

Tuesday, 23 June 2020  
ALL EXAMS

START OF EXAM

Student ID: 6745

9:30 - 9:50 AM

## Question 1

Source: Day 9 Handout, Question 1

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

Korean

- a. [mul] ‘water’
- b. [mulkama] ‘place for water’
- c. [mure] ‘at the water’
- d. [mal] ‘horse’
- e. [malkama] ‘place for horse’
- f. [mare] ‘at the horse’
- g. [pul] ‘fire’
- h. [pure] ‘at the fire’

## Question 2

Source: Day 10 Discussion

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

[approximant]

nasals

### Question 3

Source: Final Exam Dataset

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

‘mix’, ‘past’

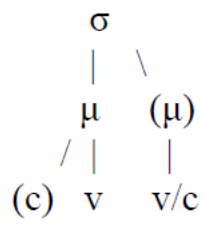
| <i>Present</i> | <i>Past</i> | <i>Future</i> | <i>Progressive</i> | <i>Gloss</i> |
|----------------|-------------|---------------|--------------------|--------------|
| [satfid]       | [satmi]     | [sater]       | [satse]            | ‘chew’       |
| [jʁɡuɔdfuɔ]    | [jʁɡuɔdmu]  | [jʁɡuɔder]    | [jʁɡuɔdse]         | ‘swallow’    |
| [mikʁvfid]     | [mikʁvmi]   | [mikʁvʁ]      | [mikʁvsʁ]          | ‘search’     |
| [lebfid]       | [lebmi]     | [leber]       | [lebse]            | ‘falsify’    |
| [sirfid]       | [sirmi]     | [sirer]       | [sirse]            | ‘mix’        |
| [kʁʔfid]       | [kʁʔmi]     | [kʁʔʁ]        | [kʁʔsʁ]            | ‘toss’       |
| [dimfid]       | [dimmi]     | [dimer]       | [dimse]            | ‘handle’     |
| [pegɛdfid]     | [pegɛdmi]   | [pegɛder]     | [pegɛdse]          | ‘invent’     |
| [zabfid]       | [zabmi]     | [zaber]       | [zabse]            | ‘pretend’    |
| [rekuɫfuɔ]     | [rekuɫmu]   | [rekuɫer]     | [rekuɫse]          | ‘dig’        |

## Question 4

Source: Day 11 Handout, Question 5

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

V



## Question 5

Source: Day 8 Handout, Question 7

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

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

Sound is a particular kind of wave known as <sup>3</sup>a compression wave. <sup>4</sup>When the molecules are really close together, we say they are “rarefied” and when they are really far apart, we say they are “compressed.”

## Question 6

Source: Day 12 Handout, Question 7

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

### Southern Manyika dialect of Shona

Set 1:

- a. [tɛŋg-á]                    ‘buy’
- b. [tɛŋg-és-á]                ‘sell’
- c. [tɛŋg-és-ér-á]            ‘sell to’
- d. [tɛŋg-és-ér-án-á]        ‘sell to each other’

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

Set 2:

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



END OF EXAM

START OF EXAM

Student ID: 6427

9:50 - 10:10 AM

## Question 1

Source: Day 9 Handout, Question 1

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

Korean

- a. [mul] ‘water’
- b. [mulkama] ‘place for water’
- c. [mure] ‘at the water’
- d. [mal] ‘horse’
- e. [malkama] ‘place for horse’
- f. [mare] ‘at the horse’
- g. [pul] ‘fire’
- h. [pure] ‘at the fire’

## Question 2

Source: Final Exam Dataset

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

| <i>Present</i> | <i>Past</i> | <i>Future</i> | <i>Progressive</i> | <i>Gloss</i> |
|----------------|-------------|---------------|--------------------|--------------|
| [satfid]       | [satmi]     | [sater]       | [satse]            | ‘chew’       |
| [jʁɡuɔdfuɔ]    | [jʁɡuɔdmu]  | [jʁɡuɔder]    | [jʁɡuɔdse]         | ‘swallow’    |
| [mikʁvfid]     | [mikʁvmi]   | [mikʁvʁ]      | [mikʁvsʁ]          | ‘search’     |
| [lebfid]       | [lebmi]     | [leber]       | [lebse]            | ‘falsify’    |
| [sirfid]       | [sirmi]     | [sirer]       | [sirse]            | ‘mix’        |
| [kʁʔfid]       | [kʁʔmi]     | [kʁʔʁ]        | [kʁʔsʁ]            | ‘toss’       |
| [dimfid]       | [dimmi]     | [dimer]       | [dimse]            | ‘handle’     |
| [pegedfid]     | [pegedmi]   | [pegeder]     | [pegedse]          | ‘invent’     |
| [zabfid]       | [zabmi]     | [zaber]       | [zabse]            | ‘pretend’    |
| [rekuɫfuɔ]     | [rekuɫmu]   | [rekuɫer]     | [rekuɫse]          | ‘dig’        |

## Question 3

Source: Day 11 Handout, Question 8

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

### Peng's Rule-Based Approach:

#### (17) Rule-based approach

*These two apply simultaneously and are universal.*

- a. Project a  $\sigma$  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,  $\sigma$ .

