

3. *Mokilese* (Mokilese is an Austronesian language of the South Pacific)
Examine the following data from Mokilese carefully, taking note of where voiceless vowels occur.

| | | | |
|--------------|------------------|-----------|-----------------------|
| a) pɿsan | 'full of leaves' | g) uduk | 'flesh' |
| b) tɿpɿkta | 'bought' | h) kaskas | 'to throw' |
| c) pɿko | 'basket' | i) poki | 'to strike something' |
| d) kɿsa | 'we two' | j) pil | 'water' |
| e) sɿpwo | 'firewood' | k) apid | 'outrigger support' |
| f) kamwɿkɿti | 'to move' | l) ludɿuk | 'to tackle' |

- i) The vowel phonemes of Mokilese are /i e ɛ u o ɔ a/. In Mokilese, [ɿ] is an allophone of /i/, and [ɯ] is an allophone of /u/. No other vowels have voiceless allophones. State in words the conditioning factors that account for this. Be as general as possible in referring to classes of sounds.
- ii) Using features, formulate a rule that accounts for the derived allophones.

4. *Gascon* (Gascon is spoken in southwest France)

The phones [b], [β], [d], [ð], [g], and [ɣ] are all found in Gascon, as the following examples show.

| | | | |
|-----------|---------------|-----------|--------------|
| a) bux | 'you' | m) gat | 'cat' |
| b) bako | 'cow' | n) lūŋg | 'long' |
| c) ũmbro | 'shadow' | o) salɿβo | 'saliva' |
| d) brēn | 'endanger' | p) noβɿ | 'husband' |
| e) dɿlys | 'Monday' | q) aβe | 'to have' |
| f) dɿŋko | 'until' | r) fɿβaw | 'horse' |
| g) duso | 'sweet' | s) buðet | 'gut' |
| h) fred | 'cold' | t) efaðo | 'hoe' |
| i) pūnde | 'to lay eggs' | u) biyar | 'mosquito' |
| j) dudze | 'twelve' | v) riɣut | 'he laughed' |
| k) guteza | 'flow' | w) agro | 'sour' |
| l) ɛŋgwān | 'last' | x) dariɣa | 'pull out' |

- i) Which pairs among the phones [b], [β], [d], [ð], [g], and [ɣ] are the most phonetically similar? Support your claim with phonetic descriptions of the similar pairs.
- ii) List the environments in which the phones [b], [β], [d], [ð], [g], and [ɣ] are found.
- iii) Is there any evidence for grouping these pairs of sounds into phonemes? State the evidence for each pair.
- iv) Make a general statement about the patterning of the phonemes you have established.
- v) Following your analysis, write the following forms in phonemic transcription.
- (1) [puyo] (2) [deʎat] (3) [ɛŋgwān]