Tuesday, 23 June 2020
ALL EXAMS (with notes)

START OF EXAM
Student ID: 6745
9:30 - 9:50 AM

Question 1

Source: Day 9 Handout, Question 1

Explain why the concept of an alternation either is or is not useful for understanding this dataset.

Korean
a. [mul] ‘water’
b. [mulkama] ‘place for water’
c. [muɾe] ‘at the water’
d. [mal] ‘horse’
e. [malkama] ‘place for horse’
f. [maɾe] ‘at the horse’
g. [pul] ‘fire’
h. [puɾe] ‘at the fire’

INSTRUCTOR NOTES: is useful – root morphemes alternate, so we can decide which sounds we need to analyze

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 2

Source: Day 10 Discussion

Explain what the given feature's value is for this class of sounds, and why.

[approximant]

nasals

INSTRUCTOR NOTES: [-], because air can't escape through the mouth ([+ approx] sounds have a narrowing in the vocal tract, but air escapes without friction)

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 3

Source: Final Exam Dataset

Explain what the underlying representation of these morphemes would be and why.

'mix', 'past'

Present	*Past*	*Future*	*Progressive*	*Gloss*
[satfid]	[satmi]	[sater]	[satse]	'chew'
[jɤgɯdfɯd]	[jɤgɯdmɯ]	[jɤgɯder]	[jɤgɯdse]	'swallow'
[mikɤvfid]	[mikɤvmi]	[mikɤvɤr]	[mikɤvsɤ]	'search'
[lebfid]	[lebmi]	[leber]	[lebse]	'falsify'
[sirfid]	[sirmi]	[sirer]	[sirse]	'mix'
[kɤʔfid]	[kɤʔmi]	[kɤʔɤr]	[kɤʔsɤ]	'toss'
[dimfid]	[dimmi]	[dimer]	[dimse]	'handle'
[pegedfid]	[pegedmi]	[pegeder]	[pegedse]	'invent'
[zabfid]	[zabmi]	[zaber]	[zabse]	'pretend'
[rekɯlfɯd]	[rekɯlmɯ]	[rekɯler]	[rekɯlse]	'dig'

INSTRUCTOR NOTES: For any morpheme that doesn't alternate, its UR should be the same as its SR. For the morphemes that alternate, the back-vowel version occurs in the narrower set of contexts (after a back vowel of the same height), so should be the one that we write a rule for. The front-vowel version occurs in the wider / elsewhere set of contexts (after a front vowel and after a back vowel of a different height), so this should be the UR. So in this case, we have the non-alternating root morpheme 'mix' /sir/ and the alternating suffix morpheme 'past' /mi/.

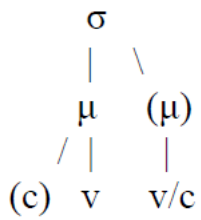
Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 4

Source: Day 11 Handout, Question 5

Explain why this template either does or does not allow syllables of this type to occur.

V



INSTRUCTOR NOTES: allowed

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 5

Source: Day 8 Handout, Question 7

Explain why each numbered, underlined statement is true or false. If it is false, explain one way that you could correct it.

Sound is an invisible phenomenon. Sound can travel through any substance, [1]such as a liquid, solid, or a gas. [2]It involves the transfer of the matter in that substance from one place to another.

Sound is a particular kind of wave known as [3]a compression wave. [4]When the molecules are really close together, we say they are "rarefied" and when they are really far apart, we say they are "compressed."

INSTRUCTOR NOTES: 1 - true.
2 - false (it involves the transfer of energy... or anything about the matter itself not moving but only vibrating, etc).
3 - true.
4 - false (when the molecules are really close together, we say they are compressed and when the molecules are really far apart, we say they are rarefied).

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 6

Source: Day 12 Handout, Question 7

Explain how you would figure out the tone-mapping procedures that apply in this dataset.

Southern Manyika dialect of Shona

Set 1:

Note: literally, 'sell' consists of two morphemes that combine to mean 'make buy.'

a. [téŋg-á]	'buy'
b. [téŋg-és-á]	'sell'
c. [téŋg-és-ér-á]	'sell to'
d. [téŋg-és-ér-án-á]	'sell to each other'

Set 2:

a. [èrèŋg-à]	'read'
b. [èrèŋg-ès-à]	'make read'
c. [èrèŋg-èr-à]	'read to'
d. [fùŋg-ìdz-ìr-àn-à]	'suspect each other'

INSTRUCTOR NOTES: You probably start with procedures that you know work for some other language like Mende, and see whether they work here; in this case, there's only one underlying tone in each word, and it gets linked to every TBU, so you probably just need something like initial linking and then Leftover-TBU linking (there will never be any leftover tones)

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

END OF EXAM

START OF EXAM
Student ID: 6427
9:50 - 10:10 AM

Question 1

Source: Day 9 Handout, Question 1

Explain why the concept of an alternation either is or is not useful for understanding this dataset.

Korean
a. [mul] ‘water’
b. [mulkama] ‘place for water’
c. [muɾe] ‘at the water’
d. [mal] ‘horse’
e. [malkama] ‘place for horse’
f. [maɾe] ‘at the horse’
g. [pul] ‘fire’
h. [puɾe] ‘at the fire’

INSTRUCTOR NOTES: is useful – root morphemes alternate, so we can decide which sounds we need to analyze

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 2

Source: Final Exam Dataset

Explain how you would go about figuring out what to analyse in this dataset.

Present	*Past*	*Future*	*Progressive*	*Gloss*
[satfid]	[satmi]	[sater]	[satse]	'chew'
[jɤgɯdfɯd]	[jɤgɯdmɯ]	[jɤgɯder]	[jɤgɯdse]	'swallow'
[mikɤvfid]	[mikɤvmi]	[mikɤvɤr]	[mikɤvsɤ]	'search'
[lebfid]	[lebmi]	[leber]	[lebse]	'falsify'
[sirfid]	[sirmi]	[sirer]	[sirse]	'mix'
[kɤʔfid]	[kɤʔmi]	[kɤʔɤr]	[kɤʔsɤ]	'toss'
[dimfid]	[dimmi]	[dimer]	[dimse]	'handle'
[pegedfid]	[pegedmi]	[pegeder]	[pegedse]	'invent'
[zabfid]	[zabmi]	[zaber]	[zabse]	'pretend'
[rekɯlfɯd]	[rekɯlmɯ]	[rekɯler]	[rekɯlse]	'dig'

INSTRUCTOR NOTES: The first thing to do is a morphological analysis. There should be morphemes that represent each of the four tenses / aspects (present, past, future, and progressive), and morphemes that represent each root. The morphemes representing the tenses appear as (relatively) consistent forms in the columns; the morphemes representing the roots appear as consistent forms in the rows. Doing this reveals that the final 3 segments in the present forms and the final two segments in the progressive forms are suffixes (there are no zero morphemes, and all components have a one-to-one correspondence). Then we check for alternations. The alternations here are in the suffixes; each of the four suffixes has two forms. There are therefore four alternations, with two allomorphs each. So, what we need to analyze are the alternations in the suffix forms, where we see vowels alternating. Two of the alternations involve [i] and [ɯ], and the other two alternations involve [e] and [ɤ]. In each case, there's a front vowel and a back vowel, which are otherwise matched for height and rounding, so we can likely generalize across the alternations.

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 3

Source: Day 11 Handout, Question 8

Explain how you could modify the rule-based approach to take into account the sonority sequencing principle.

Peng's Rule-Based Approach:

(17) Rule-based approach

These two apply simultaneously and are universal.

a. Project a σ from each V.
   Note 1: This involves also projecting a rime.
   Note 2: This is about vowels, not V slots.

b. Adjoin a consonant to the immediate left of the rime as the onset of the following syllable, σ.
   Note: This time, it's about C slots.

These two apply sequentially (in either order) and are langauge-specific.

c. (Onset Rule) Adjoin a consonant to the left of an onset to this onset.

d. (Coda Rule) Adjoin a consonant to the right of a rime to this rime.
   Note: Again, (17c) and (17d) are about C slots.

INSTRUCTOR NOTES: basically, you need to say something like: Modified onset rule: adjoin a consonant to the left of an onset to that onset, if the consonant has a LOWER sonority than the onset

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 4

Source: Day 10 Discussion

Explain what the given feature's value is for this class of sounds, and why.

