

Midterm

Total Points: 57 out of 58

Introduction (10 Points) 9.5

True or False. (3 Points) Mark the following statements as either True (T) or False (F).

- +2.5
1. T Writing is secondary to speech (i.e., you do not have to know how to write to have knowledge of a language).
 2. F Sound is a purely physical phenomenon. We know this because of the McGurk Effect.
 3. F Linguists are mostly concerned with translation and interpretation.
 4. T Most morphemes have an arbitrary yet conventionalized connection between form and meaning.
 5. T The ultimate goal of linguistic investigation is to write down observed speech (observational grammar).
 6. T Signed languages have grammar.

Popular Music. (3 Points) We will listen to clips from music by Beyoncé and Ne-Yo. Pay special attention to the word *down* in each clip. Identify which one is sung in a more iconic way and explain your answer.

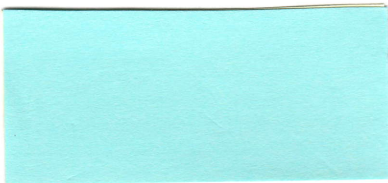
✓
Beyoncé sings "down" in a more iconic way in that the pitch of her voice moves down as she says the word. On the other hand, the pitch of Ne-Yo's voice moves up as she says the word.

+3

Writing Systems. (4 Points). Omniglot provides the following information about the Korean writing system: *The shapes of the consonants are based on the shape the mouth made when the corresponding sound is made.* An emoticon (emoji) for "happiness" in Korean is written as $\wedge_ \wedge$ (literally [sis]). Is the iconic use of the Korean script in both normal writing and the emoji the same? Explain your answer.

These are different iconic uses of Korean script. $\wedge_ \wedge$ takes its meaning based on the resemblance of all three letters together to a happy face, but Omniglot is referring to how \wedge is iconic for the shape of the mouth when producing [s].

+4



Phonetics (17 Points) +17

Transcription. (4 Points) I will say the following (except for your name). Write the words in narrow English IPA transcription.

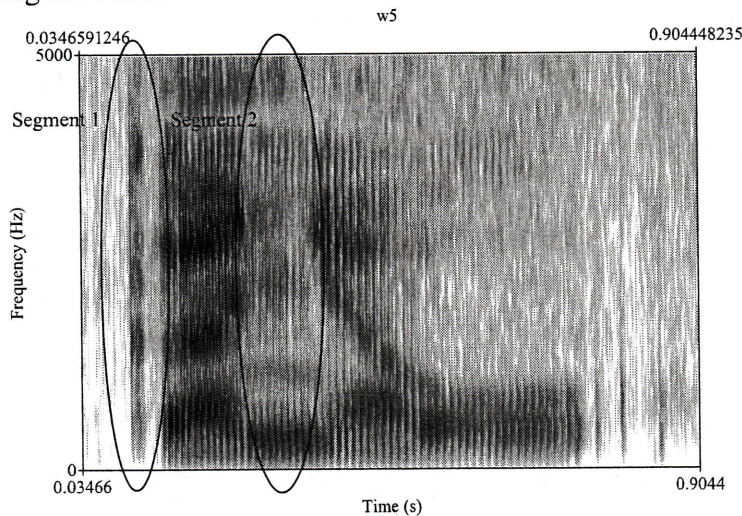
+4

pure [ˈpjʊr] drain [ˈdʒreɪn]

history [ˈhɪstəri] (your name) [ˈkɛvɪn]

Spectrograms. (2 Points) Identify the properties of the following segments in the Wangurri spectrogram by circling the correct answer.

+2



Segment 1: Plosive Fricative Glide

Segment 2: Voiced Voiceless

Segment Descriptions. (5 Points) Provide the full description of the following.

+5

- [f] voiceless labiodental fricative
- [m] voiced bilabial nasal
- [a] low back unrounded lax vowel
- [u] high back rounded tense vowel
- [w] voiced labiovelar glide
- [dʒ] voiced postalveolar affricate

Midsagittal Section. (4 Points) Identify the American English IPA segment represented in the following image. Provide prose explaining why it must be this segment. You must call out specific articulators in the image.



American IPA segment [ŋ]

Prose:

The wavy line at the ^{glottis} larynx indicates that this sound is voiced. ✓
The tongue is pressed up against the soft palate, so this sound is velar.
The uvula is forward, allowing air to flow into the nasal cavity, so this sound is nasal. ✓
Thus, we have the voiced velar nasal [ŋ].

