Wednesday, 24 June 2020
ALL EXAMS (with notes)

START OF EXAM
Student ID: 3684
9:30 - 9:50 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'

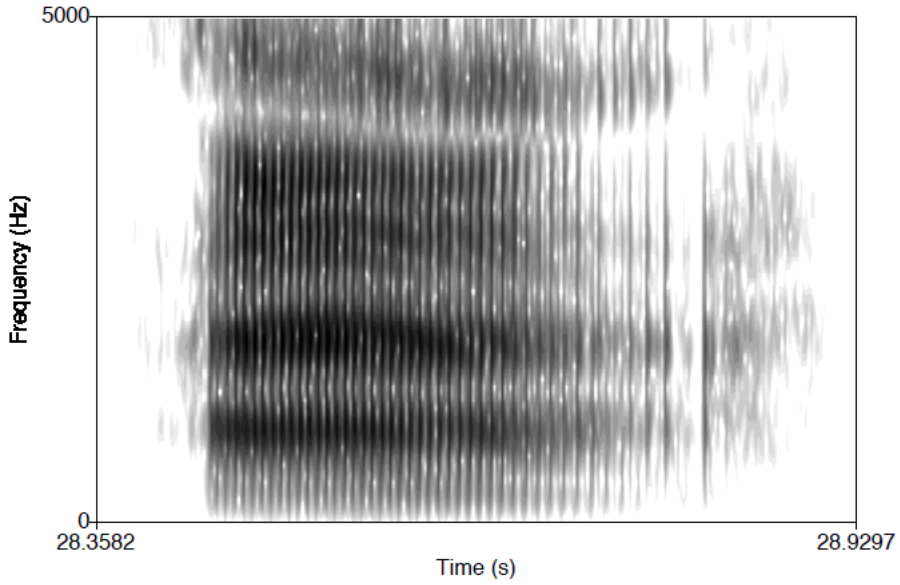
INSTRUCTOR NOTES: For any morpheme that doesn't alternate, its UR should be the same as its SR. For the morphemes that alternate, the back-vowel version occurs in the narrower set of contexts (after a back vowel of the same height), so should be the one that we write a rule for. The front-vowel version 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 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 4

Source: Quiz 8, Question 6

Explain why this is an incorrect statement.

Nasal consonants are [+ continuant] because they lack a central occlusion in the vocal tract.

INSTRUCTOR NOTES: nasals are [-cont], because air cannot escape through the mouth (there is a central occlusion / blockage)

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

Question 5

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 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: 7336
9:50 - 10:10 AM

Question 1

Source: Day 11 Handout, Question 12

Explain why what you're analyzing in the following dataset either is or is not an alternation.

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: it's not an alternation – we don't have multiple *surface* forms of the same morpheme; the different forms are the UR and the SR, and so they are not predictable from phonological context (the SR is derived from the UR by rule)

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

Question 2

Source: Day 10 Discussion

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

[anterior]

fricatives

INSTRUCTOR NOTES: can have both [+] and [-] anterior fricatives (e.g., [s] and [θ] are [+ ant], [ʃ] is [-ant] – extra good if they also notice you can have [0 ant] like [f], which isn't [CORONAL]

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.

'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 4

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 5

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 6

Source: Day 11 Handout, Question 14

How does syllabification play a role in the analysis of the phonological relationship between tense and lax high vowels in Quebec French?

Québec French

orthography	*transcription*	*gloss*	*orthography*	*transcription*	*gloss*
vie	[vi]	'life'	fou	[fu]	'crazy'
riz	[ri]	'rice'	trou	[tru]	'hole'
lit	[li]	'bed'	boue	[bu]	'mud'
vitesse	[vitɛs]	'speed'	couper	[kupe]	'to cut'
vider	[vide]	'empty (verb)'	souder	[sude]	'to solder'
richesse	[riʃɛs]	'riches'	toucher	[tuʃe]	'to touch'
déraciné	[derasine]	'uprooted'	pousser	[puse]	'to push'
pipe	[pɪp]	'pipe'	coupe	[kʊp]	'cut'
vite	[vɪt]	'fast'	croûte	[krʊt]	'crust'
chic	[ʃɪk]	'chic'	pousse	[pʊs]	'push'
vide	[vɪd]	'empty (adj.)'	touche	[tʊʃ]	'touch'
vice	[vɪs]	'screw'	foule	[fʊl]	'crowd'
riche	[rɪʃ]	'rich'	soûle	[sʊl]	'drunk (fem.)'
ville	[vɪl]	'city'	boule	[bʊl]	'ball'

INSTRUCTOR NOTES: here, syllabification must precede the rest of the analysis; the tense vowels ([i] and [u]) occur in open syllables, while the lax vowels occur in closed syllables – so e.g. we might have a rule of vowel laxing that says [+high, +syll] –> [-tense] / _ C., with a period to specifically mark the syllable boundary in the context of the rule

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

END OF EXAM

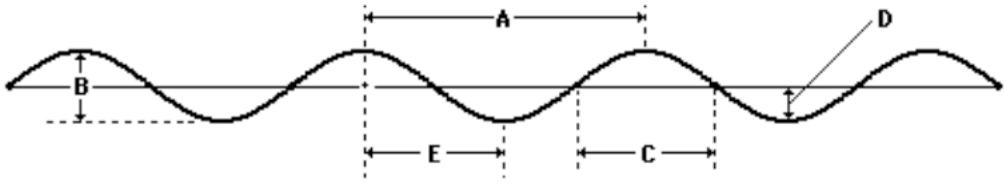
START OF EXAM
Student ID: 3514
10:10 - 10:30 AM

Question 1

Source: Day 8 Handout, Question 1

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

E



INSTRUCTOR NOTES: nothing (half wavelength or half period)

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 11 Handout, Question 16

How does syllabification play a role in the analysis of Tibetan numerals?

Standard Tibetan

(1-10)		(11-19)		(multiples of 10)	
a. [ʒig]	'1'	f. [ʒugʒig]	'11'		
b. [ʃi]	'4'	g. [ʒubʃi]	'14'	j. [ʃibʒu]	'40'
c. [ŋa]	'5'	h. [ʒuŋa]	'15'	k. [ŋabʒu]	'50'
d. [gu]	'9'	i. [ʒurgu]	'19'	l. [gubʒu]	'90'
e. [ʒu]	'10'				

INSTRUCTOR NOTES: morphemes that seem to have initial CC clusters (which are visible word-medially, where the CC sequence can be broken up across a syllable boundary) are simplified by deleting the initial consonant when the morpheme occurs word-initially, to avoid complex onsets (perhaps especially because these complex onsets would violate the sonority sequencing principle, which is what makes it hard for students to even imagine that the morphemes have these CC sequences initially!)

