



The Prosody of Rutooro Adnominals

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LANGUAGE BACKGROUND

- Rutooro (E/J.12) is a Bantu language spoken by approx. 500,000 in Western Uganda near Fort Portal (1991 census).
- Closely related languages in the Nyooro/Ganda group are Luganda, Runyankore, Ruciga, Nyooro, Soga, and Gwere.
- Resources include a dictionary (Kaji 2007), a brief article on tone (Kaji 2008), and a Runyooro-Rutooro grammar (Rubongoya 1999).
- Data from a 26 year old field methods consultant from Fort Portal, who speaks L1 Rutooro and L2 Luganda.

PROMINENCE

- Prominence (H) in isolation surfaces on the penult:

1. ku-sóm-a	'to read'	4. o-mu-lími	'farmer'
2. ba-hik-íre	'they arrived'	5. mpóra	'slowly'
3. éé-n-go	'alligator'	6. bi-sátu	'three (C8)'
- However, not all words are assigned prominence in context:

7. E-ki-tábu	ky-áánge.	8. e-ki-tabu	ky-áánge
AUG-C7-book	C7-my	AUG-C7-book	C7-my
'The book is mine.' 'my book' (Kagi 2008)			
- | | | | | |
|---|--------------|--------|--------------------|--------------|
| 9. Íijo | a-bá-ána | b-óóna | ba-ka-sóm-a | múú-n-ju. |
| yesterday | AUG-CI-child | CI-all | 3SG.SM-TAM-read-FV | LOC-C9-house |
| 'Yesterday all the children READ in the house.' | | | | |
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|--|-------------|---------------|----------|-------------|
| 10. Nii-n-j-a | kw-eend-a | ba-taandik-e | ku-som | ee-bi-tábu. |
| 1SG.SM-TAM-go-FV | INF-want-FV | SM-start-SBJV | INF-read | AUG-C7-book |
| 'I will want that they start to read the books.' | | | | |
- Taking-off point: prominence is assigned to the penult of the ϕ -phrase, not phonological- ω .

DISTRIBUTION OF H TONES

- A H marks the subject and the right-edge of the VP: the verb in intransitive and the object in transitive clauses.

11. [DP Kajúúmba] [VP a-irúk-a].
Kajumba 3SG.SM-run-FV
'Kajumba runs.'
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|---|
| 12. [DP Kajúúmba] [VP a-raa-gur [DP ee-n-káito]]. |
| Kajumba 3SG.SM-FUT-buy AUG-C10-shoe |
| 'Kajumba will buy the shoes.' |
- If there are multiple post-verbal XPs (direct and indirect objects, adverbs, etc.) each one is marked with a H tone.

13. [VP Ba-ka-h [DP oo-mw-áán] [DP ee-by-ookúlya]].
3PL.SM-PST-give AUG-CI-child AUG-C8-food
'They gave the child food.'
- | |
|---|
| 14. [VP Ba-ka-vog-a [DP matóka]] [PP ha-Sabiiti]. |
| 3PL.SM-PST-drive-FV car CI6.LOC-sunday |
| 'They drove the car on Sunday.' |
- In cases of restructuring, the same patterns are found:

