# LING321 Syntax & Semantics

## Final Exam

## Spring 2018

## 0   Instructions

1. Due on Blackboard Friday 27 April by 11:59p
2. You are to complete the problemset in its entirety, i.e. all questions and subquestions, for full credit.
3. EXCEPT: Items labeled 'bonus' are optional. They will be awarded points for completion, but no points will be deducted for wrong/ missing answers.
4. The exam is open notes/ open internet. Be resourceful. It's not cheating to ask Google, journal articles, your textbook, your classmates, me, etc. However, do cite the sources that you use!
5. You are free to work together, however you *must* submit original work. **NB:** Your assignments will be processed via SafeAssign. Remember, you run the risk of failing the class entirely if you are caught cheating on the final.
6. Demonstrate critical thinking. Show all work. It is *insufficient* to just have a correct answer.
7. **IMPORTANT:** The exam may be updated to improve clarity, clean up typos, etc. Exam may be shortened (in that more questions become bonus questions) but never lengthened.
8. Have fun! (Duh)

# 1 Grammaticality Judgment Experiment

**Introduction:** In the tradition of Generative Grammar, a great majority of linguists have used introspective judgments to formulate hypotheses about how the Grammar of a language or the Grammar of Language are organized. However, many sentences reported in the literature as ungrammatical to a given linguist may in fact be perfectly acceptable to other speakers of the language. Likewise, the reverse is true.

To this end, many linguists have called for the use of experiments in determining the grammaticality of the sentences or constructions under the microscope. That is, instead of asking yourself, *Is the sentence 'All swans are white' grammatical in English?*, you might ask 10, 20, 50 or 100 (etc.) other native speakers of English what they think.

There are many ways you can ask people for their judgments. You can ask them a simple yes-or-no question, *Is this sentence grammatical?*. Or, you can ask people to rate sentences on a scale from 1 to 7 (this kind of scale is more common in linguistics and psychology than a scale from 1 - 10). Similarly, you can ask people to rank sentences from best to worst, among a myriad of other tasks.

Some more tradition-oriented linguists have countered that the need for 'fancy experimentation' is unnecessary and claim that the average grammaticality rating of a given sentence is similar or identical to the grammaticality rating given by a single, introspective linguist (and a linguist necessarily). Further, Sprouse et al. (2013) have experimentally determined that introspective judgments from single linguists are equivalent to experimentally-derived judgments.

For this assignment, I want you to test whether this claim is true. That is, is your judgment (as a linguist) similar or identical to the average judgment of other native English speakers? Or, if you're not a native English speaker, you may assess the degree to which your L2 (second language) grammar compares with the target L1 (native) grammar. Further, you will be exploring the effect of scale choice (yes-no vs. Likert) and the effect demongraphics have on your results. Finally, I'll have you explore difficulties in providing so-called 'secondary intuitions.'

Find a collection of 78 sentences below. Some are reported in the literature as good sentences; some are reported as bad sentences; and some are reported as marginal or so-so sentences. Some of the sentences in the list below are from Sprouse et al., 2013. Some are my own. You are free to use the list *unchanged*, however, all items *must be randomized*. It's strongly suggested that you change some of the words (called *lexicalizations*) of sentences that are similar to each other to avoid having subjects explicitly compare them. For instance, if you have the pair:

> The dog chased the cat
> The dog chased at the cat

you might consider changing the words of one of the items to, e.g., *The police chased at the robbers*.

**Bonus:** For those of you interested in sociolinguistic factors you may consider editing the following. Write a paragraph explaining any differences you find in acceptability ratings.

- Effect of race/ ethnicity/ nationality on acceptability judgments:
  Have half of the names in the stimuli be 'typical' American names (e.g., *Mary, John*, etc.)
  Have half of the names in the stimuli be 'foreign'-sounding names (e.g., *Rashid, Mohamed, Pablo*)

- Effect of gender on acceptability judgments:
  Have half of the names in the stimuli be male, half female

- Effect of age on acceptability judgments:
  Have half of names in the stimuli be 'old'-sounding (e.g., *Ethel, Ruth, Orval, Wendell*) and half not (e.g., *Avery, Blakely*, etc.)

Before you get started, please read:

> Sprouse, J., Schütze, C. T., & Almeida, D. (2013). A comparison of informal and formal acceptability judgments using a random sample from Linguistic Inquiry 2001–2010. *Lingua, 134*, 219-248.

> Wasow, T., & Arnold, J. (2005). Intuitions in linguistic argumentation. *Lingua, 115*(11), 1481-1496.