[LABIAL]

interdentals

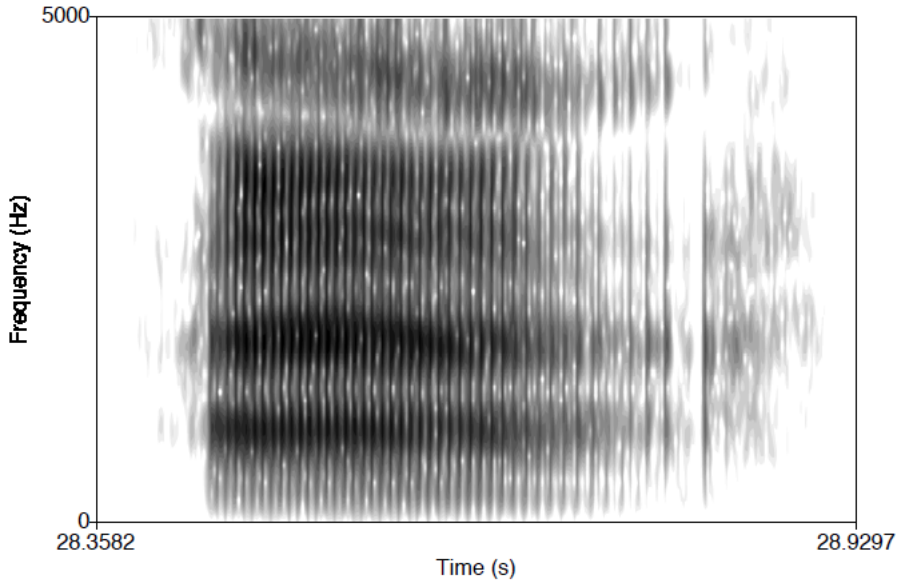
INSTRUCTOR NOTES: 0, because interdentals aren't [LABIAL], but [LABIAL] is monovalent, so they're not [-labial]

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 5

Source: Day 8 Handout, Question 3

Explain what you see in the spectrogram that tells you about the properties of the sounds in the pictured word.



INSTRUCTOR NOTES: aaah: just a vowel; formants are very steady; F1 and F2 are pretty close to each other; F1 somewhat high and F2 somewhat low

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 6

Source: Quiz 10, Question 3

Section 4.2 of chapter 13 in the Peng textbook presented an autosegmental analysis of Mende tone distribution. Explain why the form shown below should NOT be the UR for any morpheme in Mende.

H L L

f e l a m a

INSTRUCTOR NOTES: There's no reason to violate the OCP in the UR of a single morpheme, but this one has two adjacent L tones

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

END OF EXAM

START OF EXAM
Student ID: 3773
10:10 - 10:30 AM

Question 1

Source: Day 11 Handout, Question 12

Explain how understanding syllable structure helps understand the motivation for the process(es) seen in this data.

Yawelmani

UR	SR	Gloss
a. /pok'-hin/	[pok'hin]	'found'
b. /xat^{h}-hin/	[xat^{h}hin]	'ate'
c. /lihm-hin/	[lihimhin]	'ran'
d. /hogn-hin/	[hoginhin]	'floated'
e. /ʔugn-hin/	[ʔuginhin]	'drank'
f. /p^{h}aʔt'-hin/	[p^{h}aʔit'hin]	'fought'
g. /liʔ-hatn-hin/	[liʔhatinhin]	'wanted to sink'
h. /dos-hotn-hin/	[doshotinhin]	'was trying to tell'
i. /hud-hatn-xoo-ʔ/	[hudhatinxoʔ]	'wanted to know about'
j. /ʔa:ml-hin/	[ʔa:milhin]	'helped'

INSTRUCTOR NOTES: although syllabification must happen after insertion, the insertion is motivated by making things syllabifiable – we insert a vowel into a sequence of CCC in order to prevent any complex onsets / codas or syllabic consonants from having to be used

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 2

Source: Final Exam Dataset

Explain what the underlying representation of these morphemes would be and why.

'dig', 'future'

Present	*Past*	*Future*	*Progressive*	*Gloss*
[satfid]	[satmi]	[sater]	[satse]	'chew'
[jɤgɯdfɯd]	[jɤgɯdmɯ]	[jɤgɯder]	[jɤgɯdse]	'swallow'
[mikɤvfid]	[mikɤvmi]	[mikɤvɤr]	[mikɤvsɤ]	'search'
[lebfid]	[lebmi]	[leber]	[lebse]	'falsify'
[sirfid]	[sirmi]	[sirer]	[sirse]	'mix'
[kɤʔfid]	[kɤʔmi]	[kɤʔɤr]	[kɤʔsɤ]	'toss'
[dimfid]	[dimmi]	[dimer]	[dimse]	'handle'
[pegedfid]	[pegedmi]	[pegeder]	[pegedse]	'invent'
[zabfid]	[zabmi]	[zaber]	[zabse]	'pretend'
[rekɯlfɯd]	[rekɯlmɯ]	[rekɯler]	[rekɯlse]	'dig'

INSTRUCTOR NOTES: For any morpheme that doesn't alternate, its UR should be the same as its SR. For the morphemes that alternate, the back-vowel version occurs in the narrower set of contexts (after a back vowel of the same height), so should be the one that we write a rule for. The front-vowel version occurs in the wider / elsewhere set of contexts (after a front vowel and after a back vowel of a different height), so this should be the UR. So in this case, we have the non-alternating root morpheme 'dig' /rekɯl/ and the alternating suffix morpheme 'future' /er/.

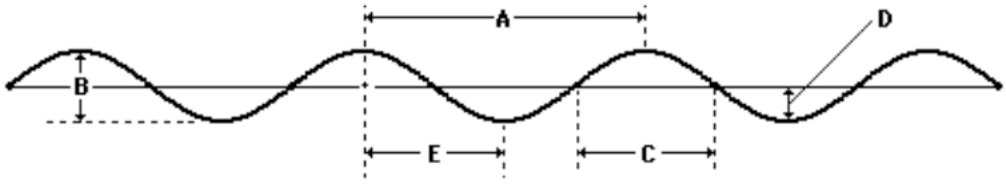
Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 3

Source: Day 8 Handout, Question 1

Explain what (if anything) the letter below represents on this waveform.

A



INSTRUCTOR NOTES: wavelength or period

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 4

Source: Day 10 Handout, Question 6 (Homework 4, Question 2)

Explain how you should use phonological features in this rule. Which parts of the rule should include features, and what features might they be? You don't have to give an exact set of features, but what kinds of features would be involved?

/n/ → ∅ / [m] _ #

English

Non-suffixed form	*Gloss*	*Suffixed form*	*Gloss*
[dæm]	'damn'	[dæmn-əbl̩]	'damnable'
[kəndɛm]	'condemn'	[kɑndɛmn-eɪʃən]	'condemnation'
[hɪm]	'hymn'	[hɪmn-əl]	'hymnal'
[ɔɾəm]	'autumn'	[ɔt^{h}ʌmn-əl]	'autumnal'
[sɑləm]	'solemn'	[səlɛmn-ɪti]	'solemnity'

INSTRUCTOR NOTES: you really can't use features for any of this, because it's all individual segments

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 5

Source: Day 9 Handout, Question 4

Explain which morpheme(s) in this dataset alternate and how that helps you do a phonological analysis.

Japanese. **(- marks a morpheme boundary)**

'to put out'

Form	*Pronunciation*
present	[das-ɯ]
provisional	[das-eba]
causative	[das-aɾeɾɯ]
tentative	[das-oo]
past	[daʃ-ita]
participial	[daʃ-ite]
conditional	[daʃ-itaɾa]

'to lend'

Form	*Pronunciation*
present	[kas-ɯ]
negative	[kas-anai]
volitional	[kaʃ-itai]
past	[kaʃ-ita]
inchoative	[kas-oo]

'to erase'

Form	*Pronunciation*
present	[kes-ɯ]
negative	[kes-anai]
past	[keʃ-ita]
conditional	[keʃ-itaɾa]
potential	[kes-eɾɯ]

INSTRUCTOR NOTES: each verb root alternates, so we know the sounds we need to analyze are the predictable occurrence of [s] and [ʃ]

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 6

Source: Day 12 Handout, Question 6

Explain how you would figure out the tone-mapping procedures that apply in this dataset.

