Deverbal Nominalizations in Runyankore

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In this paper I examine eleven different processes of deverbal nominalization in Runyankore, a Lacustrine Bantu language spoken in Uganda. After establishing both general and Runyankore-specific properties that distinguish nouns from verbs, I test each of these nominalizations against 13 phonological, morphological, and syntactic criteria. Although all eleven nominalization constructions can take the determiner-like initial vowel “augment”, and all can be derived from verb bases that include derivational suffixes (“extensions”), e.g. causative, applicative, and reciprocal, only some of the nominalizations allow a pronominal object prefix or a following noun phrase object or adverbial. The various properties are tabulated to show that the different nominalizations vary along a cline, meeting all, some, or none of the nine most discriminating criteria in defining “noun” vs. “verb”.

Keywords: nominalization, agentives, instrumentalss, causatives, locatives, passives, noun-verb cline

1. Introduction

Most Bantu languages have several means by which nouns can be derived from verbs. Meeussen (1967: 93-95) surveys the different vowel suffixes (and perfective *-ile) which are found on lexicalized nouns that may trace back to Proto-Bantu. Comprehensive grammars of currently spoken Bantu languages often do the same, as when Ashton et al (1954: 373-380) systematically examine deverbal nouns ending in each of Luganda’s five vowels -i, -u, -e, -o and -a, passive -wa, and -ye (< *-ile). While Lacustrine Bantu languages such as Luganda are particularly rich in such nominalizations, other than noting the form-meaning association of each derivational process, there have been few studies of the full range of grammatical and phonological properties of each type of nominalization. The goal of the present paper is to provide one such study for Runyankore [ISO: nyn], a major language of Uganda.¹ A key question that will be addressed is how much of the verbal source of the nominalization is accessible in each nominalization process. The paper is organized as follows. In §2 I introduce the different deverbal nominalizations. In §3 I present the grammatical and phonological properties that distinguish nouns vs. verbs in Runyankore. In §4 I test the different deverbal nominalizations against the noun vs. verb criteria established in §3. In §5 I conclude with implications of the revealed nominal to verbal cline in understanding Runyankore deverbal nominalization in general.

2. Deverbal nominalizations in Runyankore

As mentioned, Runyankore is rich in deverbal nominalizations.² As will be seen, I have identified eleven different nominalization constructions. While lexicalized examples can be found in Taylor’s

¹ Spoken by an estimated 3,420,000 people according to a 2014 census (Eberhart el al 2019:292), Runyankore is designated as JE13 in the Guthrie Bantu referential classification system (Maho 2009:59).
² For a partial presentation of the “formation of nouns from verbs”, see Morris & Kirwan (1957:140-4).
(1959) dictionary and Kaji’s (2004) extensive vocabulary, all eleven of the deverbal nominalizations are productive and have been examined with a large number of different verb bases. In the following subsections I will briefly present the eleven different nominalizations. The extent to which they meet the nominal vs. verbal criteria distinguished in §3 will be discussed in §4. In the following, I have roughly ordered the presentation to begin with the most nominal and end with the most verbal derivatives.

2.1. Agentive -i. Other than the infinitive (§2.10), perhaps the best known Bantu deverbal nominalization is the one illustrated in (1), where the bound verb roots are indicated on the left and the derived nouns on the right:

(1) a. -beij- ‘do woodwork’ o-mu-beiz-i ‘carpenter’
   b. -béih- ‘lie’ o-mu-béih-i ‘liar’
   c. -kór- ‘do, work’ o-mu-kóz-i ‘worker’
   d. -híg- ‘hunt’ o-mu-híg-i ‘hunter’
   e. -héesh- ‘forge’ o-mu-hées-i ‘blacksmith’

As seen, agentive nouns are derived by means of a (toneless) -i suffix which conditions certain consonant mutations. The nouns are marked by the o- augment and singular prefix mu- of human class 1. As also seen, such derivatives indicate a regular or habitual activity or a profession. (Their plural is in class 2: a-ba-beiz-i, a-ba-béih-i etc.). Although the above nouns are lexicalized (all of the above appear in Taylor 1959, for instance), it is possible to create new ones, e.g. o-mu-kóm-i ‘tier’ (-kóm- ‘tie’), o-mu-hénz-i ‘breaker’ (-hénz- ‘break’). There also are agentive derivatives occurring in other noun classes, especially 9/10. The following are from Taylor and have been confirmed by DN:

(2) a. -rí- ‘eat’ é-n-di ‘eater’ (person, animal)
   b. -kúnd- ‘like, love’ e-n-kúnz-i ‘lover, liker’
   c. -tá-t- ‘spy’ e-n-táts-i ‘spy’ (professional)
   d. -gamb- ‘speak, talk’ e-n-gamb-i ‘talkative person’
   e. -tááguruz- ‘dance (waving hands)’ e-n-tááguruz-i ‘dancer (waving hands)’

If there is a difference between the class 1 and class 9 forms (which take the same prefixes in their class 10 plural), it would be that the latter reflects an intrinsic property of the actor(s). Thus, e-n-tááguruz-i is a dancer who does it more often and expertly than o-mu-tááguruz-i, and e-n-gamb-i is person who talks frequently vs. the more neutral o-mu-gamb-i ‘speaker, talker’. As in class 1/2, one can productively create 9/10 words like e-n-dúm-i ‘biter’ (-rúm- ‘bite’) which, like é-n-di ‘eater’, can refer to a person or an animal.

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3 I would like to thank my principal consultant, Dr. Daphine Namara (henceforth DN), a native Runyankore speaker of the pastoralist Bahima group from Kamushoko Parish in Mbarara District of Uganda with whom I have worked since August 2019. Without DN’s patience and dedication, this study would not have been possible. I am also grateful to two anonymous reviewers for their helpful comments on the original submission.

4 I follow Runyankore orthography for marking consonants (sh = [ʃ], j = [ɟ], c, ky = [tʃ], gy = [dʒ]). ki, gi = [tʃi], [dʒi]), but diverge in marking vowel length which results from gliding of a high vowel, e.g. /ó-mu-ána/ → o-mw-áana ‘child’. The agentive suffix -i conditions the following mutations on the preceding consonant: t → [ts], sh → [s], r, j → [z], nd → [nz].
Examples of -i derivatives occur, but are rarer in other noun classes, which would tend to contain inanimates, e.g. e-ki-kwáats-i ‘safety pin’ (class 7; -kwát- ‘hold, keep’), e-i-gamb-i ‘verb’ (class 5; -gamb- ‘speak’). Agentives formed with -a are discussed in §2.7-§2.9.

2.2. Patient/resultative -e. While -i orients the noun towards the subject actor, -e produces a nominalization oriented towards the object patient or result of the verbal action (Bastin 1989).

(3) a. -búmb- ‘form, mould’ e-ki-búmb-e ‘moulded thing’
   b. -hóm- ‘plaster’ o-bu-hóm-e ‘plaster on walls’
   c. -kón- ‘castrate’ e-n-kón-e ‘castrated animal’
   d. -rará- ‘wander, be neglected’ e-ki-rará-e ‘wild, unkempt person’
   e. -shób- ‘be wrong’ e-n-shób-e ‘mistake’
   f. -tsib- ‘fasten, lock’ o-mu-tsib-e ‘prisoner’
   g. -tumb- ‘swell’ e-ki-túmb-e ‘blister’

As seen from the specific meanings, the above are all lexicalized examples and occur in different noun classes. It is, however, possible to derive new ones with transparent meanings such as class 7 e-ki-kóm-e ‘something tied’ (-kóm- ‘tie’) and e-ki-gúr-e ‘something bought’ (-gúr- ‘buy’). While the examples in (3) show derivatives from a -CVC- verb root, longer forms are also attested:

(4) a. -shékur- ‘pound’ e-ki-shékur-e ‘something pounded’
   b. -tóóran- ‘choose’ o-mu-tóóran-e ‘chosen one’
   c. -húrir- ‘hear’ a-ma-húrir-e ‘news’
   d. -téérán- ‘assemble’ o-ru-téérán-e ‘meeting’
   e. -gambuk- ‘be given in marriage’ o-mu-gambuky-e ‘bride’
   f. -handíik- ‘write’ o-ru-handíiky-e ‘report, literature’
   g. -nanuk- ‘be satisfied’ o-ru-nanuky-e ‘contentment’

It can also be noted that where the verb root is toneless, -e is accompanied by a H tone on the second stem mora, as in (4e-g). Since a second stem mora H tone will be seen in many examples below, we will refer to it as the M2H.

2.3. Causative/instrumental -y-o. The following three deverbal constructions all involve a root extended by a causative or applicative suffix with the toneless final vowel (FV) -o. There are two causative extensions in Runyankore: -i- and -is-i-, the latter having the harmony variant -es-i- after the mid vowels /e/ and /o/. The two are quite equivalent in forming a causative or instrumental nominal with the toneless FV -o. Since it is almost always followed by a vowel, the short causative

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5 As in other Bantu languages, nouns can be transferred into other classes for expressive purposes. While class 7/8 e-ki-/e-bi- can be used productively to add an augmentative and potentially derogatory sense (e.g. o-mu-shého ‘doctor’ → e-ki-shého ‘a big or bad doctor’), some such nouns are lexicalized: e-ki-gambabuk-i ‘foolish person’ (-gangabuk- ‘be cracked’), e-ki-jágarraz-i ‘an excited person’ (-jágarr- ‘be excited’), e-ki-rondogoz-i ‘half-wit’ (-rondogor- ‘wander in speech’). Productive nominalizations involving unaugmentable ki-, e.g. ki-zín-a ‘dancer’ (-zín- ‘dance’), are discussed in §2.9.

6 In examples (3c-g) the second mora is the -e suffix itself, whose assigned H is retracted to the penult before pause. Thus compare o-mu-tsib-e ‘prisoner’ vs. o-mu-tsib-é waangye ‘my prisoner’, where the H is realized on -e.
-i- glides to -y- which is often deleted, but triggers mutations on the preceding consonant similar (but not quite identical) to the agentive suffix -i, as seen in (5).  

