LING 347/PSYC349 *Talking Minds*, Fall 2018

Jonathan R. Brennan (Instructor)   Marjorie Herbert (GSI)

Yourdanis Sedarous (GSI)   Tzu-yun Tung (GSI)

- **Time** Tues & Thurs, 9 - 10 am
- **Location** Lorch 140
- **Website** Via Canvas
- **Instructor Office Hours**
  - Tues 10:00 – 11:30 am
  - @ 414 Lorch Hall
  - Click here for appt
- **GSI Office Hours**
  - **Marjorie** Thursdays 2:00 – 3:30 pm @ Lorch TBD
  - **Yourdanis** Mondays 11:30 – 1:00 pm @ Lorch TBD
  - **Tzu-Yun** Thursdays 11:00 – 12:30 @ Lorch TBD
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Course Description

This course introduces students to the cognitive processes involved in language and conversation. We will discuss aspects of language comprehension, production, and development with a special focus on what we can learn about these topics from mistakes, breakdowns, and language-related pathologies. Students will learn what is known (and what is still unknown) about how language is processed. We will use these topics to learn about the relationship between theories and hypotheses in cognitive science, and to explore a variety of state-of-the-art methods in the psychology of language.

Expectations

To do well in this course you need to *participate throughtfully* in class discussions and *apply the skills* that we develop through the course.

Skills are developed in the form of regular activities and short to mid-length writing assignments. It is important to stay current with these assignments, as we often build from week-to-week on earlier work. Participation comes in the form of in-class discussions and group work. Students are expected to come to class having done the readings and assigned activities so they can be active participants. Class discussions are facilitated by questions posted to the online forum based on the reading for that day.

Readings

All course readings are available via Canvas

Assignments & Grading

Readings, Activities & RQs (30%)

There will be weekly readings and/or out-of-class activities.

- Readings will come from journal articles, websites, or other sources. All readings will made available via Canvas under *Files*.
- Activities and Reading Questions (RQs) for each reading or activity will be posted on Canvas under *Assignments*. These may be multiple choice, true/false, or short answer questions. Simply doing the assignment will count for 50% of your RQ grade and the quality of your answers counts for the remainder. (For example, if you answer one RQ question out of three incorrectly, then you receive a 83% for that assignment.) *Responses should be submitted no later than 8am on the date indicated on the syllabus.*

Up to three RQs can be missed without penalty.

Write-ups (50%)

You will complete 7 longer write-ups over the semester. These take a few different formats, moving from more structured (answering a set of long-form questions via canvas) to less structured (writing a 500-word short essay) as the semester moves forward. Skills covered include:

- Experimental report
- Connecting evidence with competing hypotheses
- Summarizing and critiquing primary literature research
- Reconciling conflicting experimental results

One write-up can be missed without penalty. Submissions can be either Microsoft Word (.docx) or PDF files. No other file-types will be accepted. (Note: You are responsible for ensuring that your file can be opened; corrupted files that cannot be opened will not receive credit.)

Multi-media "Science minute" (10%)

Your final assignment for the course will be to complete two short *video presentations.* In each video you will present one "big idea" from the course (so, two "big ideas" overall!) Your presentation will explain each idea for a non-expert viewer, and provide some of the key evidence behind the idea.

Think of this as an entry in a YouTube series called "Science Minute". Feel free to be creative! Straight-up talking to the camera can work, but you can also free free to try whatever visual/media tools that you think will make for an effective presentation.

Each video should be no more than 3 minutes long. Possible "big ideas" to focus on are available on Canvas.

(Note: you are responsible for ensuring that your media file can be opened and viewed. Corrupted files that cannot be opened will not receive credit.)

You should work in groups of 2!

Participation (10%)

All students are expected to complete the readings before class and to actively contribute to class discussions. A forum on Canvas is maintained for students to post questions and comments about the assignments and to continue the discussion outside of the classroom. Students are encouraged to post to the forum and to respond to posts by your fellow students.

Two discussion meetings can be missed without penalty. No documentation is required under this policy. Absences due to representing the university in an official capacity, or due to conflicts with religious holidays, are accommodated without penalty so long as appropriate documentation is provided. More details are available by the Newnan Academic Advising Center.