Kukuya

One-μ Stems:	Gloss:	Two-μ Stems:	Gloss:	Three-μ Stems:	Gloss:
[kì-bà]	'grasshopper-killer'	[kì-bàlà]	'to build'	[kì-bàlàgà]	'to change route'
[mà-bá]	'oil palms'	[mà-bágá]	'to show knives'	[lì-bálágá]	'fence'
[mɔ̀-să]	'weaving knot'	[mɔ̀-sàmí]	'conversation'	[m^{w}-àrəgí]	'younger brother'
[kì-kâ]	'to pick'	[kì-kárà]	'paralytic'	[kì-kárágà]*	'to be entangled'
[ndé-bvĭ] (that's \/\ on the last V)	'he falls'	[ndé-pălì]*	'he goes out'	[ndé-kàlágì]	'he turns around'

INSTRUCTOR NOTES: You probably start with procedures that you know work for some other language like Mende, and see whether they work here. In this case, we (1) look at cases of words that have one of the contour tones, because words with only H or only L will just always have a single tone associated with all of the TBUs, but contour tones can help you see e.g. "where" the contour happens; (2) look at cases of words with a mismatch in the number of tones and TBUs (e.g. HL tones and VVV, or LHL tones and VV), because these are cases where one-to-one mapping will fail. By seeing that the "tail" of contours is to the left, not the right (e.g., it's LLH not LHH) and that in the triple-tone words with two TBUs, we have the contour to the left (LH, then L; not L, then HL), we see that the "leftover" stuff needs to be on the left edge instead of the right edge. Hence, the initial mapping procedure should proceed from right to left instead of left to right.

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

END OF EXAM

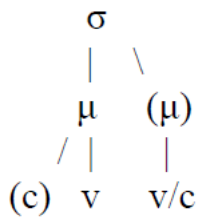
START OF EXAM
Student ID: 9303
10:30 - 10:50 AM

Question 1

Source: Day 11 Handout, Question 5

Explain why this template either does or does not allow syllables of this type to occur.

V



INSTRUCTOR NOTES: allowed

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 2

Source: Final Exam Dataset

Explain what the underlying representation of these morphemes would be and why.

'dig', 'future'

Present	*Past*	*Future*	*Progressive*	*Gloss*
[satfid]	[satmi]	[sater]	[satse]	'chew'
[jɤgɯdfɯd]	[jɤgɯdmɯ]	[jɤgɯder]	[jɤgɯdse]	'swallow'
[mikɤvfid]	[mikɤvmi]	[mikɤvɤr]	[mikɤvsɤ]	'search'
[lebfid]	[lebmi]	[leber]	[lebse]	'falsify'
[sirfid]	[sirmi]	[sirer]	[sirse]	'mix'
[kɤʔfid]	[kɤʔmi]	[kɤʔɤr]	[kɤʔsɤ]	'toss'
[dimfid]	[dimmi]	[dimer]	[dimse]	'handle'
[pegedfid]	[pegedmi]	[pegeder]	[pegedse]	'invent'
[zabfid]	[zabmi]	[zaber]	[zabse]	'pretend'
[rekɯlfɯd]	[rekɯlmɯ]	[rekɯler]	[rekɯlse]	'dig'

INSTRUCTOR NOTES: For any morpheme that doesn't alternate, its UR should be the same as its SR. For the morphemes that alternate, the back-vowel version occurs in the narrower set of contexts (after a back vowel of the same height), so should be the one that we write a rule for. The front-vowel version occurs in the wider / elsewhere set of contexts (after a front vowel and after a back vowel of a different height), so this should be the UR. So in this case, we have the non-alternating root morpheme 'dig' /rekɯl/ and the alternating suffix morpheme 'future' /er/.

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 3

Source: Day 10 Handout, Question 6 (Day 7 Handout, Question 7)

Explain how you should use phonological features to combine these rules.

/s/ → [ʃ] / _ [i]
/z/ → [dʒ] / _ [i]

In the following data from Japanese, the voiceless fricatives [s] and [ʃ] are both allophones of the same phoneme, and [z] and [dʒ] are both allophones of the same phoneme, but a different phoneme from [s] and [ʃ].

a.	[ʃiawase]	'happiness'	g.	[sate]	'well'
b.	[sɯpːai]	'sour'	h.	[oʤisan]	'grandfather'
c.	[soŋkei]	'respect'	i.	[zɯzɯʃi]	'forward'
d.	[onaʤi]	'same'	j.	[sensei]	'teacher'
e.	[zaʃːi]	'magazine'	k.	[zenzen]	'absolutely'
f.	[ʤitːo]	'straight'	g.	[zoː]	'elephant'

INSTRUCTOR NOTES: input should be alveolar fricatives, output should be just a change in place of articulation; context is still [i]; something like [CORONAL, +strid] –> [-ant, +dist] / _ [i]; note that this won't directly account for why the voiced one becomes an affricate

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 4

Source: Day 9 Handout, Question 4

Explain which morpheme(s) in this dataset alternate and how that helps you do a phonological analysis.

Japanese. **(- marks a morpheme boundary)**

'to put out'

Form	*Pronunciation*
present	[das-ɯ]
provisional	[das-eba]
causative	[das-aɾeɾɯ]
tentative	[das-oo]
past	[daʃ-ita]
participial	[daʃ-ite]
conditional	[daʃ-itaɾa]

'to lend'

Form	*Pronunciation*
present	[kas-ɯ]
negative	[kas-anai]
volitional	[kaʃ-itai]
past	[kaʃ-ita]
inchoative	[kas-oo]

'to erase'

Form	*Pronunciation*
present	[kes-ɯ]
negative	[kes-anai]
past	[keʃ-ita]
conditional	[keʃ-itaɾa]
potential	[kes-eɾɯ]

INSTRUCTOR NOTES: each verb root alternates, so we know the sounds we need to analyze are the predictable occurrence of [s] and [ʃ]

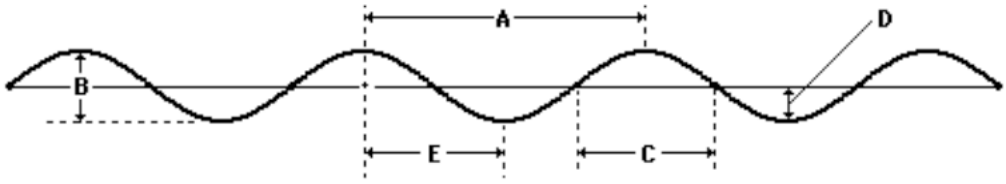
Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 5

Source: Day 8 Handout, Question 1

Explain what (if anything) the letter below represents on this waveform.

B



INSTRUCTOR NOTES: nothing (twice amplitude)

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 6

Source: Day 12 Handout, Question 5

Explain which of the three rules will apply to the form given below, and whether each of those rules would have an effect or not.

Peng's Tone-Mapping Procedure for Mende:

1. L-to-R association: Associate the first tone to the first TBU, the second tone to the second TBU, and so on, until all tones or all TBUS are exhausted.
2. Last-TBU Linking: Associate any remaining unlinked tones to the last TBU.
3. Last-Tone Linking: Associate the last tone to any TBU without a tone.

H L H L

/apute/

INSTRUCTOR NOTES: L-to-R association applies, and links the first three tones (H L H) to the first three TBUs ([a], [u], [e]). Then last-TBU linking applies and links the leftover L tone to the last TBU ([e]). Last-tone linking will not apply because there are no leftover TBUs.

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

END OF EXAM

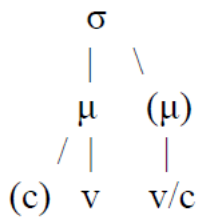
START OF EXAM
Student ID: 5824
10:50 - 11:10 AM

Question 1

Source: Day 11 Handout, Question 5

Explain why this template either does or does not allow syllables of this type to occur.

CVVC



INSTRUCTOR NOTES: not allowed

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 2

Source: Final Exam Dataset

Explain what the basic phonological analysis of this dataset is, and what the key pieces of evidence are.

Present	*Past*	*Future*	*Progressive*	*Gloss*
[satfid]	[satmi]	[sater]	[satse]	'chew'
[jɤgɯdfɯd]	[jɤgɯdmɯ]	[jɤgɯder]	[jɤgɯdse]	'swallow'
[mikɤvfid]	[mikɤvmi]	[mikɤvɤr]	[mikɤvsɤ]	'search'
[lebfid]	[lebmi]	[leber]	[lebse]	'falsify'
[sirfid]	[sirmi]	[sirer]	[sirse]	'mix'
[kɤʔfid]	[kɤʔmi]	[kɤʔɤr]	[kɤʔsɤ]	'toss'
[dimfid]	[dimmi]	[dimer]	[dimse]	'handle'
[pegedfid]	[pegedmi]	[pegeder]	[pegedse]	'invent'
[zabfid]	[zabmi]	[zaber]	[zabse]	'pretend'
[rekɯlfɯd]	[rekɯlmɯ]	[rekɯler]	[rekɯlse]	'dig'

INSTRUCTOR NOTES: The basic analysis here is that vowels of the same height need to agree in terms of backness. We see this in suffix alternations: there are four alternating suffixes, each with a back and front variant, and two of them have high vowels while two of them have mid vowels. Whenever the suffix comes after a root containing a back vowel at the same height as the suffix, the suffix also contains a back vowel, but when the root contains either a front vowel or a back vowel at a different height, the suffix contains the front vowel. Thus, we posit the front versions as the URs of the suffixes, because they occur in the wider set of contexts, and write a rule of vowel backing that only applies when the target vowel follows a back context vowel of the same height.