*Note: This time, it's about C slots.*

*These two apply sequentially (in either order) and are language-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.*

## Question 4

Source: Day 10 Discussion

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

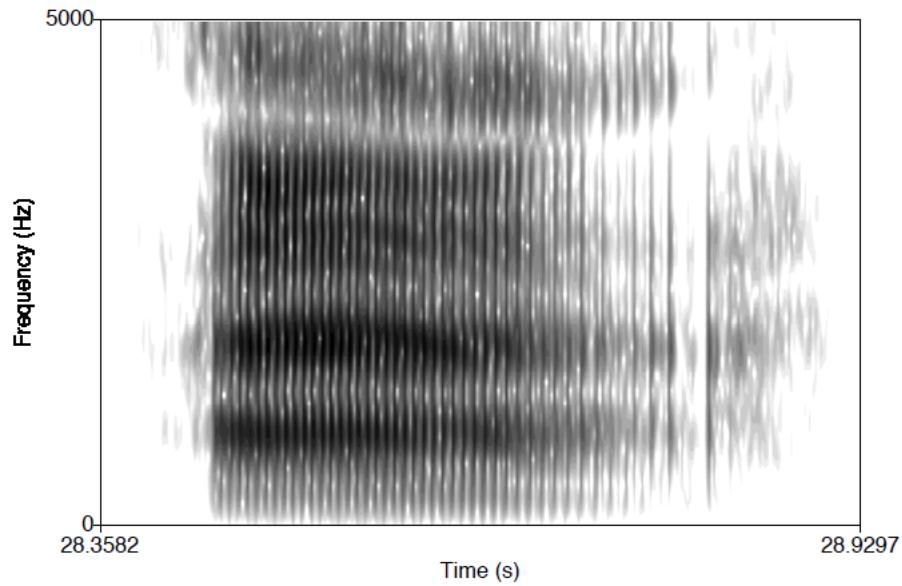
[LABIAL]

interdentals

## 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.



## Question 6

Source: Quiz 10, Question 3

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

H L L

f e l a m a



END OF EXAM

START OF EXAM

Student ID: 3773

10:10 - 10:30 AM

## Question 1

Source: Day 11 Handout, Question 12

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

### Yawelmani

| <b>UR</b>                    | <b>SR</b>                 | <b>Gloss</b>           |
|------------------------------|---------------------------|------------------------|
| a. /pok'-hin/                | [pok'hin]                 | 'found'                |
| b. /xat <sup>h</sup> -hin/   | [xat <sup>h</sup> hin]    | 'ate'                  |
| c. /lihm-hin/                | [lihimhin]                | 'ran'                  |
| d. /hogn-hin/                | [hoginhin]                | 'floated'              |
| e. /ʔugn-hin/                | [ʔuginhin]                | 'drank'                |
| f. /p <sup>h</sup> aʔt'-hin/ | [p <sup>h</sup> 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'               |

## Question 2

Source: Final Exam Dataset

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

‘dig’, ‘future’

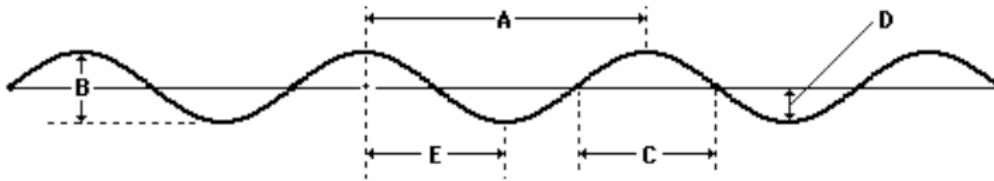
| <i>Present</i> | <i>Past</i> | <i>Future</i> | <i>Progressive</i> | <i>Gloss</i> |
|----------------|-------------|---------------|--------------------|--------------|
| [satfid]       | [satmi]     | [sater]       | [satse]            | ‘chew’       |
| [jʁɡuɔdfuɔ]    | [jʁɡuɔdmu]  | [jʁɡuɔder]    | [jʁɡuɔdse]         | ‘swallow’    |
| [mikʁvfid]     | [mikʁvmi]   | [mikʁvʁ]      | [mikʁvsʁ]          | ‘search’     |
| [lebfid]       | [lebmi]     | [leber]       | [lebse]            | ‘falsify’    |
| [sirfid]       | [sirmi]     | [sirer]       | [sirse]            | ‘mix’        |
| [kʁʔfid]       | [kʁʔmi]     | [kʁʔʁ]        | [kʁʔsʁ]            | ‘toss’       |
| [dimfid]       | [dimmi]     | [dimer]       | [dimse]            | ‘handle’     |
| [pegɛdfid]     | [pegɛdmi]   | [pegɛder]     | [pegɛdse]          | ‘invent’     |
| [zabfid]       | [zabmi]     | [zaber]       | [zabse]            | ‘pretend’    |
| [rekuɫfuɔ]     | [rekuɫmu]   | [rekuɫer]     | [rekuɫse]          | ‘dig’        |

### Question 3

Source: Day 8 Handout, Question 1

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

A



## Question 4

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

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

$/n/ \rightarrow \emptyset / [m] \_ \#$

### English

| <i>Non-suffixed form</i> | <i>Gloss</i> | <i>Suffixed form</i>     | <i>Gloss</i>   |
|--------------------------|--------------|--------------------------|----------------|
| [dæm]                    | 'damn'       | [dæmn-əbəl]              | 'damnable'     |
| [kəndæm]                 | 'condemn'    | [kəndæmn-eɪʃən]          | 'condemnation' |
| [hɪm]                    | 'hymn'       | [hɪmn-əl]                | 'hymnal'       |
| [ɔrəm]                   | 'autumn'     | [ɔt <sup>h</sup> ʌmn-əl] | 'autumnal'     |
| [sələm]                  | 'solemn'     | [sələmn-ɪti]             | 'solemnity'    |

## Question 5

Source: Day 9 Handout, Question 4

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

Japanese.