**Steps:**

1. Rate each sentence yourself on a scale of 1 - 7, where '1' means 'Absolutely no one would say this in English' and '7' means the sentence sounds perfectly natural. Use the middle of the scale to indicate the degree of naturalness of the sentence: whether or not you think other native English speakers might utter the sentence, whether or not you think the sentence could be said in some context; etc. Do not consider whether you'd accept the sentence from a non-native English speaker.

2. Get 10 or more volunteers (**bonus:** 20) to rate these sentences from 1 - 7. Be careful *how* you ask your participants to rate sentences. Do so in a way, for example, that avoids asking for prescriptive judgments. Justify your method.

3. Do the same as in (2), but now ask a *different* set of 10 participants (**bonus:** 20) whether the sentences below are *grammatical* or *ungrammatical*. You may choose to use the words *good/ bad*, *unnatural/ natural*, or something similar. Justify your choice.

4. Collect some basic demographic information: gender, where your participants grew up, where they currently live and for how long, their level of education, their profession, and any other factors you think might inform *how* a participant might rate the sentences. Justify your choice of demographic questions.

5. Include an electronic copy of your survey, including instructions, demographic questions, and test items, where *electronic copy* may be a PDF of your survey, a link to a web survey, etc.

**Questions:** Write one or two paragraphs in response to each question below. You may write more if needed, but be concise.

1. Come up with a method to directly compare the results from the binary judgment task (*grammatical/ ungrammatical*) and the Likert scale task. Explain how you do this. Do you expect the scores from each to be similar? Why? Are the scores from each similar? What effect do you expect the choice of scale has on the responses? Why? What effect does scale choice actually have? Structure your response in terms of $H_0$ and $H_1$.

2. **Bonus:** If you have knowledge of basic inferential statistics, provide some stats indicating how similar/ dissimilar the ratings that each scale type produces are.

3. Compare the scores from your participants (using the adjusted scale you came up with in (1)) against your own judgments. Are they similar? In light of your results, assess the claim that introspective judgments are representative of English Grammar.

4. Relate your findings to Sprouse et al.'s findings. In doing so, pull at least three (3) quotes from the article that support or refute your findings/ interpretation of your findings. Explain what the quotes mean carefully.

5. Can you explain the pattern of results, partially or in full, by making reference to demographic factors? Which factors seem relevant, which irrelevant?

6. Pick 3 sentences from the list and explain why you think they received the ratings they did. You may not choose sentences that are clearly good or clearly bad (perhaps received between 3 and 5 on the Likert scale). Base your discussion on the discussion of secondary intuitions in Wasow & Arnold (2005).

**Experimental sentence pool:** NB: do not break the stimuli in Sets as I have done when giving your survey. Each Set (1 - 5) corresponds to structures I'll ask you to probe corpora for in the next part of the exam.

###FROM SPROUSE ET AL.####

Ginny remembered to have bought the beer
Ginny remembered to bring the beer
Sarah convinced Bill to have gone to the party
Sarah convinced Bill that he would go to the party
Sarah convinced Bill that he would have gone to the party by the time he goes to bed this evening
Sarah convinced Bill that he will have gone to the party by the time he goes to bed this evening
John believes without a doubt his team will win
John believes without a doubt that his team will win
My belief Kim is clever is sincere
My belief that Kim is clever is sincere
How likely to be a riot is there?
How likely to win the race is John?
Max may have been studying, but Jason may have done so too.
Max may have been studying, but Jason may have been doing so too.
The children almost all are sleeping.
The children are almost all sleeping.
Knife with the golden blade and fork with the silver handle go on the left.
The knife with the golden blade and the fork with the silver handle go on the left.
What did they believe at that time that Peter fixed?
At that time, what did they believe that Peter fixed?
A taller man than my father walked in.
A man taller than my father walked in.
Max talked to as tall a man as his father.
Max talked to a man as tall as his father
Who do you wonder which picture of is on sale?
You wonder which picture of Marge is on sale

######SET 1######

Smith used to could whistle, but he's forgotten how.
Johanna might could go to the party, but she has to finish her chores first.
Julien may could go to the seminar, but his travel grant hasn't cleared yet.

Smith used to be able to whistle, but he's forgotten how.
Johanna may be able to go to the party, but she has to finish her chores first.
Julien might be able to go to the seminar; he has to wait for his travel grant to clear.

######SET 2######

The car needs washed this afternoon.
Mom says the broccoli needs eaten before we can have dessert.
The clothes at this store tend to run small, so the skirt needs tried on before buying.
Before you do anything, Grandma needs dropped off at the store.
The representative said that three things need done to avoid a government shutdown.

