

Skill-check HW #5 | Ganda liquids and segment distribution in OT

For this assignment, your goal is to demonstrate your understanding of:

- how to model complementary distribution patterns in OT
- the typological predictions made by a set of constraints on segment distribution

This data set is from one variety of Ganda (also called Oluganda, a Bantu language spoken in Uganda).

Note:

- The IPA symbol [r] indicates a voiced alveolar oral liquid (sonorant) flap.

(a)	[kola]	'do'	(k)	[wulira]	'hear'
(b)	[lwana]	'fight'	(l)	[buulira]	'tell'
(c)	[d̥ɔd̥ɔkɪra]	'remember'	(m)	[lja]	'eat'
(d)	[erjato]	'canoe'	(n)	[luula]	'sit'
(e)	[omuliro]	'fire'	(o)	[omugole]	'bride'
(f)	[effirimbi]	'whistle'	(p)	[lumonde]	'sweet potato'
(g)	[emmeeri]	'ship'	(q)	[eddwaliro]	'hospital'
(h)	[eraddu]	'lightning'	(r)	[oluganda]	'Ganda language'
(i)	[wawaabira]	'accuse'	(s)	[olulimi]	'tongue'
(j)	[lagira]	'command'	(t)	[beera]	'help'

- (1) The liquids [r] and [l] are allophones of the same phoneme in Ganda. State the **environment** in which each of these liquids can appear, using our feature model and/or the label 'elsewhere'. Characterize each environment as **insightfully** as possible, specifying only necessary information in your description.
- (2) Can you identify one of the allophones as the **default** or **basic** allophone? Why or why not?
- (3) Based on your answers to questions (1) and (2), and using our in-class discussion of complementary (allophone) distribution as a guide, propose and define the three **constraints** that are the most relevant in understanding the Ganda liquids allophone pattern:
 - (a) one **faithfulness** constraint
 - (b) one **context-specific markedness** constraint
 - (c) one **context-free markedness** constraint

- (4) How must the constraints in (3) be ranked in order to produce the complementary distribution pattern we see in Ganda? Support your claims with OT tableaux that show informative losers and valid ranking arguments.
- (5) This additional Ganda word was borrowed from English: [leerwe] 'railway'. Does your constraint ranking in (4) correctly predict the output [leerwe] from the loanword input / reelwe /? Use an OT tableau to illustrate your answer.
- (6) Some languages only have one liquid in surface forms. Based on your analysis of the Ganda liquid allophones, do you predict that a language with only one liquid would have / l / or / r /? Explain why your analysis makes this prediction.