( - marks a **morpheme boundary** )

| ‘to put out’ |                      | ‘to lend’   |                      |
|--------------|----------------------|-------------|----------------------|
| <i>Form</i>  | <i>Pronunciation</i> | <i>Form</i> | <i>Pronunciation</i> |
| present      | [das-ɯ]              | present     | [kas-ɯ]              |
| provisional  | [das-eba]            | negative    | [kas-anai]           |
| causative    | [das-arerɯ]          | volitional  | [kaɸ-itai]           |
| tentative    | [das-oo]             | past        | [kaɸ-ita]            |
| past         | [daɸ-ita]            | inchoative  | [kas-oo]             |
| participial  | [daɸ-ite]            |             |                      |
| conditional  | [daɸ-itara]          |             |                      |
| ‘to erase’   |                      |             |                      |
| <i>Form</i>  | <i>Pronunciation</i> |             |                      |
| present      | [kes-ɯ]              |             |                      |
| negative     | [kes-anai]           |             |                      |
| past         | [keɸ-ita]            |             |                      |
| conditional  | [keɸ-itara]          |             |                      |
| potential    | [kes-erɯ]            |             |                      |

## Question 6

Source: Day 12 Handout, Question 6

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

### Kukuya

| One-μ<br>Stems:                          | Gloss:                   | Two-μ<br>Stems: | Gloss:              | Three-μ<br>Stems:       | Gloss:               |
|--|--------------------------|-----------------|---------------------|-------------------------|----------------------|
| [kì-bà]                                  | ‘grasshopper-<br>killer’ | [kì-bàlà]       | ‘to build’          | [kì-bàlàgà]             | ‘to change<br>route’ |
| [mà-bá]                                  | ‘oil palms’              | [mà-bágá]       | ‘to show<br>knives’ | [lì-bálágá]             | ‘fence’              |
| [mò-sǎ]                                  | ‘weaving<br>knot’        | [mò-sà mí]      | ‘conversation’      | [m <sup>w</sup> -àrègí] | ‘younger<br>brother’ |
| [kì-kâ]                                  | ‘to pick’                | [kì-kàrà]       | ‘paralytic’         | [kì-kàrágà]*            | ‘to be<br>entangled’ |
| [ndé-bvì]<br>(that’s ∨ on<br>the last V) | ‘he falls’               | [ndé-pǎli]*     | ‘he goes out’       | [ndé-kàlági]            | ‘he turns<br>around’ |



END OF EXAM

START OF EXAM

Student ID: 9303

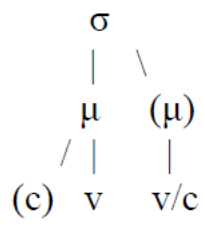
10:30 - 10:50 AM

## Question 1

Source: Day 11 Handout, Question 5

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

V



## Question 2

Source: Final Exam Dataset

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

‘dig’, ‘future’

| <i>Present</i> | <i>Past</i> | <i>Future</i> | <i>Progressive</i> | <i>Gloss</i> |
|----------------|-------------|---------------|--------------------|--------------|
| [satfid]       | [satmi]     | [sater]       | [satse]            | ‘chew’       |
| [jʁɡuɔdfuɔ]    | [jʁɡuɔdmu]  | [jʁɡuɔder]    | [jʁɡuɔdse]         | ‘swallow’    |
| [mikʁvfid]     | [mikʁvmi]   | [mikʁvʁ]      | [mikʁvsʁ]          | ‘search’     |
| [lebfid]       | [lebmi]     | [leber]       | [lebse]            | ‘falsify’    |
| [sirfid]       | [sirmi]     | [sirer]       | [sirse]            | ‘mix’        |
| [kʁʔfid]       | [kʁʔmi]     | [kʁʔʁ]        | [kʁʔsʁ]            | ‘toss’       |
| [dimfid]       | [dimmi]     | [dimer]       | [dimse]            | ‘handle’     |
| [pegɛdfid]     | [pegɛdmi]   | [pegɛder]     | [pegɛdse]          | ‘invent’     |
| [zabfid]       | [zabmi]     | [zaber]       | [zabse]            | ‘pretend’    |
| [rekuɫfuɔ]     | [rekuɫmu]   | [rekuɫer]     | [rekuɫse]          | ‘dig’        |

### Question 3

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

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

/s/ → [ɕ] / \_ [i]

/z/ → [dʒ] / \_ [i]

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

|    |           |             |    |          |               |
|----|-----------|-------------|----|----------|---------------|
| a. | [ɕiawase] | 'happiness' | g. | [sate]   | 'well'        |
| b. | [suɾɸai]  | 'sour'      | h. | [oɕisan] | 'grandfather' |
| c. | [soɲkei]  | 'respect'   | i. | [zuɾɸi]  | 'forward'     |
| d. | [onaɕi]   | 'same'      | j. | [sensei] | 'teacher'     |
| e. | [zaɕi]    | 'magazine'  | k. | [zenzen] | 'absolutely'  |
| f. | [ɕit:o]   | 'straight'  | g. | [zo:]    | 'elephant'    |

## Question 4

Source: Day 9 Handout, Question 4

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

Japanese.

( - marks a **morpheme boundary** )

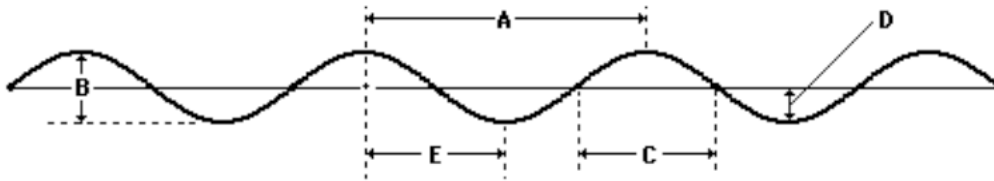
| ‘to put out’ |                      | ‘to lend’   |                      |
|--------------|----------------------|-------------|----------------------|
| <i>Form</i>  | <i>Pronunciation</i> | <i>Form</i> | <i>Pronunciation</i> |
| present      | [das-ʉ]              | present     | [kas-ʉ]              |
| provisional  | [das-eba]            | negative    | [kas-anai]           |
| causative    | [das-arerʉ]          | volitional  | [kaʃ-itai]           |
| tentative    | [das-oo]             | past        | [kaʃ-ita]            |
| past         | [daʃ-ita]            | inchoative  | [kas-oo]             |
| participial  | [daʃ-ite]            |             |                      |
| conditional  | [daʃ-itara]          |             |                      |
| ‘to erase’   |                      |             |                      |
| <i>Form</i>  | <i>Pronunciation</i> |             |                      |
| present      | [kes-ʉ]              |             |                      |
| negative     | [kes-anai]           |             |                      |
| past         | [keʃ-ita]            |             |                      |
| conditional  | [keʃ-itara]          |             |                      |
| potential    | [kes-erʉ]            |             |                      |