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 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)

Question 5

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 6

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)

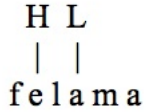
END OF EXAM

START OF EXAM
Student ID: 3129
10:30 - 10:50 AM

Question 1

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.



INSTRUCTOR NOTES: URs don't have pre-linked tones; the association lines are generated by rules (tone-mapping procedures)

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

Question 2

Source: Day 11 Handout, Question 15

Do these two signs have the same syllable structure or different, and why?

Figure 1: MILK

Figure 2: UNDERSTAND

INSTRUCTOR NOTES: different in number of syllables: MILK - disyllabic, low-sonority / UNDERSTAND - monosyllabic, low-sonority

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

Question 3

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 4

Source: Day 8 Discussion

Briefly explain source-filter theory.

INSTRUCTOR NOTES: The vocal folds vibrate, setting the air coming from the lungs into motion – this is the "source" sound wave, which is a complex wave, with energy at multiple different frequencies – the fundamental and its harmonics, i.e., its multiples. Then the oral and nasal cavities act as a "filter" to dampen (remove energy from) some of the frequencies of the sound and enhance others (the resonant frequencies). Depending on the shape of the mouth, different frequencies will resonate and so we get different formant values and hence different vowel qualities.

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]
[u]

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

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

Question 6

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)

END OF EXAM

START OF EXAM
Student ID: 3288
10:50 - 11:10 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: Day 10 Discussion

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

[sonorant]
alveolars

INSTRUCTOR NOTES: can have both sonorant and obstruent alveolars (e.g. [n] vs. [s])

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.

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)

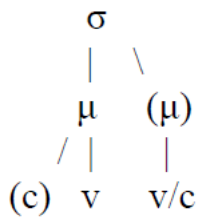
Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 5

Source: Day 11 Handout, Question 5

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

CCV



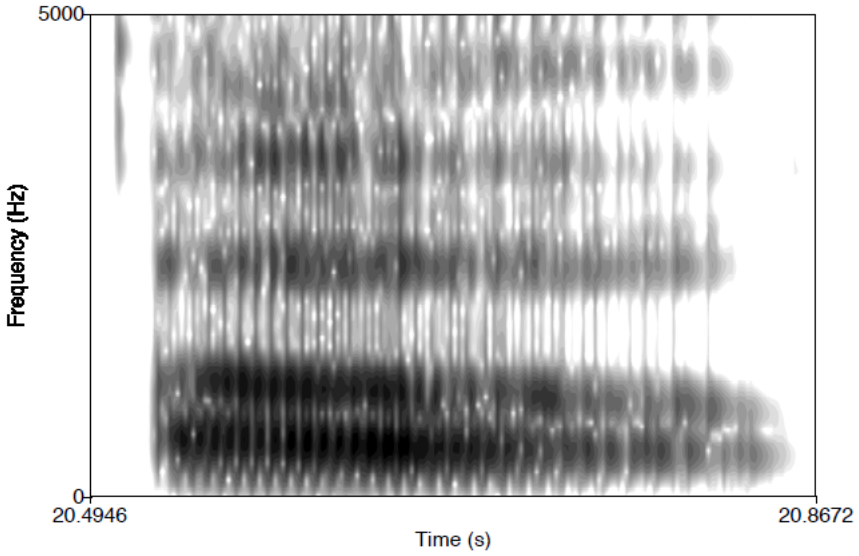
INSTRUCTOR NOTES: not allowed

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: oh: just a vowel; clear formants; pretty steady with a slight downward trend of both; F1 is pretty close to F2, which means F2 is pretty low (=back V), and F1 isn't super low (=mid to low vowel)

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

END OF EXAM

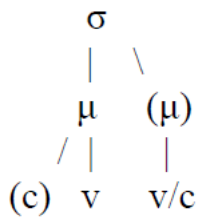
START OF EXAM
Student ID: 9450
11:10 - 11:30 AM

Question 1

Source: Day 11 Handout, Question 5

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

VCC



INSTRUCTOR NOTES: not allowed

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

Question 2

Source: Quiz 8, Question 6

Explain why this is an incorrect statement.

Nasal consonants are [+continuant], because you can continue to make the sound for a long period of time (until you run out of breath).

INSTRUCTOR NOTES: nasals are [-cont], because air cannot escape through the mouth

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.

'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 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].

čit-a & čit-il-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'

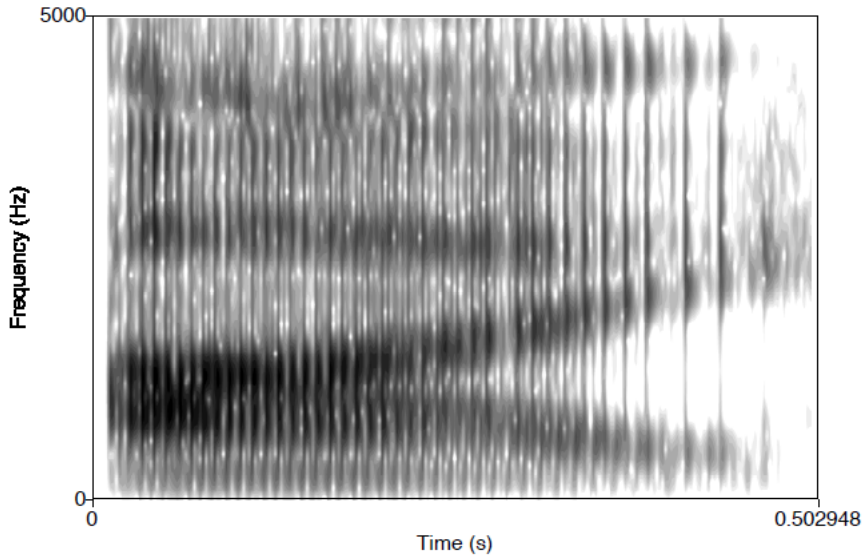
INSTRUCTOR NOTES: doesn't show this – only the [il] form is shown, so we can't judge whether [il] [el] is based on consonants or not

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: I: clear formants; all dark, so just a vowel; changes so a diphthong; F1 pretty high and then falls a bit (= starts as low V and goes higher); F2 starts pretty low and then goes up (= starts as back V and goes fronter)

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: 2357
11:30 - 11:50 AM

Question 1

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)

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'

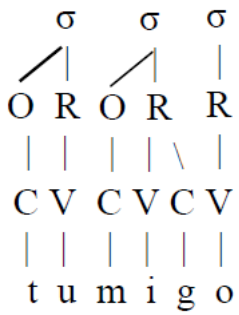
INSTRUCTOR NOTES: For any morpheme that doesn't alternate, its UR should be the same as its SR. For the morphemes that alternate, the back-vowel version occurs in the narrower set of contexts (after a back vowel of the same height), so should be the one that we write a rule for. The front-vowel version 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 11 Handout, Question 6

Explain why this structure either is or is not a correct application of the rule-based approach to syllabification, assuming that both the onset rule and the coda rule apply in this language, and the onset rule comes before the coda rule.