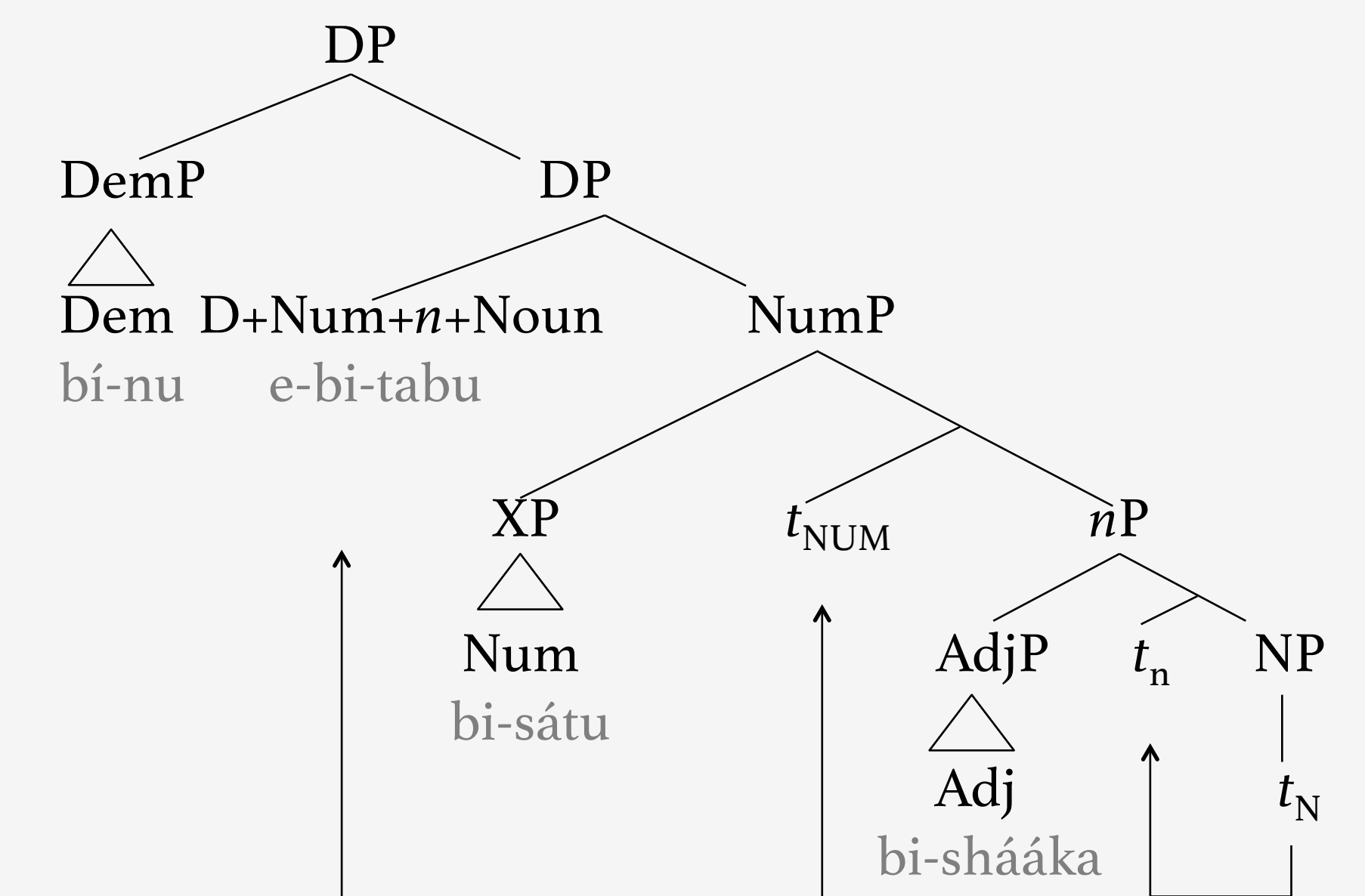
15. [VP Ni-ny-eend [DP oo-mu-lími] [VP a-som-e [DP e-ki-tábu]]].
PROG-1SG-want AUG-CI-farmer 3SG.SM-read-FV AUG-C7-book
'I want the farmer to read the book.'
- Assuming that ϕ -phrases correspond to XPs, we can account for these data by assigning prominence to the right edge of every ϕ -phrase with any number of theories of the syntax-phonology interface (i.e. Edge Alignment, Match Theory, etc.)

