

# Appendix to A Typological Study of Modality in Luhya languages

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## Appendix

The following sections provide context(s) for each modal category, and a standard utterance for the given context. We have not yet been able to collect utterances for each context in every language. At present, only our Llogoori data is complete.

Most of the contexts are directly taken or adapted from (Vander Klok, 2014). When necessary, we slightly altered Vander Klok's contexts to more culturally appropriate scenarios. We also changed the names in Vander Klok's contexts to commonly used names in each language.

Finally, we note that the interlinear glosses for the following data are still a work in progress. Comments and corrections are welcome.

### Epistemic possibility

*Kageha's professor is not dependable. The students never know if he's going to come to give the lecture or not. Today, it's time to start class and the students are waiting again. The professor **might** come to class today.*

(1) **Llogoori**

*professor a-nyal-a ku-za mu kilasi karon*  
1professor 1-MOD.I-FV 15-come in 7class today

'The professor might come to class today.'

(2) **Lunyore**

*professor a-nyal-a okhu-its-a n'nondi*  
1professor 1-MOD.I-FV 15-come-FV today

'The professor will probably come today.'

(3) **Lubukusu**

*omweekesi a-nyal-a kw-eech-a mu-kilasi luuno*  
 1professor 1-MOD.I-FV 15-come-FV 17-7class today  
 ‘The professor might come to class today.’

(4) **Luwanga**

*Namatsi y-anyal-a khu-its-a*  
 1Namatsi 1-MOD.I-FV 15-come-FV  
 ‘Namatsi might come.’

(5) **Lutiriki**

*professor a-nyal-a khu-iits-a mwiisoomera nuundina*  
 1professor 1-MOD.I-FV 15-come-FV to.class today?  
 ‘The professor might come to class today.’

(6) **Lusaamia**

*professor a-nyal-a okhu-ich-a nyanga ino*  
 1Professor 1-MOD.I-FV 15-come-FV today this?  
 ‘The professor might come today.’

**Epistemic necessity**

*Kageha is in the library. She sees that the people who are coming into the library are carrying wet umbrellas, and that their clothes are wet. She also knows that it is currently the rainy season. Kageha thinks: It must be raining.*

(7) **Llogoori**

*(ku-duk-a) mbura (ku-duk-a) e-v-ε neekuba*  
 (15-MOD.III-FV) 9rain (15-MOD.III-FV) 9-COP-FV beating  
 ‘It must be raining.’

(8) **Lunyore**

*mpaka ifula e-v-e ne khwitsaang’ga (esiooba)*  
 must 9rain 9-COP-FV COP falling (outside)  
 ‘It must be raining (outside).’

(9) **Lubukusu**

*efula a-khoy-a khu-ba nekwa*  
 9raining 9-MOD.III-FV 15-COP falling  
 ‘It must be raining.’

(10) **Luwanga**

*mpaka/khu-ol-a ifula i-kwits-ang’g-a*  
 must/15-MOD.III-FV 9rain 9-fall?-PROG-FV  
 ‘It must be raining.’<sup>1</sup>

<sup>1</sup>The availability of both of these utterances is not confirmed.

- (11) **Lutiriki**  
*imbula laazima i-v-ε i-khuv-ang'g-a*  
 9rain must 9-COP-FV 9-beat?-PROG?-FV  
 'The rain must be raining.'
- (12) **Lusaamia**  
*efula o-khoy-er-a nga e-kw-a*  
 9rain 15-MOD.III-APPL-FV COMP? 9-fall-FV  
 'It must be raining.'

### Weak epistemic necessity

*Sira works everyday. But you know that his mother sometimes comes to town to visit, and when she does, he doesn't go to work. You're pretty sure that his mother hasn't come to town, so when someone asks you where Sira is, you say Sira should be at work right now.*

- (13) **Llogoori**  
*Sira ku-duk-a naave ku gaasi*  
 1Sira 15-MOD.III-FV 1-COP-FV being at ?work  
 'Sira should be at work.'
- (14) **Lunyore**  
*mpaka Atichi a-b-e naare khu kaasi*  
 must 1Atichi 1-COP-FV being at work  
 'Atichi must be at work.' ('I'm pretty sure')
- (15) **Lubukusu**  
*Kageha a-khoy-el-a a-b-e siamilimo*  
 1Kageha 1-MOD.III-APPL-AC 1-COP-FV 7work  
 'Kageha should be at work'
- (16) **Luwanga**  
*Sira o-khul-a a-b-ε khumilimo bulano buno*  
 1Sira 15-MOD.III-FV 1-COP-FV 17?work time? this?  
 'Sira should be at work right now.'
- (17) **Lutiriki**  
*khu-tukh-a Sira a-v-ε ku kaasi isai*  
 15-MOD.III-FV 1-SC-ε at work now  
 'Sira should be at work right now.'