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: no – the [g] should be in the onset because it's a simple onset (step b)

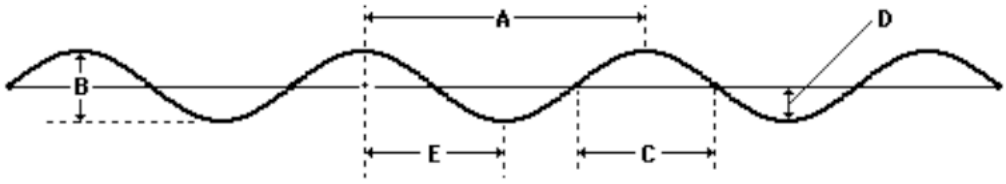
Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 4

Source: Day 8 Handout, Question 1

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

D



INSTRUCTOR NOTES: amplitude

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

Question 5

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

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?

/ð/ → [d] / _ [a]

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: input can be just a segment; output should be something like [-cont]; context can be a segment; this doesn't by itself account for the slight difference in place of articulation

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

Question 6

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)

END OF EXAM

START OF EXAM
Student ID: 1715
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: 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 10 Discussion

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

[sonorant]
alveolars

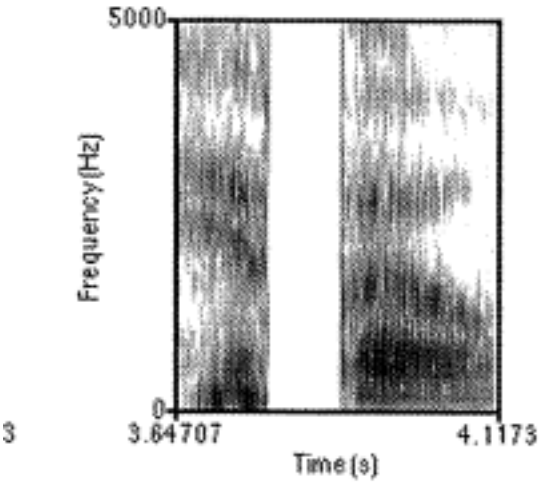
INSTRUCTOR NOTES: can have both sonorant and obstruent alveolars (e.g. [n] vs. [s])

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

Question 4

Source: Quiz 6, Question 2

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



INSTRUCTOR NOTES: hippo: stop in middle indicated by silence / white space; vowels on either side; V1 has low F1 and high F2 (= high front V) and V2 has higher F1 and lower F2 (= mid to low backer vowel)

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

Question 5

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.

INSTRUCTOR NOTES: URs don't have pre-linked tones; the association lines are generated by rules (tone-mapping procedures), AND 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 6

Source: Day 11 Handout, Question 1

Explain how these examples help support the overall syllable structure of a syllable consisting of an onset and rime, and the rime consisting of a nucleus and coda.

English Poetry

a. Alliteration –
   a. *Definition:* Words that are similar in terms of their initial consonant sounds.
   b. *Example*: "I have **stood still** and **stopped** the sound of feet"[1]
   c. *Example*: "**Peter Piper picked** a **peck** of **pickled peppers**."
b. Assonance –
   a. *Definition*: Words that are similar in terms of their vowel sounds.
   b. *Example*: "Hear the **mellow wedding bells**"[2]
   c. *Example*: "In which I **try** to **decipher** / the story it tells, / this syntax of monuments / flanking the old courthouse: / here a rough **outline** / **like** the torso of a woman / great with **child**"[3]
c. Slant or half rhyme –
   a. *Definition*: Rhymes formed when words end in the same consonants.
   b. *Example*: "Midway on our life's journey, I found **myself** / In dark woods, the right road lost. To tell / About those woods is hard—so tangled and **rough**."[4]
d. Full or perfect rhyme –
   a. *Definition*: Rhymes formed when words end in the same stressed vowel and all following materials.
   b. *Example*: "'Poor darling Goldilocks!' they **say** / 'Thank goodness that she got **away**!' / Myself, I think I'd rather **send** / Young Goldies to a sticky **end**; / 'Oh daddy!' cried the Baby **Bear**, / 'My porridge gone! It isn't **fair**!' / 'Then go upstairs,' the Big Bear **said**, / 'Your porridge is upon the **bed**. / But as it's inside **mademoiselle**, / You'll have to eat her up as **well**.'"[5]

INSTRUCTOR NOTES: alliteration gives evidence for onsets, assonance for nuclei (including an entire diphthong); slant rhymes for codas; full rhymes for nucleus plus coda together – but we don't have anything for "beginning of word through to and including the nculeus"

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

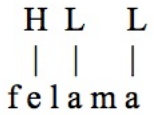
END OF EXAM

START OF EXAM
Student ID: 2014
12:10 - 12:30 PM

Question 1

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.



INSTRUCTOR NOTES: URs don't have pre-linked tones; the association lines are generated by rules (tone-mapping procedures), AND 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)

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'