(5) a. -fúmir- ‘pierce’ e-ki-fúmis-o ‘drill (for boring)’  
    b. -húur- ‘thresh’ e-ki-húuz-o ‘threshing stick’  
    c. -kógot- ‘scrape out (a pot)’ e-n-kógots-o ‘pot-scraper’  
    d. -rérur- ‘remove scum’ e-ki-réruz-o ‘skimming scraper’  
    e. -fundíkir- ‘cover’ e-ki-fundíkiz-o ‘cover, lid, cork, stopper’  
    f. -shumurur- ‘open, unlock’ e-ki-shumuruzo ‘key’  
    g. -shungur- ‘winnow’ e-ki-shunguz-o ‘sieve’

While the examples in (5) are all lexicalized with an instrumental meaning, one can productively create nominalizations which have either an instrumental or causative meaning, e.g. e-ki-naab-y-o ‘sth. to bathe with/sth. to make (s.o.) bathe’ (-naab- ‘bathe’), e-ki-kóm-y-o ‘sth. to tie with/sth. to make (s.o.) tie’ (-kóm- ‘tie, fasten’).

2.4. Causative/instrumental -is-i-o/-es-i-o. Deverbal nouns with the long causative -is-i/-es-i- are equivalent in every way to the shorter causative derivation in §2.3. As indicated, the long causative includes the short causative -i-, whose effect is seen from the consonant mutation that occurs when another suffix intervenes, e.g. applicative -ir-/er-: o-ku-kóm-es-a ‘to make (s.o.) tie, to tie with (sth.)’, o-ku-kóm-es-ez-a ‘to make (s.o.) tie for/at, to tie with (sth.) for/at’ (from -kóm-es-er-i-a: -kóm- ‘tie’). Again, the derivation is totally productive, e.g. e-ki-naab-is-o ‘sth. to bathe with/sth. to make (s.o.) bathe’ (-naab- ‘bathe’). Lexicalized examples include the following:

(6) a. -rí- ‘eat’ e-n-dí-is-o ‘bait’
    b. -nyó- ‘drink’ e-ki-nyw-ís-o ‘drinking vessel’
    c. -kuub- ‘rub in, polish’ e-ki-kuub-ís-o ‘toothbrush’
    d. -pim- ‘measure’ e-ki-pim-ís-o ‘a weight’
    e. -reng- ‘test, measure’ e-ki-rengy-és-o ‘standard’
    f. -sa- ‘grind’ e-n-se-ís-o8 ‘upper grindstone’
    g. -shuk- ‘pour, splash’ o-mu-shuk-ís-o ‘funnel’ (class 3)

As seen in both (5) and (6), the lexicalized derived nouns have an instrumental sense and most commonly occur in the default thing-class 7/8.

2.5. Locative -ir-o/er-o. Locative nominalization also utilizes toneless -o, which is preceded by the same applicative -ir-/er- suffix often required on verbs to express a location, goal or source of an action, e.g. o-ku-ték-a ‘to cook’, o-ku-tekéy-er- ó-mu-n-ju ‘to cook in the house’ (-ték-
‘cook’). Derived locative nouns which refer to where an action takes place usually fall into class 5/6, as in the following lexicalized examples:9

(7) a. -jwár- ‘wear, put on’ e-i-jwár-ir-o ‘dressing room’
b. -rí- ‘eat’ e-i-rí-ir-o ‘dining room’
c. -téér- ‘assemble, meet’ e-i-téér-ir-o ‘meeting-place’
d. -shúnshur- ‘gin (cotton)’ e-i-shúnshur-ir-o ‘ginnery’
e. -gur- ‘buy’ e-i-gur-ir-o ‘market’
f. -rwaan- ‘fight’ e-i-rwaan-ir-o ‘battlefield’
g. -shab- ‘pray, beg’ e-i-shab-ir-o ‘place of prayer’

In other classes, especially 7/8, the reference is often to the surface on which the action takes place. Thus compare the following pairs of derived nouns, where those translated with ‘place to’ were newly constructed and interpreted by DN:

(8) a. -kóm- ‘tie’ e-i-kóm-er-o ‘place to tie, prison’
eki-kóm-er-o ‘surface to tie on’ (e.g. a table)
b. -nág- ‘throw away’ e-i-nág-ir-o ‘place to throw (sth.) away’
e-i-nág-ir-o ‘rubbish heap’
c. -beíj- ‘do carpentry’ e-i-beíj-ir-o ‘carpenter’s shop’
e-i-beíj-ir-o ‘carpenter’s work surface’
d. -nyuuk- ‘crush bananas’ e-i-nyuuk-ir-o ‘place to crush bananas’
e-ki-nyuuk-ir-o ‘banana-treading floor’
e. -tuum- ‘heap up’ e-i-tuum-ir-o ‘place to heap up’
e-i-tuum-ir-o ‘mound, projection’
f. -zaan- ‘play’ e-i-zaan-ir-o ‘playing field’
e-i-zaan-ir-o ‘stadium’
g. -ari- ‘brood, sit on eggs’ e-ri-ari-ir-o ‘place to sit on eggs’
e-ri-ari-ir-o ‘hen’s nest’

As seen, class 5/6 tends to identify the global environment of the activity and other classes a specific surface or contained space. In some cases where a verb + locative can occur without an applicative, -ir-o may contrast with -o in the corresponding nominalizations:

(9) a. -tóro- ‘escape from’ e-i-tóro-ir-o ‘place to escape from’
tóro-er-o ‘place to escape to’
b. -handiik- ‘write (on)’ e-i-handiik-ir-o ‘place to write’ (e.g. on paper)
handiik-ir-o ‘place to write’ (person’s location)
c. -téék- ‘cook’ o-bu téék-o ‘cooking place’ (e.g. counter)
téék-er-o ‘cooking place’ (e.g. kitchen, area)

By the same token, some verbs that cannot take a locative -ir- at all do not accept the longer -ir-o derivation: e-i-túuro ‘place to live’, *ei-túur-ir-o (túur- ‘live, remain’, *túur-ir-). In other cases a derivation in -o or -ir-o-er-o can result in a more concrete, lexicalized (sometimes instrumental)

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9 A number of such locative nouns also appear in class 14, e.g. o-bu-húg-ir-o ‘hunting ground’ (-húg- ‘hunt’), o-bu-hung-ir-o ‘place of refuge’ (-hung- ‘run away’).
meaning: e-i-nyuuk-ir-o ‘banana press, place to crush bananas’ (-nyuuk- ‘crush bananas’), e-ki-bib-ir-o ‘seed-basket’ (-bib- ‘sow’), e-ki-ribat-ir-o ‘surface where you step’, e-n-dabít-ir-o ‘footstool, platform for a bed’ (-ribat- ‘tread on’). Since only the general locative derivation is productive, I will be interested only in this usage of -ir-o/-er-o in subsequent sections.

2.6. Manner -ir-e/-er-e. Any verb can undergo manner derivation, marked by applicative -ir-/er- and final -e. Such nouns appear only in (plural) class 4:

(10) a. -kóm- ‘tie’ e-mi-kóm-er-e ‘way of tying’
b. -rí- ‘eat’ e-mi-rí-er-e ‘way of eating’
c. -kór- ‘work, make’ e-mi-kór-er-e ‘way of working’
d. -gamb- ‘talk, speak’ e-mi-gamb-ír-e ‘way of speaking’
e. -torok- ‘run away’ e-mi-tórok-ir-e ‘way of running away’
f. -gum- ‘be hard’ e-mi-gum-ír-e ‘degree of hardness’

Examples (10d-f) show that an M2H is assigned if the verb root is toneless, and (10f) shows manner derivation can also apply to a stative verb. Although Runyankore uses the causative suffixes to mark instruments and manner, e.g. o-ku-gyend-es’ é-mótoka ‘to go by car’, a property of Lacustrine Bantu languages, instrumental applicatives are quite widely attested elsewhere in Bantu (Pacchiarotti 2020: 139-140). The -ir/-er- of manner nominals may thus be a retention of this former usage.

2.7. Causative-passive -a. While we saw that agentive nominals are marked by a final -i, (11) and (12) show that both short and long causativized verbs derive the corresponding nouns with the FV -a:

(11) a. -cwáanz-y- ‘deceive’ o-mu-cwáanz-a ‘cheat’
b. -kúz- ‘bring up’ o-mu-kúz-a ‘guardian’
c. -teb-y- ‘tell (a story)’ o-mu-teb-a ‘story-teller’
d. -tíz- ‘lend (goods)’ o-mu-tíz-a ‘lender of goods’
e. -ikiriz- ‘believe’ o-mw-ikiriz-a ‘believer’
f. -gumísiriz- ‘be patient’ o-mu-gumísiriz-a ‘patient person’

(12) a. -híng- ‘grow crops’ o-mu-híng-a ‘agriculturalist’
b. -rí- ‘eat’ o-mu-rí-a ‘shepherd’
c. -záar- ‘be born’ o-mu-záar-a ‘midwife’
d. -ég-es- ‘teach (make learn)’ o-mw-éegy-es-a ‘teacher’
e. -shom-es- ‘teach’ (make read)’ o-mu-shomés-a ‘teacher’
f. -shor- ‘pay taxes’ o-mu-shorés-a ‘tax collector’

Passives also take final -a, as seen in the following class 1 examples:

(13) a. -kúnd-w- ‘be liked, loved’ o-mu-kúnd-w-a ‘liked, beloved person’
b. -húr-w- ‘be lucky’ o-mu-húr-w-a ‘lucky person’

10 The fact that the patient/resultative -e and manner -ir-e/-er-e assign the M2H tone pattern and that they both end in -e suggests that they are related constructions, as if the latter is a resultative of the applicativized verb.
As seen, the derivatives in (11d-f), (12e,f), and (13d,e) have an unexpected M2H which is assigned in last cases to the /-ú/- of -w-a, subsequently retracted onto the penult phrase-finally (cf. o-mu-gur-w-á wangye ‘my slave’, o-mu-nyag-w-á waawe ‘your sg. captive’). In fact, all seven class 1 passive -w-a nouns found in Taylor (1959) show this pattern.\(^{11}\) The other five examples are in (14):

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\begin{align*}
\text{(14) a. } & \text{-kon-w-} & \text{‘be castrated’} & \text{ o-mu-kón-w-a} & \text{‘eunuch’} \\
\text{b. } & \text{-guz-ibw-} & \text{‘be lent money’} & \text{ o-mu-guz-ibw-a} & \text{‘borrower’} \\
\text{c. } & \text{-shober-w-} & \text{‘be baffled’} & \text{ o-mu-shobérw-a} & \text{‘bewildered person’} \\
\text{d. } & \text{-gambis-ibw-} & \text{‘speak out of turn’} & \text{ o-mu-gambís-ibw-a} & \text{‘gossip’} \\
\text{e. } & \text{-hang-} & \text{‘create’} & \text{ o-mu-háng-w-a} & \text{‘native, created here’}
\end{align*}
\]