The car needs to be washed this afternoon.
Mom says the broccoli needs to be eaten before we can have dessert.
The clothes at this store tend to run small, so the skirt needs to be tried on before buying.

Before you do anything, Grandma needs to be dropped off at the store.
The representative said that three things need to be done to avoid a government shutdown.

######SET 3######

We don't need that much water. Stop filling the pool when it's half full.
We don't need to get gas yet. The tank is only half empty.
Sarah was surprised to find that the classroom was completely empty.
Sam is only 15. He's not completely tall yet!

The painting isn't half bad!
Your hairdo isn't half good!

######SET 4######

John promised Mary he'd do the dishes
James promised Maria that he'd do the dishes
Jerome promised Moesha to do the dishes.

The patient promised the doctor to take his medication as directed
The congressman promised his constituents he'd reform
The artist promised his client that he'd finish the painting before too long.

######SET 5######

Unfortunately, Barbara has had to go back to the dentist to get her crown fixed twice this year already
Mary-Jo unfortunately hasn't made the team again this year.
Joanna has unfortunately missed the last bus home.
Clifford has lost unfortunately the race.
Ming has decided not to come unfortunately.
The bachelor has given the rose unfortunately to the most undeserving contestant.

Hopefully the professor has graded the assignments by now.
The doctor hopefully has had time to look over my results.
The submarine has hopefully surfaced in friendly waters
The baby has eaten hopefully enough to last her overnight.
The mailman has dropped the package off at the right house hopefully
The politician has given the address hopefully to a willing crowd.

Repeatedly the wind has blown the mailbox over.
The dog repeatedly has barked at anything that moves.
Students have repeatedly asked for an extension on their homework.
Officials have denounced repeatedly the claims that they were elected unfairly.
Corrine has offered a ride repeatedly to John.
To annoy her parents, Carol has sung the same song repeatedly for an hour.

Often Fox News has reported misleading information
Brian often has forgotten where she keeps her keys
Susan has often left her belongings behind at airport security
Giancarlo has misunderstood often the directions for assembling IKEA furniture
Johnny has offered his advice often to the wrong crowd.
Hana has sailed her boat around the bay often

# 2   Corpus Analysis

**Introduction:**   You can ask a myriad of questions by using a corpus/ corpora. You can ask about the existence and regional distribution of certain syntactic constructions. You can ask questions about the occurrence/ non-occurrence or frequency, and by proxy grammaticality, of a construction. You can also ask about the syntactic distribution of elements within a sentence, *inter alia.*

Search for the items listed in bold below and answer the questions under each. Be thoughtful in your responses and relate them to the discussion of corpus data in class. Provide a few example results from each search, including enough context for me to determine whether the structure you've reported is indeed the structure I've asked for. NB: Do not limit yourselves to just the first few results of each search. You may need to troll through the data to find interesting, telling, and (un)convincing results.

**Accessing the Corpora:**   You'll need to register for an account. Be aware that a free account limits you to only so many searches per day.

1. British National Corpus (BNC):
   http://corpus.byu.edu/bnc/

2. Corpus of Contemporary American English (COCA):
   http://corpus.byu.edu/coca/

**Report on the Corpora:**   Dig around on the internet, or find the relevant statistics on corpus.byu.edu and answer the following questions:

1. What type of sources does each corpus draw from and how represented is each source? What effect(s) might the selection of sources have on the results of your searches?

2. How large is COCA? How large is BNC? Should a difference in size influence your results?

**Questions:**   NB: search for the bolded terms only. Bolded terms separated by a comma indicate two separate searches (e.g., X, Y means, search for X, then search for Y). Your responses should be concise. Provide enough detail to answer the questions thoroughly, but I'm not expecting, e.g., a paragraph per question.

1. **might could**, **used to could**

   (a) Does this expression exist in COCA? In BNC? In what regions of the country/ countries? What inferences can we draw from the pattern of results?

   (b) Try to figure out its use from the examples given. Write down what you think the construction means and its distribution. Find a speaker of the variety that allows this construction and ask him/ her for more examples of where it is appropriate to use this construction. Update your original observations with the information provided by your informant.

   (c) What part of speech is *might*? *Could*? Give evidence for your labeling. Explain in syntactic terms why this construction is not expected in English Grammar.

   (d) **Bonus:** In *used to could*, the *to* is construed with which word, *used* or *could*? That is, is it [[ *used to* ] *could* ] or [ *used* [ *to could*]. How can you tell? Provide syntactic tests.