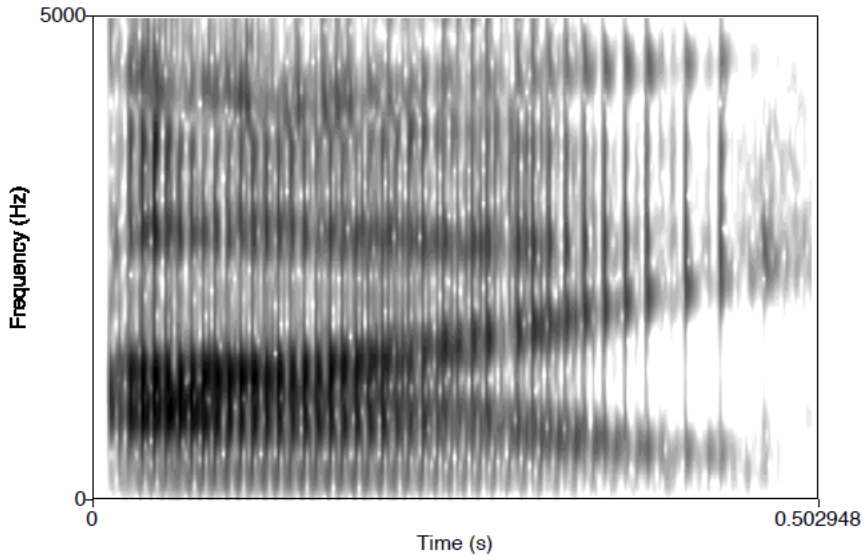
INSTRUCTOR NOTES: The first thing to do is a morphological analysis. There should be morphemes that represent each of the four tenses / aspects (present, past, future, and progressive), and morphemes that represent each root. The morphemes representing the tenses appear as (relatively) consistent forms 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 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: I: clear formants; all dark, so just a vowel; changes so a diphthong; F1 pretty high and then falls a bit (= starts as low V and goes higher); F2 starts pretty low and then goes up (= starts as back V and goes fronter)

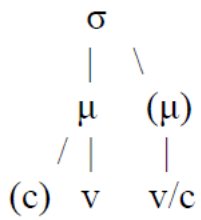
Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 4

Source: Day 11 Handout, Question 5

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

CVVC



INSTRUCTOR NOTES: not allowed

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

Question 5

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].

pat-il-a & tul-il-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 only see [il], so we don't know if [el] can also occur in these environments or not

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

Question 6

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], [e], [ɛ], [æ], [ɑ], [ɔ], [o], [ʊ], [u], [ʒ], [k], [g], [ŋ], [w]

INSTRUCTOR NOTES: [ʒ] should be removed, so that we have the natural class of dorsal segments; this could be minimally represented with [DORSAL]

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

END OF EXAM

START OF EXAM
Student ID: 4220
12:30 - 12:50 PM

Question 1

Source: Day 11 Handout, Question 12

Explain why what you're analyzing in the following dataset either is or is not an alternation.

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: it's not an alternation – we don't have multiple *surface* forms of the same morpheme; the different forms are the UR and the SR, and so they are not predictable from phonological context (the SR is derived from the UR by rule)

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

Question 2

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 3

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 4

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.

[10]Frequency is inversely related to pitch: high frequencies correspond to low pitches, and low frequencies correspond to high pitches. Finally, there is the amplitude of the wave. [11]The amplitude tells you how much pressure the molecules are under at any particular time. [12]The auditory correlate of amplitude is intensity; this is a measure of perceived pressure.

[13]In speech, air is set in vibrating motion by the lungs, so the lungs are the source of most speech sounds.

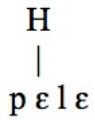
INSTRUCTOR NOTES: 10 - false (frequency is directly related to pitch: high frequencies correspond to high pitches, and low frequencies correspond to low pitches).
11 - true.
12 - false (the auditory correlate of amplitude and intensity is loudness/volume, or, a related acoustic measure to amplitude is intensity).
13 - false (air is set in vibrating motion by the vocal folds).

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

Question 5

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.



INSTRUCTOR NOTES: URs don't have pre-linked tones; the association lines are generated by rules (tone-mapping procedures)

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

Question 6

Source: Day 10 Handout, Question 6 (Day 9 Handout, Question 5)

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?

/t/ → [ɾ] / {[vowel],[syllabic consonant]} _ {[vowel],[syllabic consonant]}

English

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

INSTRUCTOR NOTES: the output and the context should both be features; the input can stay as [t]: something like /t/ –> [+son, +voice] / [+syll] _ [+syll]

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

END OF EXAM

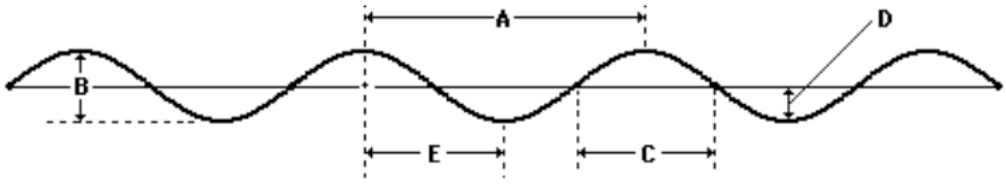
START OF EXAM
Student ID: 7661
12:50 - 1:10 PM

Question 1

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 2

Source: Final Exam Dataset

Give a good phonological description of the patterns in the dataset that should be analysed.

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 each morpheme that alternates, there are two allomorphs, one with a front vowel and one with a back vowel. The allomorph with the back vowel occurs after another back vowel of the same height (e.g., [fɯd] in [jɤgɯd-fɯd] 'swallow, present' or [sɤ] in [mikɤv-sɤ] 'search, progressive'), regardless of any intervening consonants. The allomorph with the front vowel occurs elsewhere, including after a front vowel (e.g. [fid] in [sat-fid] 'chew, present' or [se] in [sat-se] 'chew, progressive') and after a back vowel of a different height (e.g. [fid] in [mikɤv-fid] 'search, present' or [se] in [jɤgɯd-se] 'swallow, progressive'). Again, these latter environments are regardless of any intervening consonants.

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

Question 3

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'

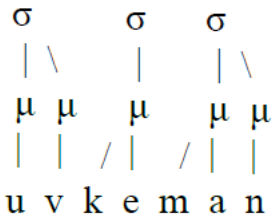
INSTRUCTOR NOTES: the suffix morphemes alternate, so we need to pick either one or the other or something else for their URs; because their tone is always predictable from their context, we can assume that they get the tones just from the tone-mapping procedures and are underlyingly toneless (the segments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

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

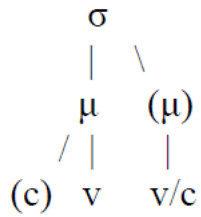
Question 4

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: no – although all the syllables are allowed by the template, the final consonant should have been marked as extra-syllabic and not put into the coda

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

Question 5

Source: Quiz 8, Question 6

Explain why this is an incorrect statement.

Nasal consonants are [-continuant], because they cannot be produced for an extended period of time.

INSTRUCTOR NOTES: nasals are indeed [-cont], but they can be held for a long time – it's just that air isn't coming from the mouth

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

Question 6

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)

END OF EXAM

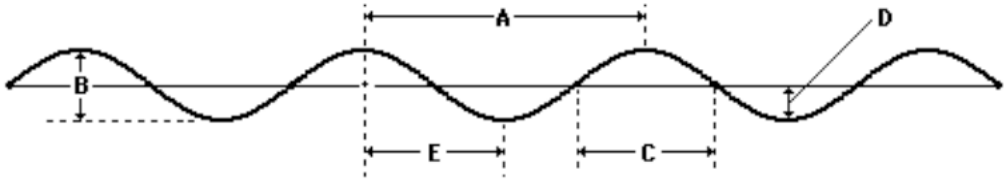
START OF EXAM
Student ID: 8742
2:00 - 2:20 PM

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: 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: 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].