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 3

Source: Day 10 Discussion

Explain why the given feature's value varies across this set of sounds.

[voice]

glottalized obstruents

INSTRUCTOR NOTES: includes both voiced and voiceless glottalized obstruents – obs. can themselves be voiced or voiceless

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 4

Source: Day 12 Handout, Question 5

Explain which of the three rules will apply to the form given below, and whether each of those rules would have an effect or not.

Peng's Tone-Mapping Procedure for Mende:

1. L-to-R association: Associate the first tone to the first TBU, the second tone to the second TBU, and so on, until all tones or all TBUS are exhausted.
2. Last-TBU Linking: Associate any remaining unlinked tones to the last TBU.
3. Last-Tone Linking: Associate the last tone to any TBU without a tone.

H

/apute/

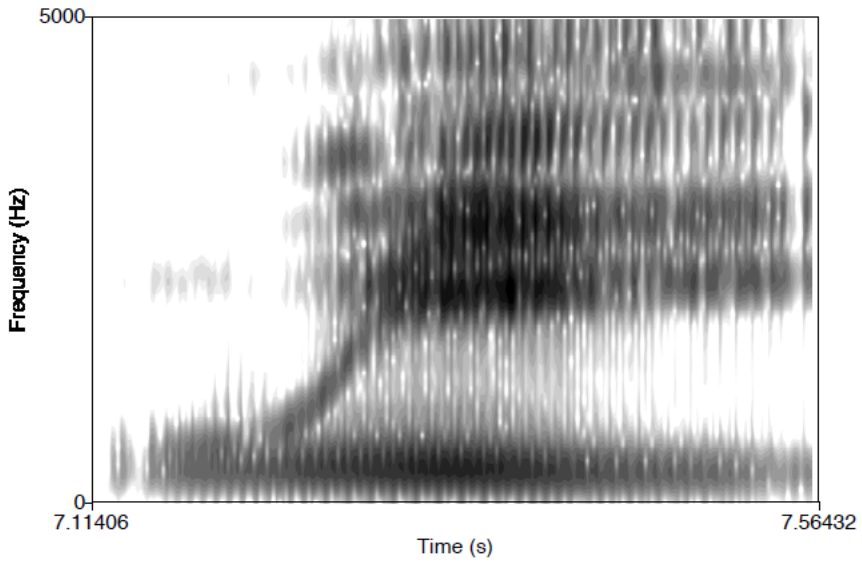
INSTRUCTOR NOTES: L-to-R association applies and links the H tone to the first TBU [a]; last-TBU linking doesn't apply because there are no leftover tones; then last-tone linking does apply, and connects all of the leftover TBUs (in this case, [u] and [e]) to the final tone (in this case, H)

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 5

Source: Day 8 Handout, Question 3

Explain what you see in the spectrogram that tells you about the properties of the sounds in the pictured word.



INSTRUCTOR NOTES: we: starts paler, then darker, so glide plus vowel; F1 pretty constantly low (=high V); F2 starts very low and then swoops up (=starts back and goes front)

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 6

Source: Day 9 Handout, Question 3

Explain which morpheme(s) in this dataset alternate and how that helps you do a phonological analysis.

English

a. walked [wɑkt]
b. jogged [dʒɑgd]
c. named [neɪmd]
d. wrapped [ɹæpt]
e. hissed [hɪst]
f. mobbed [mɑbd]
g. leafed [lift]
h. rolled [ɹoʊld]
i. sinned [sɪnd]
j. jazzed [dʒæzd]
k. washed [wɑʃt]
l. judged [dʒʌdʒd]

INSTRUCTOR NOTES: the past tense morpheme alternates, so we know we need to analyze the predictable occurrence of [t] vs. [d]

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

END OF EXAM

START OF EXAM
Student ID: 5540
11:10 - 11:30 AM

Question 1

Source: Day 11 Handout, Question 13

Explain how understanding syllable structure helps understand the motivation for the process(es) seen in this data.

Attic Greek

	UR	SURFACE FORM	GLOSS
a.	/arnos/	[ar.nos]	'lamb'
	/ek-pag-los/	[ek.pag.los]	'frightful'
b.	/e-stal-st^{h}ai/	[es.tal.t^{h}ai]	'to have sent'
	/pep^{h}an-st^{h}e/	[pe.p^{h}an.t^{h}e]	'you have been revealed'
	/lak-sk-o/	[las.ko]	'to shout'
c.	/damart/	[da.mar]	'spouse'

INSTRUCTOR NOTES: although syllabification must happen after deletion, the deletion is motivated by making things syllabifiable – we delete a consonant from a sequence of CCC in order to prevent any complex onsets / codas or syllabic consonants from having to be used

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 2

Source: Final Exam Dataset

Explain what the underlying representation of these morphemes would be and why.

'mix', 'past'

Present	*Past*	*Future*	*Progressive*	*Gloss*
[satfid]	[satmi]	[sater]	[satse]	'chew'
[jɤgɯdfɯd]	[jɤgɯdmɯ]	[jɤgɯder]	[jɤgɯdse]	'swallow'
[mikɤvfid]	[mikɤvmi]	[mikɤvɤr]	[mikɤvsɤ]	'search'
[lebfid]	[lebmi]	[leber]	[lebse]	'falsify'
[sirfid]	[sirmi]	[sirer]	[sirse]	'mix'
[kɤʔfid]	[kɤʔmi]	[kɤʔɤr]	[kɤʔsɤ]	'toss'
[dimfid]	[dimmi]	[dimer]	[dimse]	'handle'
[pegedfid]	[pegedmi]	[pegeder]	[pegedse]	'invent'
[zabfid]	[zabmi]	[zaber]	[zabse]	'pretend'
[rekɯlfɯd]	[rekɯlmɯ]	[rekɯler]	[rekɯlse]	'dig'

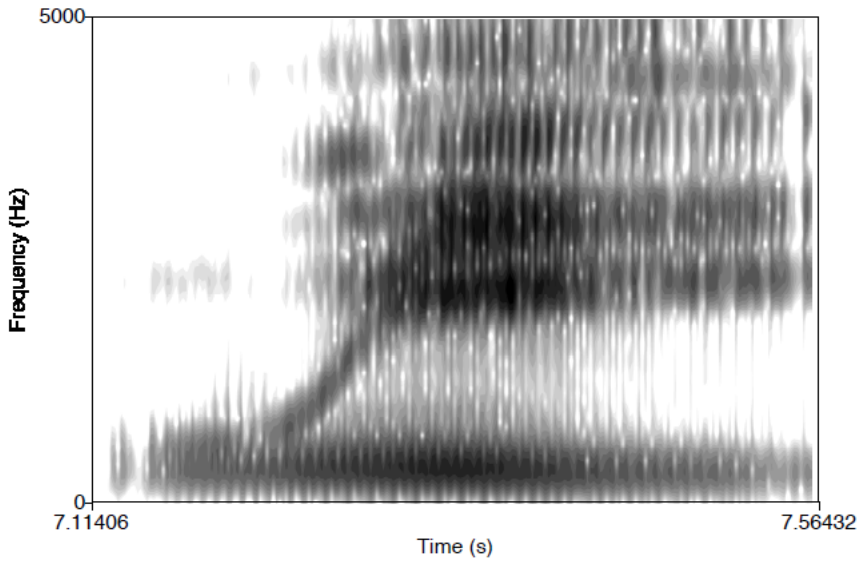
INSTRUCTOR NOTES: For any morpheme that doesn't alternate, its UR should be the same as its SR. For the morphemes that alternate, the back-vowel version occurs in the narrower set of contexts (after a back vowel of the same height), so should be the one that we write a rule for. The front-vowel version occurs in the wider / elsewhere set of contexts (after a front vowel and after a back vowel of a different height), so this should be the UR. So in this case, we have the non-alternating root morpheme 'mix' /sir/ and the alternating suffix morpheme 'past' /mi/.