Phonetic Observation. (2 Points) During the 2016 presidential race, one candidate in particular was notorious using a phrase along the lines of either “big league” or “bigly”. Linguists from the University of California, Berkeley held a viewing of the first presidential debate on campus. At one point during the New York debate, the candidate uttered the phrase and the phoneticians at the viewing determined that the the candidate was saying “big league”. Which phonetic observation tool did they use to determine this? +2

- a. Stroboscopy b. Ultra Sound c. Spectrogram d. Palatography

Phonology (17 Points) +16.5

+7 **K-Pop.** (7 Points) Amy Lee (Ailee) is a Korean-American singer. You will analyze the following lines of her song *Heaven* and respond the question prompts below. (Note: the symbols [ɟ, ɽ] are Korean consonants, [u] is a Korean vowel, and * is a diacritic used for tense consonants in Korean).



Refrain: [ju aɪ maɪ oʊnli wʌn weɪ 1
 ɔɔ̃zɪk nʌɾɯl wʌnheɪ 2
 neɪgʌ ni kʲʌte is*ume kamsaheɪ 3
 ju aɪ ðə oʊnli wʌn beɪ 4
 himdʊn sesaŋ sogeɪ 5
 saɾaŋʌl algeɪ 6
 heɪdʒʊn 7
 nʌ hanaɾo nanun heŋbokheɪ] 8

1. Provide the standard English orthography for lines 1 and 4.

Line 1: you are my only one way

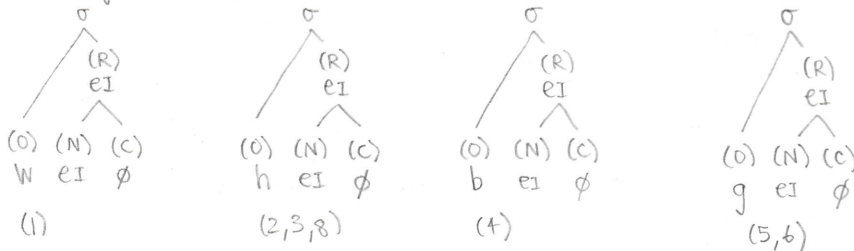
+2

Line 4: you are the only one bae

2. Provide the name of the device that is used in this song to make it catchy. Draw trees that illustrate the device in the space below.

Rhyme is being used. Note that the syllabic rhyme is identical in the last syllables of several lines:

+3



3. What is unique about her particular use of this device? Provide an example.

+2

Her use of this device is unique because it spans languages. Lines 1,4 (English) and lines 2,3,5,6,8 (Korean) are in different languages, and yet their final syllables all rhyme (see #2).

+9.5 **Burmese Phonemic Analysis** (10 Points). Burmese is a Tibeto-Burman language spoken in Myanmar. In the following data, account for the relationship of the voiceless segments (written with ◌̥) with respect to their voiced counterparts. You may ignore tone in this problem.

