

24.901 Problem Set 2: Lango C-alternations

The data on the consonant alternations of Lango (a Nilotic language of Uganda) is found in Hayes 2009, chapter 6, p.137.

For this P-set you must answer only the questions asked below. Hayes assigns a larger number of tasks, not all of which are relevant to this problem.

Instructions:

1. Identify all morphemes in the data of chapter 6 (p.137-141). You don't need to write anything yet.
2. Provide a list of the Underlying Representations of each of these morphemes, roots and suffixes, accompanied by a gloss of each morpheme. Some of these morphemes alternate, but *all can be assigned a single UR*, from which multiple surface alternants can be generated by rules.
3. Write the rules you need to generate the SRs of all morphemes.
Use the distinctive features introduced in class, or the very similar set in Hayes' 2009 Chapter 4.
4. Don't use the format for total assimilation that Hayes introduces on the bottom of p. 138. You can use distinctive features to describe the target of the rule, the change and the context where the change happens, in the usual format $A \rightarrow B/C_D$: do that.
Write the simplest, shortest rules possible, factoring out from the rule any information that can be predicted independently of the rule itself. If you simplify some rule by assuming that some information will come in from a different component of Lango grammar, say so to assure us that your overall account is complete and correct.
5. The context for each rule can be strictly phonological: I think you don't need to mention specific morphemes, or morphological properties, just distinctive features of segments. But if you come to a different conclusion and your rule contains morphological information, explain why that is needed.
6. Must your rules be ordered? If yes, point to forms that can only be correctly derived by a specific order of your rules.
7. Show how your rules work by deriving the following:
aloppi 'your buck'
alobgi 'their buck'
lakka 'my (animal) tooth'
laxa 'my own mouth'
jitta 'my (animal) mouth'
jiɣa² 'my (own) mouth'

¹ More data on the phonemes of Lango is in Hayes 2009, chapter 2, p. 44ff, but I don't think it is needed here.

² [ɾ] is a voiceless tap. Assume it is [+continuant], as the period of oral closure is extremely brief.

8. You will discover that multiple URs (each of which requires different rules) can be proposed for every morpheme, but that some choices yield simpler grammars. Using the example of the suffix meaning 'my' (not 'my own') explain how you selected the UR you gave that suffix, what the alternatives were, and why those alternatives were less desirable.

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