The question naturally arises as to how to interpret the relation of -a to agentive -i, as well as the unexpected tonal effects.\(^{12}\) A first possibility is to analyze -a as an allomorph of -i that occurs after passive -w- or causative -y- (whether absorbed or not). This appears to be quite well motivated, first, because [Cyi] does not exist in the language, and second because final [wi] is extremely rare, occurring only in two monosyllabic stems o-mú-cwi ‘refugee’ (-cú- ‘cut off, disown’) and o-mú-nyw-i ‘drinker’ (-nyó- ‘drink’).\(^{13}\) The language thus systematically avoids both C-y-i- and C-w-i. However, rather than analyzing -a as an allomorph of -i, there are good reasons for treating it separately. First, DN accepts -i as an alternative to -a in derivations containing causative -is/-es- (see (16) below). Second, if -a is an allomorph designed to avoid -w-i and -y-i sequences, this doesn’t explain why it (vs. -i) requires a second stem mora H, as seen in the synonymous pair o-mu-nááb-is-a, o-mu-naab-is-i ‘one who makes bathie/one who bathes with (sth.)’ (-naab- ‘bathe’). Another fact is that the final -a forms have different grammatical behavior. For example, the adverbial gye ‘well’ can modify o-mu-naab-is-á gye ‘one who makes bathie well/one who bathes with (sth.)’, while *o-mu-naab-is-i gye is ungrammatical.\(^{14}\)

Returning to the tonal issue, although the M2H never occurs with -i (or -o), it is clear that -a is not sufficient to trigger the M2H. To confirm this, I went through all of the class 1/2 nouns ending

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\(^{11}\) As seen in (13a-c), /H/ roots do not acquire a H suffix in the same context. However, three lexicalized nouns with passive -w- have been found with suffixal H on their FV (retracted onto the penult phrase-finally): e-nzáár-w-a, e-n-zaar-w-á yangye ‘(my) native’ (záar-w- ‘be born’); o-bu-ntsíg-w-a / o-bu-ntsíg-w-á bwangye ‘(my) vow’ (-ntsíg- ‘vow’); e-ki-tútrúr-w-a / e-ki-túrrur-w-á kyangye ‘(my) lump in porridge’ (-tútrúr- ‘be lumpie’).

\(^{12}\) Although the nouns derived from the passivized verbs in (12) are not agentive, they are oriented toward the subject and hence often treated as parallel to agentive -i (§2.1) and causative deverbal nouns.

\(^{13}\) Taylor (1959) reports four other cases of final [wi] not recognized by DN: o-mu-mw-i ‘barber’ from -mo-shave’, both of which occur in mutually intelligible Rukiga (and in Luganda) and the following presumably de-ideophonic reduplications: a-ka-bwibwíwbíwbí ‘about 7pm’, o-mu-kwikí ‘gnat’, and o-mu-turuubwíwbí ‘half-roasted potato’. DN also judges the following constructed agentive nominals as possible: o-mu-jw-i ‘bleeder, one who is bleeding’ (-jú- ‘bleed, flow’); o-mu-twi ‘wedding-giver, one who gives wedding gifts’ (-to- ‘give wedding gifts’), o-mú-hw-i ‘one who is exhausted’ (-hó- ‘be exhausted, be ended, no longer there’). That *o-mu-jw-a, *o-mu-tw-a, and *o-mu-hw-a are impossible shows that the -a final is not conditioned by a preceding [w], rather requires the passive -w- extension.

\(^{14}\) In §4 we will see that the -a derivation is much more “verbal” than the -i derivation. This correlates nicely with the fact that -a is the general (most common) FV in the Runyankore verbal paradigm, as in Bantu in general (Meeussen 1967: 110).
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in [a] in Taylor (1959) and found only one potential deverbal example where an M2H is assigned in the absence of a causative or passive suffix, namely o-mu-záana ‘female slave’, if related to -zaan- ‘play’.\(^{15}\) A more promising hypothesis is that the M2H is found only when the root is toneless and -a is accompanied by a causative or passive suffix. This is supported by the following additional causative and passive examples co-occurring with final -a:

\[(15) \begin{array}{llll}
\text{a.} & -\text{gur-} & \text{‘buy’} & \text{o-mu-gúr-w-a} & \text{‘slave’} \\
& -\text{guz-} & \text{‘sell, lend’} & \text{o-mu-gúz-a} & \text{‘money-lender’} \\
& (-\text{gur-y}) & & \text{o-mu-guz-ibw-a} & \text{‘borrower’} \\
& & & \text{o-mu-gur-ís-a} & \text{‘one who makes buy’} \\
& & & \text{e-ki-guz-ibw-a} & \text{‘something being sold’} \\
\text{b.} & -\text{kon-} & \text{‘castrate, cut horns’} & \text{o-mu-kón-w-a} & \text{‘eunuch’} \\
& & & \text{o-mu-kon-és-a} & \text{‘one who cuts horns with’} \\
\text{c.} & -\text{nyag-} & \text{‘capture, plunder’} & \text{o-mu-nyág-w-a} & \text{‘captivate’} \\
& & & \text{o-mu-nyag-ís-a} & \text{‘one who captures’} \\
& & & \text{o-bu-nyág-w-a} & \text{‘captivity’} \\
\text{d.} & -\text{shob-} & \text{‘be wrong, go wrong’} & \text{e-n-shób-y-a} & \text{‘one who disappoints’} \\
& -\text{shob-y-} & \text{‘make a mistake’} & \text{o-mu-shobér-w-a} & \text{‘bewildered person’} \\
& -\text{shober-} & \text{‘baffle’} & \text{o-bu-shobér-w-a} & \text{‘misery, perplexity’} \\
\text{e.} & -\text{guz-} & \text{‘sell’} & \text{e-i-gur-iz-o} & \text{‘place to sell’} \\
& -\text{kon-} & \text{‘cut horns’} & \text{e-ki-kon-es-ibw-o} & \text{‘sth. to be castrated with’} \\
& -\text{nyag-} & \text{‘capture, plunder’} & \text{e-i-nyag-ir-w-o} & \text{‘place to be captured’} \\
\end{array} \]

The same root + passive or causative appears in each set of verbal nouns in (15a-d), all of which exhibit an M2H. The last example in (15c) and (15d) show that this extends to other noun classes.\(^{16}\) To test the generality of the M2H, I surveyed all of the toneless deverbal nouns in Taylor (1959) ending in causative -(t)sa, za, and Cya as well as passive -wa. DN pronounced all of -wa nouns with M2H, e.g. Taylor e-n-zir-w-a, DN e-n-zir-w-a ‘neglected one(s)’ (zir- ‘forbid, curse’), and accepted only one causative with all L tone: o-mu-teb-y-a ‘story-teller’ (teb-y- ‘tell (story)’).\(^{17}\) While the M2H is preferred, if not required in such nominalizations, it does not occur on forms which are more “verbal” (§4), for example not on infinitive class 15 (o-ku-nyag-w-a ‘to be captured’) or on conjugated verb forms, e.g. remote past ba-ka-nyag-w-a ‘they were captured’. The locative and instrumental forms ending in -o in (15e) show that -a is absolutely required to get the M2H.

Although both a causative or passive suffix and the FV -a are required, omitting the M2H tone makes the form feel “incomplete”. This is probably due to the fact that such nouns are subject to H tone deletion (HTD) when followed by an appropriate nominal modifier or direct object. Thus

\(^{15}\) An M2H derivation o-mu-zaán-a is realized o-mu-záan-a by regular tonal processes. Taylor (1959: 118) has a related entry mu-zaana ‘my dear’ used in addressing a child, which lacks the M2H. Unfortunately DN doesn’t know the address term, so I couldn’t examine it further.

\(^{16}\) o-bu-nyág-w-a has the variant o-bu-nyág-w-e, whose -e is expected to co-occur with the M2H (§2.2).

\(^{17}\) DN also confirmed two non-causative deverbal ya-final nouns which were also found: e-n-dyarya ‘hypocrite, dishonest’ from the reduplicated verb ry-aa-ry- ‘deceive’ and o-mu-tembey-a ‘peddler, merchant’ from -tembey- ‘trade’.
compare o-mu-gur-w-a mu-hango ‘a big slave’. Finally, note again that -i can optionally be used after causative -is/-es-, in which case there is no M2H: 18

(16)  a.  -bar-is- ‘make count/count with’ o-mu-bar-is-a ‘one who makes count’ o-mu-bar-is-i counts with’
       b.  -sheky-es ‘make laugh’ o-mu-sheky-es-a ‘one who makes laugh’ / o-mu-sheky-es-i laughs with’
       c.  -tund- ‘sell’ o-mu-tund-is-a ‘one who sells’ o-mu-tund-is-i

We can thus conclude that the M2H requires both -a and a causative or passive suffix. 19

2.8. Compound agentive -a. In addition to causative/passive -a, Runyankore has an agentive compounding construction which requires that the deverbal noun take an -a suffix:

(17)  a.  -bón- ‘find’ mu-bón-a bi-kópo ‘cup-finder’
       b.  mu-bón-a bi-tabo ‘book-finder’
       c.  mu-bon-a bi-tabo
       d.  mu-bon-a bi-tabo
       e.  -gur- ‘buy’ mu-gur-a bi-kópo ‘cup-buyer’
       f.  mu-gur-a bi-tabo ‘book-buyer’
       g.  mu-gur-a bi-tabo

As seen, the deverbal noun is followed by an object which commonly occurs in the plural, hence literally ‘finder-books’, ‘finder cups’ etc. Although the object cannot occur with an augment (*mu-bon’ é-bi-tabo, *mu-gur’ é-bi-tabo), the deverbal noun may: o-mu-bon-á bi-tabo, o-mu-gur-a bi-kópo etc. Such compounding with agentive -i is not possible: *(o)-mu-bon-i bi-tabo, *(o)-mu-guz-i bi-kópo etc.

