Seminar in Psycholinguistics: From Illusions to Inference

LING 8XXX – Fall 2026

Course information

Time	TBD
Location	TBD
Instructor	Utku Turk
Email	utkuturk@umd.edu
Office hours	By appointment
Course site	Canvas

1 Course description

Why do we accept sentences that are ungrammatical? Why do we reject sentences that are well-formed? This seminar explores **Linguistic Illusions**: phenomena where our real-time processing of language systematically deviates from the dictates of our internal grammar.

Just as visual illusions reveal the heuristics of the visual system, linguistic illusions provide a window into the architecture of the language parser. We'll cover the full taxonomy of known illusions—semantic, structural, and comparative—and use them to evaluate competing theories of sentence processing. I'm excited to debate these mechanisms with you as we try to reverse-engineer the mind together. This is a collaborative intellectual journey, not a competition.

2 Learning objectives

Upon successful completion of this course, students will be able to:

1. Categorize major types of linguistic illusions (e.g., agreement attraction, NPI illusions, comparative illusions).

2. Critically evaluate theoretical accounts of why illusions occur (e.g., retrieval interference vs. rational inference).

3. Synthesize complex experimental literature into concise summaries.

4. Identify theoretical gaps in the current understanding of sentence processing.

3 Course structure

This is a reading-intensive graduate seminar built around **intellectual combat**.

1. **Weekly Readings:** We will read 2–3 primary source papers per week covering a specific illusion.
2. **Discussion:** Class time is dedicated to dissecting the mechanisms proposed for these illusions. Come prepared to defend a position—and to have your mind changed.
3. **Synthesis:** You must submit a 1-page synthesis of the readings every week.

The Debate Format

Each week, we'll examine competing theoretical accounts:

- **Shallow Processing** (Ferreira & Patson): People use "good enough" heuristics
- **Cue-Based Retrieval** (Lewis & Vasishth): Interference during memory access
- **Noisy Channel** (Levy, Gibson): Rational inference under uncertainty

You will be assigned to defend a theoretical position for certain weeks. Your job: make the strongest possible case for your assigned mechanism, even if you don't believe it. This forces you to engage deeply with each theory's logic and predictions. But remember—we're all on the same team here, trying to understand how language works. Strong disagreement is encouraged; disrespect is not.

Illusion of the Week

Each week features one illusion type with a provocative question:

- **Week 2**: Moses Illusion—Do people really not notice "Moses" vs. "Noah"?
- **Week 5**: Agreement Attraction—Is this memory failure or shallow processing?
- **Week 7**: NPI Illusions—Can the parser "hallucinate" licensors?
- **Week 8**: Missing VP—Why can't we parse center-embedded sentences?

For each illusion, ask: What would it take to convince you this is NOT an illusion but a feature?

4 Course requirements

4.1 Grading

Item	%	What counts
Participation	20	Active engagement in seminar discussions.
Weekly Synthesis	40	A 1-page synthesis of the week's readings (Due 24h before class).
Presentation	10	Leading the discussion for one topic.
Final Project	30	A 4-page "Missing Links" paper identifying a gap in the literature.

4.2 Weekly Synthesis (1 page)

Every week, you will submit a single-page synthesis of the assigned readings. This is not a summary. You should identify the core theoretical conflict, the evidence provided, and the remaining open questions.

4.3 Final Project: "What was missing?" (Replication-and-Extension Essay)

Instead of a standard term paper, your final project is a 4-page critical essay identifying a gap in the illusions literature—a confound, unstudied language, alternative mechanism, or methodological flaw—and proposing how a replication-and-extension study would address it. You should propose *how* we might address it (e.g., a sketch of an experiment or a model), but the focus is on identifying the gap and designing a decisive follow-up.

5 Course schedule

Readings are subject to change.

