

HG4015/7015: Psycholinguistics

AY25-26 Semester 2

Lecture: Mondays 2:30–6:20 PM, SHHK #B1-07 (HSS-TR+2)

| | | | |
|--------------------|--|----------------------|----------------|
| Instructor: | Byung-Doh Oh | Office Hours: | By appointment |
| Email: | byungdoh.oh@ntu.edu.sg | Office: | SHHK #03-06 |

1) Course-at-a-Glance:

1. **Participation (15%):** This includes in-class participation and posting 'reading engagement' reactions to assigned readings, among other things.
2. **"Written Reports" (25%):** There will be a number of "written reports," for which you will collect, analyze, and interpret psycholinguistic data.
3. **"Project Presentation" (22%):** This will consist of in-class presentations, with an emphasis on your understanding of the material and presentation skills.
4. **Final Quiz (38%):** Good old in-class quiz; MCQs, fill-in-the-blanks, short responses, ...

2) Course Description:

This course focuses on the relationship between human cognition and human language. Language is a product of the human mind, and many linguists believe that understanding human language as a cognitive object plays a big role in understanding why language has the properties it does. In this course, we will explore this by asking a range of fundamental questions at the intersection of language and cognition: How do we manage to produce language on the fly, and how do we understand language in the moment? Do different languages lead to different information processing strategies in production and comprehension, and if so, why? How does our mental machinery shape natural language? How is language organized and implemented in the brain?

These questions, and related questions, form the bedrock of the field of *psycholinguistics*. This course is a one-semester introduction to this broad, interdisciplinary field of study. Over the course of this semester, we will learn foundational results on language production and comprehension. However, psycholinguistics is a young science, and we will come against the limits of our current knowledge very quickly. Thus, an important part of this class will be developing your scientific reasoning skills and toolkit, so you can critically evaluate the current state of the art for yourself.

3) Course Objectives: The objectives of this course are to:

1. Learn about the discipline of psycholinguistics and its overall approach to human language.
2. Learn foundational results in psycholinguistics.
3. Learn to critically evaluate primary scientific literature.
4. Learn the basics of experimental design and scientific reasoning.
5. Learn basic data science skills (R/Python) for analyzing experimental data.
6. Learn to effectively present scientific findings, both in writing (e.g. data visualization) and verbally (presentation skills).
7. Conduct honest academic work, learn to manage time wisely, treat colleagues professionally, maintain healthy work-life balance, ...

4) Attendance Policy: This course consists of weekly in-person meetings: Enrolled students are expected to attend every meeting. Attendance will not formally be taken, but will obviously be correlated with in-class participation, and therefore the participation grade. If you will be missing class on a given day, do try to let me know (so I know what's going on). You are still responsible for submitting all assignments, keeping up with the readings, studying the material, and beginning any new assignments. If you need any help with the course material, I highly encourage you to reach out by email (see above).

5) Participation (15%): This will be determined by a combination of the following:

1. **Reading engagement reactions:** This will be a short (4-5 sentence maximum) summary of your reaction to that day's reading. A reading engagement may come in the form of a comment on the material, a question you want to address or discuss, or a response to another student's comments. Reading engagements are due by class-time the day a reading is due (so Mondays 2:29 PM).
2. **In-class participation:** This is an umbrella term for "proactively contributing to class." Counterexamples to this include not paying attention, talking to other classmates about irrelevant topics, falling asleep, sliding into DMs, shopping for Crocs, among others.
3. **Other things:** I may occasionally ask you to complete surveys every now and then to make sure this course isn't crashing and burning.

6) "Written Reports" (25%): There will be four "written reports," for which you will apply the lecture material to conduct a mini psycholinguistic experiment and analyze/interpret the data. This will require a good amount of technical skills, but I will not assume you have them (yet) and will help you build them as we go.

7) "Project Presentation" (22%): There will be in-class presentations, where I will be evaluating your understanding of some topic and your ability to present it clearly. How this will actually proceed will depend on the class size. At the moment, I envision two flavors of this presentation:

1. **Overview of reading:** This will involve providing an overview of that day's reading, so introducing the research question, related work, methods, results, discussion, conclusion, and your thoughts (in a similar vibe as the reading engagement).
2. **Presentation of "Written Report":** This will involve presenting your written report to the class shortly after it is due. For the presentation, I may ask you to include some additional components, such as how the mini experiment you conducted might be extended.

8) Final Quiz (38%): Good old in-class quiz; MCQs, fill-in-the-blanks, short responses, ... If you cannot make it to class on the planned date (13 April) due to some emergency circumstance, please let me know ASAP.

9) Late Work Policy: All assignments must be turned in on time through NTULearn. They will not be accepted by email, which is unreliable. As a general rule, each 24-hour interval after the deadline will incur a 10% deduction from the maximum obtainable score: A 'perfect' assignment will earn 90% of the total points if it is submitted 3 hours after the deadline, an 80% of the total points if it is submitted 27 hours after the deadline, and so on. If you are sick or have some other unavoidable problems that interfere with your ability to submit your work on time, please let me know before the deadline.

10) Academic Integrity Policy: All students are expected to do their own work. Students may discuss assignments with each other, as well as with the instructor. Any discussion with others must be noted on the student's submitted assignment. Excessive collaboration (i.e. beyond discussing the assignment) will be considered a violation of academic integrity. Questions regarding acceptable collaboration should be directed to the instructor prior to the collaboration. Needless to say, it is a violation of the academic integrity policy to copy or derive solutions from other students (or anyone at all), textbooks, previous instances of this course, or other courses covering the same topics. Finally, a good point to keep in mind is that you must be able to explain and/or re-derive anything that you submit. This is particularly important if you should adapt solutions from online sources.