Turning to tone, in (17a) the /H/ of -bón- ‘find’ obligatorily undergoes H tone deletion before the H tone noun bi-kópo ‘cups’ and optionally in (17c) before the toneless noun bi-tabo ‘books’. If HTD applies, the rule of H tone insertion (HTI) optionally inserts a final H on the -a suffix, as in (17d). 20 This combination of HTD + HTI is typical of verb constructions (see §4). Curiously, HTI

18 Although both causative -i- and agentive -i produce consonant alternations, and a noun such as o-mu-baz-i would more likely be interpreted as ‘someone who counts, an accountant’ (-ba- ‘count’), it can also mean ‘s.o. who makes count/s.o. who counts with (sth.)’ (< baz-i- < ba- 'make count/count with’). Both the -a and the H tone clearly indicate the underlying causative structure of o-mu-báz-a ‘one who makes count/someone who counts with (sth.)’. A reviewer suggests that the synonymous alternate forms in (16) may also have different structure with -i used when the root + -is/-es- is treated more like a unit. While perhaps an interesting idea to pursue, I note here that agentive -i can be used after other extensions. Thus the applicative-reciprocal sequence -er-an- of o-ku-kóm-er-an-a ‘to tie for each other’ can appear in the corresponding agentive nominal a-bá-kóm-er-an-i ‘tiers for each other’. 19 In this connection one cannot help observing that Meeuissen (1967:92) tentatively reconstructed a H tone on the Proto-Bantu causative *-i- and passive *-o- suffixes, which is otherwise not evident in Runyankore. For discussion and arguments that such H tone effects are innovative, see Hyman (2022c) and references cited therein. 20 It appears that unaugmentable nouns including names heavily favor, if not require HTI: mu-gur-a magaro ‘pliers-buyer’, mu-yamb-á Muhwezi ‘Muhwezi-helper’ (-yamb- ‘help’) vs. ?mu-gur-a magaro, ?mu-yamb-á Muhwezi.
only optionally applies in (17c,g), since mu-bon-a and mu-gur-a may remain toneless before bi-tabo as in (17d,f). While DN prefers the H tone variant mu-bón-a bi-tabo in (17b) over the HTD variants in (17c,d), she prefers the toneless variant mu-gur-a bi-tabo (17f) over the HTI variant in (17g).

Although treated separately, compound agentive -a is likely the same suffix as the causative/passive -a in §2.7. Thus, the same M2H appears in (18a,d).

(18) a. mu-gur-ís-a bantu ‘someone who makes people buy’ (-gur-ís- ‘make buy’)
b. mu-gur-ís-a bantu
c. mu-gur-ís-á bantu
d. mu-nááb-ís-a bantu ‘someone who bathes people’ (-naab-ís- ‘bathe (tr.)’)
e. mu-naab-ís-a bantu
f. mu-naab-ís-á bantu

The alternates in (18b,e) show that the M2H is optional, while final HTI applies optionally in (18c,f). The same tonal possibilities are seen in the passive compounds in (19).

(19) a. mu-gur-ís-íbw-a bi-tabo ‘someone made to buy books’ (-gur-ís-w- ‘be made to buy’)
b. mu-gur-ís-íbw-a bi-tabo
c. mu-gur-ís-íbw-á bi-tabo
d. mu-rééb-w-a ba-ntu ‘someone seen by people’ (-reeb-w- ‘be seen’)
e. mu-reeb-w-a ba-ntu
f. mu-reeb-w-á ba-ntu

As in the non-compound forms, the M2H is not possible in the absence of a causative or passive suffix:

(20) a. *mu-ragíir-a ba-ntu ‘someone who commands people’ (-ragíir- ‘command’)
b. mu-ragíir-a ba-ntu
c. mu-ragíir-á ba-ntu
d. *mu-garúr-a bi-tabo ‘someone who returns books’ (-garúr- ‘return (tr.)’)
e. mu-garúr-a bi-tabo
f. mu-garúr-á bi-tabo

Finally, note that unlike all of the other derivatives under discussion, compound -a nominalizations lacking a causative or passive extension cannot stand alone: *mu-gur-a, *mu-naab-a etc.

2.9. Agentive ki-/a. Another productive agentive nominalization process consists of using a fixed (unaugmentable) ki- prefix and an -a suffix. The meaning refers to someone who has experienced an action or state:

(21) a. ki-zún-a ‘a dancer, one who has danced’ (-zún- ‘dance’)
b. ki-húrir-a ‘a hearer, one who has heard’ (-húrir- ‘hear’
c. ki-gúr-a ‘a buyer, one who has bought’ (-gúr- ‘buy’)
d. ki-ragíir-a ‘a commander, one who has commanded’ (-ragíir- ‘command’)

—

Deverbal Nominalizations in Runyankore
The difference between ki-zín-a and o-mu-zín-i (§2.1) is that the former requires that there has been an accomplished action or experience. The person might still be dancing or hearing etc. The latter form is temporally unspecified and may refer to a professional dancer. There also is a potential difference in definiteness:

(22) a. te-tú-ku-reeb-a mu-zín-i ‘we don’t see a dancer’
    te-tú-ku-reeb’ ó-mu-zín-i ‘we don’t see the dancer (who is supposed to dance)’
    b. te-tú-ku-reeb-a ki-zín-a ‘we don’t see the dancer (who is dancing or has danced)’

Although ki- is identifiable as a class 7 prefix, two differences between this nominalization and others are that it cannot be augmented (*e-ki-zín-a) and that it cannot be replaced by a class 8 plural prefix (*bi-zín-a). Instead, the plural is marked by the proclitic baa=, e.g. baa=ki-zín-a ‘dancers’, baa=ki-hurír-a ‘hearers’. Also seen in (21), ki- nominalizations have a suffixal H: those derived from a toneless verb root receive the familiar M2H, while those derived from a /H/ verb root assign a H to their final vowel. The distinction between a H on the FV and M2H is most clearly evident on longer verb forms, e.g. baa=ki-hurir-án-a ‘ones who have heard each other’ from -hurir-an-á with H tone retraction to the penult (-húrir-an- ‘hear each other’). While certain modifiers can optionally take class 7 ki- agreement, semantic human singular class 1 agreement is more usual. Plurals obligatorily take class 2 agreement:

(23) a. class 7 : ki-zín-á ñi-rungi ‘good dancer’
    class 1 : ki-zín-á mu-rungi
    b. class 2 : baa=ki-zín-á ba-rungi ‘good dancers’

2.10. Infinitive -a. Almost all Bantu languages have an infinitive, usually occurring in noun class 15, although also often in class 5 (Hadermann 1999). In Runyankore the infinitive occurs in class 15, marked by the prefix ku-, a potential o- augment, and the toneless FV -a.

(24) a. o-ku-kóm-a ‘to tie’ (-kóm- ‘tie’)
    o-ku-zín-a ‘to dance’ (-zín- ‘dance’)
    o-ku-húrir-a ‘to hear’ (-húrir- ‘hear’)
    b. o-ku-gur-a ‘to buy’ (-gur- ‘buy’)
    o-ku-bar-a ‘to count’ (-bar- ‘count’)
    o-ku-ragiir-a ‘to command’ (-ragiir- ‘command’)

As will be seen in §4, the infinitive has both nominal and verbal properties. Among the nominal properties are its class 15 /ó-ku/- augment+prefix sequence as well as its ability to take nominal modifiers which agree in class 15, e.g. o-ku-kóm-a kwángye ‘my tying’. On the other hand, a transitive infinitive can take an object marker (o-ku-mu-kóm-a ‘to tie him/her’) or following nominal object (o-ku-kóm-a Kakúru). While Taylor’s (1959) dictionary enters verbs with an augmentless ku- prefix, cases where a specific derived meaning is clearly nominal are separately entered with the augment, e.g. o-ku-bar-a ‘arithmetic’ (-bar- ‘count’), o-ku-húrir-a ‘warning, advice’ (-húrir- ‘warn advise’), o-ku-hííg-an-is-ibw-a ‘persecution’ (-hííganisibw- ‘be persecuted’), o-ku-shemerera-a ‘happiness’ (-shemerer- ‘be fitting, pleasing’). See also note 40.

2.11. Subject relatives. The last construction to be considered is subjective relatives. While these are part of the verbal paradigm, both their function and the fact that they take the augment show that
they also have at least this one nominal property. As seen in (24), class 1 subject relatives take the subject marker o- instead of the a- used in main clauses, non-subject relative clauses and elsewhere (cf. a-gur-a ‘s/he buys’, a-zín-a ‘s/he dances’):

(24) a. o-kóm-a ‘one who ties, a tier’
o-zín-a ‘one who dances, a dancer’
o-húrir-a ‘one who hears, a hearer’
   b. o-gur-a ‘one who buys, a buyer’
o-bar-a ‘one who counts, a counter’
o-ragiir-a ‘one who commands, a commander’

That the o- in (24) combines a H tone augment /ó-/ (which becomes L tone after pause) with the class 1 subject marker o- can be seen, first, from the following comparison with the corresponding class 2 plurals, where there is an overt augment /á-/ (→ a- after pause).21

(25) a. a-bá-kom-a ‘ones who tie, tiers’
a-bá-zín-a ‘ones who dance, dancers’
a-bá-húrir-a ‘ones who hear, hearers’
   b. a-bá-gur-a ‘ones who buy, buyers’
a-bá-bar-a ‘ones who count, counters’
a-bá-ragiir-a ‘ones who command, commanders’

The following examples in the general future tense further justify that /ó-/ is an amalgam of two morphemes:

(26) a. a-ba-sháh’ á-ba-raa-tambir’ á-ba-ntu ‘doctors WHO WILL CURE PEOPLE’
b. a-ba-sháho ba-raa-tambir’ á-ba-ntu ‘doctors who will cure people’
c. o-mu-sháh’ ó-raa-tambir’ á-ba-ntu ‘the doctor WHO WILL CURE PEOPLE’
d. o-mu-sháh’ o-raa-tambir’ á-ba-ntu ‘a doctor who will cure people’

As with other modifiers (adjectives, possessives), the presence of an augment implies a contrast, which I have indicated in small caps. Thus in (26a) there is an implied contrast with a second group of doctors, while (26b) is neutral. The same is seen in (26c), where the H tone on ó- indicates the presence of the augment vs. (26d), where the L tone on o- indicates its absence. Again, recall that the augment is a nominal property.22

Since the examples in (24) and (25) are in the habitual, which lacks tense, it is possible to gloss them with the nouns ‘tier(s)’, ‘dancer(s)’ etc. However, besides the general future in (26), relative forms can appear in all tenses, as exemplified in (27).

