The Kirundi noun phrase
An interface approach

Katya Morgunova & David Shanks

Department of Linguistics, McGill University

katya.morgunova@mail.mcgill.ca, david.shanks4@mail.mcgill.ca

June 13, 2023

ACAL 54, University of Connecticut

Overview

- Through reference to the interaction of phonology and syntax, we propose an articulated structure for Kirundi nominals.

- We examine asymmetries between regular nominals and demonstrative phrases, showing them to be distinct structural categories.

- We also discuss the difference between two preposition-like elements – locatives and linkers – and show that they differ in the type of complement they select for.

Kirundi

- Great Lakes Bantu (J62/D62) (Bastin 2003).

- 11 million speakers primarily in Burundi.
  - Also in the DRC, Kenya, Rwanda, Tanzania and Uganda.

- Part of the Rwanda-Rundi dialect continuum with Kinyarwanda and Ha.

Data

Nominals in Kirundi

- Kirundi nouns in citation form consist of an augment (V-), a noun class prefix (CV-, N- or null) and a noun stem.

(1)   a.   umugoré   b.   igikére   c.   izúuba

u-mu-goré   i-ki-kére   i-Ø-zúuba

AUG-1-woman   AUG-7-frog   AUG-5-sun

'woman'   'frog'   'sun'

Kirundi noun classes

Number	Prefix	Example		Number	Prefix	Example	
1	mu-	u-mu-goré	'woman'	2	ba-	a-ba-goré	'women'
3	mu-	u-mu-twe	'head'	4	mi-	i-mi-twe	'heads'
5	ri-/Ø-	i-Ø-buye	'stone'	6	ma-	a-ma-buye	'stones'
7	ki-	i-gi-keré	'frog'	8	bi-	i-bi-keré	'frogs'
9	n-/Ø-	i-n-ká	'cow'	10	n-	i-n-ká	'cows'
11	ru-	u-ru-syo	'grinding stone'				
12	ka-	a-ka-buúnda	'puppy'	13	tu-	u-tu-buúnda	'puppies'
14	bu-	u-bu-menyi	'knowledge'				
15	ku-	u-ku-ri	'truth'				
16	ha-	a-ha-ntu	'location'				

Demonstrative phrases

- Kirundi has multiple series of deictic demonstratives, differentiated by degree of distance, as well as one series of anaphoric demonstratives.

(2)   a. iyi   nká   b.   yáa   nká

iyi	n-ká	yáa	n-ká
DEM.PROX.9	9-cow	DEM.ANAPH.9	9-cow
'this cow'		'this (aforementioned) cow'	

The augment in locative phrases

- Kirundi also has three locative elements:
  - mu 'in, into, within'
  - ku 'on, upon, at, from'
  - i 'in, to, at'

(3) a.   mu murima   b. ku bavyéeyi   c. i Bujumbura

            mu   mu-rima   ku ba-vyéeyi   i Bu-jumbura

            in   3-field   to 2-parent   in 14-Bujumbura

            'in the field'   'to the parents'   'in Bujumbura'

The augment in locative phrases

- Nouns of most classes lack the augment when they are preceded by a locative element, with the exception of null class nominals; the latter retain the initial *i-* in locative phrases.

(4)   mw'iishuúre
        mu   i-Ø-shuúre
        in   AUG-5-school
        'in the school'

muri and *kuri*

- The locative elements *mu* and *ku* must be realized as *muri* and *kuri* when they take demonstrative phrases or proper names as their complements.

(5)   a. **kuri**   iyi   nká   b.   ***ku** iyi   nká
          ku-ri   iyi   n-ká   ku   iyi   n-ká
          on-RI   DEM.9   9-cow   on   DEM.9   9-cow
          'on this cow'   intended: on this cow

muri and *kuri*

- This form, however, cannot be used with regular nouns.

(6) a. ***muri** murima b. **mu** murima

  mu-ri mu-rima mu mu-rima

  in-RI 3-field in 3-field

  intended: in the field 'in the field'

The augment in linker phrases

- The linker element *na* has a variety of uses, like coordination and argument introduction, as shown below.

(7)   Ingoma   iravúzwa   na   Mizero.

             i-n-goma   i-ra-vúzwa   na   Mizero

             AUG-9-drum 9S-DJ-is.played   LK   Mizero

             'The drum is played by Mizero today.'

The augment in linker phrases

- When the noun is preceded by a linker, the augment is preserved with all classes.

