

THE MARKING OF SCIENTIFIC CONCEPTS IN LUGANDA

The Marking of Conceptual Periods

All weaknesses of a language in the realisation or representation of scientific concepts are traceable to cases where the Pegitosa Criterion is compromised. An application of the Criterion is a process of optimising an expression for term status. For instance, indiscriminate adoption of foreign expressions compromises the subcriterion of acceptability, especially in those cases where the assisting language and the language being elaborated do not belong to the same language family. In this Chapter I take a look at the articulation of scientific concepts in Present-day Luganda. According to TR3 of the theory $\pi_1 \pi_2 \delta [Q d C] d \pi$

Luganda marks Q by obu- as in (1).

(1)	<i>obuganzi</i>	"favour"
	<i>obusungu</i>	"anger"
	<i>obujulizi</i>	"testimony"
	<i>obuzaaliranwa</i>	"nature by birth"
	<i>obuto</i>	"infancy"
	<i>obuntu</i>	"human nature"

C is marked by oku- and en- as the examples in (2) show.

(2)	<i>okukola</i>	"working"
	<i>okugenda</i>	"going"
	<i>okubala</i>	"counting"
	<i>okusoma</i>	"reading"
	<i>okuyigiriza</i>	"teaching"
	<i>enkola</i>	"mode of working"
	<i>enkugenda</i>	"mode of going"
	<i>enkubala</i>	"mode of counting"
	<i>enkusoma</i>	"mode of reading"
	<i>enkuyigiriza</i>	"mode of teaching"

C (i.e. state of change) and Q (i.e. state of non-change) can also be realised by the suffixes -a , -e , -i , -o and -u.

If $\pi_1 \pi_2 \delta \mid \text{---} C$, then

$\pi_1 \pi_2 \delta \mid \pi_2 = \pi_1 [\pi_2 M_2] M_1$	-a
$\pi_2 \pi_1 \delta \mid \pi_1 = \pi_2 [\pi_1 M_1] M_2$	-a
$\pi_1 \pi_2 \delta \mid \pi_2 = \pi_1 [\pi_2 M_2] M_1$	-i
$\pi_1 \pi_2 \delta \mid \pi_2 = \pi_2 [\pi_1 M_1] M_2$	-o

as the examples in (3) show.

(3)	<i>-yigiriz-</i>	"to teach"	<i>-yigiriza</i>	"teaching"
	<i>-yigirizw-</i>	"to teach"	<i>-yigirizwa</i>	"being taught"
	<i>-somes-</i>	"to make read"	<i>-somesa</i>	"making read"
	<i>-somesebw-</i>	"to be made to read"	<i>-somesebwa</i>	"being made to read"

<i>-(y)agal-</i>	"to love"	<i>-yigirizwa</i>	<i>-(y)agala</i>	"loving"
<i>-limb-</i>	"to deceive"	<i>-limba</i>		"deceiving"
<i>-fumb-</i>	"to cook"	<i>-fumbi</i>		"cooking"
<i>-(y)agalw-</i>	"to be loved"	<i>-(y)agalwa</i>		"being loved"
<i>-(y)agazi</i>	"loving"	<i>-limbi</i>		"deceiving"
<i>-fumbo</i>	"married" (extended from - fumb-)			
<i>-lokol-</i>	"to save"	<i>-lokozi</i>		"saving"
<i>-fug-</i>	"to rule"	<i>-fuzi</i>		"ruling"
<i>-kett-</i>	"to spy"	<i>-kessi</i>		"spying"
<i>-lwan-</i>	"to fight"	<i>-lwanyi</i>		"fighting"
<i>-log-</i>	"to bewitch"	<i>-logo</i>		"bewitching"

If on the other hand, $\pi_1 \text{ Q } \pi_2 \mid \text{---} \text{ Q}$, then

$$\pi_2 \text{ Q } \pi_1 = \pi_2 [\pi_1 M_1] M_2 \quad -e$$

$$[\pi_1 \text{ Q } \pi_2] \vee [\pi_1 \text{ Q } \pi_2]$$

$$\pi_1 \text{ Q } \pi_2 = \pi_1 [\pi_2 M_2] M_1 \quad -u$$

as in (4).