21 In (25a), the /H/ -bá- triggers Meeussen’s Rule, by which a H-H sequence becomes H-Ø.
22 I chose the general future tense in (26) since it has a unique marker -raa- which occurs in relative clauses, but not in the main clause, where a periphrastic construction with ‘come’ or ‘go’ + an infinitive is required: ni-ba-z-á ku-tambir-a, ní-be-i-j-á ku-tambir-a ‘they will cure’ (lit. ‘they will go/come to cure’). Although the verb cannot take an augment in main clauses, when the augment is missing in (26b), -raa- still clearly marks that this is a relative clause.
While these too are nominal in the sense of taking the augment, the fact that they are tensed suggests a more verbal status. In what follows I will therefore only consider (untensed) habitual forms such as in (24) and (25) as well as stative forms which take the same morphology as the yesterday past. Both of these produce lexicalized forms such as the following class 7 nouns:

(28) a. e-ki-raa-a ‘creeper, root’ < -raand- ‘creep’ (plants)
e-ki-mer-a ‘plant’ < -mer- ‘grow’ (plants)
e-ki-kor-w-a ‘deed’ < -kó-r-w- ‘be done, made’
e-ki-nyw-eewb-a ‘beverage’ < -nyw-éebw- ‘be drunk’ (passive)
e-ki-byaa-ar-w-a ‘plant’ < -byáa-ar-w- ‘be planted’
e-ki-tuung-w-a ‘property’ < -tuung-w- ‘be possessed’

b. e-ki-f-iire ‘sth. dead’ < -f-/-fú/- ‘die’
e-ki-gw-iire ‘mistake’ < -gw-/-gu/- ‘fall, fail’
e-ki-haang-ir-w-e ‘creature’ < -haang-w- ‘be created’
e-ki-haandiik-ir-w-e ‘sth. written’ < -haandiik-w- ‘be written’
e-ki-hiing-ir-w-e ‘crop’ < -hiing-w- ‘be cultivated’

As seen from the H tone on the class 7 prefix kí-, these are subject relatives in form. Those in (28a) are in the habitual marked by final -a and have meanings such as ‘that which creeps’, ‘that which grows’, while those in (28b) marked by final -ire are in an accomplished state, e.g. ‘that which is dead’, ‘that which has failed’. As seen, such nominalizations are often based on the passivized form of the verb stem marked by -w-, which occurs between -ir- and -e in (28b).

With this we complete the presentation of the different derivational processes that will be examined more closely for their nominal vs. verbal properties. We first must determine the criteria that distinguish nouns from verbs in Runyankore.

3. Nominal vs. verbal properties in Runyankore

As in most languages, nouns and verbs are distinguished by a wide range of properties. In Runyankore these properties are morphological, syntactic, and phonological. The first two will be largely familiar from Bantu and other languages; the phonological arguments are Runyankore-specific.

3.1. Morphological properties. To begin, nominal and verbal words are distinguished by their different internal structure as well as in the allomorphs that mark noun class. These are treated separately in the following two subsections.
3.1.1. Internal structure. Reference was made in §2.11 to the fact that only “nominal” words take the Bantu initial vowel morpheme known as the augment, while only verbs can be marked for tense. I place “nominals” in quotes, since it is not only nouns that can be augmented. As seen in (29), nouns, adjectives, possessives, subject relatives, and numerals can occur with an augment, however with each word class having its own properties. The following illustrates some of the possibilities with class 2 /á-ba-sháho/ ‘doctors’:

(29) Noun
   a-ba-sháho ‘doctors’
   n’ á-ba-sháho ‘they are doctors’ (ni = focus marker)
   tí ba-sháho ‘they are not doctors’

Adjective
   a-ba-sháho ba-rungi ‘good doctors’
   a-ba-sháh’ á-ba-rúngí ‘GOOD doctors’ (as opposed to bad ones)
   a-ba-rúngí ‘(the) good ones’

Poss Pron
   a-ba-sháho ba-ngye ‘my doctors’
   a-ba-sháh’ á-bángye ‘MY doctors’ (as opposed to yours)
   a-bángye ‘mine’

Poss Nom
   a-ba-sháho baa=Muhwezi ‘Muhwezi’s doctors’
   a-ba-sháh’ ‘MUHWEZI’S doctors’ (as opposed to mine)
   ábáa=Muhwezi ‘Muhwezi’s’ (doctors)

Subj Rel
   a-ba-sháh’ á-bá-gwïire ‘the FALLEN/FAILED doctors’
   a-ba-shaho bá-gwïire ‘fallen/failed doctors’
   a-bá-gwïire ‘the fallen/failed ones’ (doctors)

Numeral
   a-ba-sháho bá-bíri ‘(the) two doctors’
   a-ba-sháh’ á-bá-bíri ‘the doctors, the two’ (not three)
   ba-bíri ‘two’ (doctors)
   a-bá-bíri ‘the two’ (doctors)

The majority of Runyankore nouns are augmentable and occur with their augment except in specific grammatical contexts (here shown after the negative focus marker tí). Adnominal adjectives, possessive pronouns, and possessive nominals (“connectives”) occur without an augment unless they are contrastive, while all augmentable modifiers require an augment when occurring without a head noun. Subject relatives generally occur with an augment which however can be absent adnominally when non-contrastive, as was also seen in (26). The augmented numeral in a-ba-sháh’ á-bá-bíri ‘the doctors, the two’ is appositional.

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23 While most nouns are “augmentable”, there also are specific classes of unaugmentable nouns. See (31) below and the extended discussion in Taylor (1972) and Hyman (2021). Adjectives are morphologically identical to nouns and can also be augmented: e-bi-kopo bi-háango ‘big cups’ vs. e-bi-kóp’ é-bi-háango ‘BIG cups’ (vs. small ones) (Hyman 2021: 104).

24 As pointed out by Taylor (1972:75), the augment is present after tí in the corresponding interrogatives: t’ á-ba-sháho ‘aren’t they doctors?’. DN also accepts interrogative tí ba-sháho with raised question intonation.
We thus conclude that the structure of the Runyankore nominal word is the traditional Bantu one in (30).

(30) Nominal structure: (augment)-(noun class prefix)-stem

As mentioned, while the vast majority of common nouns have the maximal structure in (30), some nouns are not augmentable, and some do not have a noun class prefix. What this means is that there are four different noun structures (Hyman 2021):

(31) structure distribution example
Augment+Prefix most common nouns o-mu-sháho ‘doctor’
Augment only some class 9/10 nouns e-cúpa ‘bottle(s)’
Prefix only names of cows ki-róko ‘cow (sp.)’
 names of lands Bu-nyankóre ‘Nkore country’
Neither names Muhezi ‘Muhezi’
 kinship terms sho ‘your sg. father’
borrowings karáani clerk

In general, nouns which cannot take an augment take 1/2 agreement if human, 9/10 agreement if non-human, and form their plurals with the proclitics baa= and zaa=, respectively: baa=karáani ‘clerks’, zaa=ki-róko ‘cows (sp.)’.

Turning to verb structure, there are several distinguishing features. First, while most nominal stems are monomorphemic, e.g. -sháho ‘doctor’, -cúpa ‘bottle’, verb roots minimally require a final inflectional vowel (FV) to form a stem. Thus in (27) we saw that the root -kóm- ‘tie’ required one of the inflectional endings -a, -e or -ire to form a stem. Only the stems of derived nouns are morphologically complex, as we saw in §2. To the extent that there is further complexity within a noun stem, this is because it has inherited the verbal morphology, as we saw with the causative and passive derivational suffixes in §2. As shown in (32), the Bantu (and Runyankore) verb is considerably more complex than the noun both at the stem and word levels (cf. Meeussen 1967):

(32) Verbal structure: stem = root + (derivational suffixes) + FV
word = (inflectional prefixes) + stem

Inflectional prefixes: (neg, aug, tense) + subject + (neg) + (tense) + (aspect) + (object(s))

As before, those elements in parentheses do not occur in every verb form—in fact, even the subject prefix is not required in the singular imperative affirmative, e.g. kóm-a ‘tie!’ (cf. the negative o-tá-kom-a and plural mu-kóm-e, where the subject markers are o- ‘2nd person sg.’ and mu- ‘2nd person pl.’). While almost all of the nominalization processes allow derivational suffixes to be inherited from the verb, we will see in §4 that most do not allow inflectional tense-aspect-mood (TAM) or negation prefixes.

3.1.2. Noun class marking. Noun class distinguishing prefixes differ in two ways on nouns vs. verbs. The first difference is tonal: Whereas noun class prefixes are underlying toneless on both nouns and main clause affirmative verbs, they are /H/ on (augmented) subject relative verbs. This was seen in the examples in (27) and (28). The second way noun class marking differs is seen in the so-called “nasal classes” 1, 3, 4, 6, 9 and 10. As summarized in Table 1, these have a nasal consonant on
nouns (and adjectives) vs. an oral or no consonant on verbs (and agreeing noun modifiers other than adjectives):\(^{25}\)

<table>
<thead>
<tr>
<th>Class</th>
<th>Noun</th>
<th>Adj</th>
<th>Subj</th>
<th>Obj</th>
<th>Poss</th>
<th>Num</th>
<th>Dem</th>
</tr>
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<tbody>
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<td>mu-</td>
<td>a/-o-</td>
<td>mu-</td>
<td>w-</td>
<td>o-</td>
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<td>mu-</td>
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<td>gu-</td>
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<td>N-</td>
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<td>zi-</td>
<td>z-</td>
<td>i-</td>
<td>ezi</td>
</tr>
</tbody>
</table>

Table 1. Noun class markers of the “nasal classes”

The fact that adjectives take the same prefixes as nouns is usually interpreted as meaning that they are (morphologically) nouns, although they often have different syntactic properties. The shape of noun class marking will be most relevant when we consider subject relative nominalizations which take verbal marking, e.g. class 1 o- in (24).

3.2. Syntactic properties. As in other languages, nouns and verbs occur in different syntactic frames with different dependents. Put simply, nouns take adnominal “modifiers”, while verbs take verb phrase complements (objects, adjuncts). A canonical noun like o-mu-sháho ‘doctor’ cannot take a direct object, nor can a conjugated verb as in tu-ka-zín-a ‘we danced’ (remote past) be modified by an adjective, possessive, demonstrative, or numeral. In §4 we will find that all but subject relatives can take such modifiers, while only a few can be expanded by an object or adverbial.

3.3. Phonological properties. There are important phonological differences between nouns and verbs in Runyankore, particularly as concerns tone. This difference is manifested in the distribution of both lexical and morphological tone, the application of phrasal tone rules, and the realization of tone in reduplication. I take up each of these in the following subsections.