## Question 5

Source: Day 8 Handout, Question 1

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

B



## 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/



END OF EXAM

START OF EXAM

Student ID: 5824

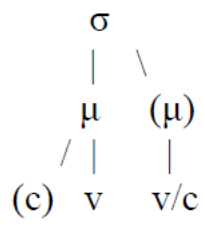
10:50 - 11:10 AM

## Question 1

Source: Day 11 Handout, Question 5

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

CVVC



## Question 2

Source: Final Exam Dataset

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

| <i>Present</i> | <i>Past</i> | <i>Future</i> | <i>Progressive</i> | <i>Gloss</i> |
|----------------|-------------|---------------|--------------------|--------------|
| [satfid]       | [satmi]     | [sater]       | [satse]            | ‘chew’       |
| [jɤgudfud]     | [jɤgudmu]   | [jɤguder]     | [jɤgudse]          | ‘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’    |
| [rekuɫfud]     | [rekuɫmu]   | [rekuɫer]     | [rekuɫse]          | ‘dig’        |

### Question 3

Source: Day 10 Discussion

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

[voice]

glottalized obstruents

## 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.
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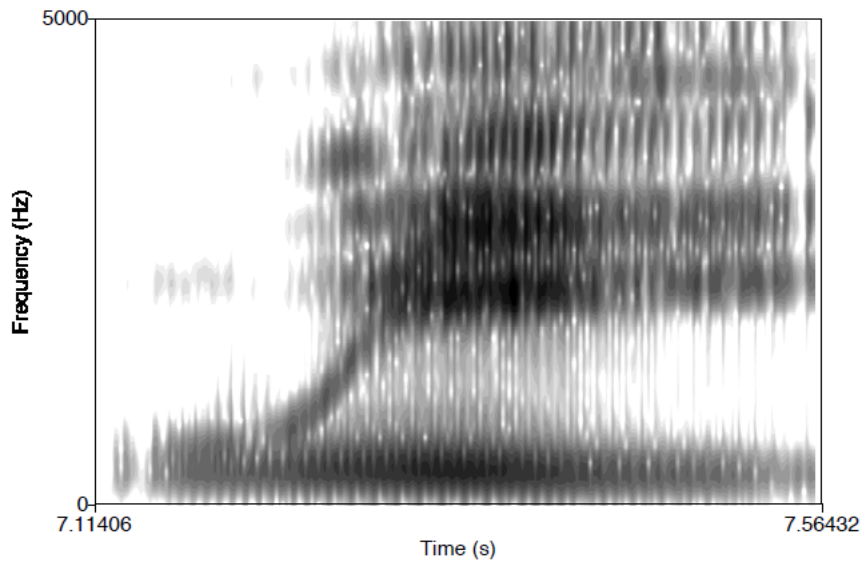
H

/apute/

## 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.



## 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 [wakt]   | g. leafed [lift]   |
| b. jogged [dʒaɡd]  | h. rolled [ˌɹoʊld] |
| c. named [neɪmd]   | i. sinned [sɪnd]   |
| d. wrapped [ˌɹæpt] | j. jazzed [dʒæzd]  |
| e. hissed [hɪst]   | k. washed [wɑʃt]   |
| f. mobbed [mɒbd]   | l. judged [dʒʌdʒd] |



END OF EXAM

START OF EXAM

Student ID: 5540

11:10 - 11:30 AM

## Question 1

Source: Day 11 Handout, Question 13

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

### Attic Greek

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

## Question 2

Source: Final Exam Dataset

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

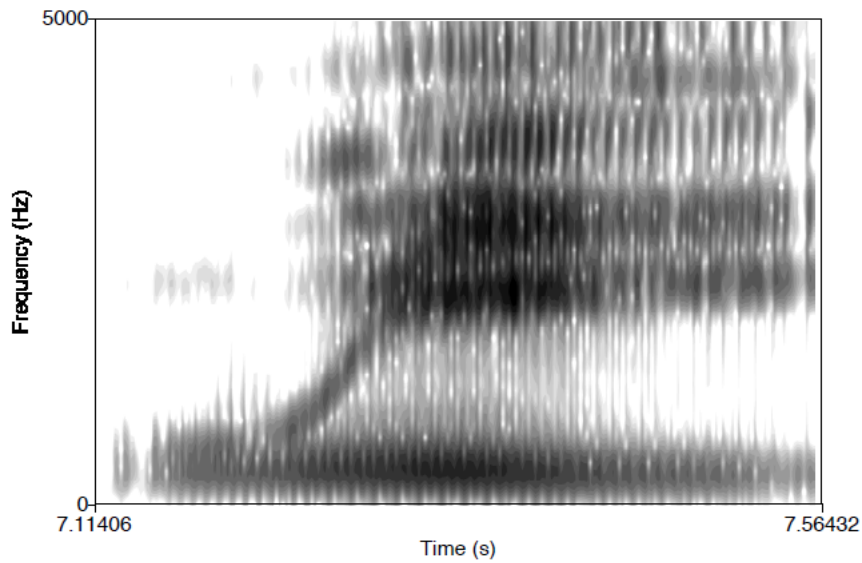
‘mix’, ‘past’