(8)   a.   n'umugoré
         na   u-mu-goré
         LK   AUG-1-woman
         'with a woman'

         b.   n'iitsítso
         na   i-Ø-tsítso
         LK   AUG-5-stem
         'as a stem'

The augment in linker phrases

- Unlike locative prefixes, linkers can merge with both augmented nominals and demonstrative phrases directly.

(9) a. n'umugoré
    na   u-mu-goré
    LK   AUG-1-woman
    'with a woman'

b. n'uyu   mugoré
    na uyu   mu-goré
    LK DEM.1 1-woman
    'with this woman'

Summary

Realization of the augment

	CV-class AUG	Ø-class AUG
argument	✓	✓
locative phrase	✕	✓
linker phrase	✓	✓

Locative alternations

	mu, ku	muri, kuri
noun	✓	✕
dem phrase	✕	✓

Background

The augment

- The augment is an element (CV, V or tonal) found before noun class prefixes in many Bantu languages (de Blois 1970).

- In languages like Bulu, it resembles a definite article, appearing only on definite nouns (Clem 2014).

- This is not the case for Kirundi, since bare (augmentless) nouns are never permitted in argument positions (e.g., Ntahokaja 1994, Zorc & Nibagwire 2007). Moreover, augmented nouns are ambiguous between definite and indefinite interpretation.

Bantu locatives

- Proto-Bantu is reconstructed with three locative noun classes: *pa- (16), *ku- (17) and *mu- (18) (Ziervogel 1971).

- In many Bantu languages, locatives are noun class prefixes (either alone or iterating), triggering class agreement (16, 17 or 18) on verbs (e.g. Bresnan 1994 for Chichewa).

- In Kirundi, only class 16 (*ha-*) is a noun class that triggers agreement. The other locative elements *ku* and *mu* do not trigger agreement, and the distribution of locative phrases differs from that of nominals (Morgunova & Shanks 2023, cf. Ngoboka 2017 for Kinyarwanda).

Universal syntactic spine

Universal Spine Hypothesis (Bliss 2013, Wiltschko 2014): a fixed order of the functional categories, parallel for the nominal and verbal domains.
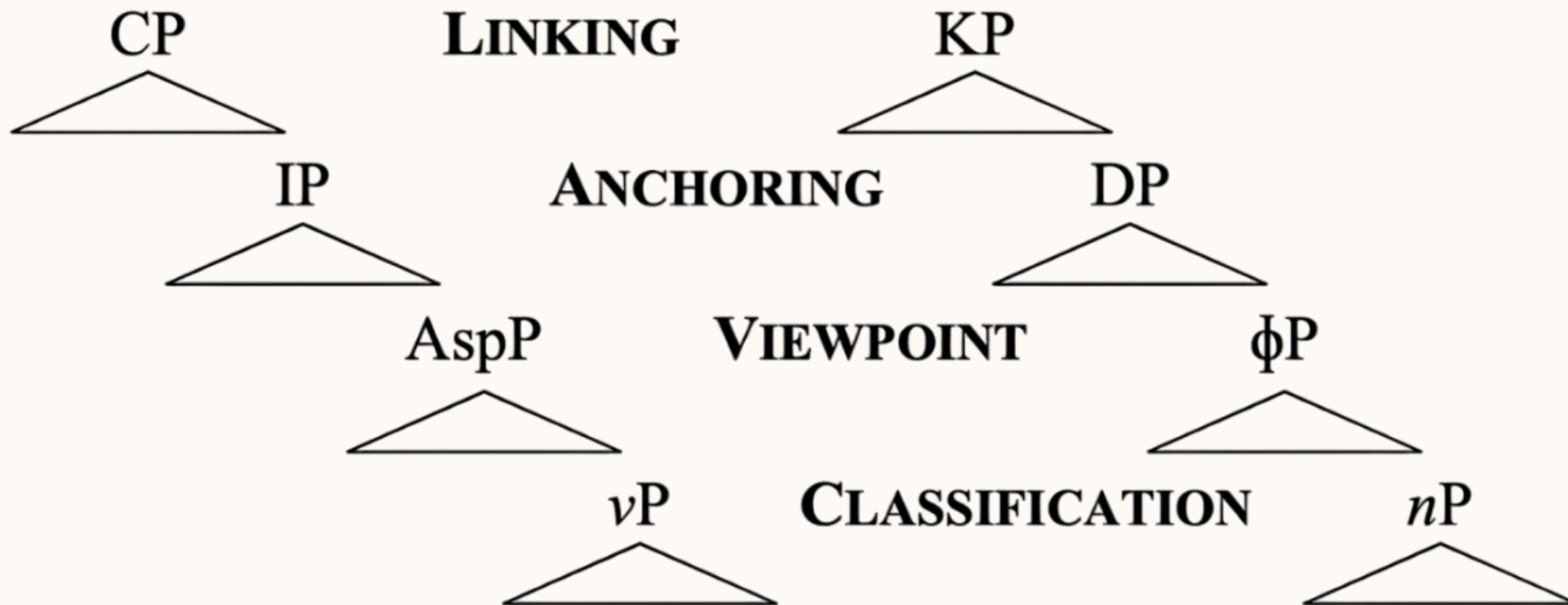
The phonology-syntax interface