3.3.1. Lexical and morphological tone. Recalling the noun structure in (30), the following summarizes the tonal properties of each of the three constituents:

(33) Augment : /H/, becomes Ø after pause  
Noun class prefix : Ø  
Stem : all Ø or one /H/

As seen, the augment is underlingly /H/ and realized as such when preceded by any element, e.g. o-mu-sháho ‘doctor’ vs. tu-ryáá-húrir’ ó-mu-sháho ‘we will hear the doctor’ (remote future) (cf. tu-ryáá-húrir-a ‘we will hear’). The nouns that have been cited also show that the class prefix is toneless. This brings us to the stem, which can be toneless, e.g. e-bi-tabo ‘book(s)’ or have at most one /H/. Examples of all of the patterns of one to three mora stems are given in (34).

---

\(^{25}\) In Table 1, N- stands for a homorganic nasal, while the demonstratives are the proximate forms ‘this/these’.
(34) a. /Ø/ o-mu-ti ‘tree’ /ó-mu-tí/
   /H/ o-mú-twe ‘head’ /ó-mu-twé/  
b. /Ø-Ø/ e-ki-tabo ‘book’ /é-ki-tabó/  
   /H-Ø/ o-mu-kázi ‘woman’ /ó-mu-kázi/  
   /Ø-H/ o-mu-góre ‘bride’ /ó-mu-goré/  
c. /ØØ-Ø/ o-mu-gaati ‘bread’ /ó-mu-gaáti/  
   /HØ-Ø/ e-ki-gíko ‘spoon’ /é-ki-gíko/  
   /ØH-Ø/ e-ki-kóóko ‘animal’ /é-ki-kookó/  
d. /Ø-Ø-Ø/ o-mu-tororo ‘yolk’ /ó-mu-tororo/  
   /H-Ø-Ø/ o-mu-hínguzi ‘stranger’ /ó-mu-hínguzi/  
   /Ø-Ø-Ø/ e-ki-rahúri ‘glass’ /é-ki-rahúrí/  
   /Ø-Ø-H/ e-ki-tenterá ‘chicken (sp.)’ /é-ki-tenterá/  

As seen, the one /H/ can be on the first, second, or third mora of the stem (and similarly for longer stems). If the /H/ is on the final mora, it will be retracted to the penult phrase—finally. Turning to verbs, the situation is both more simple and more complex. First, there is a simple initial mora /H/ vs. Ø contrast on verb roots. While tonal minimal pairs are not common, I have found the following contrastive -CVC-, and -CVNC- roots in Taylor (1959), verified by DN:

(35) a. -hé- ‘be lost for good’ -her- ‘scold’  
   -kák- ‘compel’ -kak- ‘grow fat’  
   -kán- ‘cut into strips’ -kan- ‘click tongue (in contempt)’  
   -rém- ‘become lame’ -rem- ‘be too much for, exceed’  
   -shár- ‘cut’ -shar- ‘be mad’  
   b. -búng- ‘wander off idly’ -bung- ‘treat medically, bore into wood’  
   -háng- ‘be noon’ -hang- ‘create’  
   -híng- ‘garden, grow (crops)’ -híng- ‘exchange’  
   -réng- ‘go from view, set (sun)’ -réng- ‘test, measure’  
   -síng- ‘overcome, win, defeat’ -síng- ‘step back, stand ready, start fire’  
   -tém- ‘flow (water)’ -tem- ‘climb’  
   -zímb- ‘swell’ -zímb- ‘overcharge’

The complexities arise in verb conjugation. First, as seen in Table 2 there are exactly four tonal patterns on stems, depending on whether the root has a /H/ tone and whether there is a /H/ suffixal tone.

<table>
<thead>
<tr>
<th>No suffixal /H/</th>
<th>Suffixal /H/</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø root:</td>
<td></td>
</tr>
<tr>
<td>a. no stem H</td>
<td>c. H on the second stem mora</td>
</tr>
<tr>
<td>/H/ root:</td>
<td></td>
</tr>
<tr>
<td>b. H on the initial stem mora</td>
<td>d. H on the final stem mora</td>
</tr>
</tbody>
</table>

Table 2. Four Tone Patterns on Verb Stems

---

26 There is no moraic contrast on final syllables or HØ vs. ØH contrast on CVV. Either of these would be realized with a HL falling tone if phrase-penultimate, otherwise H.

27 DN was not familiar with the only tonal minimal pair I found among -CVVC- roots in Taylor (1959), -síir- ‘give meat’ vs. -síir- ‘make a reed ceiling’. Minimal pairs are even rarer on longer verb bases, most of which carry an identifiable derivational suffix.
These four tone patterns are exemplified in (36).

(36)  
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>tu-ka-ragiir-an-a</td>
<td>‘we commanded each other’ (remote past)</td>
</tr>
<tr>
<td>b.</td>
<td>tu-ka-húrir-an-a</td>
<td>‘we heard each other’</td>
</tr>
<tr>
<td>c.</td>
<td>tu-ragír-an-a</td>
<td>‘we command each other’</td>
</tr>
<tr>
<td>d.</td>
<td>tu-húrir-án-a</td>
<td>‘we hear each other’</td>
</tr>
</tbody>
</table>

While these same patterns are observed on nouns as well, particularly deverbal nouns, what distinguishes verbs is that certain TAMs can have more than one H tone. This is seen in (37).

(37)  
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>tu-ryáá-ragiir-an-a</td>
<td>‘we will command each other’ (remote future)</td>
</tr>
<tr>
<td>b.</td>
<td>tu-ryáá-bá-ragiir-a</td>
<td>‘we will command them’</td>
</tr>
<tr>
<td>c.</td>
<td>tu-ryáá-húrir-an-a</td>
<td>‘we will hear each other’</td>
</tr>
<tr>
<td>d.</td>
<td>ni-ryáá-ba-húrir-a</td>
<td>‘we will hear them’</td>
</tr>
</tbody>
</table>

As seen, the remote future tense does not have a suffixal H: there is no H on the verb stem in (37a, b) vs. the initial H of the verb root in (37c,d). In addition, all of the examples show a H tone on the tense marker -ryáá- (from /rí-a-/). The second H on -bá- in (37b) shows that object markers are realized with a H tone when the verb stem is toneless. Other conjugated forms would show additional contexts in which verbs can have more than one H tone, typically one on the stem, one on a prefix. It will be seen in §4 that among the different nominal derivatives, only subjective relatives can host more than one H tone.28

3.3.2. Tone rules. Another source of noun-verb differences is in how the phrasal rule of H tone deletion (HTD) applies to them. As documented in Hyman (2022a), HTD is more restrictive on nouns than it is on verbs. In (38a), where the input noun is /é-bi-kópo/ ‘cups’, HTD deletes the H of a noun followed by a possessive, adjective or numeral, but not before a demonstrative (38b) or an augmented modifier (38c), where the augment has a contrastive function:

(38)  
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>possessive pronoun:</td>
<td>e-bi-kópo byéitu</td>
</tr>
<tr>
<td></td>
<td>possessive nominal:</td>
<td>e-bi-kópo byaa Kakúru</td>
</tr>
<tr>
<td></td>
<td>adjective:</td>
<td>e-bi-kópo bi-hângo</td>
</tr>
<tr>
<td></td>
<td>numeral (1-5):</td>
<td>e-bi-kópo bi-biri</td>
</tr>
<tr>
<td>b.</td>
<td>demonstrative:</td>
<td>e-bi-kópo bí-ri</td>
</tr>
<tr>
<td>c.</td>
<td>augmented possessive:</td>
<td>e-bi-kóp’ é-byéitu</td>
</tr>
<tr>
<td></td>
<td>augmented adjective:</td>
<td>e-bi-kóp’ é-bi-hângo</td>
</tr>
</tbody>
</table>

In addition, HTD will not apply if the modifier is toneless:

(39)  
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>possessive pronoun:</td>
<td>e-bi-kópo byangye</td>
</tr>
<tr>
<td>b.</td>
<td>possessive nominal:</td>
<td>e-bi-kópo byaa Muhwezi</td>
</tr>
<tr>
<td>c.</td>
<td>adjective:</td>
<td>e-bi-kópo bi-rungi</td>
</tr>
</tbody>
</table>

28 While the augment can provide a second H to the noun (and subject relative), there is good evidence that it is a proclitic (Hyman 2021). It can also be noted that all preceding H tones on the root or prefixes are deleted in verb forms that have a suffixal H, whether realized on the second or final stem mora.
Verbs, on the other hand, have fewer conditions. As long as the trigger is within the same clause, it can be an object (40a,c,e) or adjunct (40b,d), based on the remote past inputs ba-ka-húrir-a ‘they heard’ and ba-ka-zín-a ‘they danced’:

(40) a. ba-ka-húrir-a Kakúru ‘they heard Kakuru’
   b. ba-ka-zín-a na Kakúru ‘they danced with Kakuru’
   c. ba-ka-húrir-á Muhwezi ‘they heard Muhwezi’
   d. ba-ka-húrir-á gye ‘they heard well’
   e. ba-ka-húrir-á ó-mu-sháho ‘they heard the doctor’

(40c) not only shows that the /H/ of /-kóm-/ ‘tie’ has been deleted before toneless Muhwezi, but that a final H has been inserted by HTI (see below). The same is observed before the adverb gye ‘well’ in (40d), while (40e) shows that HTD will apply to a verb even when the complement begins with an augment.29

Concerning HTI more generally, whenever a toneless noun or verb is followed by a toneless dependent, a H tone will be inserted on its final vowel. For nouns HTI applies before the same modifiers seen above, illustrated with /é-bí-tabó/ ‘books’ in (41a).

(41) a. possessive pronoun: e-bí-tabó byangye ‘my books’
   possessive nominal: e-bí-tabó byaa Muhwezi ‘Muhwezi’s books’
   adjective: e-bí-tabó bi-rungi ‘good books’
   numeral: e-bí-tabó mwenda ‘nine cups’
   b. possessive pronoun: e-bí-tabó byéitu ‘our books’
   possessive nominal: e-bí-tabó byaa Kakúru ‘Kakuru’s books’
   adjective: e-bí-tabó bi-hán go ‘big books’
   numeral: e-bí-tabó bí-biri ‘two books’
   demonstrative: e-bí-tabó bí-ri ‘those cups’

(Since there are no toneless demonstratives, they cannot be tested for HTI.) (41b) shows that HTI will not apply when the modifier has a H tone. When followed by a toneless word, verbs will undergo HTI if underlingly toneless, as in (42a) or if toneless by application of HTD in (42b), as was also seen in (40c,d).