| <i>Present</i> | <i>Past</i> | <i>Future</i> | <i>Progressive</i> | <i>Gloss</i> |
|----------------|-------------|---------------|--------------------|--------------|
| [satfid]       | [satmi]     | [sater]       | [satse]            | ‘chew’       |
| [jʁɡuɔdfuɔ]    | [jʁɡuɔdmu]  | [jʁɡuɔder]    | [jʁɡuɔdse]         | ‘swallow’    |
| [mikʁvfid]     | [mikʁvmi]   | [mikʁvʁ]      | [mikʁvsʁ]          | ‘search’     |
| [lebfid]       | [lebmi]     | [leber]       | [lebse]            | ‘falsify’    |
| [sirfid]       | [sirmi]     | [sirer]       | [sirse]            | ‘mix’        |
| [kʁʔfid]       | [kʁʔmi]     | [kʁʔʁ]        | [kʁʔsʁ]            | ‘toss’       |
| [dimfid]       | [dimmi]     | [dimer]       | [dimse]            | ‘handle’     |
| [pegɛdfid]     | [pegɛdmi]   | [pegɛder]     | [pegɛdse]          | ‘invent’     |
| [zabfid]       | [zabmi]     | [zaber]       | [zabse]            | ‘pretend’    |
| [rekuɫfuɔ]     | [rekuɫmu]   | [rekuɫer]     | [rekuɫse]          | ‘dig’        |

### 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.



## Question 4

Source: Day 12 Handout, Question 6

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

### Kukuya

| One-μ<br>Stems:                       | Gloss:               | Two-μ<br>Stems: | Gloss:           | Three-μ<br>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’           |
| [mò-sǎ]                               | ‘weaving knot’       | [mò-sámí]       | ‘conversation’   | [m <sup>w</sup> -àrègí] | ‘younger brother’ |
| [kì-kâ]                               | ‘to pick’            | [kì-kàrà]       | ‘paralytic’      | [kì-kàrágà]*            | ‘to be entangled’ |
| [ndé-bvì]<br>(that’s ∨ on the last V) | ‘he falls’           | [ndé-pǎli]*     | ‘he goes out’    | [ndé-kàlági]            | ‘he turns around’ |

## Question 5

Source: Quiz 8, Question 3

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

[ + consonantal], [ + sonorant]

[m]

## 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 [wakt]   | g. leafed [lift]   |
| b. jogged [dʒaɡd]  | h. rolled [ˌɹoʊld] |
| c. named [neɪmd]   | i. sinned [sɪnd]   |
| d. wrapped [ˌɹæpt] | j. jazzed [dʒæzd]  |
| e. hissed [hɪst]   | k. washed [wɑʃt]   |
| f. mobbed [mɒbd]   | l. judged [dʒʌdʒd] |



END OF EXAM

START OF EXAM

Student ID: 1887

11:30 - 11:50 AM

## Question 1

Source: Day 9 Handout, Question 2

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

### Osage

- |    |          |           |    |             |                |
|----|----------|-----------|----|-------------|----------------|
| a. | [dábri]  | ‘three’   | f. | [áǎikhã 3ã] | ‘he lay down’  |
| b. | [datʃpé] | ‘to eat’  | g. | [tʃʔéǎe]    | ‘he killed it’ |
| c. | [dakʔé]  | ‘to dig’  | h. | [ǎéze]      | ‘tongue’       |
| d. | [dáli]   | ‘good’    | i. | [ǎie]       | ‘you’          |
| e. | [daʃtú]  | ‘to bite’ | j. | [ǎíʃki]     | ‘to wash’      |

## Question 2

Source: Final Exam Dataset

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

‘invent’, ‘progressive’

| <i>Present</i> | <i>Past</i> | <i>Future</i> | <i>Progressive</i> | <i>Gloss</i> |
|----------------|-------------|---------------|--------------------|--------------|
| [satfid]       | [satmi]     | [sater]       | [satse]            | ‘chew’       |
| [jʁɡuɔdfuɔ]    | [jʁɡuɔdmu]  | [jʁɡuɔder]    | [jʁɡuɔdse]         | ‘swallow’    |
| [mikʁvfid]     | [mikʁvmi]   | [mikʁvʁ]      | [mikʁvsʁ]          | ‘search’     |
| [lebfid]       | [lebmi]     | [leber]       | [lebse]            | ‘falsify’    |
| [sirfid]       | [sirmi]     | [sirer]       | [sirse]            | ‘mix’        |
| [kʁʔfid]       | [kʁʔmi]     | [kʁʔʁ]        | [kʁʔsʁ]            | ‘toss’       |
| [dimfid]       | [dimmi]     | [dimer]       | [dimse]            | ‘handle’     |
| [pegɛdfid]     | [pegɛdmi]   | [pegɛder]     | [pegɛdse]          | ‘invent’     |
| [zabfid]       | [zabmi]     | [zaber]       | [zabse]            | ‘pretend’    |
| [rekuɫfuɔ]     | [rekuɫmu]   | [rekuɫer]     | [rekuɫse]          | ‘dig’        |

### Question 3

Source: Day 8 Handout, Question 7

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

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

<sup>20</sup>On a spectrogram, the dark bars are called formants. <sup>21</sup>The formants correspond to the amplitude peaks on a spectrum.

