

Angas Sonorants

Voicing is predictable in Angas sonorants. State the rule.

1. mut	'to die'	13. f ^w aŋ	'to rain'
2. nuŋ	'to ripen'	14. taŋ	'bench'
3. ntaŋzum	'wasp'	15. ŋgak	'snake'
4. mbaŋga	'drum'	16. ndaŋm	'bark'
5. nem ^y eɭ	{name of village}	17. paŋpaŋ	'bread'
6. siŋ	'to forgive'	18. lep	'to send'
7. li:li:	'slowly'	19. dondoŋ	'yesterday'
8. ?ara	'road?'	20. ?aŋ	'road'
9. k ^w aɭ	'joint'	21. taŋwep	'harvest season'
10. k ^w ɔ nsar	'finger'	22. deŋ	'to drag'
11. mbeɭm	'to lick'	23. poŋtiŋ	'sky'
12. n ^f waŋm	'head cold'	24. ziŋɔɭ	'Satan'

Kongo Obstruents

In Southern Kongo, we find [t, s, z] in complementary distribution with [č, š, ž], respectively:

1. tobola	'to bore a hole'	9. nselele	'termite'
2. čina	'to cut'	10. lolonži	'to wash'
3. kesoka	'to be cut'	11. zevo	'then'
4. nkoši	'lion'	12. ažimoła	'alms'
5. zenga	'to cut'	13. nzwetu	'our house'
6. žima	'to stretch'	14. kunezulu	'to heaven'
7. kasu	'emaciation'	15. tanu	'five'
8. čiba	'banana'		

1. State the distribution of these sounds. Where do [t, s, z] occur? Where do [č, š, ž] occur?
2. Which sounds should be taken as representing the basic (underlying) phonemes, and which as representing their surface variants? State your reasons.
basic:
nonbasic:
3. State the rule that derives the surface variants from the basic phonemes you have proposed.

Ganda Liquids

1. [r] and [l] are in complementary distribution in one variety of Ganda. State the conditions under which each appears.

1. kola	'do'	11. wulira	'hear'
2. lwana	'fight'	12. beera	'help'
3. buulira	'tell'	13. jjukira	'remember'
4. lya	'eat'	14. eryato	'canoe'
5. luula	'sit'	15. omuliro	'fire'
6. omugole	'bride'	16. effirimbi	'whistle'
7. lumonde	'sweet potato'	17. emmeeri	'ship'
8. eddwaliro	'hospital'	18. eraddu	'lightning'
9. oluganda	'Ganda language'	19. wawaabira	'accuse'
10. olulimi	'tongue'	20. lagira	'command'

2. Consider the following loanwords (from English except for the last item). How may one account for the apparently aberrant treatment of [r] and [l]?

1. ebendera	'flag'	3. luula	'ruler'
2. leerwe	'railway'	4. ssaffaali	'safari' (from Swahili)

Proto-Bantu Voiced Obstruents

The following set of data is from Proto-Bantu—the reconstructed latest common ancestor of the modern Bantu languages spoken in Eastern, Central, and Southern Africa, including Swahili and Ganda. [β, l, γ] are in complementary distribution with [b, d, g] respectively. Account for their distribution by postulating an underlying phoneme for each pair and stating the rule accounting for the phonetic forms.

1. βale	'two'	13. kiya	'eyebrow'
2. leme	'tongue'	14. γiye	'locust'
3. taβe	'twig'	15. kulu	'tortoise'
4. pala	'antelope'	16. oŋgo	'cooking pot'
5. konde	'bean'	17. tende	'palm tree'
6. zoŋgo	'gall'	18. zala	'hunger'
7. βeya	'monkey'	19. zoγu	'elephant'
8. βembe	'pigeon'	20. βele	'body'
9. limo	'god, spirit'	21. lelu	'chin, beard'
10. kanga	'guinea fowl'	22. eyi	'water'
11. γombe	'cattle'	23. kingo	'neck'
12. lelo	'fire'	24. nto	'person'

Mohawk Stops

Mohawk has six phonetic oral stops (as well as a glottal stop, which we will disregard here). The bilabial stops are rare and for the most part restricted to recent loan words. Decide which of the following two hypotheses is correct:

Hypothesis A. Mohawk has the six distinct oral stop phonemes /p b t d k g/.

Hypothesis B. Mohawk has only three distinct oral stop phonemes in its underlying phoneme inventory.

If you select hypothesis A, show that the inventory of stop phonemes cannot be reduced, by citing (near-)minimal pairs. If you select hypothesis B, show that it is correct by (a) listing the phonemes, and (b) listing each variant (surface reflex) of each phoneme together with the context in which it occurs. (Assume that the data is complete in all relevant respects.)

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| 1. oli:de? | 'pigeon' | 8. oya:gala | 'shirt' |
| 2. zahset | 'hide it!' (sg.) | 9. ohyotsah | 'chin' |
| 3. ga:lis | 'stocking' | 10. labahbet | 'catfish' |
| 4. odahsa | 'tail' | 11. sdu:ha | 'a little bit' |
| 5. wisk | 'five' | 12. jiks | 'fly' |
| 6. degeni | 'two' | 13. desda?ŋ | 'stand up!' (sg.) |
| 7. aplam | 'Abram, Abraham' | 14. de:zckw | 'pick it up!' (sg.) |