OVERVIEW

- In general, XPs in Rutooro correspond to ϕ -phrases with a penult bearing a H tone. We demonstrate this fact with words in isolation and intransitive, transitive, ditransitive, and restructuring clauses, where the verb is only marked H at the right edge of a ϕ -phrase.
- In adnominal phrases we find two patterns: 1) the head noun does not bear a H when it is modified by an augment-less adjective or a 'weak' determiner (e.g., numerals, possessors, certain quantifiers) or when it is modified by a reduced RC; and 2) the head noun is marked H when it immediately precedes or follows a 'strong' determiner (e.g., demonstratives, certain quantifiers) or when it is modified by a full RC or an adjective or 'weak' determiner with an augment vowel (see Milsark 1974 for strong vs. weak determiners).
- Building on Carstens' (2000, 2008) account of Bantu DP structure, we capture the distribution of H tones in Rutooro by positing that type 1 adnominals are generated in DP-internal positions, and type 2 adnominals are adjoined in a DP external position.

NON-CLAUSAL MODIFICATION

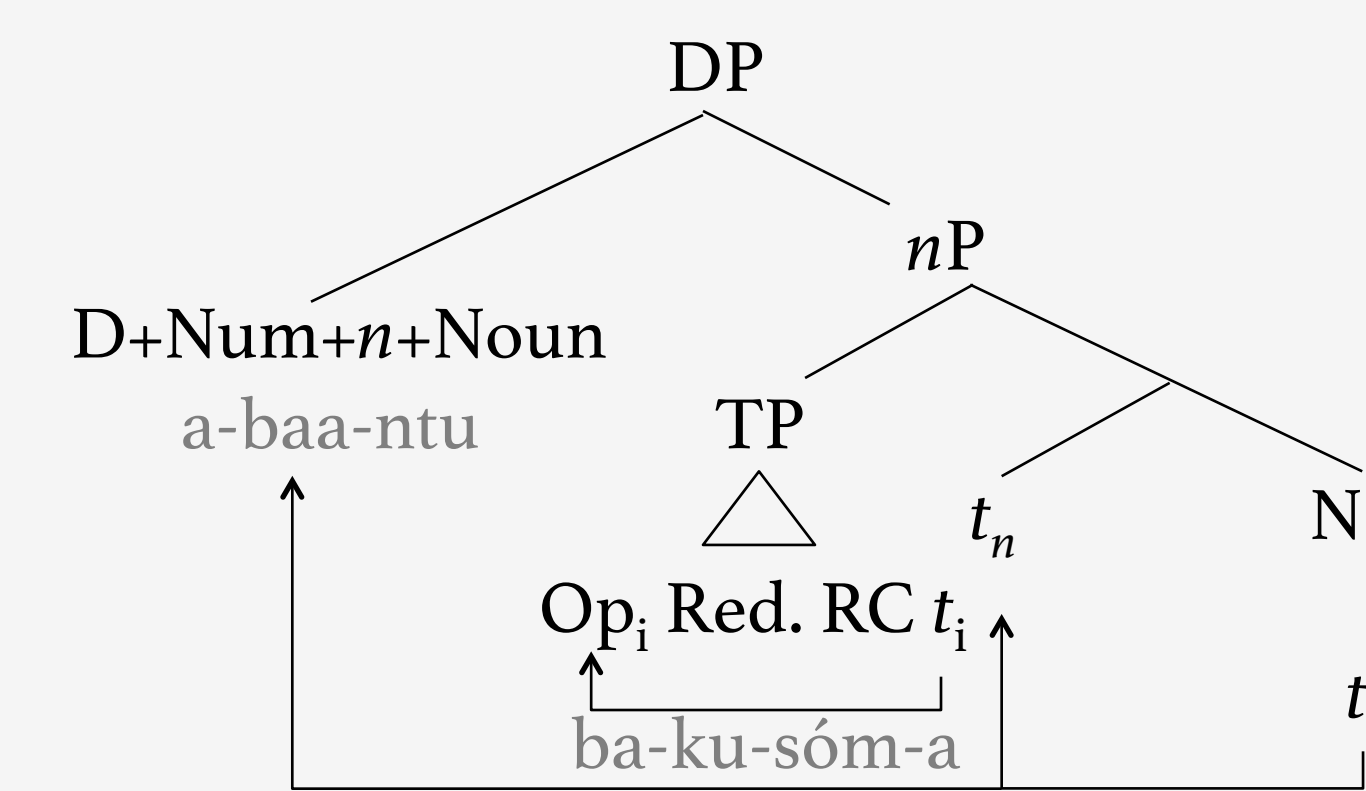
- Pattern #1: No H on head**
- Parallels between the nominal and verbal domain: the head is not marked with H, but post-nominal XPs are.
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|---|----------|-----------|
| 16. e-bi-tabu | bi-sátu | bi-shááka |
| AUG-C8-book | C8-three | C8-new |
| 'three new books' (also 'The three books are new.') | | |
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|--|-------------|---------|
| 17. e-bi-tabu | by-áánge | bí-íngi |
| AUG-C8-book | C8-POSS.1SG | C8-many |
| 'many books of mine' (also 'My books are many.') | | |
- Pattern #2: H on head**
- An exception occurs with demonstratives and other 'strong' determiners, which surface to the left or right of the noun.
 - The noun gets an H (i8-21), unless there is also a post-nominal augmentless modifier, as in (22).
 - Prosodically, strong determiners behave like subjects.
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|--------------|---------------|-------------------|--------|
| 18. bí-nu | e-bi-huguhúgu | 19. e-bi-huguhúgu | bí-nu |
| C8-DEM | AUG-C8-bat | AUG-C8-bat | C8-DEM |
| 'these bats' | | | |
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|-----------------|-------------|---------------|---------|
| 20. by-óón | ee-bi-tábu | 21. e-bi-tábu | by-óóna |
| C8-all | AUG-C8-book | AUG-C8-book | C8-all |
| 'all the books' | | | |
- | | | | | | |
|--|-------------|----------|-----------|-----------|---------|
| 22. (bí-nu) | e-bi-tabu | bi-sátu | (#bí-nu)' | bi-shááka | (bí-nu) |
| C8-DEM | AUG-C8-book | C8-three | C8-DEM | C8-new | C8-DEM |
| 'these three new books' ('These three books are new.') | | | | | |
- We can account for the distribution of H tones by placing them at the right edge of XP, by adopting Carstens (2000, 2008).



