Psycho

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ty of Language (PSY 357), Winter 2016
Syllabus and Lab Manual
Section 1, Noon-12:50 PM, MWF
174 Lake Ontario Hall

Instructor: Jennifer Gross, Ph.D.
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Course Description:
Language plays a central role in our lives. We chat with friends, read novels, enjoy the lyrics of music, convey our feelings, teach our children, and transmit scientific discoveries to future generations via language. Your ability to read these words is just one example of language in action. Most of us, however, don’t stop to ponder our linguistic prowess. In this course, we shall scientifically investigate our linguistic feats and foibles, by exploring these topics and more:

- What distinguishes language from mere communication?
- How did the human mind develop the capacity for language?
- Is language uniquely human, or do non-human animals and insects have language?
- How are gestural (sign) languages similar to, and different from, spoken languages?
- How do children learn to speak and read their mother tongue?
- Why do children say funny things like ‘she giggled me’ and ‘I breaked the toy’?
- Where does language reside in the brain, and is there such a thing as ‘being right-brained or left-brained’?
- Are there sex differences in mental aptitude?
- What might help the 21 percent of U.S. adults (per the U.S. Dept. of Education) who read below a 5th grade level?
- Can we think independently of language, or does language constrain our reality?
- Do Eskimos really have several hundred words to describe snow? Do skiers?
- Can leading questions compromise the accuracy of eyewitness testimony?
- What do tips of the slongue (oops—slips of the tongue) reveal about the mind?
- Can subliminal communication influence buying preferences?
- Are there risks associated with simultaneously driving and talking on a cell phone?
- Although equipped with voice activation, why can’t our cell phones reliably converse with us?
- Is ‘WUG’ an entry in your mental dictionary? What about ‘WAG’? How can you make these decisions within fractions of seconds considering the vast number of words you know?
- Why do we hear discrete words, even though speakers do not pause between words when speaking (a phenomenon best observed by listening to someone who speaks a language foreign to the listener)?
- Can language be ‘loaded’? For example, should words like ‘chairman’ and ‘freshman’ be replaced respectively with gender-free terms such as ‘chairperson’ and ‘freshperson’? What is a ‘freshperson’ anyway?

Indeed, such fascinating questions deserve compelling, scientific explanations—the highest standard of evidence available. Although we may take our language-savvy minds for granted, we shall explore how language dominates our social and cognitive processes. Simply stated, language may be the essence of humanity.

Prerequisite: PSY 101
Course homepage on Blackboard (mybb.gvsu.edu) contains:

Pertinent class information (e.g., syllabus, laboratory assignments, readings, grades, announcements, and lecture slides) will be posted on Blackboard.

Required book:


$34 paperback; used copies available

Required Software License:


$45 in bookstore; $49 online at [https://coglab.cengage.com/info/purchase.shtml](https://coglab.cengage.com/info/purchase.shtml)

Required readings: Available electronically (see Blackboard).

Suggested readings: These readings are *really* optional, and have been provided should you seek additional details about the studies presented in lecture.

Weekly laboratory participation via:

1) CogLab 5 [https://coglab.cengage.com/](https://coglab.cengage.com/)
3) Project Implicit ([https://implicit.harvard.edu/implicit/](https://implicit.harvard.edu/implicit/))

Course Grade Formula:

Course grades will be based on scores from the following, weighted activities:

- Exam #1 25%
- Exam #2 25%
- Exam #3 25%
- Weekly laboratory participation 25%

**Letter Grades** will be calculated according to the following scale:

- A 93-100%
- A- 90-92%
- B+ 87-89%
- B 83-86%
- B- 80-82%
- C+ 77-79%
- C 73-76%
- C- 70-72%
- D+ 67-69%
- D 60-66%
- F Below 60

Course Attendance:

Although role is not taken, you are expected to attend class. Students who do well in the class attend regularly. By attending class, you benefit by hearing unique content presented exclusively in lecture.

