

We will discuss this in class Thursday 8 December and I'll hand out a sample solution.

Rules for the real exam:

Write your answers on these sheets and on your own blank sheets as needed.

If you turn in the final on-line, please give your file the name: *Your-Last-Name 4-543 Final*

The exam is open-book, open-notes; you may use any written or on-line references. You will notice that I have not identified the languages in the problems. You are not forbidden to try to guess the languages and look up the answers, but I don't recommend it. Much easier to just figure out the solution for yourself.

The rules about collaboration for the take-home final exam are different from the regular weekly assignments. You are encouraged to work together on the weekly assignments; but you must do this take-home exam independently; collaboration is cheating. If you have questions about the take-home exam, bring it up in class or send me an e-mail.

(1) Phonetics (5 points)

Transcription of your own speech: Your objective is to transcribe the way you speak English at a normal speech rate. Include as much phonetic detail as you feel comfortable with.

(1 point each; 2 points total)

a. about

b. transfer

Transcription of Carden's speech: Download the audio file "443 Sample Final Audio 1 transcription.wav" and transcribe the two English words or phrases as pronounced by Carden. I recommend playing the audio in Praat, but you can use any audio player you prefer. (3 points total)

c. Greenwich (a place name in Connecticut – 1 point)

d. Can't you do it? (Transcribe the fast-speech version in the audio -- 2 points)

(2) Acoustic Phonetics - VOT Measurement (5 points)

Download the audio file "443 Sample Final Audio 2 VOT.wav" and use Praat to analyze it. The file will contain four tokens of a consonant-initial word in an unidentified language. You will measure token 3. Following the model developed in class and tested in Quiz 3, measure the VOT and document your measurement by printing out and annotating a Praat screen capture. Your picture should show the relevant part of the waveform (or waveform plus spectrogram). **Mark and label** the following:

-- stop release

-- stop release burst

-- a reasonable estimate of the beginning of the stop closure

-- voicing onset

(If relevant, add a note about uncertainties in identifying the start of the first PP.)

-- An arrow showing the duration you would measure for VOT.

-- Identify the VOT as positive, negative, or (near) zero. Give a number for the VOT:

VOT = _____.-- Identify the stop as "voiced", "voiceless unaspirated", or "voiceless aspirated". (The data does not include any voiced aspirated stops.)

(3) Surface Phonology Problem - Unidentified Language 1: (20 points)

Chart the distribution of plain [l] and velarized [ɫ] in the data below. Based on this data, determine whether the sounds are distinct phonemes or allophones of the same phoneme. If the sounds are distinct phonemes, give your evidence. If the sounds are allophones of the same phoneme, select a base form and give a rule that generates the surface allophones. State your rule once in English and once in the informal segment notation we developed in class. You may use features if you wish, but formal feature notation is not required.

[ɫamazad]	‘prettily’	[zarali]	‘loss’	[xeli]	‘hand’
[leɫo]	‘goal’	[kaɫa]	‘tin’	[xoɫo]	‘however’
[saxɫʃi]	‘at home’	[pepeɫa]	‘butterfly’	[c ^h ec ^h xli]	‘fire’
[ɫxena]	‘joy’	[kleba]	‘reduce’	[vxleč ^h]	‘I split’
[kbits]	‘tooth’	[ert ^h xetɫ]	‘once’	[c ^h oli]	‘wife’

(4) Surface Phonology Problem - Unidentified Language 2: (20 points)

Language 2 has a breathy voiced bilabial stop [ɓ] and a plain voiced bilabial stop [b]. Chart the distribution of these two sounds in the data below. Based on this data, determine whether the sounds are distinct phonemes or allophones of the same phoneme. If the sounds are distinct phonemes, give your evidence. If the sounds are allophones of the same phoneme, select a base form and give a rule that generates the surface allophones. State your rule once in English and once in the informal segment notation we developed in class. You may use features if you wish, but formal feature notation is not required.

bara	'large'	ɓɛd	'disagreement'
ɓag	'part'	bais	'twenty-two'
bina	'without'	ɓəs	'buffalo'
ɓir	'crowd'	bap	'father'
bori	'sackcloth'	ɓati	'kiln'

(5) Feature systems (10 points)

(a) Chart the inventory below. Do separate charts for consonants and vowels, placing glides appropriately. (2 points)

p n t ŋ k ɲ q m b x χ d φ g s ɟ l w j i e æ u o ɑ

Charts: Consonants (and glides)

Vowels (and glides)

I am giving you two rules in our informal segment notation. Assume the language has the inventory you charted in (a). For each rule, restate the rule in English, and then translate it into features following the conventions in Odden Chapter 3. For full credit, use as few features as possible. (4 points per rule.)

(b) $[k, g, x] \rightarrow [q, ɟ, \chi] / ___ \{o, ɑ\}$

Statement in English:

Statement in features:

(c) $[p, t, k, q] \rightarrow [\phi, s, x, \chi] / V ___ \#$

Statement in English:

Statement in features:

(6) Underlying Representations Problem - Unidentified Language 3: (20 points)

Given the data below, work out the URs for the indefinite and definite affixes and for each of the stems of the forms. State the rules needed to derive the given surface forms. State each rule in English, in our informal segment notation, and in formal feature notation. (My analysis has two rules.)

Test and demonstrate your rule(s) by giving derivations for “woman”, “the woman”, “fig”, “the fig”, “mother”, and “the mother”. (adapted from *Language Files 8*)

UR of indefinite affix: _____ UR of definite affix: _____

Indefinite	Definite	Stem UR	Gloss
[fellus]	[ilfellus]		‘chicken’
[arya]	[larya]		‘air’
[mara]	[ilmara]		‘woman’
[omm]	[lomm]		‘mother’
[kelb]	[ilkelb]		‘dog’
[ʔattus]	[ilʔattus]		‘cat’
[hitan]	[ilhitan]		‘walls’
[abt]	[labt]		‘armpit’
[ispanyol]	[lispanyol]		‘Spanish (language)’
[ti:n]	[itti:n]		‘fig’
[dawl]	[iddawl]		‘light’
[shab]	[isshab]		‘clouds’
[natura]	[innatura]		‘nature’
[da:r]	[idda:r]		‘house’
[zift]	[izzift]		‘pitch’

(7) Underlying Representations Problem - Unidentified Language 4: (20 points)

Given the (somewhat simplified) data below and the underlying forms of the suffixes, work out the UR for each of the stems of the forms and the rules needed to derive the given surface forms. State each rule in English, in our informal segment notation, and in formal feature notation. (My analysis has two rules; these rules do not need to be ordered.)

Test and demonstrate your rules by giving derivations for [mek'hin], [bok'k'o] , and [dosk'o].

Nonfuture	Imperative	Dubitative	Future	Stem UR	Gloss
şaphin	şapk'a	şa:pal	şa:pen		'burn'
doshin	dosk'o	do:sol	do:sen		'report'
lanhin	lank'a	la:nal	la:nen		'hear'
mek'hin	mek'k'a	me:k'al	me:k'en		'swallow'
wonhin	wonk'a	wo:nol	wo:nen		'hide'
xathin	xatk'a	xatal	xaten		'eat'
xilhin	xilk'a	xilal	xilen		'tangle'
bok'hin	bok'k'o	bok'ol	bok'en		'find'
<i>-hin</i>	<i>-k'a</i>	<i>-al</i>	<i>-en</i>	Suffix URs	