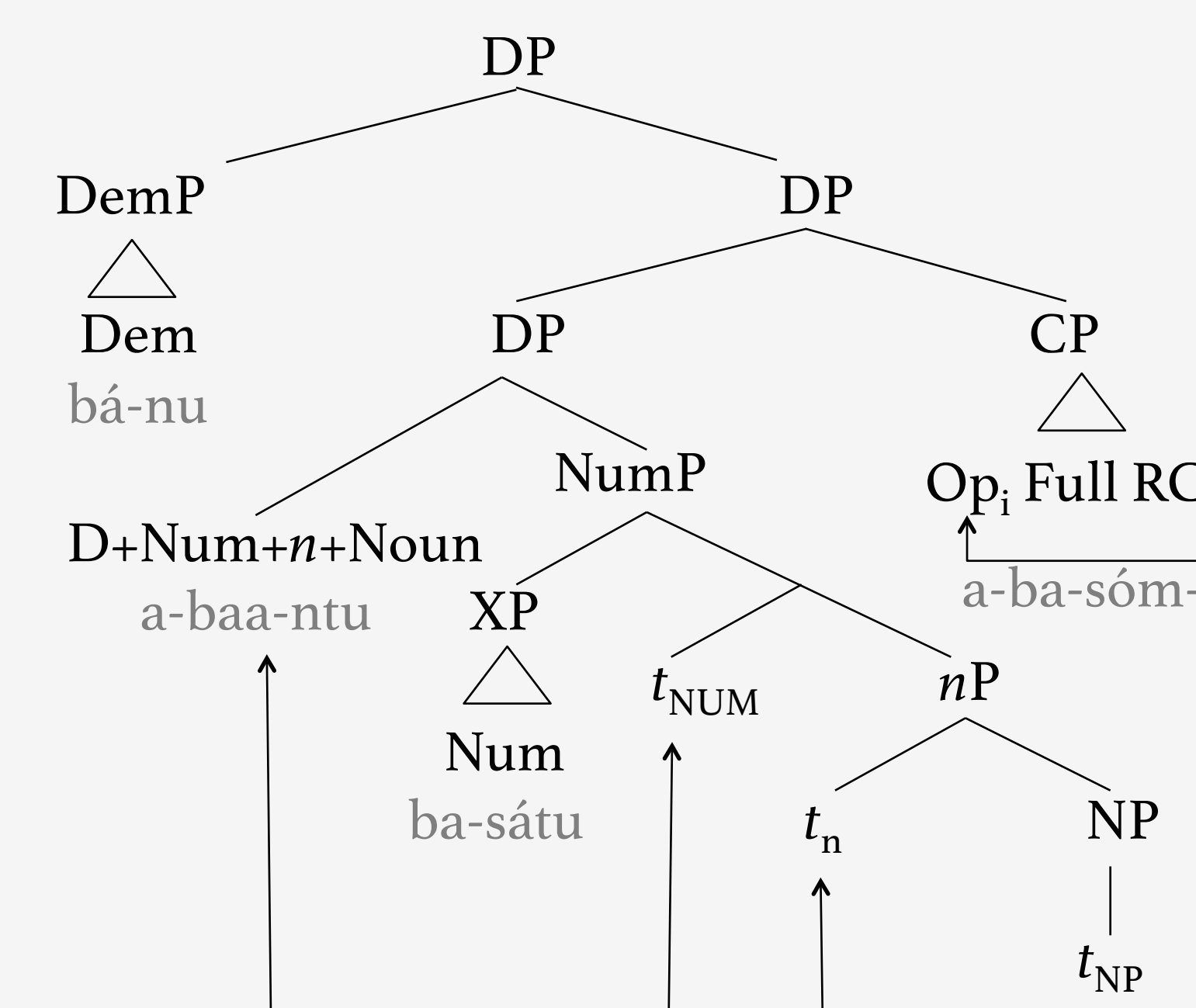
- When preceded by an augment vowel, pattern #1 modifiers trigger a H on the head noun; these examples are often translated as relative clauses (see next section for analysis).
 - This is the only option after a post-nominal demonstrative
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|-----------------|-------------|
| 24. e-bi-tábu | e-bi-shááka |
| AUG-C8-book | AUG-C8-new |
| 'the new books' | |
- | | | |
|---|--------|----------------|
| 26. e-bi-tábu | bí-nu | (#e-)bi-shááka |
| AUG-C8-book | C8-DEM | AUG-C8-new |
| 'these new books.' ('These books are new.') | | |