Three Forms of Evaluation:

1. **Exams**: To formally assess your understanding of course material, there will be three exams, including a noncumulative final exam. Questions on the exam will be based on material covered in lecture, assigned readings, and the laboratory assignments. See *Weekly Schedule* for exam dates.
**Make-up exams** will be given for the following circumstances: Official university activities (e.g., participating in sporting events), illnesses, and major life events (e.g., romantic breakup). Please email the professor as soon as possible to explain the situation and request permission for an alternate exam date.

2. **Laboratory Participation:** The primary goal of the laboratory component is to afford you with a better understanding of how to conduct research in Cognitive Science in particular, and in Psychology more generally. Outside of class time, you will participate in web-based, experimental investigations of classic experiments in Cognitive Science via CogLab 5 (license fee), the Online Psychology Lab (free), and Project Implicit (free). You may complete these weekly experiments by using the GVSU computer labs or your own computer.

Take the time to read the background material for each lab at the host sites. For all assigned experiments, you are expected to understand the theoretical underpinnings motivating the investigation; the procedures and methods of investigation, including the independent and dependent variables; the predicted experimental outcome (i.e., hypothesis); the results of the experiment expressed in statistics and graphs; potential limitations of the investigation; and how each experiment is related to material covered in class and the assigned readings.

*Submit proof of completion for weekly labs to Blackboard via Assignments by midnight on the due date to earn full credit.* Late labs receive ½ credit. No email submissions will be accepted. You are encouraged to submit proof of completion up to two weeks early for maximum flexibility.

Proof of Completion requires:

1. Date of Completion
2. Your Summary Data. CogLab automatically provides your summary data upon completion of the experiment. At the Online Psychology Lab site, use your UserID to look up your summary data. Never report “Trial-by-trial data.”
3. Your UserID (e.g., 47981)—only for Online Psychology Labs. The UserID is furnished with a big red check mark upon completion. Careful, this proof of completion pops-up only once from the host site. Copy # immediately.

Please note: You are encouraged to keep a copy of the assignment for your personal records (backup proof of completion; helpful when preparing for exams). Participation in all assigned labs is expected. Thus, failure to complete a lab results in a corresponding grade deduction as shown below.

**Laboratory Participation Grade** will be awarded, according to the following schedule:

<table>
<thead>
<tr>
<th>Lab Count</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>21 (of 21) labs by due date</td>
<td>100%</td>
</tr>
<tr>
<td>20</td>
<td>95%</td>
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<tr>
<td>19</td>
<td>90%</td>
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<td>18</td>
<td>86%</td>
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<td>17</td>
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<td>16</td>
<td>76%</td>
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<td>15</td>
<td>71%</td>
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<td>14</td>
<td>67%</td>
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<tr>
<td>13</td>
<td>62%</td>
</tr>
<tr>
<td>12 or less</td>
<td>50%</td>
</tr>
</tbody>
</table>
Instructions for getting started with, and obtaining proof of completion from, CogLab 5:

1. Open your Web browser and go to http://coglab.cengage.com/help/register.shtml
2. Towards the bottom of the page is a form that asks for three pieces of information. If you do not see the form, your Web browser probably has JavaScript disabled. Please enable JavaScript and re-load the page to continue.
3. Enter the requested information:
   - In the Group Name text field, enter the Group ID: PsyLangW16
   - In the Group Password text field, enter: noamchomsky
   - In the Registration Code text field, enter your registration code. The registration code could be in one of several formats. It may be on a sticker on the inside front cover of your CogLab Student Manual. It may have been bundled with your textbook on a postcard. Or, you may have purchased a registration code electronically (sometimes this is also called an e-Pin). There are two types of codes:
     - A CogLab2 code: This is made up of 11 letters and numbers, and will look something like this: yij2d9v6fu0
     - A CogLab5 code: This is made up of 16 letters and numbers, and will look something like this: sjqk8b632dvh4u0
   Both are valid on this website. However, do not purchase used CogLab registration codes! If the registration code has already been used, it will not work for you. Each valid registration code can be used only once.
4. After filling in all the text fields, click or tap on the Start Registration button.
5. Your Web browser will connect with the CogLab server to verify your information. If the information is correct, a new window will appear. The first line, highlighted in yellow, is your User ID. You should write this down because you will need to access CogLab.
6. The second line is your registration code.
7. The next two lines ask for your first name and your last (family) name.
8. Next, enter a password. You'll use this when you login. The password must be at least 8 characters long. It is best not to enter a password you use on other web sites. The next line asks you to re-enter the password.
9. The next two lines ask for your email address and then confirmation of this address. This email address will be used if you forget your password.
10. Next, enter a security question and answer. Make sure to use an question that only you can answer correctly. Also, remember whether you use uppercase or lowercase letters in your answer: you'll need to enter your answer exactly the same if you forget your password.
11. If necessary, select your keyboard layout (for keyboard help, see http://coglab.cengage.com/info/keyboards.shtml).
12. Finally, decide if you want CogLab to remember you so that you don't need to login each time. If not, uncheck the box next to Remember Me.
13. After filling in all the text fields, click or tap on the Complete Registration button. Done! To start doing labs, just click or tap on the Labs menu and select the lab.
14. To start doing labs, just click or tap on the Labs menu and select the lab.
15. Proof of completion is your summary (not trial-by-trial) data provided upon completion of the experiment.
Instructions for getting started with Online Psychology Lab (http://opl.apa.org/):