2. **[need] [v?n*]**, **[need] to be [v?n*]**

   (a) The first search will potentially return the construction *needs X'ed* as in *That car needs washed.* The second will return the construction *needs to be X'ed* as in *That car needs to be washed.* Is the construction *needs X'ed* found in COCA and/ or BNC? Report examples from your search. Is the construction *needs to be X'ed* found in COCA and/ or BNC? Report examples from your search.

(b) Explain why forms like *needs met*, as in *I have my needs met* do not have the same structure as the one under discussion. Report a few examples of this alternate structure from your search. Provide as much context as is provided in the corpora; do not just report a string of two words. You may not use the string *...needs met...* as an example.

(c) We know that the *need X'ed* construction exists. What does that say about the usefulness of corpora? Relate your answer to your report on the size and composition of COCA and BNC to your discussion here.

3. **half full**, **half empty**, **completely empty**, **completely tall**

(a) According to many semantic theories, *half empty* should sound rather weird to most English speakers, but not *half full*. Similarly, *completely tall* should sound weird, but not *completely empty*. How can corpus data weigh in on this intuition? How do COCA and BNC weigh in on this intuition?

(b) Discuss the limitation of corpora to weigh in on the grammaticality of a construction. Include discussion of *negative evidence* in your response.

4. **[promise] [nn*] to**, **[promise] [nn*] that**

(a) In the literature, it has been claimed that the structure, 'promise someone to' is acceptable by a small minority of English speakers. However, we might hypothesize that many more people would likely accept the structure than would produce it. Let's see if that's the case! Look the two structures up in COCA and BNC. Compare the frequencies of the production of two structures and then compare them with the acceptability judgments you collected. Is this hypothesis supported? NB: Here in particular you want to be careful to find structures that are truly identical to the ones being given!

5. **unfortunately**, **hopefully**, **repeatedly**, **often**

(a) Where in a sentence can *unfortunately/ hopefully* come? Where *repeatedly/ often*? Is there a difference between British and American English speakers? Make reference to syntactic terms. Do not simply say, "*Repeatedly* occurs in the middle of a sentence."

(b) Is adverb placement a more stable property of the English spoken in the US and the UK, or is it subject to regional variation (like *might could*, etc.)? Explain.

# 3   Comparison of Methods

You have used informal judgments, formal acceptability judgment tasks, and corpus data to examine a number of linguistic constructions. Write a 2-page, single space essay (1in margins all around; 11pt arial font) comparing the results of each method to each other. You are free to base your discussion on anything you find meaningful or relevant to you. You may pick one or two constructions, e.g., the *needs X'd* construction, and do a critical comparison of their acceptability according to (a) your intuition, (b) a binary forced-choice acceptability rating survey, (c) a Likert scale based acceptability rating survey, and (d) their frequency in the corpora. Here are some other sample prompts:

1. Gradient grammaticality refers to an observation you've likely already made from Part 1 of the exam: sometimes sentences don't appear to be categorically good or bad. There are great sentences (7), good sentences (6), OK sentences (5), so-so sentences (4), and so on (3, 2, 1). Can this gradience we observe in experimental studies be found using introspection? Using binary yes-no scales? Using corpora? What do you think this gradience tells us about the nature of Grammar?

2. What method seems most reliable? Unreliable? Why? Or, do we need to use all available methods to be absolutely sure we've got a complete picture? What would be some potential drawbacks of using so many methods?

# 4 Kurdish

In the below, a series of questions will guide you through providing a rudimentary linguistic analysis of Kurdish. **Important:** The data below are from a particular dialect of Kurdish. Be careful if you consult outside sources on Kurdish as different dialects/ varieties of Kurdish can be *significantly* different.

The answers to each question should be short and concise. Only provide evidence that is asked for, being careful to answer each question *in full*.

## 4.1 Data Set 1: Word Order & Tense

(1)  a.  mə  dəni  søvək χor
        1sg. yesterday apple eat
        'I ate an apple yesterday'

     b.  az  huɾu  søvke dəχumə
        1sg. today apple eat
        'I am eating an apple today'

     c.  az  su  søvke bəχumə
        1sg. tomorrow apple eat
        'I will eat an apple tomorrow'

**Question 1:** What is the basic word order of Kurdish, based off of the examples in (1)? Your answer should be in terms of Subject (S), Verb (V), and Object (O). Provide evidence from the data.