(4)	<i>-kole</i>	"made"		
	<i>-bale</i>	"counted"		
	<i>-some</i>	"read"		
	<i>-yigirize</i>	"taught"		
	<i>-yagale</i>	"loved"		
			<i>-limbe</i>	"deceived"
			<i>-fumbe</i>	"cooked"
			<i>-lokole</i>	"saved"
			<i>-fuge</i>	"ruled"
			<i>-loge</i>	"bewitched"
<i>-swal-</i>	"to be ashamed"		<i>-swavu</i>	"shameful"
<i>-sanyuk-</i>	"to be happy"		<i>-sanyufu</i>	"joyful"
<i>-jeem-</i>	"to rebel"		<i>-jeemu</i>	"rebellious"
<i>-f-</i>	"to die"		<i>-fu</i>	"dead"
<i>-myuk-</i>	"to redden"		<i>-myufu</i>	"red"
<i>-yig-</i>	"to learn"		<i>-yivu</i>	"learned"

With eri- -Iro, ek- -Iro, eN- -Iro, nna-, obu-, obwa- Luganda marks L [π m]o. Hence,

(5)	<i>-lwal-</i>	"to fall sick"	<i>eddwaliro</i>	"hospital"
	<i>-som-</i>	"to read"	<i>essomero</i>	"school"
	<i>-lim-</i>	"to cultivate"	<i>ennimiro</i>	"garden"
	<i>-gunjul-</i>	"to educate"	<i>eggunjuliro</i>	"educational
institution"				
	<i>-naab-</i>	"to bathe"	<i>ekinaabiro</i>	"bathroom"
	<i>abaana</i>	"children"	<i>nnabaana</i>	"uterus"
	<i>omulabirizi</i>	"bishop"	<i>obulabirizi</i>	"bishopric,
diocese"				
	<i>wooz-</i>	"to levy"	<i>eggwoolezo</i>	"customs house"

<i>kabaka</i>	"king"	<i>obwakabaka</i>	"kingdom"
<i>lwan-</i>	"to fight"	<i>eddwaniro</i>	"battlefield"

T [ɿ m]o is marked by *ama-*, *olu-* and *emi-*.

(6)	<i>-som-</i>	"to read"	<i>olusoma</i>	"school term"
	<i>-zaal-</i>	"to hear"	<i>amazaalibwa</i>	"birthday"
	Muteesa a king's name <i>miteesa</i> 'Muteesa's reign'			

F is realised by *omu-* /*emi-*, *eki-* / *ebi-* as in (7)

(7)	<i>omuti/emit</i>	"trees"
	<i>omumwany</i> / <i>emimwany</i>	"coffee trees"
	<i>ekitooke/ebitooke</i>	"banana trees"
	<i>ekisubi/ebisubi</i>	"grasses"

Z is realised by *eN-* / *eN-*.

(8)	<i>ensolo</i>	"animal(s)"
	<i>embuzi</i>	"goat(s)"
	<i>embwa</i>	"dog(s)"
	<i>endiga</i>	"sheep"
	<i>entugga</i>	"giraffe(s)"
	<i>empanga</i>	"cock(s)"

(9) H is realized by *omu-* / *aba-*

<i>omuntu/abantu</i>	"human(s)"
<i>omusajja/abasajja</i>	"man/men"
<i>omuwala/abawala</i>	"girls(s)"
<i>omulenzi/abalenzi</i>	"boy(s)"
<i>omulongo/abalongo</i>	"twin(s)"
<i>omusawo/abasawo</i>	"doctor(s)"

The periods R, X and P are marked by *eki-* (sg.) *ebi-* (pl.).

(10)	<i>ekintu/ebintu</i>	"things"
	<i>ekinywa/ebinywa</i>	"bundles"
	<i>ekivvulu/ebivvulu</i>	"demonstration"
	<i>ekiwempe/ebiwempe</i>	"carpets"
	<i>ekigambo/ebigambo</i>	"word(s)"
	<i>ekirowoozo/ebirowoozo</i>	"thoughts(s)"
	<i>ekirabo/ebirabo</i>	"gift(s)"
	<i>ekivumo/ebivumo</i>	"insults"

Luganda uses part of its nominal prefix inventory to mark number N as in (11).