Documented medically excused absences that go beyond the above allowances can be made up by posting a reading response on the discussion board. Posts should:

- Be at least 200 words long
- Includes *questions* and/or *comments* that relate the reading to topics from previous classes and readings

All students are expected to meet with the professor or one of the GSIs at least one time during the term.

Late Work Policy

- **RQs**: Late work will not be accepted for credit.
- **Write-ups**: Late work completed within 3 days of the due date will receive a 25% grade deduction. Late work submitted between 3 days and 1 week

of the due date will receive a 50% grade deduction. Late work submitted after 1 week will receive no credit.

- **Science Minutes**: Late work will not be accepted for credit.

Grading Scale

	A	B	C	D	F
+	97-99	87-89	77-79	67-69	
	94-96	84-86	74-76	64-67	<60
-	90-93	80-83	70-73	60-63	

Schedule

The schedule may change during the term. Be sure to check Canvas for updates!

Unit 1: Speech errors and the levels of linguistic representation

- **Sep 4** Why computer's aren't going to take over the world any time soon
- **Sep 6** The mistakes that talking computers make
  - *Do* Computer language activity and RQ1
- **Sep 11** Speech errors and the stages of speech production
  - *Do* Speech error activity and RQ2
  - *Read* Traxler 2012 selection
- **Sep 13** What's gone wrong when something is "on the tip of your tongue"?
  - *Read* Aschcraft 1993's remarkable personal testamony of a speech production disorder
  - *Do* RQ3

Unit 2: Aphasia

- **Sep 18** Broca's brain and the origin of modern cognitive neuroscience
  - *Read* Geschwind 1972 on aphasia
  - *Do* RQ4
- **Sep 20** Tools and techniques in studying aphasias
  - *Read* This website about MRI
  - *Watch* this youtube video
  - *Do* RQ5
  - **Write-up 1 is due Sept 21**
- **Sep 25** Aphasia treatments and the line between cognitive and motoric processing
  - *Watch* The following sequence of youtube videos tracking recovery from Broca's Aphasia: 2 years, 3 years, 5 years, 7 years
  - *Optional read* Buchwald et al. 2017 on remediating targetting specific sub-deficits
  - *Do* RQ6

- **Sep 27** Auditory agnosia, Pure word deafness, and the "specialness" of speech
  - *Optionally read* Polster & Rose 1998
- **Oct 2** Broca's aphasia and the importance of syntactic structure
  - *Read* Caramazza & Zurif 1976 on syntactic comprehension deficits in Broca's aphasia
  - *Do* RQ7
  - **Write-up 2 is due Oct 3**
- **Oct 4** Wernicke's aphasia and the nature of lexical access
  - *Read* Milberg & Blumstein 1981 on semantic priming in aphasia
  - *Do* RQ8

Unit 3: Anomia and conceptual representations

- **Oct 9** The remarkable specificity of Agnosia
  - *Read* Warrington & Shallice 1984's report of category-specific deficits
  - *Do* RQ9
- **Oct 11** The "it takes a village" theory of conceptual knowledge
  - *Read* Pulvermuller et al. 2005's experiment testing whether stimulating the brain's "motor system" affects language comprehension
  - No RQ but this reading is important for *write-up 4*
  - **Write-up 3 is due Oct 12**
- **Oct 16** NO CLASS (Fall break)
- **Oct 18** Mirror neurons might help to explain how meaning works, and they also do dishes
  - *Read* Rizzolatti & Arbib 1998 review the brain's mirror system
  - *Do* RQ10
- **Oct 23** Too good to to be true? The evidence against strongly embodied theories of cognition
  - *Read*: Hickok 2013's arguments against mirror neurons and an embodied theory of cognition
  - *Do* RQ11

Unit 4: Primary Progressive Aphasia & Dementia

- **Oct 25** Semantic dementia and the one region to bind concepts together
  - *Read* Patterson et al. 2007's review of semantic dementia
  - *Do* RQ12
- **Oct 30** Inducing semantic dementia in the comfort of your own lab
  - *Optionally read* Pobric et al. 2007 on inducing semantic deficits with brain stimulation
  - **Write-up 4 is due Oct 31**
- **Nov 1** Dementia and language change over the life-span
  - *Listen* to this *Radiolab* podcast (16 minutes)
  - *Do* RQ13