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 3

Source: Day 8 Handout, Question 3

Explain what you see in the spectrogram that tells you about the properties of the sounds in the pictured word.



INSTRUCTOR NOTES: we: starts paler, then darker, so glide plus vowel; F1 pretty constantly low (=high V); F2 starts very low and then swoops up (=starts back and goes front)

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 4

Source: Day 12 Handout, Question 6

Explain how you would figure out the tone-mapping procedures that apply in this dataset.

Kukuya

One-μ Stems:	Gloss:	Two-μ Stems:	Gloss:	Three-μ Stems:	Gloss:
[kì-bà]	'grasshopper-killer'	[kì-bàlà]	'to build'	[kì-bàlàgà]	'to change route'
[mà-bá]	'oil palms'	[mà-bágá]	'to show knives'	[lì-bálágá]	'fence'
[mɔ̀-să]	'weaving knot'	[mɔ̀-sàmí]	'conversation'	[m^{w}-àrəgí]	'younger brother'
[kì-kâ]	'to pick'	[kì-kárà]	'paralytic'	[kì-kárágà]*	'to be entangled'
[ndɛ́-bvĭ] (that's \/\ on the last V)	'he falls'	[ndɛ́-pălì]*	'he goes out'	[ndɛ́-kàlágì]	'he turns around'

INSTRUCTOR NOTES: You probably start with procedures that you know work for some other language like Mende, and see whether they work here. In this case, we (1) look at cases of words that have one of the contour tones, because words with only H or only L will just always have a single tone associated with all of the TBUs, but contour tones can help you see e.g. "where" the contour happens; (2) look at cases of words with a mismatch in the number of tones and TBUs (e.g. HL tones and VVV, or LHL tones and VV), because these are cases where one-to-one mapping will fail. By seeing that the "tail" of contours is to the left, not the right (e.g., it's LLH not LHH) and that in the triple-tone words with two TBUs, we have the contour to the left (LH, then L; not L, then HL), we see that the "leftover" stuff needs to be on the left edge instead of the right edge. Hence, the initial mapping procedure should proceed from right to left instead of left to right.

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 5

Source: Quiz 8, Question 3

Explain why this featural specification either does or does not match the given sound.

[+ consonantal], [+ sonorant]

[m]

INSTRUCTOR NOTES: matches

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 6

Source: Day 9 Handout, Question 3

Explain which morpheme(s) in this dataset alternate and how that helps you do a phonological analysis.

English

a. walked [wɑkt]
b. jogged [dʒɑgd]
c. named [neɪmd]
d. wrapped [ɹæpt]
e. hissed [hɪst]
f. mobbed [mɑbd]
g. leafed [lift]
h. rolled [ɹoʊld]
i. sinned [sɪnd]
j. jazzed [dʒæzd]
k. washed [wɑʃt]
l. judged [dʒʌdʒd]

INSTRUCTOR NOTES: the past tense morpheme alternates, so we know we need to analyze the predictable occurrence of [t] vs. [d]

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

END OF EXAM

START OF EXAM
Student ID: 1887
11:30 - 11:50 AM

Question 1

Source: Day 9 Handout, Question 2

Explain why the concept of an alternation either is or is not useful for understanding this dataset.

Osage

a.	[dábri]	'three'	f.	[áðikhã ʒã]	'he lay down'
b.	[daʧpé]	'to eat'	g.	[ʧʔéðe]	'he killed it'
c.	[dakʔé]	'to dig'	h.	[ðéze]	'tongue'
d.	[dáli]	'good'	i.	[ðíe]	'you'
e.	[daʃtú]	'to bite'	j.	[ðíʃki]	'to wash'

INSTRUCTOR NOTES: is not useful – there are no alternations in this dataset, so we can't use them to figure out what sounds are relevant to analyse

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 2

Source: Final Exam Dataset

Explain what the underlying representation of these morphemes would be and why.

'invent', 'progressive'

Present	*Past*	*Future*	*Progressive*	*Gloss*
[satfid]	[satmi]	[sater]	[satse]	'chew'
[jɤgɯdfɯd]	[jɤgɯdmɯ]	[jɤgɯder]	[jɤgɯdse]	'swallow'
[mikɤvfid]	[mikɤvmi]	[mikɤvɤr]	[mikɤvsɤ]	'search'
[lebfid]	[lebmi]	[leber]	[lebse]	'falsify'
[sirfid]	[sirmi]	[sirer]	[sirse]	'mix'
[kɤʔfid]	[kɤʔmi]	[kɤʔɤr]	[kɤʔsɤ]	'toss'
[dimfid]	[dimmi]	[dimer]	[dimse]	'handle'
[pegedfid]	[pegedmi]	[pegeder]	[pegedse]	'invent'
[zabfid]	[zabmi]	[zaber]	[zabse]	'pretend'
[rekɯlfɯd]	[rekɯlmɯ]	[rekɯler]	[rekɯlse]	'dig'

INSTRUCTOR NOTES: For any morpheme that doesn't alternate, its UR should be the same as its SR. For the morphemes that alternate, the back-vowel version occurs in the narrower set of contexts (after a back vowel of the same height), so should be the one that we write a rule for. The front-vowel version occurs in the wider / elsewhere set of contexts (after a front vowel and after a back vowel of a different height), so this should be the UR. So in this case, we have the non-alternating root morpheme 'invent' /peged/ and the alternating suffix morpheme 'progressive' /se/.

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 3

Source: Day 8 Handout, Question 7

Explain why each numbered, underlined statement is true or false. If it is false, explain one way that you could correct it.

We can visualize speech through the use of spectra and spectrograms. [18]A spectrogram shows frequency on the horizontal axis and amplitude on the vertical axis. [19]A spectrum, on the other hand, shows frequency on the vertical axis and time along the horizontal axis.

[20]On a spectrogram, the dark bars are called formants. [21]The formants correspond to the amplitude peaks on a spectrum.

INSTRUCTOR NOTES: 18 - false (A spectrum shows frequency on the horizontal axis and amplitude on the vertical axis, or, a spectrogram shows frequency on the vertical axis and time along the horizontal axis).
19 - false (A spectrum shows frequency on the horizontal axis and amplitude on the vertical axis, or, a spectrogram shows frequency on the vertical axis and time along the horizontal axis).
20 - true.
21 - true.

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 4

Source: Quiz 10, Question 1

Section 4.2 of chapter 13 in the Peng textbook presented an autosegmental analysis of Mende tone distribution. Explain why the form shown below should NOT be the UR for any morpheme in Mende.

H H

p ɛ l ɛ

INSTRUCTOR NOTES: There's no reason to violate the OCP in the UR of a single morpheme, but this one has two adjacent H tones

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 5

Source: Homework 5, Question 1

Explain which sound should be removed to make this a natural class, and what the minimum set of features would be to describe the resulting natural class.

[v], [z], [ʃ], [ʒ], [ð]

INSTRUCTOR NOTES: [ʃ] should be removed, so that we have the natural class of voiced fricatives; this could be minimally represented with [+voice, +cont, -son]

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 6

Source: Quiz 9, Question 12

Explain the key differences between the templatic and the rule-based approaches to syllabification.

INSTRUCTOR NOTES: in the rule-based approach, you ONLY have rules, so you don't know ahead of time what possible syllable types you might get; you also need to know which rules apply in a language and what the order of the rules is – but in the templatic approach, you have a template that tells you ahead of time what the possible syllable types are, and you use the template in conjunction with rules; in the templatic approach, you also need to know the direction of syllabification (L to R or R to L), not the order of the rules [Note: should not mention anything about the units used in either approach)

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

END OF EXAM

START OF EXAM
Student ID: 4199
11:50 AM - 12:10 PM

Question 1

Source: Day 9 Handout, Question 1

Explain why the concept of an alternation either is or is not useful for understanding this dataset.

Korean
a. [mul] ‘water’
b. [mulkama] ‘place for water’
c. [muɾe] ‘at the water’
d. [mal] ‘horse’
e. [malkama] ‘place for horse’
f. [maɾe] ‘at the horse’
g. [pul] ‘fire’
h. [puɾe] ‘at the fire’

INSTRUCTOR NOTES: is useful – root morphemes alternate, so we can decide which sounds we need to analyze

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 2

Source: Day 8 Handout, Question 4

Explain how each component of the description below gives you information about the sound being described.

