Your Name:_____

LIGN101 Homework 5 - Will Styler, Fall 2020

Be sure to include your name at the top of the homework sheet. Homeworks may be typed (many PDF reader applications can type on top of documents) or handwritten legibly. Please do your best to make your answers concise, you are graded on quality, not quantity. For generating syntax trees, you may hand-draw, or use a tool like `http://ironcreek.net/phpsyntaxtree/` *to generate them online.* ***You will need to scan your homework to submit it! Use Gradescope's scanning guide (`https://www.gradescope.com/help#Help-Center-item-student-scanning`) and please leave adequate time!***

1 Phonetics (15 points)

1. Give the conventional English spelling for the words transcribed in the IPA below. Note that [ɾ] is not often included in phonemic transcriptions, but I've done so here for readability. (5 points)

   Example: /æntajdɪsɛstæblɪʃmɛntɛɹiənɪzm/ - "Antidisestablishmentarianism".

   (a) /tɹizən/ — (a) **treason**

   (b) /kawtʃ/ — (b) **couch**

   (c) /pitʃ/ — (c) **peach**

   (d) /pʊɾɪŋ/ — (d) **pudding/putting**

   (e) /splæʃ/ — (e) **splash**

2. Broadly transcribe the following words into the IPA. To control for dialect differences, reference the recording of Will producing these words at `http://savethevowels.org/101/hw5_production.wav`. Remember, your writing system is ten pounds of lies in a five pound bag. (5 points)

   (a) rising — (a) **/ɹajzɪŋ/**

   (b) force — (b) **/fɔɹs/**

   (c) cheek — (c) **/tʃik/**

   (d) snack — (d) **/snæk/**

   (e) belief — (e) **/bəlif/**

2 Phonology (10 points)

3. It is the year 2038. The human race now shares the planet with a race of sentient robots with a particular passion for loading and unloading ships. As Will predicted, you declared a Linguistics major, and now are a bigshot linguistics professor. One of your students is studying the language that these ship-unloading robots produce when they're angry, known as 'Wrathdocky', and they need your help determining the role of two pairs of sounds in the language. You shake your head at the absurdity of the situation, thinking "well, hey, at least it makes more sense than 2020 did", and examine the dataset:

Wrathdocky	English	Wrathdocky	English
niθa	'stone'	muθu	'grass'
aniθa	'stones'	tulko	'night'
tif	'sun'	faθi	'run'
tur	'walk'	tuneθ	'phonology'
tapθi	'toilet paper'	toni	'day'
fuθ	'mountain'	aθoni	'days'
tofθe	'egg'	roθe	'smile'
ʃamaθ	'eye'	miliθ	'arm'
tempi	'moon'	leθo	'linguistics'
mekθu	'milk'	roθ	'hand'
tal	'number'	tafa	'baby camel'
aθal	'numbers'	tirna	'cat'
nulθa	'dream'	nunθa	'bush'

(a) First, consider the two words [nulθa] 'dream' and [nunθa] 'bush'. What are these two words an example of, and why? What can we conclude from their presence in the data? (5 points)

> **Solution:** The two words are an example of a minimal pair, because they mean different things, but differ only in one sound: [l] and [n]. We can conclude from this that /l/ and /n/ are different phonemes.

(b) Describe the environments in which [t] and [θ] occur. You're not required to list out the environment for each sound, but you may want to, to best see the patterns. Make your descriptions as simple and as general as possible. (5 points)

> **Solution:** [t] only occurs word-initially. [θ] occurs word-medially after both vowels and consonants, and word-finally. There are also a couple of alternations from plural forms ('number' vs 'numbers', 'day' vs 'days') which illustrate the same patterns.
>
> The student should ideally mention all of these points, and illustrate by referencing the data.

(c) Is it possible to capture the distribution of [t] and [θ] with a phonological rule?

If yes: choose an underlying form, describe your reasoning for choosing the one you did, and write a rule which describes the distribution of [t] and [θ] in phonological rule form.

If no, explain why, and how this relates to the previous question. (5 points)

Solution: /θ/ -> [t] / #_

[θ] should be the underlying form because it occurs in the most general environment. It allows us to state the distribution of [t] with a simple rule.

Choosing [t] as the underlying form would make a very complicated rule with multiple environments for [θ] (or one would need multiple rules).

3 Morphology (15 points)

4. The following data are from Somali (a Cushitic language spoken on the Horn of Africa). They are presented with the Somali orthography first, then the IPA, then an English gloss. (2 points each)

   (a) What type of affix is *o*?

aayad	[a:jad]	'miracle'
aayad-o	[a:jado]	'miracles'
xaduud	[ħadu:d]	'border'
xaduud-o	[ħadu:do]	'borders'

   ◯ prefix √ **suffix** ◯ infix ◯ circumfix ◯ tonal affix

   (b) What type of affix is *t*?

waan faraxsan ahay	[wa:n farаħsan ahaj]	'I am happy'
waad faraxsan t-ahay	[wa:d farаħsan tahaj]	'you are happy'
waan aamusan ahay	[wa:n a:musan ahaj]	'I am quiet'
waad aamusan t-ahay	[wa:d a:musan tahaj]	'you are quiet'