*Portugal is playing Hungary in a football match. Because you follow football, you know that Portugal is a better team; therefore, Portugal should beat Hungary.*

- (18) **Lusaamia**  
*Portugal e-khoy-er-a i-hir-ε*  
 9Portugal 9-MOD.III-APPL-FV 9-win?-FV  
 'Portugal should win.'

## Deontic possibility

*According to the rules of the hospital, only family members are allowed to enter the patient's room during visiting hours. You came to visit your sister, but it was after visiting hours. However, the nurse gives you permission to see her, anyway. She says, "You **may** go in."*

- (19) **Llooori**  
*u-nyar-a ku-zia mu*  
 2SG-MOD.I-FV 15-go in  
 'You may go in.'
- (20) **Lunyore**  
*u-nyal-a okhu-injila*  
 2SG-MOD.I-FV 15-enter  
 'You can enter.'
- (21) **Lubukusu**  
*o-nyal-a w-ach-a mukari*  
 2SG-MOD.I-FV 2SG-go-FV 3room  
 'You may go into the room.'
- (22) **Luwanga**  
*o-nyal-a okhu-injela*  
 2SG-MOD.I-FV 15-enter  
 'You may enter.'
- (23) **Lutiriki**  
*u-nyal-a khu-tsya mukarhi*  
 2SG-MOD.I-FV 15-go 3room  
 'You can go in the room.'
- (24) **Lusaamia**  
*o-nyal-a o-chal-i rina*  
 2SG-MOD.I-FV 2SG-go?-FV when  
 'You may go in.'<sup>2</sup>

## Deontic necessity

*In Kenya, the law states that when you ride a motor bike, you **should** wear a helmet.*

- (25) **Llooori**  
*ku-duk-a w-evek-a igudwe*  
 15-MOD.III-FV 2SG-wear-FV 9helmet  
 'You must wear a helmet.'
- (26) **Lunyore**  
*mpaka/okhu-ol-a w-evikh-ε ihelmet*  
 must/15-MOD.III-FV 2SG-wear-FV 9helmet  
 'You must wear a helmet.'<sup>3</sup>

<sup>2</sup>The speaker was adamant that *rina* 'when' is necessary here.

<sup>3</sup>The availability of both of these utterances is not confirmed.

(27) **Lubukusu**

*o-khoy-el-a o-fwal-ε kukofia*  
 15-MOD.III-APPL-FV 2SG-wear-FV helmet  
 ‘You must wear a helmet.’

(28) **Luwanga**

*mpaka/khul-a o-fwal-ε ihelmet*  
 must/15-MOD.III-FV 2SG-wear-FV 9helmet  
 ‘You must wear a helmet.’

(29) **Lutiriki**

*mpaka w-ifwal-ε ikofya*  
 must 2SG-wear-FV 9helmet  
 ‘You must wear a helmet.’

(30) **Lusaamia**

*o-khoy-er-a w-efwal-ε ihelmet*  
 15-MOD.III-APPL-FV 2SG-wear-FV 9helmet  
 ‘You must wear a helmet.’

**Weak deontic necessity**

*Sira wants to go to town, but he doesn’t have a bike. He wants to borrow his brother’s bike, and he thinks that he could do so without his brother knowing, but he should ask his brother for the bike.*

(31) **Llogoori**

*ga-eny-ek-a Sira a-sav-ε amwaavo*  
 6-MOD.II-AC-FV 1Sira 1-ask-FV 1brother  
 ‘Sira should ask his brother.’

(32) **Lunyore**

*ka-eny-ekh-ang’-a Atichi a-sab-ε Weche indika*  
 9-MOD.II-AC-PROG-FV 1Atichi 1-ask-FV 1Weche 9bike  
 ‘It would be nice if Atichi asks Weche for the bike.’

(33) **Luwanga**

*Osundwa y-eny-ekh-a a-saab-ε msiami waβu indiki*  
 1Osundwa 1-MOD.II-AC-FV 1-ask-FV 1brother 1his 9bike  
 ‘Osundwa is supposed to ask his brother for the bike.’