1. Working from a GVSU computer lab, look for and open the ‘Application Folder’ on the desktop.
2. Next, open the ‘Psychology Folder’.
3. Launch the Online Psychology Lab (OPL; http://opl.apa.org/). If working from your own computer, be sure to download Adobe Flash plugin (available at host site) and permit pop-ups before launching a lab.
4. Select ‘Students Begin Here’ and then select assigned experiment.
5. Enter class ID: 8995
6. Enter requested demographic (e.g., age; handedness) information to proceed with experiment.
7. Upon completion of the experiment, write down the UserId (e.g., 47981) furnished with a big red check mark upon completion.

To retrieve data from the Online Psychology Lab (http://opl.apa.org/):

1. Select the ‘Data’ tab on the homepage:
2. Select ‘data format’ by scrolling down to ‘Microsoft Excel’.
3. Select the assigned experiment by scrolling through options.
4. Select our class ‘Grand Valley State University- W16, PSY 101 & 357 (8995)’ from the list.
5. Select ‘Download Data’ option. An Excel data file will open in a separate tab.

Instructions for getting started with, and obtaining proof of completion from, Project Implicit:

1. Open your Web browser and go to https://implicit.harvard.edu/implicit/
2. You have the option of registering for research at Project Implicit “to gain access to dozens of studies and tests on a wide variety of topics.” If you prefer, you can participate as a guest in a limited array of demonstration studies on social attitudes.
3. Proof of completion is a summary statement provided upon completion of an experiment.
**Weekly Schedule:**

**Week 1  The nature of language and metacognition.**

**Lab #1: Memory Judgment (due no later than Monday, 1/18)**

**Required readings (total pages approx. 32):**

Harley, Chapter 1, Language, pp. 1-29


**Suggested readings:**


**Week 2  Is language innate?**

**Lab #2: Statistical Learning (due Friday, 1/22)**

**Required readings (total pages approx. 16):**


**Suggested readings:**


**Week 3 Smart, albeit alingual animals and insects.**

**Lab #3: Monty Hall (due Friday, 1/29)**

**Required readings (total pages approx. 35):**

Harley, Chapter 2, Animals, pp. 31-48


To watch a live “bee dance,” check out the following link compliments of NOVA and PBS: [http://www.pbs.org/wgbh/nova/bees/dances.html](http://www.pbs.org/wgbh/nova/bees/dances.html)


**Suggested readings:**


**Week 4 No formal instruction necessary.**

**Lab #4: Categorical Perception – Identification (Requires headphones/earbuds; due Friday, 2/5)**

**Lab #5: Categorical Perception – Discrimination (Requires headphones/earbuds; due Friday, 2/5)**

**Required readings (total pages approx. 39):**

Harley, Chapter 3, Children, pp. 49-76 only

Suggested readings:

Week 5 My teacher ‘holded’ the rabbits.