CLAUSAL MODIFICATION

- Pattern #1: No H on head**
- Reduced RCs (TPs – see "More RC Syntax") behave like augmentless modifiers: the RC head is not marked H
 - 'High' determiners cannot intervene between the head and the reduced RC (compare to full RCs below).
 - Subsequently we place the reduced RC in spec,nP.
 - Reduced RC template: SubjCM-Neg-T-Root-FV
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|------------------------------|--------------------|
| 26. a-baa-ntu | ba-ku-sóm-a |
| AUG-C2-person | C2.SM-PROG-read-FV |
| 'the people who are reading' | |
- | | |
|----------------------------------|--------------------|
| 27. o-mw-aana | ba-ta-góónz-a |
| AUG-CI-child | 3PL.SM-NEG-like-FV |
| 'the child that they don't like' | |



- Pattern #2: H on head**
- Full RCs (CPs – see "More Relative Clause Syntax") have the same prosodic patterns as non-clausal modifiers with the augment vowel: the RC head is marked with H.
 - 'High' determiners can follow the relative clause, precede the relative clause, or precede the head (as shown).
 - We adjoin full RCs to DP.
 - Full Subject RC: RM-SubjCM-Neg-T-Root-FV
 - Full Object RC: RM-ObjCM-SubjCM-Neg-T-Root-FV
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|-------------------------------|---------------|----------|-------------------|
| 28. bá-nu | a-baa-ntu | ba-sátu | a-ba-sóm-a |
| C2-DEM | AUG-C2-person | C2-three | REL-C2.SM-read-FV |
| 'those three people who read' | | | |
- | | |
|-------------------------------|--------------------------|
| 29. a-ka-téga | a-ka-ya-guz-ire |
| AUG-C12-bracelet | REL-C12.OM-3SG.SM-buy-FV |
| 'the bracelet that he bought' | |