čit-a & čit-il-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'

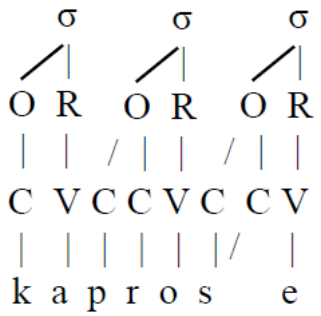
INSTRUCTOR NOTES: doesn't show this – only the [il] form is shown, so we can't judge whether [il] [el] is based on consonants or not

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

Question 4

Source: Day 11 Handout, Question 6

Explain why this structure either is or is not a correct application of the rule-based approach to syllabification, assuming that both the onset rule and the coda rule apply in this language, and the onset rule comes before the coda rule.



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: yes; the long [s] is part of the onset here because the onset rule applies before the coda rule

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]
[u]

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

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

Question 6

Source: Day 12 Handout, Question 7

What would be a good description of the alternation 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 suffixes that alternate appear with a H tone after a H-toned root, and wtih a L tone after a L-toned root. For example, the causative suffix appears with a H tone, as [és], in [-téŋg-és-á] ‘sell,’ but with a L tone, as [ès], in [-èrèŋg-ès-à] ‘make read.’

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

END OF EXAM

START OF EXAM
Student ID: 6948
2:20 - 2:40 PM

Question 1

Source: Day 11 Handout, Question 12

Explain why what you're analyzing in the following dataset either is or is not an alternation.

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: it's not an alternation – we don't have multiple *surface* forms of the same morpheme; the different forms are the UR and the SR, and so they are not predictable from phonological context (the SR is derived from the UR by rule)

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

Question 2

Source: Final Exam Dataset

Give a good phonological description of the patterns in the dataset that should be analysed.

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 each morpheme that alternates, there are two allomorphs, one with a front vowel and one with a back vowel. The allomorph with the back vowel occurs after another back vowel of the same height (e.g., [fɯd] in [jɤgɯd-fɯd] 'swallow, present' or [sɤ] in [mikɤv-sɤ] 'search, progressive'), regardless of any intervening consonants. The allomorph with the front vowel occurs elsewhere, including after a front vowel (e.g. [fid] in [sat-fid] 'chew, present' or [se] in [sat-se] 'chew, progressive') and after a back vowel of a different height (e.g. [fid] in [mikɤv-fid] 'search, present' or [se] in [jɤgɯd-se] 'swallow, progressive'). Again, these latter environments are regardless of any intervening consonants.

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

Question 3

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 4

Source: Day 11 Discussion

Explain why the sonority sequencing principle would block the syllabification of [n] and [t] of [n.ta] into one syllable in Ponapean.

INSTRUCTOR NOTES: [n] is higher sonority than [t], and the SSP requires that segments increase in sonority as you get closer to the nucleus and decrease in sonority as you move away; [nte] would involve a dip and then a rise in sonority

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.

[i], [ɪ], [ɛ], [u], [ʊ]

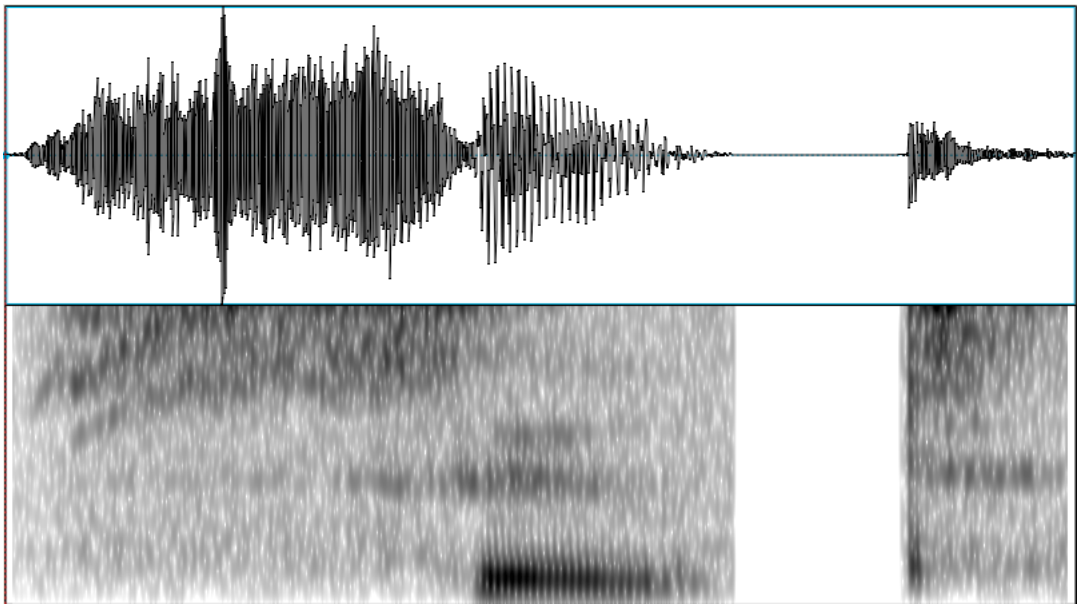
INSTRUCTOR NOTES: [ɛ] should be removed, so that we have the natural class of high vowels; this could be minimally represented with [+syll, +high]

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

Question 6

Source: Day 8 Handout, Question 6

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



INSTRUCTOR NOTES: suit: starts with fricative noise; then some kind of vowel; then a stop with a release burst; fricative is voiceless (no voice bar); fricative likely [s] because high-energy; vowel has low F1 (=high V) but then hard to see F2; stop is also voiceless

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

END OF EXAM

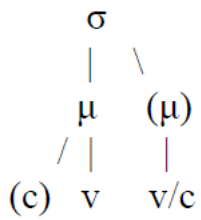
START OF EXAM
Student ID: 2931
2:40 - 3:00 PM

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 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 3

Source: Day 10 Discussion

Explain why phonological features are used instead of phonetic characteristics in analyzing datasets.

