

**KIKURIA (Bantu, spoken in Tanzania)**

a.	aβǎ:nto	‘people’	o.	aβamúra	‘young men’
b.	eβǎ	‘forget!’	p.	e:ŋgwé	‘leopard’
c.	eγǎ	‘learn!’	q.	ekeβwé	‘fox’
d.	iβirú:ŋgû:ri	‘soft porridges’	r.	iβiyú:ruβe	‘small pigs’
e.	βáinu	‘you (pl.)’	s.	uyusíri	‘huge rope’
f.	itʃi:ŋgéna	‘grinding stones’	t.	βorjó	‘on the right’
g.	γaβǎ	‘share!’	u.	itʃi:ŋgú:ruβe	‘pig’
h.	βereká	‘carry a child!’	v.	itʃi:ŋgúta	‘walls’
i.	γú:ká	‘ancestor’	w.	iyítú:mbe	‘stool’
j.	oβoté:ndé:ru	‘smoothness’	x.	oβoyá:ká	‘male adulthood’
k.	okö:mbára	‘to count me’	y.	okoyé:mbá	‘to cause rain’
l.	okö:ndóya	‘to bewitch me’	z.	okoβára	‘to count’
m.	ukü:mbu:rjá	‘to ask me’	aa.	okoróya	‘to bewitch’
n.	uruγúta	‘wall’	bb.	teyetá	‘be late!’

The accents over the vowels are high tones (á), falling tones (â) or rising tones (ǎ). You can ignore them for the purposes of this problem.

Determine the distribution of the sounds [b] and [β]. Are they allophones of the same phoneme or of different phonemes?

Provide evidence to support your answer. Evidence consists of:

- i) minimal pair(s)  
*or*
- ii) a description of the environment in general terms  
ex. [m] occurs before labial consonants and [n] occurs elsewhere  
(before velar and coronal consonants and vowels)

*and*

a phonological rule that accounts for the distribution  
ex. /n/ → [m] / \_\_\_ labial C

Now do the same exercise for [g] and [γ]

Draw a phoneme/allophone diagram for [b][β][g][γ]