**Question 2:** Is Kurdish head initial or head final? How can you tell? Provide evidence from the data.

**Bonus:** What else could we check to be sure that Kurdish is a head initial or head final language? Explain.

**Question 3:** What tense(s) does Kurdish have? How are they marked? Discuss the morphosyntax and morphophonology of Kurdish tense, providing and explaining examples from the data.

## 4.2 Data Set 2: Agreement

(2)  a.  az  su  søvke bəχumə
        1sg. tomorrow apple eat
        'I will eat an apple tomorrow'

     b.  dø  su  søvke bəχui
        2sg. tomorrow apple eat
        'You will eat an apple tomorrow'

     c.  awe  su  søvke bəχue
        3sg.f tomorrow apple eat
        'She will eat an apple tomorrow'

**Question 4:** Does Kurdish exhibit agreement? If so, is it subject-verb or verb-object agreement? Or, is agreement between a noun and its dependents? Based off of what evidence? NB: You may want to check what you identified as tense-marking in **Question 3**.

**Question 5:** Is the agreement pattern you found consistent? IN answering this question, discuss item (1-a). Your discussion should only address what the problem is: you do not need a solution to it yet.

## 4.3 Subjects & Objects

(3)  a.  ta  dəni    az   dim
          2sg. yesterday 1sg. saw
          'You saw me yesterday'

      b.  mə  dəni     dø  die
          1sg. yesterday 2sg. saw
          'I saw you yesterday'

(4)  a.  dəni     az   listm
          yesterday 1sg. play
          'I played yesterday'

      b.  huɾu  az   dəlizimə
          today 1sg. play
          'I am playing today'

**Question 6:** Consider the pronouns that translate to 'I' and 'you' in (3-a,b). What predicts what form of the pronouns surfaces? Explain.

**Question 7:** Now consider the data in (4). Is the form of the pronoun that means 'I' predicted based on your answer to **Question 6**? How might you change your characterization of the distribution of pronouns in (3) to account for the data in (4)? (HINT: Look at the verbs involved, but do not assume they work exactly the same as English verbs).

(5)    Copy of (1)

      a.  mə  (dəni)    søvək χor
          1sg. (yesterday) apple eat
          'I ate an apple (yesterday)'

      b.  az  (huɾu)  søvke dəχumə
          1sg. (today) apple eat
          'I am eating an apple (today)'

**Question 8:** Now consider the first person singular pronouns in (5-a,b). Do your observations about the distribution of pronouns above also cover the distribution in (5)? Consider also the words that translate to 'apple.' Your treatment of pronouns and nouns should be unified. That is, you do not need a separate analysis for pronouns and nouns. (HINT: What is the minimal difference between the sentences in (5-a,b), disregarding the time adverbial?)

## 4.4 Agreement redux

(6)  a.  ta  dəni    az   dim
          2sg. yesterday 1sg. saw
          'You saw me yesterday'

      b.  mə  dəni     dø  die
          1sg. yesterday 2sg. saw
          'I saw you yesterday'

      c.  mə  dəni    søvek di
          1sg. yesterday apple saw
          'I saw an apple yesterday'

(7)    Copy of (2)

      a.  az  su      søvke bəχumə
          1sg. tomorrow apple eat
          'I will eat an apple tomorrow'

      b.  dø  su      søvke bəχui
          2sg. tomorrow apple eat
          'You will eat an apple tomorrow'

      c.  awe  su      søvke bəχue
          3sg.f tomorrow apple eat
          'She will eat an apple tomorrow'

**Question 9:** Kurdish's agreement system is a little more complicated than what you identified in **Question 4**. From (6) and (7), how many agreement patterns are there? What conditions where a particular pattern will surface? Discuss the data explicitly.

**Question 10:** Is Kurdish a head-marking or dependent-marking language? How can you tell?

**Bonus:** What else could we check to be sure that Kurdish is head-marking or dependent-marking? Explain.

**Question 11:** How are the functions *agent*, *subject*, and *object* differentiated in Kurdish? Make reference to constituent order, agreement or cross-referencing, and case-marking. Is Kurdish a Nominative-Accusative (N-A) language or an Ergative-Absolutive (E-A) language? Is Kurdish morphologically and/ or syntactically N-A or E-A language? How can you tell?

**Bonus:** What more information would we want to be sure of our answer to **Question 11**? If you interviewed a native speaker of this Kurdish dialect, how would you elicit the missing information? What sentence(s) would you ask her/ him to translate and why?

**Question 12:** What word classes does Kurdish have? How can you tell? Use *only* the data presented here. Report *only* what you have evidence for.