(11)	<i>eri + kumi</i>	<i>ekkumi</i>	"ten"
	<i>ama+ kumi</i>	<i>amakumi</i>	'tens', "-ty"
	<i>eki+ kumi</i>	<i>ekikumi</i>	"hundred"
	<i>ebi+ kumi</i>	<i>ebikumi</i>	"hundred(s) (pl)"
	<i>olu+ kumi</i>	<i>olukumi</i>	"thousand"

<i>eN+ kumi</i>	<i>enkumi</i>	"thousand(s)" (pl)
<i>aka+ kumi</i>	<i>akakumi</i>	"ten thousand"
<i>aka+ kadde</i>	<i>akakadde</i>	"one million"
<i>obu+ kadde</i>	<i>obukadde</i>	"millions" (pl)

If the prefixes were to be deployed in a one-to-one fashion, a neat system of marking conceptual periods would emerge. Comparative evidence from Proto-Bantu [cf. Meinhof (1906) and Guthrie (1967)] would suggest that such a neat system might have existed, only to be disrupted later as a result of class movements of nouns. Let me attempt at assigning the nominal prefixes in Luganda to conceptual periods in a one-to-one fashion. In [FIGURE 1](#), the vertical axis shows the conceptual period of the periodic system of conceptual elements.

The two horizontal axes show the gradation of size and number. The numbering of the prefixes accords with Meinhof (1906). For plural formation, the prefixes correlate as (12) shows.

(12)	1 <i>omu-</i>	:	2 <i>aba-</i>
	1° <i>wa-, nna-, sse-, ka-</i>	:	2° <i>bawa-, banna-, basse-, baka-</i>
	3 <i>omu-</i>	:	4 <i>emi-</i>
	5 <i>eli-</i>	:	6 <i>ama-</i>
	7 <i>eki-</i>	:	6 <i>ebi-</i>
	9 <i>en-</i>	:	10 <i>en-~ zi-</i>
	11 <i>olu-</i>	:	10 <i>en-</i>
	12 <i>aka-</i>	:	14 <i>obu-</i>
	13 <i>otu-</i>	:	
	15 <i>oku-</i>	:	6 <i>ama-</i>
	16	:	
	17	:	
	18	:	
	19	:	
	20 <i>ogu-</i>	:	22 <i>aga-</i>
	21	:	

It must be conceded that no one-to-one system of marking periods emerges. In fact M, K, A, W, B are not specially marked. The marking of L with 14 *obu-* is doubtful. Nevertheless, I have recourse to underlying notions to support my suggestion of intrinsic marking, for it could be argued that the relations in (13) hold.

(13)	S 3 <i>omu-</i>	<i>omulengo</i> (Ksw. <i>mkusanyiko</i>)	"bundle"
	P, X, R 7 <i>eki-</i>	<i>ekintu</i> (Ksw. <i>kitu</i>)	"thing"
	H 1 <i>omu-</i>	<i>omuntu</i> (Ksw. <i>mtu</i>)	"human being"
	Z 9 <i>en-</i>	<i>ensolo</i>	"animal"
	F 3 <i>omu</i>	<i>omuti</i> (Ksw. <i>mti</i>)	"tree"
	T 11 <i>olu</i>	<i>olunaku</i>	"day"
	C 15 <i>oku -</i>	<i>okukola</i> (<i>kufanya</i>)	"to do"

	<i>okubeera (kuwa)</i>	"to be"
	<i>okukyuka (kugeuka)</i>	"to change"
L 14 <i>obu</i>	<i>buganda</i> (Ksw. <i>Uganda, Ureno Urusi, Ufaransa</i>)	
Q 14 <i>obu</i>	(attested in the majority of Bantu languages)	

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It only remains to contemplate class movement as being determined by the overtone implicit in size gradation. This point is further developed in the next Chapter.