

Modality in Luhya: A typological study

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1. Overview of the project

- We give a **modal typology** for 6 (out of 18) Luhya languages. Luhya is a subfamily of Bantu (ISO: luy; Guthrie: JE.32) spoken by approximately 5 million people in western Kenya and Tanzania.
- Our data was collected using a modified version of Vander Klok's (2014) modal fieldwork questionnaire.
- We situate our findings within the modal typology of van der Auwera & Plungian (1998) and Nauze (2008), who distinguish between three categories:
 - Participant-internal (PI) modality:** expresses an ability or need of a participant of the action.
 - Participant-external (PE) modality:** expresses a possibility or obligation on the part of someone external to the action. (Includes the subclasses **deontic** and **goal-oriented**.)
 - Epistemic modality:** expresses a judgment towards a proposition based on knowledge.

We show that the Luhya modals can vary in expressing modal category, but not in modal force. We additionally show that there is substantial inter- and intra-speaker variation.

3. Class I: Existential force

- PI: Ability**
Sira a-nyal-a ku-tema mandazi.
1Sira 1-MOD.I-FV 15-cook 6mandazi
'Sira can cook mandazi.'
- PE: Deontic possibility**
1Kageha a-nyal-a ku-voliza.
Kageha 1-MOD.I-FV 15-date
'Kageha may go on a date.'
- Epistemic possibility**
professor a-nyal-a ku-za mu kilasi.
1professor 1-MOD.I-FV 15-come in 7class
'The professor might come to class.'

Class I expresses existential force with respect to participant-internal, participant-external, and epistemic modals in all 6 languages.

Selected references. Nauze, F. 2008. *Modality in Typological Perspective*. PhD dissertation, Institute for Logic, Language, and Computation, Amsterdam. • van der Auwera, J. & Plungian, V. 1998. "Modality's semantic map." *Linguistic Typology* 2: 79-124. • Vander Klok, J. 2014. "Modal questionnaire for cross-linguistic use." Accessed online 8/24/2016.

2. Modal verbs

Luhya languages use three verbs to express modal meanings. They have both modal and non-modal uses. We categorize these verbs into three classes (I, II, and III), and give rough (Kratzerian) modal meanings. All examples on this poster are from Llogoori.

	Class I ≈Possibility	Class II ≈Weak necessity	Class III ≈(Weak) necessity
Modal use	≈Possibility	≈Weak necessity	≈(Weak) necessity
Non-modal use	'manage [to do ...]'	'want'	'arrive'/'reach'
Lubukusu	<i>khunyala</i>	<i>khwenya</i>	<i>khoya</i>
Llogoori	<i>kunyala</i>	<i>kwenya</i>	<i>kuduka</i>
Lunyore	<i>okhunyala</i>	<i>okhwenya</i>	<i>okhwola</i>
Lusaamia	<i>kunyala</i>	<i>kwenya/kudakha</i>	<i>kukhoyera</i>
Lutiriki	<i>khunyala</i>	<i>khwenya</i>	<i>khutukha</i>
Luwanga	<i>okhunyala</i>	<i>okhwenya</i>	<i>okhula</i>

4. Classes II & III: Universal force

- PI: Circumstantial necessity**
n-eny-a n-voholek-ε.
1SG-MOD.II-FV 1SG-relieve-SBJV
'I need to pee.'
- PE: Deontic weak necessity**
ga-eny-ek-a Sira a-sav-ε
6-MOD.II-AC-FV 1Sira 1-ask-SBJV
amwaavo.
1brother
'Sira should ask his brother.'

Class II expresses weak necessity with respect to participant-internal and participant-external modals in all 6 languages.

- PE: Deontic necessity/weak necessity**
ku-duka w-evek-ε igudwe.
15-MOD.III 2SG-wear-SBJV 9helmet
'You {must/should} wear a helmet.'
- Epistemic necessity/weak necessity**
(ku-duka) mbura (ku-duka) e-v-ε
15-MOD.III 9rain 15-MOD.III 9-COP-SBJV
neekuba.
falling
'It {must/should} be raining.'

Class III expresses (weak) necessity with respect to all modal categories across all 6 languages.

5. Modal typology

Part.-int	Part.-ext		Epis.
	Deontic	Goal-oriented	
Ability	Permission	Possibility	Possibility
Need	Obligation	Necessity	Necessity

Modal typology from (Nauze 2008) with Luhya modal categories overlaid.

- Class I** verbs express all categories of existential force modality.
- Class II** verbs express participant-internal and participant-external weak necessity.
- Class III** verbs express all categories of strong necessity, as well as weak epistemic necessity. This is our only example of Luhya modals being underspecified for modal force.

The Luhya languages **lexically distinguish between existential and universal force modals** and between **weak and strong necessity**.

Support for Nauze's typology:

- Variation occurs along one axis: flavor (here, "categories"), not force.
- No "skipping" categories; i.e. if a modal expresses need and necessity, it also expresses obligation.

Problems for Nauze's typology:

- Class III can vary in both modal category and force, since it can express both weak and strong epistemic modality.
- Volitional modality** appears to play an important role in Luhya's modal system, as the class II modals in their non-modal use mean "want."

6. Variation

Variation #1 : Non-cognate modal verbs. Not all modal verbs are cognate. For instance, class III: *khoya* (Lubukusu) vs. *kuduka* (Llogoori).

Variation #2 : Expletive subjects. We observe inter-/intra-language variation with respect to the choice of expletive subject agreement. Different agreement morphemes reflect differences in modal force, as shown in (8) (Gluckman & Bowler, to appear).

Language	Expletive subject agreement	Total
Lubukusu	<i>li-</i> (5), <i>ka-</i> (6), <i>e-</i> (9)	3
Llogoori	<i>ga-</i> (6), <i>e-</i> (9)	2
Lunyore	<i>ka-</i> (6)	1
Lusaamia	<i>vi-</i> (8)	1?
Lutiriki	<i>ka-</i> (6), <i>e-</i> (9)	2
Luwanga	<i>li-</i> (5), <i>ka-</i> (6) <i>fi-</i> (8), <i>i-</i> (9)	4

Expletives agreement across Luhya. Bolded morphemes are shared by all speakers.

- (8) *ga-/e-duk-an-a u-zi-ε.*
6-/9-MOD.III-REC-FV 2SG-go-SBJV
'You must_{ga}/should_e go.'

Variation #3 : Finite class III. In all languages, class III modals appear in their infinitival (class 15) form. Three languages (Llogoori, Lubukusu, and Tiriki) also permit non-finite forms of class III.

- (9) *ku-duka/ga-duk-a u-zi-ε.*
15-MOD.III/6-MOD.III-FV 2SG-go-SBJV
'You must go.' **Logoori**
- (10) *okhu-ola/*ka-ol-a u-tsi-ε.*
15-MOD.III/6-MOD.III-FV 2SG-go-SBJV
'You must go.' **Lunyore**

7. Non-verbal modals

- All languages have (at least) one pure possibility adverb (*haondi* in Llogoori).
- All languages have (at least) one general purpose necessity "adverb" borrowed from Swahili: *mpaka*, which means 'until' in Swahili. It distributes like an adverb, but selects for subjunctive mood, like the modal verbs.