- Syntax proceeds cyclically by phase (Chomsky 2000).

- Words are built in the syntax (e.g. DM, Halle & Marantz 1994).

- Phases correspond to phonological spellout domains (Newell 2008):
  - After each phase is constructed by the syntax, it is passed to the phonology for spellout.

- Each phase is spelled out as a chunk:
  - nP and DP are phases (e.g. Chomsky 2001), so are spellout domains.
  - √ and φP are not phases, so are not.

The phonology of Kirundi nominals

- The augment is an epenthetic vowel which copies the features of the adjacent class prefix (Shanks 2022, cf. Ndayiragije et al. 2012, Niyondagara 1993):
  - It is epenthesized to give phonological content to the features of the φ-head.
  - The augment is weightless (mora-less), since it is epenthetic (e.g. Piggott 1995).
  - Its copying of vowel features from the class prefix can fail if the class prefix contains no vowels (e.g. null and N classes), giving default [i-].

(10) a. $u_x mu_x goré$ b. $i_y nká$
          V-mu-gore   V-N-ká
          AUG-1-woman   AUG-9-cow
          'woman'   'cow'

The phonology of Kirundi nominals

- Null and N class noun class prefixes have complex underlying forms which explain phonological asymmetries between them and CV classes (Shanks 2023, cf. Choti 2015 for Kinyarwanda, Ndayiragije et al. 2012).

- Both non-CV class prefixes are underlyingly moraic, showing complex weight effects (beyond the scope of this talk).

- N class prefixes are underlyingly $/N_\mu/$, while "null" class prefixes are $/\emptyset_\mu/$.

The phonology of locative phrases

- Locative phrases with regular augmented nouns underlyingly contain the augment (Shanks 2022):
    - No augment surfaces in locatives with CV class nouns (11a).
    - But it does surface with null class nouns (11b).

(11) a. mu   murima
         mu   V-mu-rima
         in   AUG-3-field
         'in a field'

b. mw'iishuúre
    mu   V-Ø-shuúre
    in   AUG-5-school
    'in a school'

- Asymmetries in deletion are due to the underlying form of class prefixes rather than syntax (Shanks 2023).

Proposal

Summary

Realization of the augment

	CV-class AUG	**Ø-class AUG**
argument	✓	✓
locative phrase	✗	✓
linker phrase	✓	✓

Locative alternations

	mu, ku	**muri, kuri**
noun	✓	✗
dem phrase	✗	✓

Two categories of nominals

- **Hypothesis 1**: Both augmented nouns and demonstrative phrases can be arguments, so they have the same structural category.

- However, they differ with regard to locative phrases:
  - Locatives surface as *mu* and *ku* with (underlyingly) augmented nouns (12a).
  - But, they surface as *muri* and *kuri* with demonstrative phrases (12b).

(12) a.   ku nká   b.   kuri   iyi   nká
           ku V-n-ká   ku-ri   iyi   n-ká
            on AUG-9-cow   on-RI   DEM.9 9-cow
           'on the cow'   'on that cow'

Two categories of nominals

- **Hypothesis 2**: The augment is in D (e.g. Ndayiragije et al. 2012), and augmented nouns are DPs. Demonstrative phrases have additional structure (e.g. KP/LinkP for Blackfoot, Bliss 2013).

- This would account for the distributional asymmetry in locatives, with locatives selecting for a DP complement.

- However, since DP is a phase, it would be spelled out by the phonology before merging with the locative.
  - This would incorrectly predict that the augment would never delete in locative phrases.

- Therefore, augmented nouns must be smaller than DP.