(34) **Lusaamia**

*vi-dakh-ikh-an-a Wabwire a-saav-ε omusiamo waβwe endika*  
 8-desire-AC-REC-FV 1Wabwire 1-ask-FV 1brother his 9bike  
 ‘Wabwire should ask his brother for the bike.’

*You want to go on a hike that crosses a farmer's property. You think that you could hike across their farm without them noticing, but it would be more polite if you asked them for permission first. You **should** ask the farmer to walk through their land.*

(35) **Lubukusu**

*w-eny-ekh-an-ε o-sab-ε balimi nio o-kend-ε mu bulime mwabwe*  
 2SG-MOD.II-AC-REC-FV 2SG-ask-FV 1farmer if? 2SG-walk-FV in 3land 3his  
 'You should ask the farmer if? you might walk on his land.'

(36) **Lutiriki**

*khu-tukh-a u-rhev-ε murimi munwa kwa khu-chend-a murimi.*  
 15-MOD.III-FV 2-ask?-FV 1farmer 3mouth in.order.to 15-walk-FV 3land  
 'You should the farmer permission to walk his land.'

### Circumstantial possibility

*Imali knows how to make mandazi (fried dough balls). When she travels overseas, she likes to make mandazi for the people she visits, so she can show them a common food from Kenya. Imali is in Canada right now. She goes to the grocery store and picks up the ingredients. Now, Imali **can** make mandazi.*

(37) **Llogoori**

*sasa Imali a-nyal-a ku-roomba mandazi*  
 now 1Imali 1-MOD.I-FV 15-make 6mandazi  
 'Now Imali can make mandazi.'

(38) **Lunyore**

*Amisi a-nyal-a okhu-teeka amandazi*  
 1Amisi 1-MOD.I-FV 15-cook 6mandazi  
 'Amisi can cook mandazi.'

(39) **Lubukusu**

*Imali a-nyal-a ku-tekha mandasi biise bino*  
 1Imali 1-MOD.I-FV 15-cook 6mandazi ?time ?this  
 'Imali can make mandazi now.'

(40) **Luwanga**

*Imali a-nyal-a okhu-tekha amandasi bulano*  
 1Imali 1-MOD.I-FV 15-cook 6mandazi now?  
 'Imali can make mandazi now.'

(41) **Lutiriki**

*Imali a-nyal-a khu-tekha mandasi.*  
 1Imali 1-MOD.I-FV 15-cook 6mandazi  
 'Imali can make mandazi.'

(42) **Lusaamia**

*Nabwire a-nyal-a o-deha mandasi*  
 Nabwire 1-MOD.I-FV 15-cook mandazi  
 'Nabwire can cook mandazi.'

### Circumstantial necessity

*You are on a bus to Nairobi. You have not had a chance to go to the toilet for 6 hours, and your bladder is full. You text your friend: “I **have to** pee so badly!”*

(43) **Llogoori**

*ku-duk-a nzi-nyal-ε*  
15-MOD.III-FV 1SG-urinate-FV  
'I have to pee.'

(44) **Lunyore**

*n-eny-a okhu-tsia okhu-inyala*  
1SG-MOD.II-FV 15-go 15-pee  
'I want to go pee.'<sup>4</sup>

(45) **Lubukusu**

*∅-khoy-el-a ni-inyale buubi po*  
1SG?-MOD.III-APPL-FV 1SG-pee very ID  
'I really have to pee.'

(46) **Luwanga**

*paka nd-inyal-ε*  
must 1SG-pee-FV  
'I must pee.'

(47) **Lutiriki**

*ka-tukh-an-a nd-inyar-ε vutamanu sana*  
6-MOD.III-REC-FV 1SG-pee-FV badly? very  
'I must pee very badly.'

(48) **Lusaamia**

*n-eny-a okhu-inyala*  
1SG-MOD.II-FV 15-pee  
'I have/need to pee.'

*You have to sneeze, and want to be polite. You say, “Excuse me! **I have to** sneeze.”*

(49) **Luwanga**

*o-khula nd-asumul-ε*  
15-MOD.III 1-sneeze-FV  
'I have to sneeze.'

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<sup>4</sup>We note that this data is consistent with other Lunyore modal data; however, the use of the two embedded infinitival verbs is unusual.