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---------------------|----------|---------------------|---|---|---|---|---|---|---|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|---|---|---|---|--|------|--------|-------|---------------|--------|-----------------|-------|-------|--------|---------|------|--------|---------|---------|--------|-------------------|--------|----------|-------|----------------|------|---------|-------|-------------------|--------|---------|---------|------------|-------|--------------------|----------|------------------|----------|---------------|---------|-----------------|--------|--------|---------|---------------------|----------|-----------|----------|-------------------|---------|---------------------|-------|-------------|--------|--------|-------|---------|--|----|--|---|---|---|---|---|---|---|---|--|----|--|---|---|---|---|---|---|--|----|--|---|---|---|---|
| <table border="0"> <tr><td colspan="2" style="text-align: center;">m</td></tr> <tr><td>#</td><td>î</td></tr> <tr><td>#</td><td>w</td></tr> <tr><td>#</td><td>j</td></tr> </table> | m | | # | î | # | w | # | j | <table border="0"> <tr><td colspan="2" style="text-align: center;">n</td></tr> <tr><td>#</td><td>â</td></tr> <tr><td>#</td><td>î</td></tr> <tr><td>#</td><td>ê</td></tr> <tr><td>#</td><td>j</td></tr> <tr><td>#</td><td>w</td></tr> <tr><td>#</td><td>i</td></tr> <tr><td>#</td><td>î</td></tr> <tr><td>#</td><td>w</td></tr> </table> | n | | # | â | # | î | # | ê | # | j | # | w | # | i | # | î | # | w | <table border="0"> <tr><td colspan="2" style="text-align: center;">ŋ</td></tr> <tr><td>#</td><td>â</td></tr> <tr><td>#</td><td>o</td></tr> </table> | ŋ | | # | â | # | o | <table border="0"> <tr><td>[mî]</td><td>'fire'</td><td>[niè]</td><td>'fine, small'</td></tr> <tr><td>[mwêi]</td><td>'to give birth'</td><td>[nwâ]</td><td>'cow'</td></tr> <tr><td>[mjiʔ]</td><td>'river'</td><td>[ŋâ]</td><td>'five'</td></tr> <tr><td>[mjwân]</td><td>'ditch'</td><td>[ŋouʔ]</td><td>'stump (of tree)'</td></tr> <tr><td>[mjín]</td><td>'to see'</td><td>[mín]</td><td>'old (people)'</td></tr> <tr><td>[nê]</td><td>'small'</td><td>[hmî]</td><td>'to lean against'</td></tr> <tr><td>[njiʔ]</td><td>'dirty'</td><td>[hmwêi]</td><td>'fragrant'</td></tr> <tr><td>[nwè]</td><td>'to bend flexibly'</td><td>[hmjajʔ]</td><td>'to cure (meat)'</td></tr> <tr><td>[hmjawʔ]</td><td>'to multiply'</td><td>[hmòwn]</td><td>'flour, powder'</td></tr> <tr><td>[hpeî]</td><td>'slow'</td><td>[hnjiʔ]</td><td>'to wring, squeeze'</td></tr> <tr><td>[hpewêi]</td><td>'to heat'</td><td>[hnjeiʔ]</td><td>'to nod the head'</td></tr> <tr><td>[hnjaʔ]</td><td>'to cut off (hair)'</td><td>[hnâ]</td><td>'to borrow'</td></tr> <tr><td>[hpeʔ]</td><td>'bird'</td><td>[hîn]</td><td>'curry'</td></tr> </table> | [mî] | 'fire' | [niè] | 'fine, small' | [mwêi] | 'to give birth' | [nwâ] | 'cow' | [mjiʔ] | 'river' | [ŋâ] | 'five' | [mjwân] | 'ditch' | [ŋouʔ] | 'stump (of tree)' | [mjín] | 'to see' | [mín] | 'old (people)' | [nê] | 'small' | [hmî] | 'to lean against' | [njiʔ] | 'dirty' | [hmwêi] | 'fragrant' | [nwè] | 'to bend flexibly' | [hmjajʔ] | 'to cure (meat)' | [hmjawʔ] | 'to multiply' | [hmòwn] | 'flour, powder' | [hpeî] | 'slow' | [hnjiʔ] | 'to wring, squeeze' | [hpewêi] | 'to heat' | [hnjeiʔ] | 'to nod the head' | [hnjaʔ] | 'to cut off (hair)' | [hnâ] | 'to borrow' | [hpeʔ] | 'bird' | [hîn] | 'curry' | <table border="0"> <tr><td colspan="2" style="text-align: center;">m̥</td></tr> <tr><td>h</td><td>j</td></tr> <tr><td>h</td><td>i</td></tr> <tr><td>h</td><td>w</td></tr> <tr><td>h</td><td>o</td></tr> </table> | m̥ | | h | j | h | i | h | w | h | o | <table border="0"> <tr><td colspan="2" style="text-align: center;">n̥</td></tr> <tr><td>h</td><td>ê</td></tr> <tr><td>h</td><td>w</td></tr> <tr><td>h</td><td>j</td></tr> </table> | n̥ | | h | ê | h | w | h | j | <table border="0"> <tr><td colspan="2" style="text-align: center;">ŋ̥</td></tr> <tr><td>h</td><td>ê</td></tr> <tr><td>h</td><td>a</td></tr> </table> | ŋ̥ | | h | ê | h | a |
| m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| # | î | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| # | w | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| # | j | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| n | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| # | â | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| # | î | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| # | ê | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| # | j | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| # | w | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| # | i | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| # | î | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| # | w | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ŋ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| # | â | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| # | o | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [mî] | 'fire' | [niè] | 'fine, small' | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [mwêi] | 'to give birth' | [nwâ] | 'cow' | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [mjiʔ] | 'river' | [ŋâ] | 'five' | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [mjwân] | 'ditch' | [ŋouʔ] | 'stump (of tree)' | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [mjín] | 'to see' | [mín] | 'old (people)' | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [nê] | 'small' | [hmî] | 'to lean against' | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [njiʔ] | 'dirty' | [hmwêi] | 'fragrant' | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [nwè] | 'to bend flexibly' | [hmjajʔ] | 'to cure (meat)' | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [hmjawʔ] | 'to multiply' | [hmòwn] | 'flour, powder' | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [hpeî] | 'slow' | [hnjiʔ] | 'to wring, squeeze' | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [hpewêi] | 'to heat' | [hnjeiʔ] | 'to nod the head' | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [hnjaʔ] | 'to cut off (hair)' | [hnâ] | 'to borrow' | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| [hpeʔ] | 'bird' | [hîn] | 'curry' | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| m̥ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| h | j | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| h | i | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| h | w | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| h | o | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| n̥ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| h | ê | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| h | w | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| h | j | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ŋ̥ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| h | ê | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| h | a | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

1. Describe the distribution of the segments under analysis. You may write the distribution charts on your scratch paper, but you will only get credit for a prose description that makes use of proper vocabulary.