INSTRUCTOR NOTES: Phonological features help to capture phonological patterns, i.e., they group sounds together based on whether they do things like triggering a change or undergoing a change. Phonological features are sometimes language-specific. Phonetic characteristics are simply descriptions of the physical properties of the sounds; they are language-universal and independent of the patterns (though it turns out that many phonological patterns are based on phonetic characteristic groupings).

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: 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].

čet-el-a & čit-il-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: does show this – we see both [il] and [el], and they occur after the SAME preceding consonant, so the preceding consonant cannot be responsible

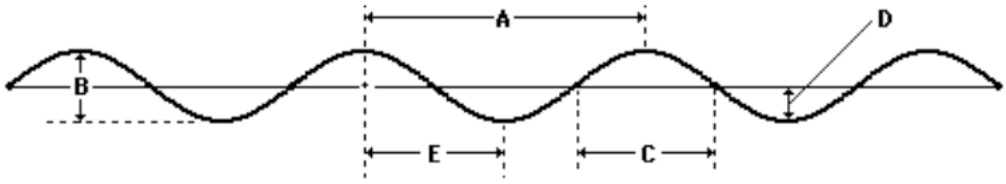
Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 6

Source: Day 8 Handout, Question 1

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

D



INSTRUCTOR NOTES: amplitude

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

END OF EXAM

START OF EXAM
Student ID: 6801
3:00 - 3:20 PM

Question 1

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 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: 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].

čet-el-a & čit-il-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'

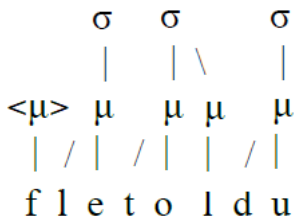
INSTRUCTOR NOTES: does show this – we see both [il] and [el], and they occur after the SAME preceding consonant, so the preceding consonant cannot be responsible

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

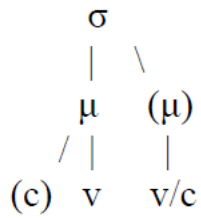
Question 4

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: no – the initial consonant shouldn't be marked extrasyllabic accoridng to the notes provided

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]

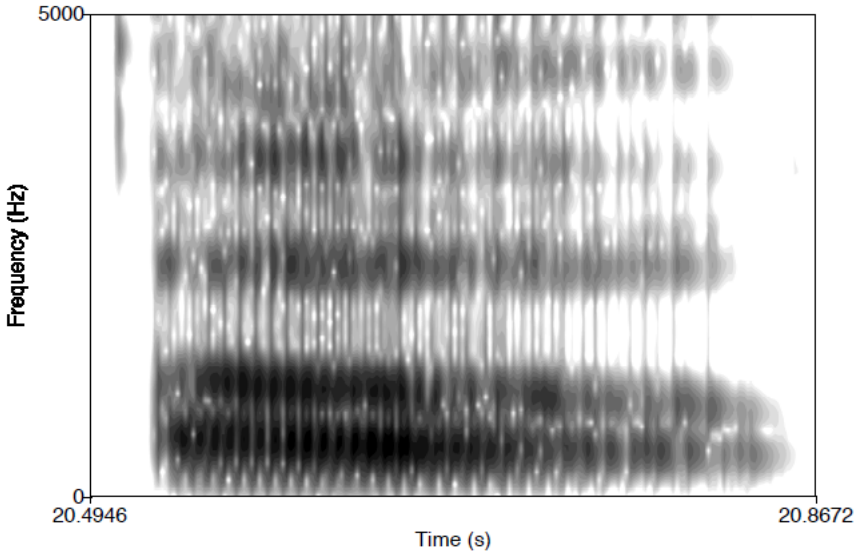
INSTRUCTOR NOTES: matches

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

Question 6

Source: Day 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: oh: just a vowel; clear formants; pretty steady with a slight downward trend of both; F1 is pretty close to F2, which means F2 is pretty low (=back V), and F1 isn't super low (=mid to low vowel)

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

END OF EXAM

START OF EXAM
Student ID: 1743
3:20 - 3:40 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: 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: Quiz 8, Question 6

Explain why this is an incorrect statement.

Nasal consonants are [+ continuant] because they lack a central occlusion in the vocal tract.

INSTRUCTOR NOTES: nasals are [-cont], because air cannot escape through the mouth (there is a central occlusion / blockage)

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/

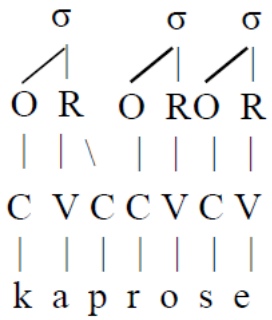
INSTRUCTOR NOTES: L-to-R association applies and links the H tone to the first TBU [a]; last-TBU linking doesn't apply because there are no leftover tones; then last-tone linking does apply, and connects all of the leftover TBUs (in this case, [u] and [e]) to the final tone (in this case, H)

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

Question 5

Source: Day 11 Handout, Question 6

Explain why this structure either is or is not a correct application of the rule-based approach to syllabification, assuming that both the onset rule and the coda rule apply in this language, and the onset rule comes before the coda rule.



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.

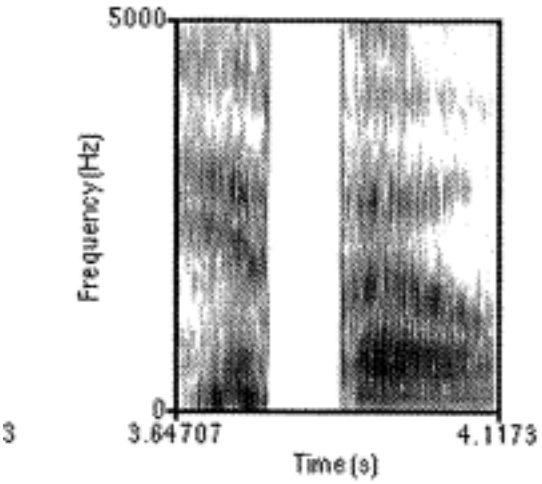
INSTRUCTOR NOTES: no – the [p] should be in the onset because the onset rule precedes the coda rule

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

Question 6

Source: Quiz 6, Question 2

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



INSTRUCTOR NOTES: hippo: stop in middle indicated by silence / white space; vowels on either side; V1 has low F1 and high F2 (= high front V) and V2 has higher F1 and lower F2 (= mid to low backer vowel)

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

END OF EXAM

START OF EXAM
Student ID: 5581
3:40 - 4:00 PM

Question 1

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 2

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].

pat-il-a & tul-il-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 only see [il], so we don't know if [el] can also occur in these environments or not

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

Question 3

Source: Final Exam Dataset

Give a good phonological description of the patterns in the dataset that should be analysed.