(42) a. ba-ka-reeb-a Muhwezi → ba-ka-reeb-á Muhwezi ‘they saw Muhwezi’
   b. ba-ka-bón-a Muhwezi → ba-ka-bón-á Muhwezi ‘they found Muhwezi’

Given the above differences, we will see in §4 whether the different nominalizations follow the nominal or the verb pattern for HTD. However, two potential complications will have to be borne in mind. While I have presented the different conditions on the trigger of HTD, there also are target conditions. As seen in (43a), unaugmentable nouns do not undergo HTD, nor do negative verbs and a few affirmative verb forms such as the progressive and subjunctive in (43b).

---

29 Within the noun paradigm, the verbal pattern of HTD+HTI is optional in the case of compound kinship terms. Thus, compare nyinéénkúru ‘grandmother’ (from nyina ‘mother’ + /é-n-kúru/ ‘old’) with nyinéénkúru Muhwezi ~ nyinéenkurú Muhwezi ‘Muhwezi’s grandmother’ (Hyman 2021). In §4 we will see that HTD+HTI is also possible in some of the derived nominals.
Deverbal Nominalizations in Runyankore

(43) a. possessive pronoun: karááni wéitu ‘our clerk’
possessive nominal: karááni waa Kakúru ‘Kakuru’s clerk’
adjective: karááni mu-hângo ‘a big clerk’
numeral (1-5): baa=karááni bá-biri ‘two clerks’
b. progressive: ni-ba-ragiír-a Kakúru ‘they are commanding Kakuru’
subjunctive: ba-ragiír-e Kakúru ‘may they command Kakuru!’
negative habitual: ti-ba-ragiír-a Kakúru ‘they don’t command Kakuru’

In §4 we will see the issue of these target conditions arises when we consider the agentive ki-/a nominalization as well as infinitives.

3.3.3. Tone in reduplication. A third phonological difference between nouns and verbs is how tone is realized in stem reduplication, which assigns a frequentative or devaluative meaning. A reduplicated noun such as o-mu-sháho-shaho can mean ‘a sort of doctor, not quite a doctor’ or be used if the speaker isn’t sure a person is a doctor (‘a might be doctor’). The sentence ba-ka-zína-zína means ‘they sort of danced’ or ‘they danced a lot, they danced here and there’ (remote past). While the meanings can vary along these lines, and speakers have a choice in forms (stems can copy more than once and longer stems can optionally truncate or end in a replacive -a), we will be interested only in the following two tonal differences, which will be illustrated with full stem reduplication.

The first tonal difference concerns toneless noun stems which optionally undergo HTI and receive a H tone on the final syllable of the first stem, as in (44a). Reduplicated toneless verbs, do not undergo HTI, as seen in (44b).

(44) a. o-mu-gyenyi ‘visitor’ → o-mu-gyenyi-gyenyi
    e-ki-tabo ‘book’ → e-ki-tabo-tabo
    o-mu-roreezi ‘spectator’ → o-mu-roreezi-roreezi
    b. ba-ka-gyend-a ‘they went away’ → ba-ka-gyenda-gyenda
       ba-ka-bar-a ‘they counted’ → ba-ka-bará-bará
       ba-ka-ragiir-a ‘they commanded’ → ba-ka-ragiirá-ragiirá

Since HTI is a rule that only applies between a head and dependent word, a plausible explanation is that noun reduplication has such a nested internal word structure, while verbs have a compounded stem structure.

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30 For extensive discussion of both tonal and segmental variation in Runyankore verb stem reduplication, see Hyman (2022b). Noun stem reduplication shows similar segmental variations.
31 In discussing differences in Kinande, Mutaka & Hyman (1990) consider that noun reduplication is both word-level and “suffixing”, while verb reduplication is stem-level and “prefixing”. Runyankore is a little more complicated in that multiple reduplication is possible (see note 32).
The second tonal differences concerns stems with a H tone. As seen in (45), an input stem H can be realized on either stem in noun reduplication:

(45)  a. /H-Ø/  o-mu-sháho  ‘doctor’  →  o-mu-sháho-sháho
        0-mu-shahosho-sháho
        o-mu-shaho-sháho
        b. /Ø-H/  o-mu-góre  ‘bride’  →  o-mu-góre-góre
        o-mu-gore-góre
        c. /H-Ø-Ø/  o-mu-hínguzí  ‘stranger’  →  o-mu-hínguzí-hínguzí
        o-mu-hinguzi-hínguzí
        d. /Ø-Ø-Ø/  o-mu-gurúsí  ‘old man’  →  e-ki-gurúsí-gurúsí
        e-ki-gurusi-gurúsí
        e. /Ø-Ø-H/  e-bí-cobóyo  ‘old beans’  →  e-bí-cobóyo-cobóyo
        e-bi-coboyo-cobóyo

The above examples have been chosen to show that the freedom of the H to appear on either stem is independent of where that H originates in the input.

The situation is quite different in verbs. Recall from Table 2 above that the H may be on the initial, second, or final mora. The tonal possibilities in reduplication are indicated in (46).

(46)  a.  M1 H  ba-ka-zín-a  ‘they danced’  →  ba-ka-zín-a-zín
        ba-ka-kóror-a  ‘they cough’  →  ba-ka-kóror-a-kóror
        ba-ka-kóror-a-kóror
        *ba-ka-zína-zín
        *ba-ka-kórora-kórora
        b.  FV H  ba-zín-a  ‘they dance’  →  ba-zín-a-zín
        ba-ka-zín-a
        *ba-zíná-zín
        ba-kóror-a  ‘they cough’  →  ba-ka-kórora-kóror
        ba-kóror-a-kóror
        ba-ka-zín-a
        *ba-ka-zína-zín
        *ba-ka-kórora-kóror
        *ba-ka-kóror-a-kóror
        c.  M2 H  ba-gúr-a  ‘they buy’  →  ba-gúr-a-gúra
        ba-ka-zín-a
        ba-gúr-a-gúra
        ba-ka-gúr-a-gúra
        ba-ka-gúr-a
        ba-ragúr-a  ‘they command’  →  ba-ragúr-a-ragúra
        ba-ka-gúr-a-gúra
        ba-ka-ragúr-a-ragúra
        ba-ka-ragúr-a

Differing from nouns, the first mora (M1) root H can only be realized on the first stem, while the FV H can only be realized on the second stem. The M2 H can be realized on either stem, although in the case of CVC-a stems, DN expresses a preference for the H to be realized on the first stem. As seen in both (45) and (46), neither reduplication process allows a H on both stems (*o-mu-sháho-sháho, *ba-ka-zína-zín). The question taken up in §4 is whether reduplicated nominalizations follow the tonal properties of nouns or verbs.32

---

32 Although I have only shown single stem reduplication, the same noun-verb differences hold even more clearly in multiple reduplication. Thus, o-mu-gyenyi ‘visitor’ can have an inserted H on any non-final stem (o-mu-gyenyi-gyenyi-gyenyi, o-mu-gyenyi-gyenyi-gyenyi ‘sort of a visitor’) and the H of o-mu-sháho ‘doctor’ can be on any stem (o-mu-sháho-sháho-sháho, o-mu-sháho-sháho-sháho, o-mu-sháho-sháho-sháho ‘sort of a doctor’). In verbs the M1 H must be on the first stem and the FV H on the last stem (ba-ka-zína-zín-a ‘they danced a lot’ (*ba-ka-zína-zína-zína, *ba-ka-zína-zína-zína); ba-zína-zína-zína ‘they dance a lot’ (*ba-zína-zína-zína, *ba-zína-zína-zína). The M2 H is free to occur on any stem: ba-gúr-a-gúra, ba-gúr-a-gúra, ba-gúr-a-gúra ‘they buy a lot’). For more discussion, see Hyman (2022b).
3.4. Summary of noun-verb differences. In §3 we saw that Runyankore nouns and verbs differ in a number of syntactic, morphological, and phonological ways. These are summarized in Table 3.

<table>
<thead>
<tr>
<th>A. Morphology</th>
<th>Nouns</th>
<th>Verbs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Augment</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>2. Nasal class prefixes</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>3. Extensions</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>4. TAMs, negation</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>5. Object markers</td>
<td>-</td>
<td>+</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B. Syntax</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Adnominal modifier</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>7. Object</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>8. Adverbials</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>9. Compounding (see §4)</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C. Phonology</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>10. More than one H</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>11. HTD triggered by Ø</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>12. HTI in reduplication</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>13. H on any stem in reduplication</td>
<td>+</td>
<td>±</td>
</tr>
</tbody>
</table>

Table 3. Noun-Verb Differences in Runyankore

Taken together, these differences can serve as criteria to measure the extent to which the different deverbal nouns in §2 acquire nominal properties vs. maintain the original properties of their verbal base. In the next section I will evaluate each nominalization against the above 13 criteria. We will see that these nominalizations themselves fall along a hierarchy going from “most nominal” to “most verbal”.

4. Nominal vs. verbal properties of deverbal nouns

In this section I present the results from testing each of the 13 nominalization processes against the noun vs. verb criteria. An overview of these results are summarized in Table 4, where the first column represents the deverbal noun structures in order of presentation in §2, while the headers represent the 13 noun vs. verb criteria from §3.4.33

---

33 As indicated in note 2, the results to be presented are based on the judgments of my consultant, DN, with whom I systematically applied each of the criteria against numerous forms over a period of several months. In some cases DN varied in how she characterized some of the forms. In such cases where she did not immediately indicate total acceptability or total rejection, I returned on different occasions in an attempt to find the proper characterization, e.g. whether she would ever say it, whether she thought someone else might say it, or whether she was not sure. It is obvious that the results reported here need to be tested against other speakers who may be more or less accepting in their judgments of grammaticality and their actual usage of potential forms.
A + in a cell means that the nominalization in question meets the criterion, while a - means it does not. A ± means that DN’s judgment varied or that acceptability was marginal, while (+) in the HTD/Ø column means that the HTD verb pattern can optionally be used. In the second line of the headers, the noun criteria are in italics, e.g. Aug, Nas, while the verb criteria are in plain font, e.g. Ext, Neg. The cells that follow the noun criteria are in green, while those that meet the verb criteria are in orange. I indicate the compound column with a golden color since compounding seems to be a special case (see below), while cells where the criteria are non-applicable are indicated in grey.