Wk	Topic	Key Readings	Concept
MODULE 1: The Landscape of Illusions			
1	Introduction: Illusions as Data	Phillips, Wagers, & Lau (2011); Examples from Vision.	Grammar vs. Processor
2	Semantic Illusions	Erickson & Mattson (1981) [Moses Illusion]; Sanford & Sturt (2002) [Depth Charge].	Shallow Processing
3	Comparative Illusions (Escher)	Wellwood et al. (2018); O'Connor (2015).	"More people have been to Russia than I have."
4	Assessment: Is it grammatical?	Sprouse (2011); Gibson & Fedorenko (2013).	Where do "judgments" come from?
MODULE 2: Structural Illusions			
5	Agreement Attraction I: The Basics	Bock & Miller (1991); Wagers, Lau, & Phillips (2009).	Feature percolation vs. Retrieval
6	Agreement Attraction II: Diversity	Slioussar (2018) [Russian]; Tucker et al. (2015) [Arabic].	Cross-linguistic variation
7	NPI Illusions: Intrusive Licensors	Vasishth et al. (2008); Xiang et al. (2009).	"No head injury is too trivial to be ignored."
8	The Missing VP Illusion	Gibson & Thomas (1999); Christiansen & MacDonald (2009).	Center embedding failure
9	Binding & Reflexive Illusions	Sturt (2003); Parker & Phillips (2017).	Structural constraints on memory
MODULE 3: Mechanisms of Fallibility			
10	Mechanism I: Memory Retrieval	Lewis, Vasishth, & Van Dyke (2006).	Cue-based retrieval interference
11	Mechanism II: Noisy Channel	Levy (2008); Gibson et al. (2013).	Rational inference over errors
12	Mechanism III: Good-Enough	Ferreira & Patson (2007); Swets et al. (2008).	Heuristic processing
MODULE 4: New Frontiers			
13	Illusions in LLMs	Futrell et al. (2019); Gulordava et al. (2018).	Do neural networks have illusions?
14	Case & Argument Structure	Logačev & Vasishth (2016); Turk & Logačev (2024).	Case attraction?
15	Synthesis: From Illusions to Inference	Discussion of student "Missing Links".	**Due:** Final Project (4 pages)

7 Policies

7.1 Mental health & wellness

Graduate school is challenging, and this seminar is intellectually demanding. If you're struggling—academically, personally, or emotionally—please reach out. I really appreciate when students communicate with me, and I'm happy to work with you to make a plan together. Your health and wellbeing are more important than any assignment or deadline.

If you need to miss class or need an extension, just let me know. I trust you to manage your own wellbeing, and I'm here to support you however I can.

8 Resources

1. **Course Canvas Site:** All PDFs will be available here.
2. **Reference:** *The Oxford Handbook of Psycholinguistics.*

Appendix: Quarter-system (10 weeks)

A condensed version focusing on core illusion types.

Wk	Topic	Key Readings	Concept
1	Intro: Illusions as Data	Phillips, Wagers, & Lau (2011)	Grammar vs. Processor
2	Semantic & Comparative Illusions	Erickson & Mattson (Moses); Wellwood et al.	Shallow Processing
3	Agreement Attraction I	Bock & Miller (1991); Wagers et al. (2009)	Percolation vs. Retrieval
4	Agreement Attraction II	Slioussar (2018); Tucker et al. (2015)	Cross-linguistic variation
5	NPI Illusions	Vasishth et al. (2008); Xiang et al. (2009)	Intrusive licensors
6	Mechanism I: Retrieval	Lewis, Vasishth, & Van Dyke (2006)	Cue-based retrieval
7	Mechanism II: Noisy Channel	Levy (2008); Gibson et al. (2013)	Rational inference
8	Mechanism III: Good-Enough	Ferreira & Patson (2007)	Heuristic processing
9	Illusions in LLMs	Futrell et al. (2019); Gulordava et al. (2018)	Neural illusions?
10	Synthesis	Discussion of "Missing Links"	**Due:** Final Project

Quarter grading:

Item	%	What counts
Participation	20	Active engagement.
Weekly Synthesis	40	1-page synthesis (10 total).
Presentation	10	Leading discussion.
Final Project	30	4-page "Missing Links" essay.