11) Generative AI Policy: We live in the age of viable generative AI, and banning the use of these tools is neither realistic nor desirable. However, it is unwise to rely on them too much, as there are high-stakes situations where you won't have access to them, like job interviews. In addition, working without AI assistance is crucial for developing/refining thinking skills and avoiding brainrot. That said, you can use generative AI tools to help you with some components of this class (e.g. to summarize the reading, or help you write R code), but I will be explicit about where this is not allowed (e.g. the reading engagement, where I'd like to see what you thought and found difficult).

12) Course Website: Our primary course site is hosted on NTULearn. On this site you will find the most recent version of the syllabus, as well as links to lecture slides and other course material. All your assignments should be submitted through the NTULearn site. I will also make important announcements via NTULearn.

The above guidelines are here to help you achieve the learning objectives, adhere to university policies, and to set a mutual agreement. I ask that you respect these guidelines with professionalism and honesty.

13) Course Materials: The lecture materials will be drawn from a wide variety of sources, such as textbooks, academic papers, and other online resources.

Textbooks

[TG06] Traxler, M., & Gernsbacher, M. A. (Eds.). (2006). *Handbook of psycholinguistics*. Elsevier.

[T11] Traxler, M. (2011). *Introduction to psycholinguistics: Understanding language science*. John Wiley & Sons.

These two textbooks are available through the NTU Library (although with some silly download limits): <https://libguides.ntu.edu.sg/proquest-ebook-central>

[F+25] Frank, M. C., Braginsky, M., Cachia, J., Coles, N. A., Hardwicke, T. E., Hawkins, R. D., Mathur, M. B., & Williams, R. (2025). *Experimentology: An open science approach to experimental psychology methods*. Stanford University. <https://experimentology.io>

Academic Articles

[D+04] Diehl, R. L., Lotto, A. J., & Holt, L. L. (2004). Speech perception. *Annual Review of Psychology*, 55:149–179.

[W18] Winn, M. B. (2018). Speech: It's not as acoustic as you think. *Acoustics Today*, 14(2):43–49.

[D+99] Dupoux, E., Kakehi, K., Hirose, Y., Pallier, C., & Mehler, J. (1999). Epenthetic vowels in Japanese: A perceptual illusion? *Journal of Experimental Psychology*, 25(6):1568–1578.

[M+08] Maye, J., Aslin, R. N., Tanenhaus, M. K. (2008). The weckud wetch of the wast: Lexical adaptation to a novel accent. *Cognitive Science*, 32:543–562.

[D10] Dahan, D. (2010). The time course of interpretation in speech comprehension. *Current Directions in Psychological Science*, 19(2):121–126.

[FP07] Fiorentino, R. & Poeppel, D. (2007). Compound words and structure in the lexicon. *Language and Cognitive Processes*, 22(7):953–1000.

[KF00] Kutas, M. & Federmeier, K. D. (2000). Electrophysiology reveals semantic memory use in language comprehension. *Trends in Cognitive Sciences*, 4(12):463–470.






[BK08] Brown-Schmidt, S. & Konopka, A. E. (2008). Little houses and casas pequeñas: Message formulation and syntactic form in unscripted speech with speakers of English and Spanish. *Cognition*, 109(2):274–280.


[T+95] Tanenhaus, M. K., Spivey-Knowlton, M. J., Eberhard, K. M., & Sedivy, J. C. (1995). Integration of visual and linguistic information in spoken language comprehension. *Science*, 268:1632–1634.


Online Resources

To be announced (this will largely be determined by your familiarity with various technical tools)

14) Course Schedule:

| Date | | Topic/Reading | Deadlines/Notes |
|------|------|--|---|
| 1 | 12/1 | Syllabus Intro: Language in the mind Background survey Speech: Categorizing experience  : [D+04] (pp. 149–159) | WR 1: <i>Categorical perception</i> assigned :) |
| 2 | 19/1 | Speech: Top-down perception WR 1 prep: R/R Markdown  : [W18] | |
| 3 | 26/1 | Speech: Phonological illusions Speech: Perceptual learning  : [D+99], [M+08] | |
| 4 | 2/2 | WR 1 debrief Speech review Word recognition: Accessing the lexicon  : [T11] (Ch. 3) | WR 1 due around here WR 2: <i>Lexical decision</i> assigned <u>Byung-Doh at LMS seminar (6/2)</u> |
| 5 | 9/2 | Word recognition: Continuous activation and competition WR 2 prep: <i>Inferential and descriptive statistics</i>  : [D10] | |
| 6 | 16/2 | Word recognition: Morphology Word recognition: Predictability and prediction  : [FP07], [KF00] | |
| 7 | 23/2 | WR 2 debrief Word recognition review Production: Levels of encoding  : [TG06] (Ch. 2) | WR 2 due around here WR 3: <i>Speech error diary</i> assigned |
| | 2/3 | Recess (no class) | |
| 8 | 9/3 | Production: Mechanisms of selection WR 3 prep | |
| 9 | 16/3 | Production: Grammatical encoding  : [BK08] | |
| 10 | 23/3 | Sentence comprehension: Incrementality Sentence comprehension: Memory and prediction  : [TG06] (Ch. 12) | WR 3 due around here WR 4: <i>Syntactic processing</i> assigned |

11 30/3 Sentence comprehension: Integration with
context
WR 4 prep
: [T+95]

12 6/4 Language in the brain: Functional
organization
Course review/Final quiz prep
: [T11] (Ch. 13)

13 13/4 Final quiz :(WR 4 due around here too :(