This consonant is characterized by having a lot of random noise in the spectrogram, with no clear formant structure at all. It tends to be longer and louder than other similar consonants. There is no voice bar, and the majority of the noise created by this consonant is at relatively high frequencies.

INSTRUCTOR NOTES: [s]; check for voicing, place, and manner

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 3

Source: Final Exam Dataset

Explain how you would go about figuring out what to analyse in this dataset.

Present	*Past*	*Future*	*Progressive*	*Gloss*
[satfid]	[satmi]	[sater]	[satse]	'chew'
[jɤgɯdfɯd]	[jɤgɯdmɯ]	[jɤgɯder]	[jɤgɯdse]	'swallow'
[mikɤvfid]	[mikɤvmi]	[mikɤvɤr]	[mikɤvsɤ]	'search'
[lebfid]	[lebmi]	[leber]	[lebse]	'falsify'
[sirfid]	[sirmi]	[sirer]	[sirse]	'mix'
[kɤʔfid]	[kɤʔmi]	[kɤʔɤr]	[kɤʔsɤ]	'toss'
[dimfid]	[dimmi]	[dimer]	[dimse]	'handle'
[pegedfid]	[pegedmi]	[pegeder]	[pegedse]	'invent'
[zabfid]	[zabmi]	[zaber]	[zabse]	'pretend'
[rekɯlfɯd]	[rekɯlmɯ]	[rekɯler]	[rekɯlse]	'dig'

INSTRUCTOR NOTES: The first thing to do is a morphological analysis. There should be morphemes that represent each of the four tenses / aspects (present, past, future, and progressive), and morphemes that represent each root. The morphemes representing the tenses appear as (relatively) consistent forms in the columns; the morphemes representing the roots appear as consistent forms in the rows. Doing this reveals that the final 3 segments in the present forms and the final two segments in the progressive forms are suffixes (there are no zero morphemes, and all components have a one-to-one correspondence). Then we check for alternations. The alternations here are in the suffixes; each of the four suffixes has two forms. There are therefore four alternations, with two allomorphs each. So, what we need to analyze are the alternations in the suffix forms, where we see vowels alternating. Two of the alternations involve [i] and [ɯ], and the other two alternations involve [e] and [ɤ]. In each case, there's a front vowel and a back vowel, which are otherwise matched for height and rounding, so we can likely generalize across the alternations.

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 4

Source: Homework 5, Question 1

Explain which sound should be removed to make this a natural class, and what the minimum set of features would be to describe the resulting natural class.

[i], [ɪ], [ɛ], [u], [ʊ]

INSTRUCTOR NOTES: [ɛ] should be removed, so that we have the natural class of high vowels; this could be minimally represented with [+syll, +high]

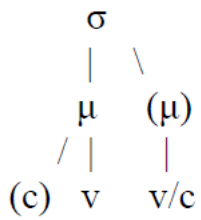
Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 5

Source: Day 11 Handout, Question 5

Explain why this template either does or does not allow syllables of this type to occur.

VCC



INSTRUCTOR NOTES: not allowed

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 6

Source: Day 12 Handout, Question 7

Explain how you would figure out the underlying representations of the suffix morphemes in this dataset.

Southern Manyika dialect of Shona

Set 1:

a. [téŋg-á]	'buy'
b. [téŋg-és-á]	'sell'
c. [téŋg-és-ér-á]	'sell to'
d. [téŋg-és-ér-án-á]	'sell to each other'

Note: literally, 'sell' consists of two morphemes that combine to mean 'make buy.'

Set 2:

a. [èrèŋg-à]	'read'
b. [èrèŋg-ès-à]	'make read'
c. [èrèŋg-èr-à]	'read to'
d. [fùŋg-ìdz-ìr-àn-à]	'suspect each other'

INSTRUCTOR NOTES: the suffix morphemes alternate, so we need to pick either one or the other or something else for their URs; because their tone is always predictable from their context, we can assume that they get the tones just from the tone-mapping procedures and are underlyingly toneless (the segments never alternate, so they are the same as in their URs)

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

END OF EXAM

START OF EXAM
Student ID: 1794
12:10 - 12:30 PM

Question 1

Source: Day 11 Handout, Question 12

Explain how understanding syllable structure helps understand the motivation for the process(es) seen in this data.

Yawelmani

UR	SR	Gloss
a. /pok'-hin/	[pok'hin]	'found'
b. /xat^{h}-hin/	[xat^{h}hin]	'ate'
c. /lihm-hin/	[lihimhin]	'ran'
d. /hogn-hin/	[hoginhin]	'floated'
e. /ʔugn-hin/	[ʔuginhin]	'drank'
f. /p^{h}aʔt'-hin/	[p^{h}aʔit'hin]	'fought'
g. /liʔ-hatn-hin/	[liʔhatinhin]	'wanted to sink'
h. /dos-hotn-hin/	[doshotinhin]	'was trying to tell'
i. /hud-hatn-xoo-ʔ/	[hudhatinxoʔ]	'wanted to know about'
j. /ʔa:ml-hin/	[ʔa:milhin]	'helped'

INSTRUCTOR NOTES: although syllabification must happen after insertion, the insertion is motivated by making things syllabifiable – we insert a vowel into a sequence of CCC in order to prevent any complex onsets / codas or syllabic consonants from having to be used

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 2

Source: Day 10 Discussion

Explain what the given feature's value is for this class of sounds, and why.

[strident]
glides

INSTRUCTOR NOTES: 0, because [strident] applies only to obstruents, and glides are sonorants

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 3

Source: Final Exam Dataset

Explain what the underlying representation of these morphemes would be and why.

'mix', 'past'

Present	*Past*	*Future*	*Progressive*	*Gloss*
[satfid]	[satmi]	[sater]	[satse]	'chew'
[jɤgɯdfɯd]	[jɤgɯdmɯ]	[jɤgɯder]	[jɤgɯdse]	'swallow'
[mikɤvfid]	[mikɤvmi]	[mikɤvɤr]	[mikɤvsɤ]	'search'
[lebfid]	[lebmi]	[leber]	[lebse]	'falsify'
[sirfid]	[sirmi]	[sirer]	[sirse]	'mix'
[kɤʔfid]	[kɤʔmi]	[kɤʔɤr]	[kɤʔsɤ]	'toss'
[dimfid]	[dimmi]	[dimer]	[dimse]	'handle'
[pegedfid]	[pegedmi]	[pegeder]	[pegedse]	'invent'
[zabfid]	[zabmi]	[zaber]	[zabse]	'pretend'
[rekɯlfɯd]	[rekɯlmɯ]	[rekɯler]	[rekɯlse]	'dig'

INSTRUCTOR NOTES: For any morpheme that doesn't alternate, its UR should be the same as its SR. For the morphemes that alternate, the back-vowel version occurs in the narrower set of contexts (after a back vowel of the same height), so should be the one that we write a rule for. The front-vowel version occurs in the wider / elsewhere set of contexts (after a front vowel and after a back vowel of a different height), so this should be the UR. So in this case, we have the non-alternating root morpheme 'mix' /sir/ and the alternating suffix morpheme 'past' /mi/.

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 4

Source: Day 12 Handout, Question 5

Explain which of the three rules will apply to the form given below, and whether each of those rules would have an effect or not.

Peng's Tone-Mapping Procedure for Mende:

1. L-to-R association: Associate the first tone to the first TBU, the second tone to the second TBU, and so on, until all tones or all TBUS are exhausted.
2. Last-TBU Linking: Associate any remaining unlinked tones to the last TBU.
3. Last-Tone Linking: Associate the last tone to any TBU without a tone.

H L H

/apute/

INSTRUCTOR NOTES: L-to-R association is the only one that applies; it links up each of the three tones to a TBU, and then the other rules have nothing to do, because their context isn't met (there are no leftover tones or TBUs)

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 5

Source: Day 9 Handout, Question 5

Explain which morpheme(s) in this dataset alternate and how that helps you do a phonological analysis.