## Question 4

Source: Quiz 10, Question 1

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

H H

p ε l ε

## Question 5

Source: Homework 5, Question 1

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

[v], [z], [ʃ], [ʒ], [ð]

## Question 6

Source: Quiz 9, Question 12

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



END OF EXAM

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

## Question 1

Source: Day 9 Handout, Question 1

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

Korean

- a. [mul] ‘water’
- b. [mulkama] ‘place for water’
- c. [mure] ‘at the water’
- d. [mal] ‘horse’
- e. [malkama] ‘place for horse’
- f. [mare] ‘at the horse’
- g. [pul] ‘fire’
- h. [pure] ‘at the fire’

## Question 2

Source: Day 8 Handout, Question 4

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

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

### Question 3

Source: Final Exam Dataset

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

| <i>Present</i> | <i>Past</i> | <i>Future</i> | <i>Progressive</i> | <i>Gloss</i> |
|----------------|-------------|---------------|--------------------|--------------|
| [satfid]       | [satmi]     | [sater]       | [satse]            | ‘chew’       |
| [jʁɡuɔdfuɔ]    | [jʁɡuɔdmu]  | [jʁɡuɔder]    | [jʁɡuɔdse]         | ‘swallow’    |
| [mikʁvfid]     | [mikʁvmi]   | [mikʁvʁ]      | [mikʁvsʁ]          | ‘search’     |
| [lebfid]       | [lebmi]     | [leber]       | [lebse]            | ‘falsify’    |
| [sirfid]       | [sirmi]     | [sirer]       | [sirse]            | ‘mix’        |
| [kʁʔfid]       | [kʁʔmi]     | [kʁʔʁ]        | [kʁʔsʁ]            | ‘toss’       |
| [dimfid]       | [dimmi]     | [dimer]       | [dimse]            | ‘handle’     |
| [pegedfid]     | [pegedmi]   | [pegeder]     | [pegedse]          | ‘invent’     |
| [zabfid]       | [zabmi]     | [zaber]       | [zabse]            | ‘pretend’    |
| [rekuɫfuɔ]     | [rekuɫmu]   | [rekuɫer]     | [rekuɫse]          | ‘dig’        |

## Question 4

Source: Homework 5, Question 1

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

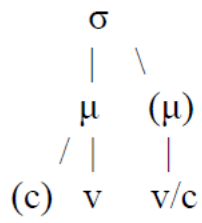
[i], [ɪ], [ɛ], [u], [ʊ]

## Question 5

Source: Day 11 Handout, Question 5

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

VCC



## Question 6

Source: Day 12 Handout, Question 7

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

### Southern Manyika dialect of Shona

Set 1:

- a. [tɛŋg-á]                      ‘buy’
- b. [tɛŋg-és-á]                ‘sell’
- c. [tɛŋg-és-ér-á]            ‘sell to’
- d. [tɛŋg-és-ér-án-á]        ‘sell to each other’

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

Set 2:

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



END OF EXAM

START OF EXAM

Student ID: 1794

12:10 - 12:30 PM

## Question 1

Source: Day 11 Handout, Question 12

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

### Yawelmani

| <b>UR</b>                    | <b>SR</b>                 | <b>Gloss</b>           |
|------------------------------|---------------------------|------------------------|
| a. /pok'-hin/                | [pok'hin]                 | 'found'                |
| b. /xat <sup>h</sup> -hin/   | [xat <sup>h</sup> hin]    | 'ate'                  |
| c. /lihm-hin/                | [lihimhin]                | 'ran'                  |
| d. /hogn-hin/                | [hoginhin]                | 'floated'              |
| e. /ʔugn-hin/                | [ʔuginhin]                | 'drank'                |
| f. /p <sup>h</sup> aʔt'-hin/ | [p <sup>h</sup> 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'               |

## Question 2

Source: Day 10 Discussion

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

[strident]

glides

### Question 3

Source: Final Exam Dataset

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

‘mix’, ‘past’

| <i>Present</i> | <i>Past</i> | <i>Future</i> | <i>Progressive</i> | <i>Gloss</i> |
|----------------|-------------|---------------|--------------------|--------------|
| [satfid]       | [satmi]     | [sater]       | [satse]            | ‘chew’       |
| [jʁɡuɔdfuɔ]    | [jʁɡuɔdmu]  | [jʁɡuɔder]    | [jʁɡuɔdse]         | ‘swallow’    |
| [mikʁvfid]     | [mikʁvmi]   | [mikʁvʁ]      | [mikʁvsʁ]          | ‘search’     |
| [lebfid]       | [lebmi]     | [leber]       | [lebse]            | ‘falsify’    |
| [sirfid]       | [sirmi]     | [sirer]       | [sirse]            | ‘mix’        |
| [kʁʔfid]       | [kʁʔmi]     | [kʁʔʁ]        | [kʁʔsʁ]            | ‘toss’       |
| [dimfid]       | [dimmi]     | [dimer]       | [dimse]            | ‘handle’     |
| [pegɛdfid]     | [pegɛdmi]   | [pegɛder]     | [pegɛdse]          | ‘invent’     |
| [zabfid]       | [zabmi]     | [zaber]       | [zabse]            | ‘pretend’    |
| [rekuɫfuɔ]     | [rekuɫmu]   | [rekuɫer]     | [rekuɫse]          | ‘dig’        |