   √ **prefix** ◯ suffix ◯ infix ◯ circumfix ◯ tonal affix

   (c) What is the verb *root* (e.g. 'wait') in these examples? (4 points)

waan sugay	[wa:n sugaj]	'I waited'
waad sugtay	[wa:d sugtaj]	'You waited'
waan sugayaa	[wa:n sugaja:]	'I am waiting'
waad sugaysaa	[wa:d sugajsa:]	'you are waiting'
waan sugayay	[wa:n sugajaj]	'I was waiting'
waad sugaysay	[wa:d sugajsaj]	'you were waiting'
ma sugo	[ma sugo]	'I don't wait'
ma sugto	[ma sugto]	'you don't wait'

   Solution: *sug*

   (d) Based on these data, if the Somali root for 'drink' is /kab/, we would expect 'I drank' to be... (give the IPA form) (4 points)

   Solution: *wa:n kabaj*

   (e) Based on the above data, if the Somali root for 'drink' is /kab/, what should [ma kabto] mean? (4 points)

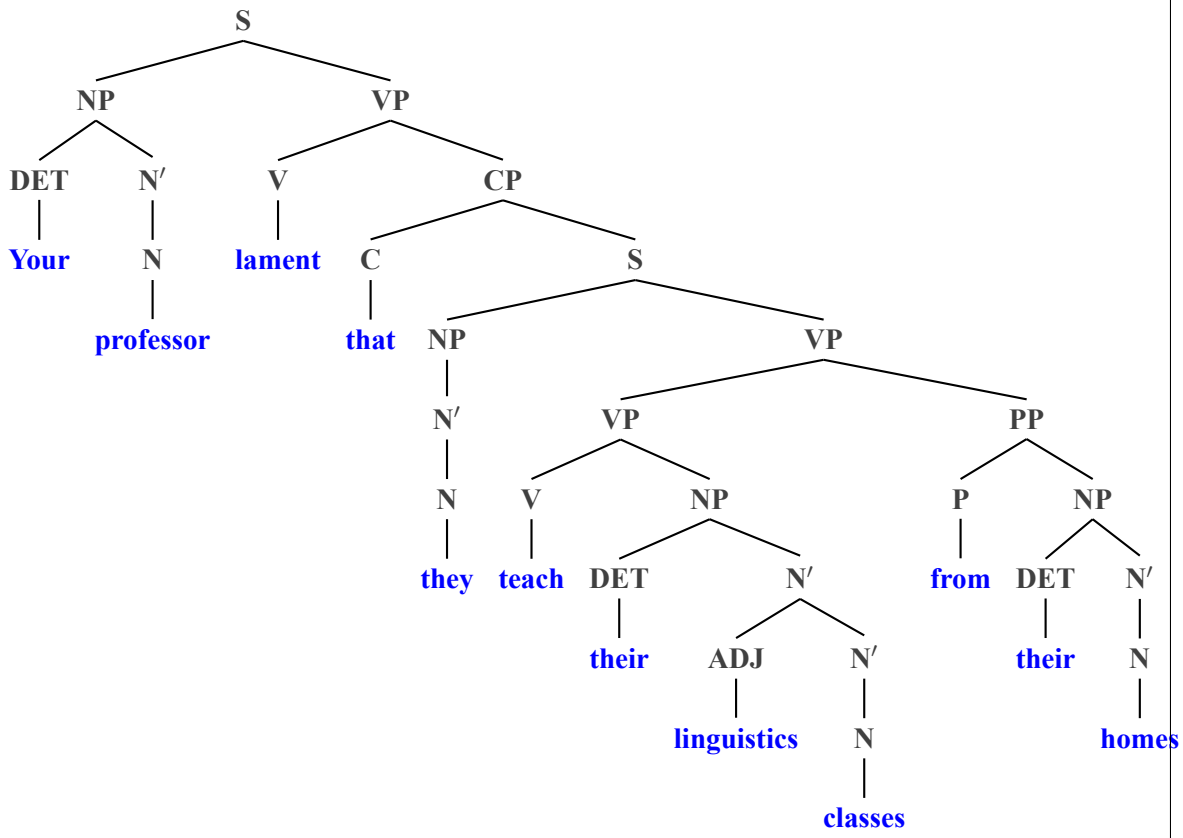
   Solution: *you don't drink*

4 Syntax (10 points)

5. Draw the FULLY DETAILED syntactic structure, including all N' and N levels, for the following sentence according to the phrase structure rules we have introduced in class. Draw the tree *entirely within the provided box*.

   Your professors lament that they teach their linguistics classes from their homes. (Hint: Make sure your tree shows that the teaching is happening from homes, rather than there being a single chunk of 'linguistics classes from their homes'. Also, treat 'Linguistics' as an adjective.) (10 points)

Solution:



5 Semantics (10 points)

6. Your roommate walked in and out of the room several times while you watched one of the semantics lectures, and now considers themself to be an expert on semantics. They give you the example sentence "Will took two sodas from the office fridge", and then declare that "Will has an office" is entailed by it. Briefly explain to your roommate the differences betweens statements being related by implicature vs. entailment, giving examples of sentences both entailed and implied by that sentence, and explain to your roomie whether their example entailment was actually an instance of entailment. (10 points)

Solution: A sentence entails the other if the second sentence *must* be true on the basis of the meaning of the words, regardless of circumstances. Implicature is a weaker relationship, where the second sentence is *likely* true, given the sentence, but there are situations where it might not be. In this case, Will might have broken into somebody else's office, or maybe he just has a cubicle, so it's not entailed.