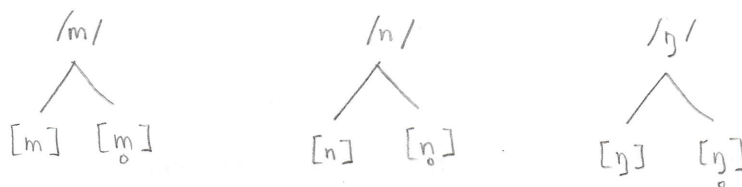
"allophone" vs "phoneme?" -0.5

Voicless segments [m̥, n̥, ŋ̥] are in complementary distribution with their voiced counterparts [m, n, ŋ]. The voicless segments can be predicted to occur only after [h], and the voiced segments elsewhere.

ok neat approach.
 [m, m̥] and [n, n̥] are in contrastive distribution. Note the near-minimal pair { [mî], [niè] }
 [m, m̥] and [ŋ, ŋ̥] are in contrastive distribution. Note the near-minimal pair { [hmòwn], [hnjeiʔ] }
 [n, n̥] and [ŋ, ŋ̥] are in contrastive distribution. Note the near-minimal pair { [hnêi], [hpeʔ] }

2. How many phonemes are there? Draw the schema to show how the phonemes related to the phones under investigation.

Based on (a), we may conclude that there are 3 phonemes:



3. If there are any allophones of the same phoneme, provide a generalized rule that accounts for the alternations.

$\{_{\text{nasal}} \rightarrow [-\text{voice}] / h_$

Morphology (14 Points) +14

+8 **Bukusu.** (8 Points) Bukusu is a Bantu language from Kenya. Look at the first person singular verb paradigm for the following verbs. Note: [ɲ], [x], and [β] represent a post-alveolar nasal, a voiceless velar fricative, and a voiced bilabial fricative respectively. Length on vowels is marked with : , but you do not have to account for vowel length.

| | | | |
|----------|-----------|--------|----------|
| ndi:la | I hold | ɲdʒina | I scream |
| mbala | I count | ndasa | I add |
| ɲdʒu:ŋga | I watch | suna | I jump |
| ŋgaβa | I divide | xala | I cut |
| mbi:ma | I weigh | fuka | I cook |
| mbula | I roam | xola | I do |
| mpuka | I perish | funa | I break |
| ŋgeta | I pour | fwa:ra | I dress |
| ndula | I trampel | se:nda | I move |

1. Does this paradigm reflect a derivational or inflectional process?

+4 This is an inflectional process. It changes the subject of the verb, but not its lexical class or core meaning.

2. What are the two possible word building processes used to create these verbs?

✓ 1) Suffixation: addition of -a suffix to indicate person.

2) Prefixation: addition of a nasal (n-, m-, ŋ-, ɲ-) to indicate person, except before an unvoiced consonant? — see note after #3

3. Even though you identified two processes, there is only one underlying form. There are really two different processes that effect the same underlying form. Explain which phonological changes alter the



single underlying form.

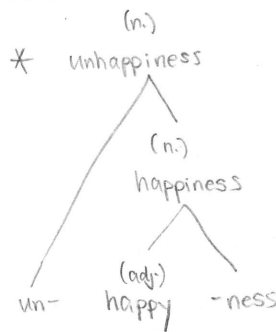
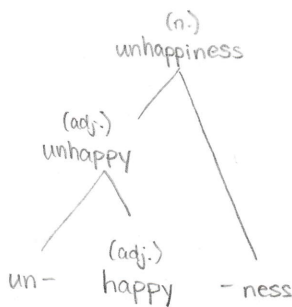
✓ This seems to suggest that the actual process is circumfixation (n-root-a) followed by assimilation of the first part of the circumfix based on the voicing and place of articulation of the following consonant: voiced alveolar [n] before voiced alveolar [d]; voiced bilabial [m] before voiced bilabial [b]; voiced velar [ŋ] before voiced velar [g]; voiced postalveolar [ɲ] before voiced postalveolar [dʒ]; and [∅] before unvoiced [s, x, f].

English Morphology (6 Points) The word *unhappiness* has two possible tree structures.

+6

1. Draw the two tree structures for *unhappiness* below.

+4



*** There is not enough information to determine whether the first part of the circumfix occurs before plosives, before voiced consonants, not before fricatives, or some combination thereof.

2. Provide argumentation that demonstrates which of the two structures is correct.

✓ The left tree is correct. ✓ The right tree is incorrect because un- cannot be used to negate nouns like this (subcategorization restriction). ✓

+2