Two categories of nominals

- **Hypothesis 3**: Augmented nouns are φPs, while demonstrative phrases are DPs (see, e.g., Chierchia 1998).

- The augment occupies the φ head, which is the projection between DP and nP in the nominal spine.
  - Correspond to the Viewpoint role of φP (~AspP in the clausal spine).

- Demonstrative phrases are DPs.
  - Demonstratives themselves are DPs rather than D, since they are multimorphemic and are spelled out by the phonology prior to merging with head nouns (e.g. Morgunova & Shanks 2023).
  - They are in Spec, DP, corresponding to the Anchoring role of DP (~TP).

Summary

Realization of the augment

	CV-class AUG	Ø-class AUG
argument	✓	✓
locative phrase	✗	✓
linker phrase	✓	✓

Locative alternations

|	mu, ku	muri, kuri
noun	✓	✗
dem phrase	✗	✓

Locative phrases as PPs

- We propose that locatives select φP as their complements.

- Locative heads are not D elements as their distribution differs from that of DPs (cf. Ngoboka 2017 for Kinyarwanda).
  - For examples, locative phrases can be adjuncts, while DPs cannot.
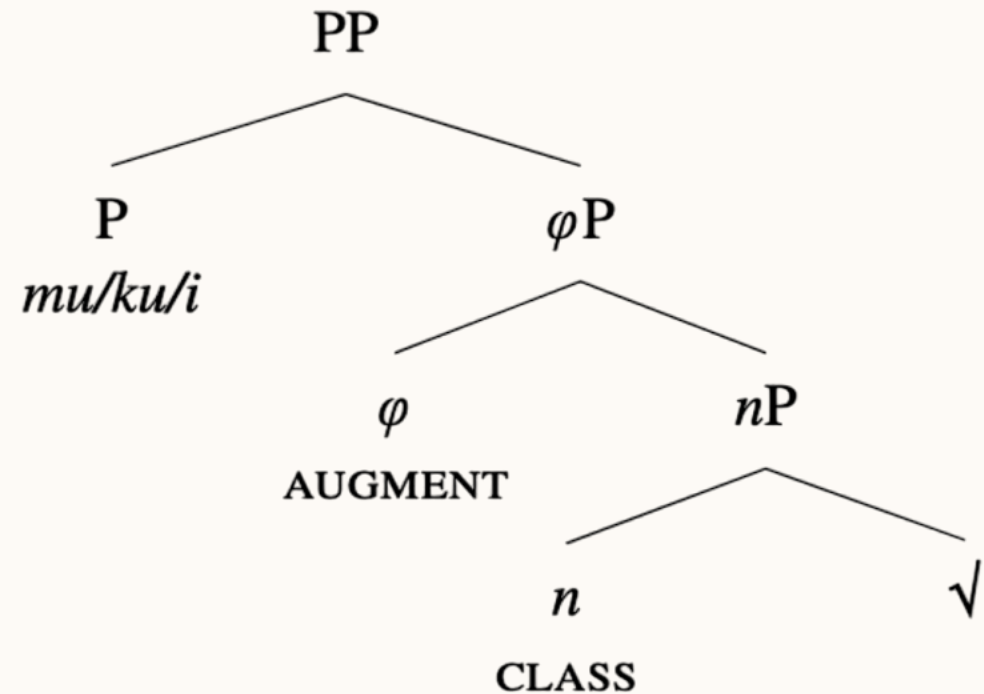
-ri as a repair mechanism

- Locatives do not take DPs as their complements and therefore cannot merge with demonstrative phrases directly.

- Instead, default (class 5) nominal structure is inserted to satisfy the selectional restrictions of the locative head.