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 each morpheme that alternates, there are two allomorphs, one with a front vowel and one with a back vowel. The allomorph with the back vowel occurs after another back vowel of the same height (e.g., [fɯd] in [jɤgɯd-fɯd] 'swallow, present' or [sɤ] in [mikɤv-sɤ] 'search, progressive'), regardless of any intervening consonants. The allomorph with the front vowel occurs elsewhere, including after a front vowel (e.g. [fid] in [sat-fid] 'chew, present' or [se] in [sat-se] 'chew, progressive') and after a back vowel of a different height (e.g. [fid] in [mikɤv-fid] 'search, present' or [se] in [jɤgɯd-se] 'swallow, progressive'). Again, these latter environments are regardless of any intervening consonants.

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

Question 4

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 5

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 the adjacent second and third formants "pinched" together; that is, F3 moves down and F2 moves up if you go from a vowel into this consonant. There is often a clear voice bar, but there's no evidence of formants in the consonant itself. In fact, there's not much energy during the consonant at all.

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

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

Question 6

Source: Day 10 Handout, Question 6 (Day 7 Handout, Question 8)

Explain how you should use phonological features in this rule. Which parts of the rule should include features, and which features should be used?

/ʊ/ → [ɯ] / [unrounded vowel] C_0 _

The following data is from Tamil, a Dravidian language spoken in southern India and Sri Lanka. The vowels [ʊ] and [ɯ] are allophones of the same phoneme in Tamil; [ɯ] is a high back unrounded vowel.

a.	[ʊpːʊ]	'salt'	h.	[ʊmi]	'husk'
b.	[mʊrə̃]	'winnowing fair'	i.	[pʊzɻʊ]	'worm'
c.	[pɑːzɻɯ]	'waste'	j.	[t̪eɾɯ]	'street'
d.	[uːɾʊ]	'village'	k.	[aðɯ]	'it'
e.	[puːʈʊ]	'lock'	l.	[t̪oːlʊ]	'leather'
f.	[t̪oːɭʊ]	'shoulder'	m.	[neːt̪ːɯ]	'yesterday'
g.	[miːn̪ɯ]	'fish'	n.	[nɛɲʤɯ]	'heart'

INSTRUCTOR NOTES: input can be just a segment; output should be [-round], context should be [-round, +syllabic]

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

END OF EXAM

START OF EXAM
Student ID: 2358
4:00 - 4:20 PM

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.

'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'

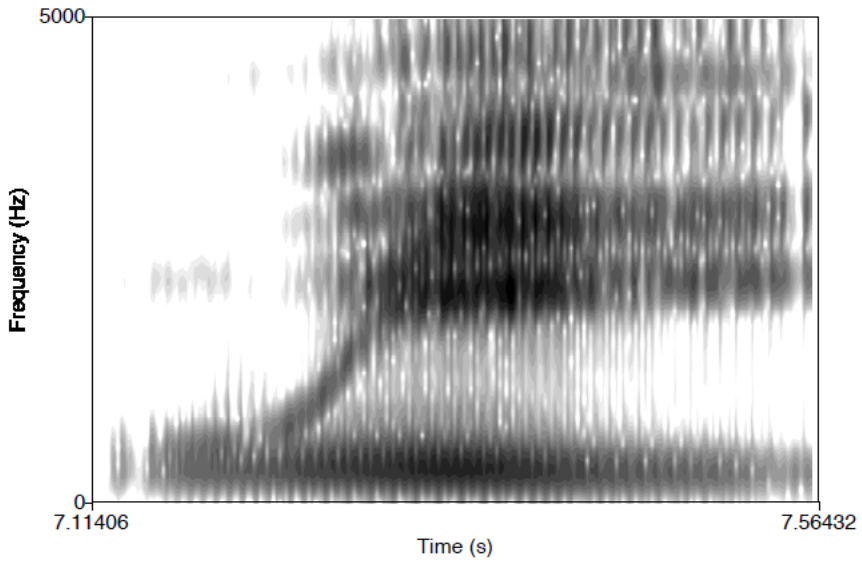
INSTRUCTOR NOTES: For any morpheme that doesn't alternate, its UR should be the same as its SR. For the morphemes that alternate, the back-vowel version occurs in the narrower set of contexts (after a back vowel of the same height), so should be the one that we write a rule for. The front-vowel version 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 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)

Question 5

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 6

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)

END OF EXAM

START OF EXAM
Student ID: 9918
4:20 - 4:40 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 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)

Question 3

Source: Final Exam Dataset

Give a good phonological description of the patterns in the dataset that should be analysed.

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 each morpheme that alternates, there are two allomorphs, one with a front vowel and one with a back vowel. The allomorph with the back vowel occurs after another back vowel of the same height (e.g., [fɯd] in [jɤgɯd-fɯd] 'swallow, present' or [sɤ] in [mikɤv-sɤ] 'search, progressive'), regardless of any intervening consonants. The allomorph with the front vowel occurs elsewhere, including after a front vowel (e.g. [fid] in [sat-fid] 'chew, present' or [se] in [sat-se] 'chew, progressive') and after a back vowel of a different height (e.g. [fid] in [mikɤv-fid] 'search, present' or [se] in [jɤgɯd-se] 'swallow, progressive'). Again, these latter environments are regardless of any intervening consonants.

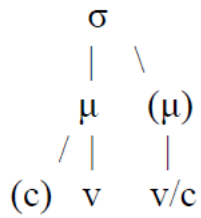
Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 4

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; all syllables allowed by template, and this is what you get going L to R

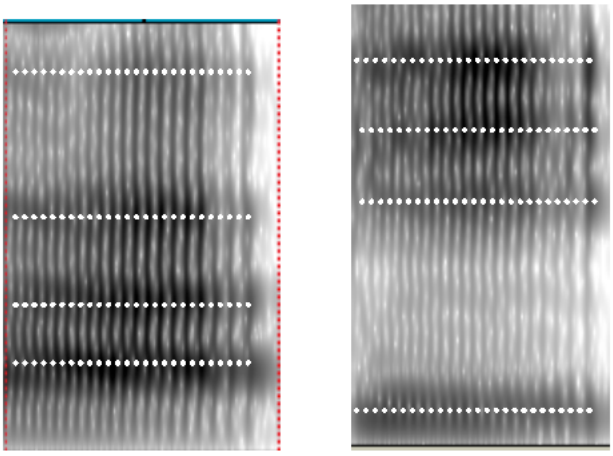
Excellent (3) Good (2.2) Fair (1.7) Poor (0)

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.

