

Phonology Assignment #5

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1 Part 1

Morpheme	Forms
sg. morpheme	lu
pl. morpheme	ŋ, m, n
‘rope’	goi
‘straight’	goloka
‘rib’	bau
‘lath’	bagalo
‘pepper’	la:la, da:la
‘tongue’	lmi, dmi
‘guarded’	lmdɾla, dmdɾla
‘bald head’	palai, balai
‘wanted’	pa:la, ba:la
‘piece of wood’	te:la, de:la
‘place for initiates’	kiligo, giligo
‘palm’	kili, gili

2 Part 2

To me it seems most likely that the underlying form of ‘pepper’ is /la:la/. ‘Pepper’ is an interesting case, because both of its forms are voiced – meaning that it is being affected by a rule/constraint/process outside the scope of this assignment (which focuses on voicing alternation in the roots). Nevertheless, if we compare it to other words in this list, especially ‘piece of wood’, we can see that the singular form is the underlying one. If we chose the plural form, we would have to explain why, in the case of ‘pepper’, a /d/ becomes an /l/, but in the case of ‘piece of wood’ becomes a /t/. The environments in these two cases are almost the same, making such an explanation extremely difficult if not impossible. Instead, we can choose the singular form. An explanation is now possible using voicing assimilation and some other constraint to explain the /l/ → /d/ transformation.

3 Part 3

- Markedness Constraint: *[+nasal][-voice -syl]

Assign one violation for every voiceless consonant following a nasal.

- Faithfulness Constraint: Faith(voice)

Assign one violation for every change in voicing from the UR to the SR

nte:la	*[+nas][-vce]	Faith
nte:la	*	
⇒ nder:la		*

ŋgoi	*[+nas][-vce]	Faith
⇒ ŋgoi		
ŋkoi	*	*

4 Part 4

The SR of the plural morpheme seems to be determined by the place of articulation of the following consonant. Regardless of which of the various forms you choose as the UR, it will be altered to match the place of articulation of the following consonant. If you really wanted to choose a specific UR, you might look for which form occurs more often, and whether or not there are any other distributions involving nasals that might affect your decision.

5 Part 5

The plural morpheme exists as a nasal consonant which assimilates to the place of articulation of the consonant which follows it.

6 Part 6

- Markedness Constraint: $*[+nasal \left\{ \begin{matrix} \alpha_{labial} \\ \alpha_{dorsal} \\ \alpha_{coronal} \\ \alpha_{back} \end{matrix} \right\}] [-syl \left\{ \begin{matrix} \beta_{labial} \\ \beta_{dorsal} \\ \beta_{coronal} \\ \beta_{back} \end{matrix} \right\}]$

Assign one violation for every nasal which does not match the place of articulation of the consonant which follows it

- Faithfulness Constraint: Faith(nasal place)

Assign one violation for each change in place of articulation of a nasal from UR to SR

I have arbitrarily chosen /n/ as the UR of the plural morpheme. Picking a different nasal for the UR would have no effect on the SRs. Therefore, the Faith constraint above is of questionable usefulness at this point in our analysis.

ngoi	Match Place	Faith
ngoi	*	
mgoi	*	*
⇒ ŋgoi		*

nbagalo	Match Place	Faith
nbagalo	*	
⇒ mbagalo		*
ŋbagalo	*	*

\Rightarrow nde:la	Match Place	Faith
mde:la	*	*
ŋde:la	*	*

7 Part 8

Rule 1: [-syl -vce] \rightarrow [-syl +vce] / [-syl +nas]--

Rule 2: [-syl +nas] \rightarrow [-syl +nas α place] / --[-syl α place]

	lula:la	nla:la	lupa:la	npa:la
1	–	–	–	nba:la
2	–	–	–	mba:la
SR	lula:la	*nla:la	lupa:la	mba:la

This analysis is boring. Because it doesn't have a rule to explain how we get from /l/ to /d/, only one of the forms in our derivation above is actually affected. What's more, we don't get the correct SR for 'pepper.' I suspect that the transformation from /l/ to /d/ has something to do with the same assimilation of place process that is affecting the nasal plural phoneme. However, because I don't know enough or have enough data to figure out how exactly, I propose the addition of a third, very specific rule:

Rule 3: [-syl +lat +cont +son] \rightarrow [-syl -lat -cont -son] / [-syl +nas]--

This rule basically just says that /l/ becomes /d/ after a nasal. It is almost certainly too specific for the actual process that is going on, but it allows us to, based upon only this limited data set, predict the correct SRs:

	lula:la	nla:la	lupa:la	npa:la
1	–	–	–	nba:la
2	–	–	–	mba:la
3	–	nda:la	–	–
SR	lula:la	nda:la	lupa:la	mba:la