(13)   mu **ri**gí
         mu V-**ri**-gí
         in   V-**5**-egg
         'in the egg'
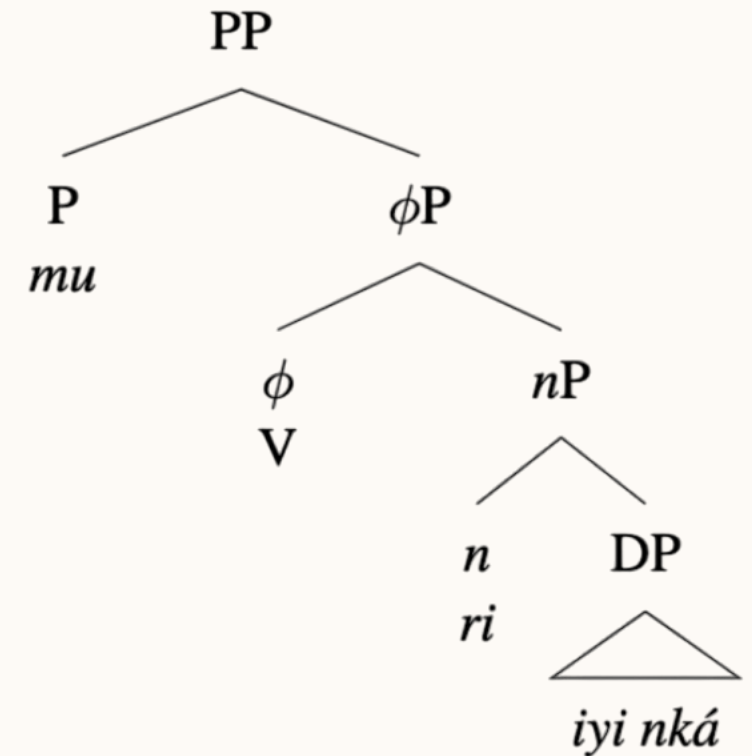
The complements of linker phrases

- Unlike locatives, the linker *na* can directly merge with both augmented nouns and demonstrative phrases.

- An additional asymmetry is that the augment is never deleted in linker phrases.

(14) a.   n'umugoré
           na   u-mu-goré
           LK   AUG-1-woman
           'with a woman'

b.   n'uyu   mugoré
      na uyu   mu-goré
      LK DEM.1 1-stem
      'with this woman'

Linker phrases as KPs

- We propose that the linker *na* selects for a DP; that allows it to merge with both augmented nouns (with a null D head) and demonstrative phrases directly.

- The linker thus corresponds to a K head, associated with nominal licensing.

- The augment on the complement noun is always realized as it is spelled out as a part of the DP phase.
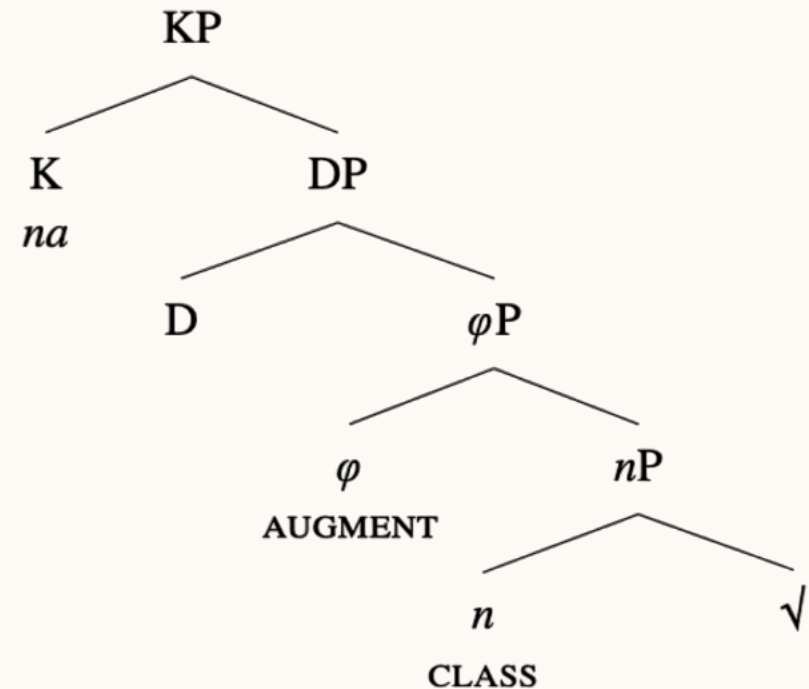
Conclusion

- In this talk, we look at different elements appearing in nominal phrases and argue that they correspond to different functional categories in the nominal domain:

1. The augment vowel is a φ head, making augmented nouns are φPs. Demonstrative phrases are DPs; this explains the difference in the distribution of augmented nouns and demonstrative phrases.

2. Locatives are P that select for φPs as their complements. This triggers the appearance of the nominal layer on the DP complements they take.

3. The linker *na* corresponds to the K head and acts as a nominal licensor. The augment is always realized in linker phrases as it is spelled out as a part of the DP phase.

Aknowledgements

We are very grateful to Benilde Mizero for sharing his language with us and always being an enthusiastic and refreshing voice. *Urakóze caane!*

Thanks to Jessica Coon, Terrance Gatchalian, Heather Goad, Martina Martinović, Willie Myers, Juvénal Ndayiragije, and Junko Shimoyama.