Unit 5: Aphasia, dementia, and multilingualism

- **Nov 6** Losing a language? Aphasia and multilingualism
  - *Read* Silverberg & Gordon 1979's case studies of bilingual aphasias
  - *Do* RQ14
- **Nov 8** The curious case of the woman who forgot which language she was speaking
  - *Optionally read* Abutalebi et al. 2000
- **Nov 13** The benefits of multilingualism and the ill-understood notion of "cognitive reserve"
  - *Read* Woumans et al. 2015 on the possibility that multilingualism may delay the onset of cognitive impairment in old age
  - *Do* RQ15
  - **Write-up 5 is due Nov 14**

Unit 6: Specific language impairment and Autism Spectrum Disorders

- **Nov 15** Williams syndrome and the cognitive modularity of language acquisition
  - *Read* the New York Times on "The Gregarious Brain"
  - *Do* RQ16
- **Nov 20** Specific language impairments in development
  - *Read both* Joanisse & Seidenberg (1998) and Gopnik (1997) on different theories of SLI
  - No RQ, but these are the focus of *write-up 7*
  - **Write-up 6 is due Nov 21**
- **Nov 27** (S)LI and the search for the "language gene"
  - *Read* Marcus (2003) on clues to the genetics of language from LI
  - *Do* RQ17
- **Nov 29** The complicated connection between language processing and Autism Spectrum Disorders
  - *Watch* This short video giving a general perspective on ASD
  - *Optionally read* this brief NIH overview of communication in ASD
  - *Do* RQ18
- **Dec 4** ASD: Linking social function and language
  - *Optionally watch* this video about methods to study looking patterns in children to assess word learning
  - **Write-up 7 is due Dec 5**
- **Dec 6** The growing understanding of the relationship between ASD and (S)LI
  - *No reading*
- **Dec 11** Wrap-up

There is no final examination for this course. Both **Science Minutes** videos are due on **Friday Dec 14th**.

Accommodations for Students with Disabilities

If you think you need an accommodation for a disability, please let me know at your earliest convenience. Some aspects of this course, the assignments, the in-class activities, and the way the course is usually taught may be modified to facilitate your participation and progress. As soon as you make me aware of your needs, we can work with the Office of Services for Students with Disabilities (SSD) to help us determine appropriate academic accommodations. SSD (734-763-3000; http://ssd.umich.edu) typically recommends accommodations through a Verified Individualized Services and Accommodations (VISA) form. Any information you provide is private and confidential and will be treated as such.

LSA Community Standards of Academic Integrity

The LSA undergraduate academic community, like all communities, functions best when its members treat one another with honesty, fairness, respect, and trust. The College holds all members of its community to high standards of scholarship and integrity. To accomplish its mission of providing an optimal educational environment and developing leaders of society, the College promotes the assumption of personal responsibility and integrity and prohibits all forms of academic dishonesty and misconduct. Academic dishonesty may be understood as any action or attempted action that may result in creating an unfair academic advantage for oneself or an unfair academic advantage or disadvantage for any other member or members of the academic community. Conduct, without regard to motive, that violates the academic integrity and ethical standards of the College community cannot be tolerated. The College seeks vigorously to achieve compliance with its community standards of academic integrity. Violations of the standards will not be tolerated and will result in serious consequences and disciplinary action. (http://www.lsa.umich.edu/academicintegrity/, Dec 21, 2012)

Email Policy

The best place to ask questions is via the Canvas Forum where the GSIs, instructor, and fellow students may all engage with the question. **There is a dedicated "Ask the Instructors" discussion board exactly for this purpose. Use it!**

Posting your questions on the forum allows for easy follow-up discussion and makes your contribution available to other students who may have similar questions. The instructors will monitor the forum to ensure answers are clear and accurate.

E-mail should only be used for personal concerns that cannot be addressed via the discussion board, in person before/after class, or in office hours. The GSIs and the instructor aim to respond to emails within 24 hours on weekdays. We are not available on email after business hours or on

weekends.