## 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/

## Question 5

Source: Day 9 Handout, Question 5

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

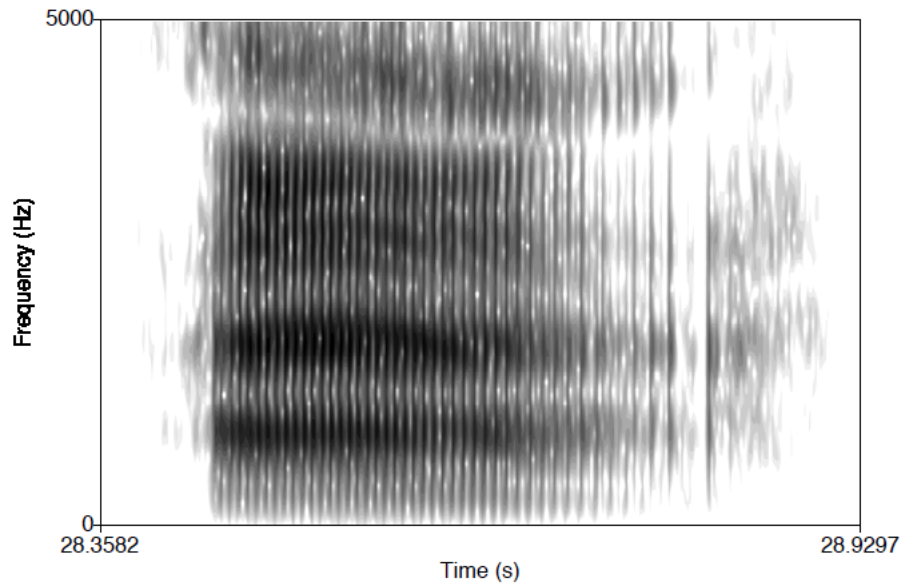
### English

|           |          |               |               |
|-----------|----------|---------------|---------------|
| a. [tæk]  | ‘tack’   | j. [hɪrə]     | ‘hitter’      |
| b. [tru]  | ‘true’   | k. [laɪtɪŋ]   | ‘lighting’    |
| c. [taɪm] | ‘time’   | l. [bærə]     | ‘batter’      |
| d. [tiɹ]  | ‘tear’   | m. [mɪrə]     | ‘meter’       |
| e. [bæt]  | ‘bat’    | n. [laɪrə]    | ‘lighter’     |
| f. [weɪt] | ‘wait’   | o. [bærl]     | ‘battle’      |
| g. [hɪt]  | ‘hit’    | p. [kærəpɪlə] | ‘caterpillar’ |
| h. [laɪt] | ‘light’  | q. [weɪtɪŋ]   | ‘waiting’     |
| i. [bɒt]  | ‘bought’ |               |               |

## 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.





END OF EXAM

START OF EXAM

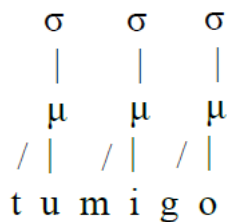
Student ID: 4656

12:30 - 12:50 PM

## Question 1

Source: Day 11 Handout, Question 10

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



### Peng's Templatic Approach:

#### (30) Moraification

- a. Project a mora from each vowel.
- b. Associate a consonant to the immediate left of a mora to that mora.
- c. Project a mora from any remaining consonant.

*Note: This last step is language-specific.*

#### (34) Extrasyllabicity

Mark the last mora dominating a consonant as extrasyllabic.

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

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

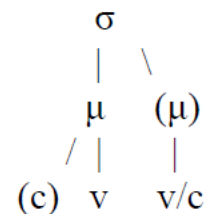
#### (35) Syllabification

*Note: This proceeds either left-to-right or right-to-left, depending on the language!*

- a. Project a syllable from [the first available] mora.
- b. Associate the moraic materials to the syllable.

#### (36) Conditions on association to a template

- a. Template Satisfaction: Satisfaction of templatic constraints is obligatory and is determined by the principles of prosody, both universal and language-specific.
- b. Maximization of Association: Associate as many phonological elements as possible.



## Question 2

Source: Day 10 Handout, Question 5

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

Vowel laxing: /i/ → [ɪ] / {[ɛ], [ɔ]} C<sub>0</sub>\_\_

### Question 3

Source: Final Exam Dataset

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

| <i>Present</i> | <i>Past</i> | <i>Future</i> | <i>Progressive</i> | <i>Gloss</i> |
|----------------|-------------|---------------|--------------------|--------------|
| [satfid]       | [satmi]     | [sater]       | [satse]            | ‘chew’       |
| [jʁɡuɔdfuɔ]    | [jʁɡuɔdmu]  | [jʁɡuɔder]    | [jʁɡuɔdse]         | ‘swallow’    |
| [mikʁvfid]     | [mikʁvmi]   | [mikʁvʁ]      | [mikʁvsʁ]          | ‘search’     |
| [lebfid]       | [lebmi]     | [leber]       | [lebse]            | ‘falsify’    |
| [sirfid]       | [sirmi]     | [sirer]       | [sirse]            | ‘mix’        |
| [kʁʔfid]       | [kʁʔmi]     | [kʁʔʁ]        | [kʁʔsʁ]            | ‘toss’       |
| [dimfid]       | [dimmi]     | [dimer]       | [dimse]            | ‘handle’     |
| [pegɛdfid]     | [pegɛdmi]   | [pegɛder]     | [pegɛdse]          | ‘invent’     |
| [zabfid]       | [zabmi]     | [zaber]       | [zabse]            | ‘pretend’    |
| [rekuɫfuɔ]     | [rekuɫmu]   | [rekuɫer]     | [rekuɫse]          | ‘dig’        |

## Question 4

Source: Quiz 7, Question 8

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

tul-il-a & soŋk-el-a

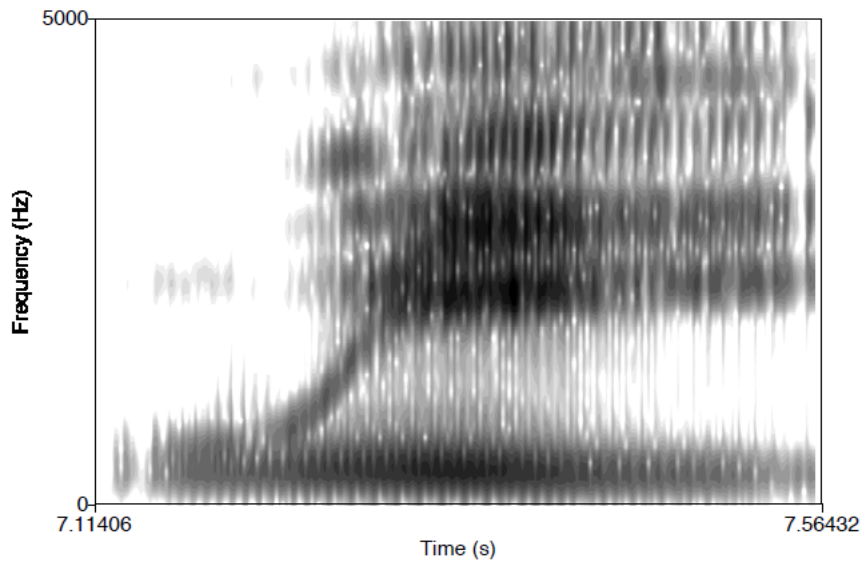
(6) data from Lamba

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

## 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.



## Question 6

Source: Day 12 Handout, Question 5

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

Peng's Tone-Mapping Procedure for Mende:

