. 2013. Embedded scalars
 - Veenstra, Alma & Napoleon Katsos. 2018. Assessing the comprehension of pragmatic language: Sentence judgment tasks. In Andreas Jucker, Klaus Schneider & Wolfram Bublitz (eds.), *Methods in pragmatics*, vol. 10, 1806. Walter de Gruyter GmbH & Co KG. doi: <https://doi.org/10.1515/9783110424928>

6. **Corpus studies** February 22, 2023

- Readings:
 - Kennedy, Christopher & Louise McNally. 2005. Scale structure, degree modification, and the semantics of gradable predicates. *Language* 345–381

- 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*
- Caponigro, Ivano, Lisa Pearl, Neon Brooks & David Barner. 2012. Acquiring the meaning of free relative clauses and plural definite descriptions. *Journal of semantics* 29(2). 261–293

7. **Production studies** March 1, 2023

- Introductory chapter on production studies: Gillioz & Zufferey 2020 chapter 3
- Readings:
 - Schlenker, Philippe, Jonathan Lamberton & Mirko Santoro. 2013. Iconic variables. *Linguistics and philosophy* 36(2). 91–149
 - Casey, Shannon & Karen Emmorey. 2009. Co-speech gesture in bimodal bilinguals. *Language and cognitive processes* 24(2). 290–312
 - Ko, Heejeong, Tania Ionin & Ken Wexler. 2010. The role of presuppositionality in the second language acquisition of english articles. *Linguistic inquiry* 41(2). 213–254
 - de Quadros, Ronice Müller, Kathryn Davidson, Diane Lillo-Martin & Karen Emmorey. 2020. Code-blending with depicting signs. *Linguistic approaches to bilingualism* 10(2). 290–308

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:
 - Law, Jess HK & K Syrett. 2017. Experimental evidence for the discourse potential of bare nouns in mandarin. In *Nels 47: Proceedings of the forty-seventh annual meeting of the north east linguistic society*, vol. 2, 231–40. Grad. Linguist. Stud. Assoc., Univ. Mass. Amherst
 - Yang, Chin Lung, Peter C Gordon, Randall Hendrick & Jei Tun Wu. 1999. Comprehension of referring expressions in chinese. *Language and Cognitive Processes* 14(5-6). 715–743
 - Dillon, Brian, Charles Clifton Jr, Shayne Sloggett & Lyn Frazier. 2017. Appositives and their aftermath: Interference depends on at-issue vs. not-at-issue status. *Journal of Memory and Language* 96. 93–109

10. **Eye-tracking** March 29, 2023

- Readings:
 - Arnold, Jennifer E. 2008. The bacon not the bacon: How children and adults understand accented and unaccented noun phrases. *Cognition* 108(1). 69–99

- Esteve-Gibert, Nuria, Cristel Portes, Amy Shafer, Barbara Hemforth & Mariapaola d'Imperio. 2016. Intonation in the processing of contrast meaning in french: An eye-tracking study. In *Speech prosody*,

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, Cory Bill & Jacopo Romoli. 2016. Reluctant acceptance of the literal truth: Eye tracking in the covered box paradigm. In *Proceedings of sinn und bedeutung*, vol. 20, 61–78
 - 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:
 - Syrett, Kristen & Todor Koev. 2015. Experimental evidence for the truth conditional contribution and shifting information status of appositives. *Journal of Semantics* 32(3). 525–577
 - Syrett, Kristen. 2015. Qr out of a tensed clause: Evidence from antecedent-contained deletion. *Ratio* 28(4). 395–421
- 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*
 - Beguš, Gašper. 2022. Local and non-local dependency learning and emergence of rule-like representations in speech data by deep convolutional generative adversarial networks. *Computer Speech & Language* 71. 101244
- 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.

Ahn, Dorothy & Jesse Snedeker. 2021. Early acquisition of plural morphology in a classifier language: Data from Korean 2-4 year olds. *Language Learning and Development* doi: 10.1080/15475441.2021.1922280.

Arnold, Jennifer E. 2008. The bacon not the bacon: How children and adults understand accented and unaccented noun phrases. *Cognition* 108(1). 69–99.

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- Esteve-Gibert, Nuria, Cristel Portes, Amy Shafer, Barbara Hemforth & Mariapaola d’Imperio. 2016. Intonation in the processing of contrast meaning in french: An eye-tracking study. In *Speech prosody*, .
- Geurts, Bart & Bob Van Tiel. 2013. Embedded scalars .
- Gillioz, Christelle & Sandrine Zufferey. 2020. *Introduction to experimental linguistics*. John Wiley & Sons.
- Kennedy, Christopher & Louise McNally. 2005. Scale structure, degree modification, and the semantics of gradable predicates. *Language* 345–381.
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- Schlenker, Philippe, Jonathan Lamberton & Mirko Santoro. 2013. Iconic variables. *Linguistics and philosophy* 36(2). 91–149.
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- Sprouse, Jon, Troy Messick & Jonathan David Bobaljik. 2022. Gender asymmetries in ellipsis: An experimental comparison of markedness and frequency accounts in English. *Journal of Linguistics* 58(2). 345–379. doi: <https://doi.org/10.1017/S0022226721000323>.
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