Exam 1, Friday, February 12

Lab #6: Memory Span (due Friday, 2/12)

Lab #7: Mental Rotation (due Friday, 2/12)

Required readings (total pages approx. 10):


Week 6 Role of working memory in language.

Lab #8: Word Length Effect (due Friday, 2/19)

Lab #9: Phonological Similarity Effect (due Friday, 2/19)

Required readings (total pages approx. 19):

Suggested readings:

Week 7 The ‘bottleneck’ of information processing.

Lab #10: Modality Effect (due Friday, 2/26)

Required readings (total pages approx. 28):
Harley, Chapter 6, Words, pp. 145-154 only


**Suggested readings:**


**Week 8 The science of reading.**

**Lab #11:** Stroop (due Friday, 3/4)

**Lab #12:** Word Superiority Effect (due Friday, 3/4)

**Required readings (total pages approx. 38):**

Harley, Chapter 6, Words, pp. 154-185 only


**Suggested readings:**


Week 9—Spring Break!!!—March 6-13

Drop Deadline - Grade W, March 11

Week 10  Meaning in network theories.

Lab #13: Lexical Decision (due Friday, 3/18)

Lab #14: Lexical Decision Making at the Online Psychology Lab (due Friday, 3/18)

Your Lexical Decision Making Data, Part 1:
Related Accuracy: Words= ___%; Nonwords= ___%
Related Reaction Time: Words= ___ sec; Nonwords= ___ sec
Unrelated Accuracy: Words= ___%; Nonwords= ___%
Unrelated Reaction Time: Words= ___ sec; Nonwords= ___ sec

Your Lexical Decision Making Data, Part 2:
Did both Lexical Decision Labs reveal spreading activation? If not, with your Sherlock Holmes' hat on, figure out the mystery of why one lab flopped. The two labs see remarkably similar. What methodological strengths vs. weaknesses may explain why one version of the lab yielded the predicted findings, and the other version of the lab did not.

Required readings (total pages approx. 34):

Harley, Chapter 5, Meaning, pp. 117-143


Suggested readings:

Week 11  Connotation, denotation, and false memory.

Exam 2, Friday, March 25

Lab #15: False Memory (due Friday, 3/25)

Lab #16: Facial Recognition at the Online Psychology Lab. Participate on two days separated by 24 hours (due Friday, 3/25)

Your Facial Recognition Data:
Condition: ____ [Control / Experimental]

Required readings (total pages approx. 38):

Harley, Chapter 7, Understanding, pp. 187-220


Suggested readings:

Week 12 The relationship between language and thought.

Lab #17: Implicit Association Test (IAT) of your choice at Project Implicit (https://implicit.harvard.edu/implicit/; due Friday, 4/1).

Your IAT Summary Data: A one-sentence summary of your attitudes

Required readings (total pages approx. 39):

Harley, Chapter 4, Thought, pp. 89-115


Suggested readings:


**Week 13 Speaking and inattention blindness.**

**Lab #18:** Change Detection (due Friday, 4/8)

**Lab #19:** Operation Span (due Friday, 4/8)

**Required readings (total pages approx. 36):**

Harley, Chapter 8, Speaking, pp. 221-253


**Suggested readings:**


**Week 14 Brain, plasticity, and critical periods**

**Lab #20:** Brain Asymmetry (due Friday, 4/15)

**Required readings (total pages approx. 18):**

Harley, Chapter 3, Children, pp. 77-87


**Suggested readings:**


**Week 15: Assorted language facts and fallacies**

**Required readings (total pages approx. 15):**

Harley, Chapter 9, End, pp. 255-264

**Lab #21: Mirror Drawing at Online Psychology Lab (due Friday, 4/22)**

**Your Data:** Hand Preference: ____ [Right/Left]; Time for Left: ____ sec; Time for Right: ____ sec


**Suggested readings:**


**Final Exam, Wednesday, April 27 from 2-3:50 PM**

“Talk is cheap, but understanding how and why is priceless.”

Brian Bartek, Psychology Major, Honors College, Grand Valley State University, ‘04