English

a. [tæk]	'tack'	j. [hɪɾɚ]	'hitter'
b. [tɹu]	'true'	k. [lɑɪɾɪŋ]	'lighting'
c. [tɑɪm]	'time'	l. [bæɾɚ]	'batter'
d. [tiɹ]	'tear'	m. [miɾɚ]	'meter'
e. [bæt]	'bat'	n. [lɑɪɾɚ]	'lighter'
f. [weɪt]	'wait'	o. [bæɾl̩]	'battle'
g. [hɪt]	'hit'	p. [kæɾɚpɪlɚ]	'caterpillar'
h. [lɑɪt]	'light'	q. [weɪɾɪŋ]	'waiting'
i. [bɔt]	'bought'		

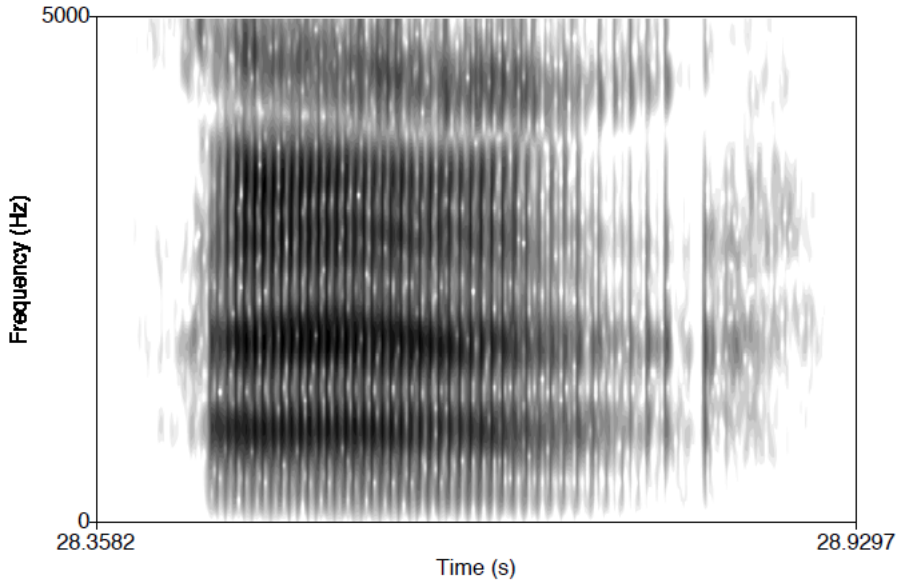
INSTRUCTOR NOTES: some of the roots alternate (such as 'light'), so we know that we need to analyze the predictable occurrence of [t] vs. [flap]

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 6

Source: Day 8 Handout, Question 3

Explain what you see in the spectrogram that tells you about the properties of the sounds in the pictured word.



INSTRUCTOR NOTES: aaah: just a vowel; formants are very steady; F1 and F2 are pretty close to each other; F1 somewhat high and F2 somewhat low

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

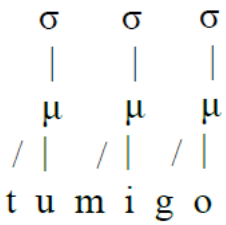
END OF EXAM

START OF EXAM
Student ID: 4656
12:30 - 12:50 PM

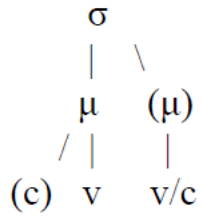
Question 1

Source: Day 11 Handout, Question 10

Explain why this structure either is or is not a correct application of the templatic-based approach to syllabification, using the provided template and assuming that syllabification proceeds from left to right.



Peng's Templatic Approach:



(30) Moraification
- a. Project a mora from each vowel.
- b. Associate a consonant to the immediate left of a mora to that mora.
- c. Project a mora from any remaining consonant.
- *Note: This last step is language-specific.*

(34) Extrasyllabicity

Mark the last mora dominating a consonant as extrasyllabic.

Note 1: This step is not used in all languages.

Note 2: The wording on this is a bit odd. What he means is "if the last segment in a word is a moraic consonant, mark it as extrasyllabic."

(35) Syllabification

Note: This proceeds either left-to-right or right-to-left, depending on the language!
- a. Project a syllable from [the first available] mora.
- b. Associate the moraic materials to the syllable.

(36) Conditions on association to a template
- a. Template Satisfaction: Satisfaction of templatic constraints is obligatory and is determined by the principles of prosody, both universal and language-specific.
- b. Maximization of Association: Associate as many phonological elements as possible.

INSTRUCTOR NOTES: yes; this is just all CV syllables

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 2

Source: Day 10 Handout, Question 5

Explain why you either should or should not use phonological features in the CONTEXT of the given rule.

Vowel laxing: /i/ → [ɪ] / {[ɛ], [ɔ]} C_0__

INSTRUCTOR NOTES: yes; you're trying to group multiple (in this case, two) sounds together, so it's good to use features to describe their commonality; it also helps us see the naturalness of the rule by pointing out the relevant part of the phonological context

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 3

Source: Final Exam Dataset

Explain how you would go about figuring out what to analyse in this dataset.

Present	*Past*	*Future*	*Progressive*	*Gloss*
[satfid]	[satmi]	[sater]	[satse]	'chew'
[jɤgɯdfɯd]	[jɤgɯdmɯ]	[jɤgɯder]	[jɤgɯdse]	'swallow'
[mikɤvfid]	[mikɤvmi]	[mikɤvɤr]	[mikɤvsɤ]	'search'
[lebfid]	[lebmi]	[leber]	[lebse]	'falsify'
[sirfid]	[sirmi]	[sirer]	[sirse]	'mix'
[kɤʔfid]	[kɤʔmi]	[kɤʔɤr]	[kɤʔsɤ]	'toss'
[dimfid]	[dimmi]	[dimer]	[dimse]	'handle'
[pegedfid]	[pegedmi]	[pegeder]	[pegedse]	'invent'
[zabfid]	[zabmi]	[zaber]	[zabse]	'pretend'
[rekɯlfɯd]	[rekɯlmɯ]	[rekɯler]	[rekɯlse]	'dig'

INSTRUCTOR NOTES: The first thing to do is a morphological analysis. There should be morphemes that represent each of the four tenses / aspects (present, past, future, and progressive), and morphemes that represent each root. The morphemes representing the tenses appear as (relatively) consistent forms in the columns; the morphemes representing the roots appear as consistent forms in the rows. Doing this reveals that the final 3 segments in the present forms and the final two segments in the progressive forms are suffixes (there are no zero morphemes, and all components have a one-to-one correspondence). Then we check for alternations. The alternations here are in the suffixes; each of the four suffixes has two forms. There are therefore four alternations, with two allomorphs each. So, what we need to analyze are the alternations in the suffix forms, where we see vowels alternating. Two of the alternations involve [i] and [ɯ], and the other two alternations involve [e] and [ɤ]. In each case, there's a front vowel and a back vowel, which are otherwise matched for height and rounding, so we can likely generalize across the alternations.

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 4

Source: Quiz 7, Question 8

Based on this data from Lamba, explain why the pair given below either does or does not show that the consonants preceding the morpheme for 'with' are NOT responsible for the variation between [-il] and [-el].

tul-il-a & soŋk-el-a

(6) data from Lamba

čit-a	'do'	čit-il-a	'do with'
tul-a	'dig'	tul-il-a	'dig with'
čet-a	'spy'	čet-el-a	'spy with'
soŋk-a	'pay taxes'	soŋk-el-a	'pay taxes with'
pat-a	'scold'	pat-il-a	'scold with'

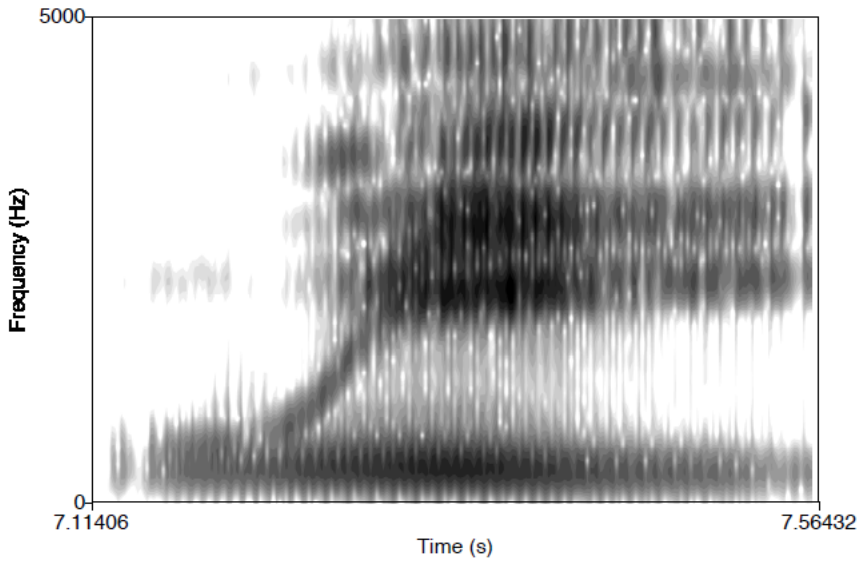
INSTRUCTOR NOTES: doesn't show this – we do see [il] and [el], but they occur after different consonants, so it COULD be the consonant that is responsible

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 5

Source: Day 8 Handout, Question 3

Explain what you see in the spectrogram that tells you about the properties of the sounds in the pictured word.



