

Problem set 4: 24.900
Due Wednesday, 10/10/01 [because of Columbus Day]

Part 1: Igbirra (Nigeria) phonology

Examine the distribution of [e] and [a] in the Igbirra data below, and answer the questions that follow:

[mezi]	'I expect'	[matu]	'I send'
[maze]	'I agree'	[meze]	'I am well'
[matɔ]	'I pick'	[mazi]	'I am in pain'
[meto]	'I arrange'	[metu]	'I beat'

- a. Are Igbirra [e] and [a] allophones of the same phoneme or distinct phonemes?
- b. Justify your answer by either stating a rule¹ that governs the distribution of [e] and [a] (if you think they are allophones of the same phoneme) or giving evidence that they are distinct phonemes² (if you think they are distinct phonemes).

Answer for Igbirra [e] and [a] the same pair of questions you answered for German [x] and [ç] in part 2.

Part 2: Finnish phonology

Examine the distribution of [d] and [t] in the Finnish data below, and answer the questions that follow:

[madon]	'of a worm'	[kade]	'envious'
[kadot]	'failures'	[maton]	'of a rug'
[kate]	'cover'	[ratas]	'wheel'
[katot]	'roofs'	[radan]	'of a track'

Answer for Finnish [d] and [t] the same pair of questions you answered for Igbirra [e] and [a].

Part 3: Various In CL, do problems 1, 2 and 4 (i)-(iv) on p. 121. [Do (v) for extra credit.]

¹ "Stating a rule" means using the phonetic classification we have learned to describe which allophone is used in which environment (e.g. "before X", "after Y", "at the end of a word", etc.).

² Relevant evidence would be any minimal or near-minimal pairs present in the data. Otherwise, offer the best evidence you can that neither position in the word nor the segments preceding or following the sound in question are factors that determine their distribution.

Part 3: Russian Consider some pairs of forms from Russian. Call the forms in the left column "zero-ending forms" and the forms in the left column "-a forms", though the meaning and use of the two forms -a actually varies widely among the examples.

	<u>zero-ending form</u>	<u>-a form</u>	
1.	grɔp	grɔba	'coffin'
2.	lip	lipa	'linden tree'
3.	ʃɔpət	ʃɔpəta	'whisper'
4.	gɔrət	gɔrəda	'city'
5.	ruk	ruka	'hand'
6.	rɔk	rɔga	'horn'
7.	rɔk	rɔka	'fate'
8.	kərəndaʃ	kərəndaʃa	'pencil'
9.	ekipaʃ	ekipaʒa	'crew'
10.	ras	rasa	'race'
11.	ras	raza	'time'
12.	dɔm	dɔma	'house'
13.	pɫan	pɫana	'plan'
14.	skəzəl	skəzala	'said'
15.	vɔr	vɔra	'thief'

- a. State the phonological rule affecting consonants that is illustrated by these forms. Make sure your statement of the rule covers all the data.

- b. What language examined in class also has this rule? How do we know that English lacks this rule?

- c. List the minimal pairs found in the Russian examples above. What does the existence of these minimal pairs teach us about the phonemic inventory of Russian?

- d. Assuming that phonologically predictable aspects of pronunciation do not form part of the lexical entries of morphemes, what are the forms listed in the lexicon for the root morpheme of the words in the first 6 rows above?

Name: _____