## Teleological necessity

*There is only one flight a day from Nairobi to Kisumu. So, if you want to fly to Kisumu today, you **have to take this flight.***

- (50) **Llogoori**  
*ni u-eny-ε ku-zia Kisumu, ku-duka u-niin-ε indege eye*  
 if 2SG-MOD.II-FV 15-go 1Kisumu, 15-reach 1SG-take-FV 9flight 9this  
 ‘If you want to go to Kisumu, you must take this flight.’
- (51) **Lunyore**  
*okhu-ol-a o-tsi-ε nende na indege ino*  
 15-MOD.III-FV 2SG-go-FV with PRT 9flight 9this  
 ‘You must take this flight.’
- (52) **Lubukusu**  
*o-khoy-el-a o-bukul-ε endeke yino*  
 2SG-MOD.III-APPL-FV 2SG-take-FV 9flight 9this  
 ‘You must take this flight.’
- (53) **Lutiriki**  
*ka-tukh-an-a u-vukul-ε indeche iyi.*  
 6-MOD.III-REC-FV 2SG-take-FV 9flight 9this  
 ‘You must take this flight.’
- (54) **Lusaamia**  
*o-khoy-er-a m-bukul-ε indege ino*  
 15-MOD.III-APPL-FV 1SG-take-FV 9flight 9this  
 ‘I must take this flight.’

*AFC Leopards and Gor Mahia (two football teams) are playing in the group stage of a football tournament. In order for AFC to advance, they need three points (a win) in the next game against Gor Mahia. Otherwise, they will be eliminated from the tournament. You say, “AFC **must** defeat Gor Mahia.”*

- (55) **Llogoori**  
*AFC ku-duk-a va-leg-ε Gor Mahia*  
 1AFC 15-MOD.III-FV 2-beat-FV 1Gor Mahia  
 ‘AFC must defeat Gor Mahia.’
- (56) **Lunyore**  
*mpaka Gor Mahia ba-lek-ε AFC Leopards*  
 must 1Gor Mahia 2-defeat-FV 1AFC 1Leopards  
 ‘Gor Mahia must defeat AFC Leopards.’
- (57) **Luwanga**  
*o-khul-a AFC i-khup-ε Gor Mahia*  
 15-MOD.III-FV 1AFC 1-beat-FV 1Gor Mahia  
 ‘AFC must beat Gor Mahia.’
- (58) **Lusaamia**  
*o-khoy-er-a khu-hin-ε Gor Mahia*  
 15-MOD.III-APPL-FV 1PL-beat-FV 1Gor Mahia  
 ‘We have to beat Gor Mahia.’



## Weak teleological necessity

*There are three markets close to where Maina is staying in Kisumu. Sira tells him that the market to the east is the cheapest, the market to the west is the most expensive, and the market to the south has the fewest vendors. According to Sira, the eastern market is the best. So to get the best groceries, Maina should go to the market to the east. Since that market is far away, Sira says, “You **should** take a matatu.”*

(59) **Llogoori**

*w-eny-ek-a o-niin-ε matatu*  
2SG-MOD.II-AC-FV 2SG-take-FV matatu

‘You need to take a matatu.’

(60) **Lunyore**

*ka-eny-ekh-a o-niin-ε matatu*  
6-MOD.II-SC-FV 2SG-take-FV matatu

‘You should take a matatu.’

(61) **Lubukusu**

*khu khu-ol-a khusoko Vihiga, w-eny-ekh-a o-bukul-ε ematatu*  
in.order.to 15-MOD.III-FV market? Vihiga, 2-MOD.II-SC-FV 2SG-take-FV 9matatu

‘To get to Vihiga’s market(?), you should take a matatu.’

(62) **Luwanga**

*fi-eny-ekh-an-a a-vukul-ε matatu*  
8-MOD.II-AC-REC-FV 1-take-FV matatu

‘He should take a matatu.’

(63) **Lutiriki**

*khu-tukh-a iVihiga ka-eny-ekh-a u-vukul-ε matatu*  
15-MOD.III-FV 9Vihiga 6-MOD.II-AC-FV 2SG-take-FV matatu

‘You should take a matatu.’

(64) **Lusaamia**

*vi-dakh-ikh-an-a o-vukul-ε matatu*  
8-desire-AC-REC-FV 2SG-take-FV matatu

‘You should take a matatu.’

## References

- Vander Klok, J. (2014). Modal Questionnaire for Cross-Linguistic Use. Online version: [https://www.eva.mpg.de/lingua/tools-at-lingboard/pdf/Modal\\_Questionnaire\\_-\\_CrossLing\\_JVK.pdf](https://www.eva.mpg.de/lingua/tools-at-lingboard/pdf/Modal_Questionnaire_-_CrossLing_JVK.pdf).