INSTRUCTOR NOTES: we: starts paler, then darker, so glide plus vowel; F1 pretty constantly low (=high V); F2 starts very low and then swoops up (=starts back and goes front)

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 6

Source: Day 12 Handout, Question 5

Explain which of the three rules will apply to the form given below, and whether each of those rules would have an effect or not.

Peng's Tone-Mapping Procedure for Mende:

1. L-to-R association: Associate the first tone to the first TBU, the second tone to the second TBU, and so on, until all tones or all TBUS are exhausted.
2. Last-TBU Linking: Associate any remaining unlinked tones to the last TBU.
3. Last-Tone Linking: Associate the last tone to any TBU without a tone.

L H

/apute/

INSTRUCTOR NOTES: L-to-R association applies and links the H tone to the first TBU [a] and the L tone to the second TBU [u]; last-TBU linking doesn't apply because there are no leftover tones; then last-tone linking does apply, and connects all of the leftover TBUs (in this case, [e]) to the final tone (in this case, L)

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

END OF EXAM

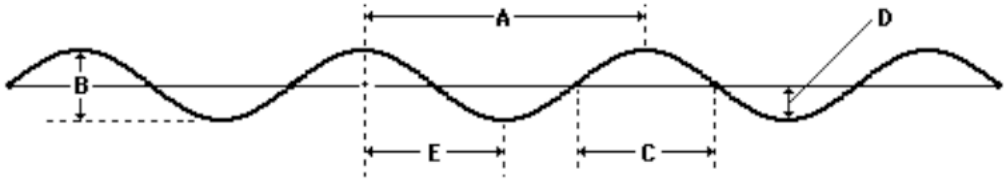
START OF EXAM
Student ID: 8079
12:50 - 1:10 PM

Question 1

Source: Day 8 Handout, Question 1

Explain what (if anything) the letter below represents on this waveform.

C



INSTRUCTOR NOTES: nothing (half wavelength or half period)

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 2

Source: Quiz 8, Question 3

Explain why this featural specification either does or does not match the given sound.

[-consonantal], [-sonorant]
[u]

INSTRUCTOR NOTES: does not match: [u] is [-cons], but is [+son]

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 3

Source: Final Exam Dataset

Explain what rule or rules would apply in this dataset and how you know.

Present	*Past*	*Future*	*Progressive*	*Gloss*
[satfid]	[satmi]	[sater]	[satse]	'chew'
[jɤgɯdfɯd]	[jɤgɯdmɯ]	[jɤgɯder]	[jɤgɯdse]	'swallow'
[mikɤvfid]	[mikɤvmi]	[mikɤvɤr]	[mikɤvsɤ]	'search'
[lebfid]	[lebmi]	[leber]	[lebse]	'falsify'
[sirfid]	[sirmi]	[sirer]	[sirse]	'mix'
[kɤʔfid]	[kɤʔmi]	[kɤʔɤr]	[kɤʔsɤ]	'toss'
[dimfid]	[dimmi]	[dimer]	[dimse]	'handle'
[pegedfid]	[pegedmi]	[pegeder]	[pegedse]	'invent'
[zabfid]	[zabmi]	[zaber]	[zabse]	'pretend'
[rekɯlfɯd]	[rekɯlmɯ]	[rekɯler]	[rekɯlse]	'dig'

INSTRUCTOR NOTES: We need a rule of "Vowel Backing" as follows: [α high, +syllabic] –> [+back] / [α high, +back, +syllabic] C0 _. This rule says that a vowel will become back if it follows another back vowel of the same height, regardless of any intervening consonants. We know this is the rule we need because we need to account for the suffix alternations; the suffixes appear either with a front vowel or a back vowel. The back versions occur only after a back vowel of the same height (so are the focus of the rule); the front vowels occur elsewhere (after a front vowel, or after a back vowel of a different height). We could have two separate rules, one for mid vowels and one for high vowels, but this misses the generalization that these rules are basically doing the same thing.

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 4

Source: Day 9 Handout, Question 3

Explain which morpheme(s) in this dataset alternate and how that helps you do a phonological analysis.

English

a. walked [wɑkt]
b. jogged [dʒɑgd]
c. named [neɪmd]
d. wrapped [ɹæpt]
e. hissed [hɪst]
f. mobbed [mɑbd]
g. leafed [lift]
h. rolled [ɹoʊld]
i. sinned [sɪnd]
j. jazzed [dʒæzd]
k. washed [wɑʃt]
l. judged [dʒʌdʒd]

INSTRUCTOR NOTES: the past tense morpheme alternates, so we know we need to analyze the predictable occurrence of [t] vs. [d]

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 5

Source: Day 12 Handout, Question 6

Explain how you would figure out the tone-mapping procedures that apply in this dataset.

Kukuya

One-μ Stems:	Gloss:	Two-μ Stems:	Gloss:	Three-μ Stems:	Gloss:
[kì-bà]	'grasshopper-killer'	[kì-bàlà]	'to build'	[kì-bàlàgà]	'to change route'
[mà-bá]	'oil palms'	[mà-bágá]	'to show knives'	[lì-bálágá]	'fence'
[mɔ̀-să]	'weaving knot'	[mɔ̀-sàmí]	'conversation'	[m^{w}-àrəgí]	'younger brother'
[kì-kâ]	'to pick'	[kì-kárà]	'paralytic'	[kì-kárágà]*	'to be entangled'
[ndé-bvĭ] (that's \/\ on the last V)	'he falls'	[ndé-pălì]*	'he goes out'	[ndé-kàlágì]	'he turns around'

INSTRUCTOR NOTES: You probably start with procedures that you know work for some other language like Mende, and see whether they work here. In this case, we (1) look at cases of words that have one of the contour tones, because words with only H or only L will just always have a single tone associated with all of the TBUs, but contour tones can help you see e.g. "where" the contour happens; (2) look at cases of words with a mismatch in the number of tones and TBUs (e.g. HL tones and VVV, or LHL tones and VV), because these are cases where one-to-one mapping will fail. By seeing that the "tail" of contours is to the left, not the right (e.g., it's LLH not LHH) and that in the triple-tone words with two TBUs, we have the contour to the left (LH, then L; not L, then HL), we see that the "leftover" stuff needs to be on the left edge instead of the right edge. Hence, the initial mapping procedure should proceed from right to left instead of left to right.

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 6

Source: Homework 5, Question 2

Explain why the insertion analysis is better than the deletion analysis for this dataset.

Fula

	Plain Word	**Suffixed Word**	**Word Gloss**	**Suffix Gloss**
a.	[war-a]	[war-d-a]	'come'	ASSOCIATIVE
b.	[nast-a]	[nasd-id-a]	'enter'	ASSOCIATIVE
c.	[jar-a]	[jar-d-a]	'drink'	COMPREHENSIVE
d.	[win^{n}d-a]	[win^{n}d-id-a]	'write'	COMPREHENSIVE
e.	[war-a]	[war-t-o]	'kill'	REFLEXIVE
f.	[jim-a]	[jim-t-o]	'sing'	REFLEXIVE
g.	[taʔj-a]	[taʔj-it-o]	'cut'	REFLEXIVE
h.	[fiɓ-a]	[fiɓ-t-a]	'tie'	REVERSIVE
i.	[hufn-o]	[hufn-it-o]	'put on a cap'	REVERSIVE
j.	[bark-a]	[bark-iɗ-a]	'blessing'	DENOMINATIVE
k.	[sem^{m}b-e]	[sem^{m}b-iɗ-a]	'strength'	DENOMINATIVE

INSTRUCTOR NOTES: If you have /VC/ as the underlying form of these suffixes, there's no reason to delete the vowel, because you'd have perfect CV syllables throughout the word. But if you have /C/ as the underlying form, it's clear that we occasionally need an extra vowel in order to allow syllabification to happen; otherwise, we'd end up with non-syllabifiable CCC sequences. That is, there's a phonological motivation for the insertion rule, but no motivation for the deletion rule.

Excellent (3) Good (2.2) Fair (1.7) Poor (0)

END OF EXAM