We are also grateful to the participants of the Winter 2022 Linguistic Field Research class at McGill University, the audience at Ba-TOM 1 and members of MULL-Lab at McGill University for their feedback.

References

Bastin, Y. 2003. The Interlacustrine zone (zone J). In *The Bantu languages*, ed. by D Nurse & G Philippson, 501–28. Routledge.

Bliss, H. *The Blackfoot configurationality conspiracy: Parallels and differences in clausal and nominal structures*. UBC dissertation.

de Blois, KF. 1970. The augment in Bantu languages. *Africana Linguistica*. 4.85–165.

Bresnan, J. 1994. Locative inversion and the architecture of Universal Grammar. *Language*. 70.72–131.

Carstens, V. 2008. DP in Bantu and Romance. In *The Bantu-Romance connection*, ed. by K Demuth & C de Cat, 131-166. Benjamins.

Chierchia, G. 1998. Reference to kinds across language. *Natural Language Semantics*. 6.339–405.

Chomsky, N. 2000. Minimalist inquiries. In *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*, ed. by R Martin, D Michaels & J Uriagereka, 89–155. MIT Press.

Chomsky, N. 2001. Derivation by phase. In *Ken Hale: A life in language*, ed. by M Kenstowicz, 1–52. MIT Press.

Choti, J. 2015. *Phonological (a)symmetries of nasal prefixes in Bantu*. MSU dissertation.

References

Clem, E. 2014. *The interaction of lexical and grammatical tone in the Bulu verb system*. OSU dissertation.

Halle, M & A Marantz. 1994. Some key features of Distributed Morphology. *MIT Working Papers in Linguistics*. 21.275–288.

Morgunova, K & D Shanks. 2023. On the left periphery of the Kirundi noun phrase. *TWPL*, to appear.

Ndayiragije, J, E Nikiema & P Bhatt. 2012. The augment in Kirundi: When syntax meets phonology. In *Selected proceedings of ACAL 42*, ed. by MR Marlo, N Adams, CR Green, M Morrison & TM Purvis, 112–21. Cascadilla.

Newell, H. 2008. *Aspects of the morphology and phonology of phases*. McGill dissertation.

Niyondagara, A. 1993. *Kirundi phonological representations and the formation of complex segments*. Stony Brook dissertation.

Ngoboka, JP. 2017. Locative markers in Kinyarwanda as determiners. *Nordic Journal of African Studies*. 26.292–317.

Ntahokaja, J-B. 1994. *Grammaire structurale du kirundi*. L'université du Burundi.

Shanks, D. 2022. Copying your neighbour: The Kirundi augment as total vowel assimilation. Paper presented at Ba-TOM 1.

References

Shanks, D. 2023. Spelling out the Kirundi augment: Prosodic domains, epenthesis, and weight. *TWPL*, to appear.

Wiltschko, M. 2014. *The universal structure of categories: Towards a formal typology*. CUP.

Ziervogel, D. 1971. The Bantu locative. *African Studies*. 3/4.371–384.

Zorc, R & L Nibagwire. 2007. *Kinyarwanda and Kirundi comparative grammar*. Dunwoody.

Augmentless nouns

- The augment is obligatorily present on most nouns in citation form and argument positions, with the exception of proper names, kinship terms and certain loanwords.

(15)   a. Kagabo   b. maawe   c. paruwaasi
             'Kagabo'   'my mom'   'perish'

Augment asymmetries

- While augments are realized with null class nouns in locative phrases, they are never realized with demonstratives. We have argued that this shows that the augment is not present underlyingly in demonstrative phrases (Morgunova & Shanks 2023, Shanks 2022, 2023).

(16) mw'iishuúre
      mu   i-Ø-shuúre
      in   AUG-9-school
      'in the school'

(17) iyo   shuúre
      iyo   Ø-shuúre
      DEM   9-school
      'that school'

Locative phrases as PPs

- Locative phrases also differ from DPs in linker phrases
  - The linker surfaces as *na* with DPs
  - But, it surfaces as *nó* with locatives.

(18) a. na Montreal   b.   n'inká   c.   nó mu cuúmba

          na Montreal   na   i-n-ká   nó mu ki-uúmba

          LK Montreal   LK   AUG-9-cow   LK   in   7-room

          'by Montreal'   'by a cow'   'by the insides of the room'