MORE RC SYNTAX

- Evidence supporting an analysis that full RCs are CPs, while reduced RCs only project as high as TP:
 - Both full RCs and reduced RCs have TAM makers and subject agreement (agreement between subject and T⁰), although the form of 1st and 2nd person agreement is distinct in all RCs.
 - Full object RCs, but not reduced object RCs, show class agreement with object heads (agreement between Op and C⁰).
 - High adverbs can intervene between the subject and the verb in full object RCs and matrix clauses, but not in reduced RCs.
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|--|---------------|-----------|-----------------------|
| 30. e-bi-tábu | a-ba-lím | íijo | *(e-bi)-ba-a-som-ére |
| AUG-C8-book | AUG-C2-farmer | yesterday | RM-C8-C2-PROG-read-FV |
| 'the books the farmers read yesterday' | | | |
- The augment vowel of full RCs, absent in reduced RCs, is C⁰. Note that the distribution of augment vowels in RCs and nominals is not the same in all cases, e.g., under negation the augment vowel surfaces on the RC, but not the nominal:

31. Ti-ba-li	*(a)-ba-lími.	32. Ti-ba-li	*(a)-ba-ku-lím-a.
NEG-C2-COP	AUG-C2-farmer	NEG-C2-COP	AUG-C2-farmer
'They aren't farmers.'		'They aren't ones who are farming.'	
- For these reasons, we argue for an analysis where reduced RCs are TPs and full RCs are CPs. We adopt matching analyses for both, for the following reasons:
 - Raising analyses of RCs are incompatible with head-movement in the DP domain.
 - There is no evidence of movement in either case types of RCs (see also Pak 2007 for Luganda).

OPEN QUESTIONS

- There are no cases of reduced RCs immediately following a right-edge boundary, i.e. the word preceding a reduced RC never has a H.
 - Headless RCs *must* be full relative clauses.
 - Certain high adverbs in the initial position of reduced RCs (a dispreferred position for these adverbs) phrase with the RC.
 - Overt subjects in reduced object RCs phrase with the RC, but in these contexts the object head is phrased separately.
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|---|----------------|----------------|
| 33. o-mw-áána | a-ba-lími | ba-ta-góónz-a |
| AUG-CI-child | AUG-C2.-farmer | C2-NEG-like-FV |
| 'the child that the farmers don't like' | | |
- Should an ad-hoc constraint suppressing right-edge boundaries before reduced RCs replace our syntactic account? If so we'd lose
 - the parallel between clausal and non-clausal modification, and
 - an explanation for why 'high' determiners can intervene between the head and the full RC but not reduced RC.

REFERENCES

- Carstens 2000: Concord in Minimalist Theory. *LI*. Carstens 2008. DP in Bantu and Romance. In *The Bantu-Romance Connection*. Kaji 2007: A Rutooro Vocabulary. Tokyo: Research Institute for Languages and Cultures of Asia and Africa. Kaji 2008. Tone and syntax in Rutooro, a toneless Bantu language of Western Uganda. *Language Sciences* 31: 239-247. Milsark, Gary. 1974. Existential sentences in English. Ph.D. thesis, MIT. Pak 2008: The Postsyntactic Derivation and its Phonological Reflexes. PhD thesis, UPenn. Rubongoya 1999: Modern Runyooro-Rutooro Grammar. Köln: Rüdiger Köppe Verlag. Selkirk 2011: The syntax-phonology interface. In *The Handbook of Phonological Theory*. Thanks to our language consultant Barbara Balinda; Michael Diercks, Arsalan Kahnemuyipour, Claire Halpert, Larry Hyman, Jochen Zeller, and Jason Zentz; and audiences at ACAL 47 and Toronto's Syntax/Semantics Research Group.