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

L H

/apute/



END OF EXAM

START OF EXAM

Student ID: 8079

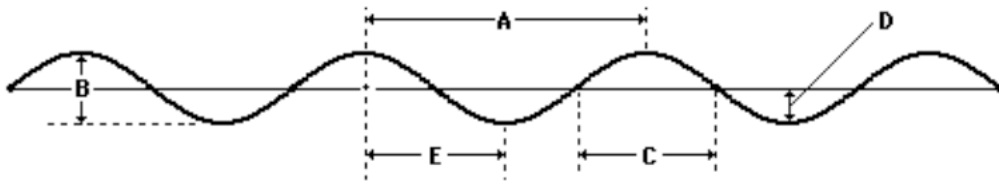
12:50 - 1:10 PM

## Question 1

Source: Day 8 Handout, Question 1

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

C



## Question 2

Source: Quiz 8, Question 3

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

[-consonantal], [-sonorant]

[u]

### Question 3

Source: Final Exam Dataset

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

| <i>Present</i> | <i>Past</i> | <i>Future</i> | <i>Progressive</i> | <i>Gloss</i> |
|----------------|-------------|---------------|--------------------|--------------|
| [satfid]       | [satmi]     | [sater]       | [satse]            | ‘chew’       |
| [jʁɡuɔdfuɔ]    | [jʁɡuɔdmu]  | [jʁɡuɔder]    | [jʁɡuɔdse]         | ‘swallow’    |
| [mikʁvfid]     | [mikʁvmi]   | [mikʁvʁ]      | [mikʁvsʁ]          | ‘search’     |
| [lebfid]       | [lebmi]     | [leber]       | [lebse]            | ‘falsify’    |
| [sirfid]       | [sirmi]     | [sirer]       | [sirse]            | ‘mix’        |
| [kʁʔfid]       | [kʁʔmi]     | [kʁʔʁ]        | [kʁʔsʁ]            | ‘toss’       |
| [dimfid]       | [dimmi]     | [dimer]       | [dimse]            | ‘handle’     |
| [pegɛdfid]     | [pegɛdmi]   | [pegɛder]     | [pegɛdse]          | ‘invent’     |
| [zabfid]       | [zabmi]     | [zaber]       | [zabse]            | ‘pretend’    |
| [rekuɫfuɔ]     | [rekuɫmu]   | [rekuɫer]     | [rekuɫse]          | ‘dig’        |

## Question 4

Source: Day 9 Handout, Question 3

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

### English

- |                    |                    |
|--------------------|--------------------|
| a. walked [wakt]   | g. leafed [lift]   |
| b. jogged [dʒaɡd]  | h. rolled [ˌɹoʊld] |
| c. named [neɪmd]   | i. sinned [sɪnd]   |
| d. wrapped [ˌɹæpt] | j. jazzed [dʒæzd]  |
| e. hissed [hɪst]   | k. washed [wɑʃt]   |
| f. mobbed [mɒbd]   | l. judged [dʒʌdʒd] |

## Question 5

Source: Day 12 Handout, Question 6

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

### Kukuya

| One-μ<br>Stems:                       | Gloss:               | Two-μ<br>Stems: | Gloss:           | Three-μ<br>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’           |
| [mò-sǎ]                               | ‘weaving knot’       | [mò-sà mí]      | ‘conversation’   | [m <sup>w</sup> -àrègí] | ‘younger brother’ |
| [kì-kâ]                               | ‘to pick’            | [kì-kàrà]       | ‘paralytic’      | [kì-kàrágà]*            | ‘to be entangled’ |
| [ndé-bvì]<br>(that’s ∨ on the last V) | ‘he falls’           | [ndé-pǎli]*     | ‘he goes out’    | [ndé-kàlági]            | ‘he turns around’ |

## Question 6

Source: Homework 5, Question 2

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

Fula

|    | <b>Plain Word</b>      | <b>Suffixed Word</b>      | <b>Word Gloss</b> | <b>Suffix Gloss</b> |
|----|------------------------|---------------------------|-------------------|---------------------|
| a. | [war-a]                | [war-d-a]                 | ‘come’            | ASSOCIATIVE         |
| b. | [nast-a]               | [nasd-id-a]               | ‘enter’           | ASSOCIATIVE         |
| c. | [jar-a]                | [jar-d-a]                 | ‘drink’           | COMPREHENSIVE       |
| d. | [win <sup>n</sup> d-a] | [win <sup>n</sup> d-id-a] | ‘write’           | COMPREHENSIVE       |
| e. | [war-a]                | [war-t-o]                 | ‘kill’            | REFLEXIVE           |
| f. | [jim-a]                | [jim-t-o]                 | ‘sing’            | REFLEXIVE           |
| g. | [taʔj-a]               | [taʔj-it-o]               | ‘cut’             | REFLEXIVE           |
| h. | [fiḅ-a]                | [fiḅ-t-a]                 | ‘tie’             | REVERSIVE           |
| i. | [hufn-o]               | [hufn-it-o]               | ‘put on a cap’    | REVERSIVE           |
| j. | [bark-a]               | [bark-id-a]               | ‘blessing’        | DENOMINATIVE        |
| k. | [sem <sup>m</sup> b-e] | [sem <sup>m</sup> b-id-a] | ‘strength’        | DENOMINATIVE        |



END OF EXAM