We can look at the vertical location of the formants to determine something about the characteristics of individual speech sounds. For example, in the two spectrograms below, we can see that [22]the first formant is higher in the spectrogram for sound 1 than it is for sound 2. Because [23]F1 is directly correlated with vowel height, we know that [24]the vowel pictured in sound 1 is a higher vowel than the one in sound 2. For example, [25]sound 1 might be an [ɑ] while sound 2 might be an [i].



Sound 1 **Sound 2**

INSTRUCTOR NOTES: 22 - true.
23 - false (F1 is inversely correlated with vowel height).
24 - false (the vowel pictured in sound 1 is a lower vowel than the one in sound 2, or, the vowel pictured in sound 2 is a higher vowel than the one in sound 1).
25 - true.

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

Question 6

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)

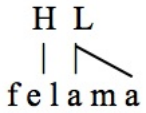
END OF EXAM

START OF EXAM
Student ID: 8951
4:40 - 5:00 PM

Question 1

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.



INSTRUCTOR NOTES: URs don't have pre-linked tones; the association lines are generated by rules (tone-mapping procedures)

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]

[f]

INSTRUCTOR NOTES: matches

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.

'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 4

Source: Day 8 Discussion

Briefly explain source-filter theory.

INSTRUCTOR NOTES: The vocal folds vibrate, setting the air coming from the lungs into motion – this is the "source" sound wave, which is a complex wave, with energy at multiple different frequencies – the fundamental and its harmonics, i.e., its multiples. Then the oral and nasal cavities act as a "filter" to dampen (remove energy from) some of the frequencies of the sound and enhance others (the resonant frequencies). Depending on the shape of the mouth, different frequencies will resonate and so we get different formant values and hence different vowel qualities.

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

Question 5

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]

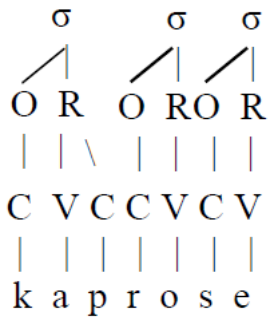
INSTRUCTOR NOTES: the past tense morpheme alternates, so we know we need to analyze the predictable occurrence of [t] vs. [d]

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

Question 6

Source: Day 11 Handout, Question 6

Explain why this structure either is or is not a correct application of the rule-based approach to syllabification, assuming that both the onset rule and the coda rule apply in this language, and the onset rule comes before the coda rule.



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: no – the [p] should be in the onset because the onset rule precedes the coda rule

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

END OF EXAM

START OF EXAM
Student ID: 8350
5:00 - 5:20 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 11 Handout, Question 16

How does syllabification play a role in the analysis of Tibetan numerals?

Standard Tibetan

(1-10)		(11-19)		(multiples of 10)	
a. [ʒig]	'1'	f. [ʒugʒig]	'11'		
b. [ʃi]	'4'	g. [ʒubʃi]	'14'	j. [ʃibʒu]	'40'
c. [ŋa]	'5'	h. [ʒuŋa]	'15'	k. [ŋabʒu]	'50'
d. [gu]	'9'	i. [ʒurgu]	'19'	l. [gubʒu]	'90'
e. [ʒu]	'10'				

INSTRUCTOR NOTES: morphemes that seem to have initial CC clusters (which are visible word-medially, where the CC sequence can be broken up across a syllable boundary) are simplified by deleting the initial consonant when the morpheme occurs word-initially, to avoid complex onsets (perhaps especially because these complex onsets would violate the sonority sequencing principle, which is what makes it hard for students to even imagine that the morphemes have these CC sequences initially!)

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'

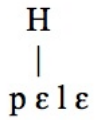
INSTRUCTOR NOTES: For any morpheme that doesn't alternate, its UR should be the same as its SR. For the morphemes that alternate, the back-vowel version occurs in the narrower set of contexts (after a back vowel of the same height), so should be the one that we write a rule for. The front-vowel version 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: 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.



INSTRUCTOR NOTES: URs don't have pre-linked tones; the association lines are generated by rules (tone-mapping procedures)

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

Question 5

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 the adjacent second and third formants "pinched" together; that is, F3 moves down and F2 moves up if you go from a vowel into this consonant. There is often a clear voice bar, but there's no evidence of formants in the consonant itself. In fact, there's not much energy during the consonant at all.

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

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

Question 6

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], [e], [ɛ], [æ], [ɑ], [ɔ], [o], [ʊ], [u], [ʒ], [k], [g], [ŋ], [w]

INSTRUCTOR NOTES: [ʒ] should be removed, so that we have the natural class of dorsal segments; this could be minimally represented with [DORSAL]

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

END OF EXAM

START OF EXAM
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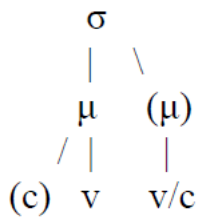
Question 1

Source: Day 11 Handout, Question 5

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

C



INSTRUCTOR NOTES: not allowed

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

Question 2

Source: Day 10 Discussion

Explain why phonological features are used instead of phonetic characteristics in analyzing datasets.

INSTRUCTOR NOTES: Phonological features help to capture phonological patterns, i.e., they group sounds together based on whether they do things like triggering a change or undergoing a change. Phonological features are sometimes language-specific. Phonetic characteristics are simply descriptions of the physical properties of the sounds; they are language-universal and independent of the patterns (though it turns out that many phonological patterns are based on phonetic characteristic groupings).

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 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.

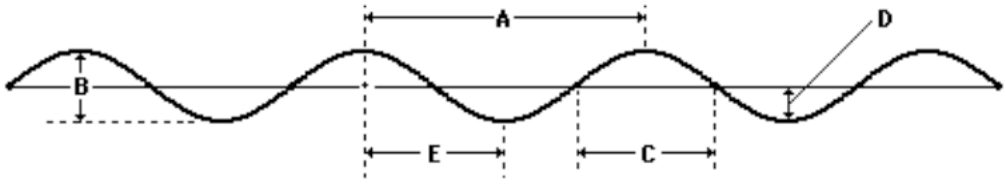
Excellent (3) Good (2.2) Fair (1.7) Poor (0)

Question 5

Source: Day 8 Handout, Question 1

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

E



INSTRUCTOR NOTES: nothing (half wavelength or half period)

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

Question 6

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].

čet-el-a & čit-il-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: does show this – we see both [il] and [el], and they occur after the SAME preceding consonant, so the preceding consonant cannot be responsible

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

END OF EXAM