To begin, let us take note of the most striking results seen in Table 4. First, looking at the table as a whole, judging from the chosen criteria, the nominalizations appear be more nominal (80 green cells) than verbal (46 orange cells). Looking at the table by rows, the first five are clearly nouns, while the remaining six meet some or most of the verbal criteria. Compound -a represents a special case (see below). Second, looking at the table by column, only the extension column has the same value for all eleven derivatives: In all of the constructions, if grammatically and semantically compatible, the verb base can consist of a root plus an extension such as causative/instrumental -i- or -is-i-/-es-i-, applicative -ir/-e-r-, reciprocal -an-, and passive -(ib)w-. Examples involving the verb roots -kóm- ‘tie’, -gur- ‘buy’, and -bar- ‘count’ are seen in (47):

(47)  
Agt -i  a-ba-kóm-er-an-i  ‘those who tie for each other’
Pat -e  a-ba-kóm-er-an-e  ‘those (human class 2) tied together’
       e-ki-gur-ir-an-e  ‘sth. bought for each other’

Table 4. Deverbal Nouns Tested Against Noun vs. Verb Criteria

<table>
<thead>
<tr>
<th>Morphological</th>
<th>Syntactic</th>
<th>Phonological</th>
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<tr>
<td></td>
<td>Aug</td>
<td>Nas</td>
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<tr>
<td>Agt -i</td>
<td>+</td>
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<tr>
<td>Pat -e</td>
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<tr>
<td>CI -y-o</td>
<td>+</td>
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<td>CI -is-i-o</td>
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<td>CI -ir-o</td>
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<td>Loc -ir-e</td>
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<td>Man -ir-e</td>
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<td>CP -a</td>
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<td>Cpd -a</td>
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<td>Agt ki-/-a</td>
<td>n.a.</td>
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<td>Inf -a</td>
<td>n.a.</td>
<td>+</td>
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<td>SRel</td>
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Abbreviations: (i) First column: Agt = Agentive, Pat = Patient, CI = Causative/Instrumental, Loc = Locative, Man = Manner, CP = Causative/Passive, Cpd = Compound, Inf = Infinitive, SRel = Subject Relative. (ii) Line 2 of header: Aug = Augment, Nas = Nasal (noun class prefixes), Ext = extensions, Neg = Negative, Adj = Adjective, DO = direct object (nominal), OM = object marker (prefix), gye ‘well’ (adverb), Cpd = Compound, 2H = possibility of two (or more) H tones; HTD/Ø = H tone deletion applies when dependent is toneless; RedHTI = H tone insertion on toneless non-final stem in reduplication, RedHH = input H can appear on either or any stem in reduplication.
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A third observation is that the subject relative is clearly the most verbal of the derivatives. First, neither it nor compound agentive -a can be modified by an adjective or other noun modifier (possessive, numeral, demonstrative). This is shown in (48), where the derivatives of -zín- ‘dance’, -kóm- ‘tie’, and -bar- ‘count’ are followed by the adjective -rungi ‘good’ or -hângo ‘big’:35

(48) Agt -i o-mu-zín-i mu-rungi ‘a good dancer’
Pat -e e-ki-kom-e ki-hângo ‘something big tied’
Cl -y-o e-ki-kóm-y-o ki-rungi ‘a good thing to tie with’
Cl -is-i-o e-ki-bar-is-o ki-hângo ‘a big thing to count with’
Loc -ir-o e-i-zín-i rí-rungi ‘a good place to dance’
Man -ir-e e-mi-bar-ir-e mi-rungi ‘a good way to count’
CP -a o-mu-kom-w-a mu-hângo ‘a big tied person’
Cpd -a *mu-bar-a mu-hângo (intended: ‘a big counter’)‘
Agt ki/-/a ki-zín-á mu-hângo ‘a big dancer’
Inf -a o-ku-zín-a ku-rungi ‘good dancing’
SRel *o-zín-a mu-rungi (intended: someone good who dances)

In addition, there are two isolated hold-outs, where the subject relative differs from all of the other derivations. The first is that subject class markers in relative clauses cannot take the nasal allomorphs of classes 1, 3, 4, 6, 9 and 10: o-zín-a ‘one (class 1 human) who dances’ (*o-mú-zín-

34 DN is less comfortable with an overt causative -y- followed by reciprocal -an-, hence reports that e-ki-kóm-y-an-o is “not common” (*e-ki-kóm-an-y-o is ungrammatical), and similarly for e-ky-ôzy-an-o ‘something used to wash each other’. The problem seems to be with combining reciprocal -an- with an overt -y- in either order. On the other hand, DN accepts cases where the -i- conditions consonant mutation and then is absorbed into the preceding fricative, e.g. e-ki-baz-an-o ‘something used to count each other’, from /é-ki-bar-i-an-o/.

35 As discussed further below, compound -a requires a verbal complement. On the other hand the whole compound is nominal and can be modified by an adjective: mu-bar-a bi-tabo mu-hângo ‘a big book-counter’.
(49) a. y-áa-kóm-ire  
   ‘s/he has tied (already)’
   y-áa-ki-kóm-ire  
   ‘s/he has tied it’
   ow-áa-kóm-ire  
   ‘one who has tied’
   ow-áa-ki-kóm-ire  
   ‘one who has tied it’

b. a-rá-kóm-ire  
   ‘s/he has tied (before)’
   a-rá-ki-kóm-ire  
   ‘s/he has tied it’
   o-rá-kóm-ire  
   ‘one who has tied’
   o-rá-ki-kóm-ire  
   ‘one who has tied it’

c. a-ryáa-kóm-a  
   ‘s/he will tie’
   a-ryáa-ki-kóm-a  
   ‘we will tie it’
   o-ta-rí-kóm-a  
   ‘one who will not tie’
   o-ta-rí-ki-kóm-a  
   ‘one who not will tie it’

The main reason why only the subject relative can support more than one H tone is that alone among the derivatives can take tense markers like /-áa-/ /-rá-/ /-rí-/ and /-rí/- in the above examples (which would be an additional hold-out if added in Table 4). There is however only one H when -kóm- is directly preceded by -rá- in (49b) and -rí- in (49c). This is because of Meeussen’s Rule which deletes a H tone when it directly follows another H, hence /-rá-kóm-/ /-rí-kóm-/ → -rá-kóm-, -rí-kóm-. The immediately following examples allow the two input H tones to surface since they are buffered by the class 7 object marker -ki- ‘it’.

Since the infinitive and (marginally) agentive ki-/a have a negative counterpart, one could conceivably have gotten two H tones from the non-main clause negative prefix /-tá/- and a H verb root separated by a toneless object prefix, but, as seen in (50), the language conspires against this.

(50) a. ?ki-tá-kóm-a  
   ‘one not having tied’
   b. ki-mu-kóm-a  
   ‘one having tied him/her’
   c. ?ki-ta-mu-kóm-a  
   ‘one not having tied him/her’
   d. o-ku-tá-kóm-a  
   ‘to not tie’
   e. o-ku-ta-mu-kóm-a  
   ‘to not tie him/her’

Although DN’s acceptability judgments were variable, in (50a) we see that the non-main-clause negative prefix -tá- has a /H/ tone, which triggers deletion of the /H/ of /-kóm-/ ‘tie’ by Meeussen’s Rule. In (50b), we see that in the affirmative ki-/a can take an object marker, here class 1 -mu- ‘him/her’. It should therefore be possible for -tá- and -kóm- both to be realized when -mu-intervenes in the corresponding negative, as we saw in (49). However, as seen in (50c), the negative marker -ta- is toneless when it is followed by an object marker. The same is observed in the negative infinitive. Again, -tá- has a H tone in (50d), which triggers Meeussen’s Rule on -kóm-. As seen in (50e), the object marker -mu- is acceptable, but when it co-occurs with the negative marker, -ta- is toneless. Thus (ignoring the augment), other than certain subject relative TAMs, deverbal

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36 Even though (50a) and (50c) are only marginally acceptable, DN is sure of what their tones would be.
nouns never have more than one H tone. In fact, as we have seen, other than its ability to take an augment, subject relatives meet none of the noun criteria in §3. They are completely verbal.

Focusing still on the more verbal derivatives towards the bottom of Table 4, agentive ki-/a and the infinitive also fail to take nasal prefixes. However, the corresponding cells have been marked n.a. because the first is restricted to the (unaugmentable) ki- prefix and the second to class 15 o-ku-(o-ku-zín-a ‘to dance’), optionally class 14 o-bu- in the negative (o-ku-tá-zín-a, o-bu-tá-zín-a ‘to not dance’). For these two derivatives the nasal prefix criterion is thus irrelevant. Setting this criterion aside, both of these constructions appear to be almost as verbal as the subject relative. As seen in (51), they have corresponding negative forms and can take a prefixal object marker, a following nominal object, and an oblique or adverbial such as gye ‘well’: 37

(51) a. o-tá-kom-a ‘one who doesn’t tie’
o-mu-kóm-a ‘one who ties him/her’
o-kom-á Muhwezi ‘one who ties Muhwezi’
o-kom-á gye ‘one who ties well’
b. ki-tá-kom-a ‘one not having tied’
ki-mu-kóm-a ‘one having tied him/her’
ki-kom-á Muhwezi ‘one having tied Muhwezi’
ki-kom-á gye ‘the one having tied well’
c. o-ku-tá-kom-a ‘to not tie’
o-ku-mu-kóm-a ‘to tie him/her’
o-ku-kóm-a Muhwezi ‘to tie Muhwezi’
o-ku-kóm-a gye ‘to tie well’

While the three constructions in (51) satisfy the most verbal criteria (11 in the case of subject relatives, seven in the other two cases), the question is why the latter two meet so many of the nominal criteria. The infinitive is well known for its dual character as a “mixed category” (see e.g., Creissels & Godard 2005): Morphologically, it can appear with a nominal augment and a class 15 noun class prefix (optionally class 14 o-bu- in the negative), but also with verbal negative and object prefixes. Syntactically, it can be followed by an object or adverbial verb phrase constituent, as above in (51c), but also by a nominal modifier, as in (52),

(52) a. o-ku-zín-a ku-rungi ‘good dancing’
b. o-ku-zín-a kw-čitu ‘our dancing’
c. o-ku-zín’ óo-ku ‘this (sort of) dancing’

Although expressed morphologically, the negative and object prefixes are exponents of what other languages often express in the verb phrase syntax. 38 The dual properties in (51c) and (52c) thus show that the infinitive can be used in either a nominal or verbal syntactic context, as has been long known for Bantu (Carstens 1991, Creissels & Goddard 2005).

37 The “locative” class 16 /hó/ and class 18 /mú/, frequently used as attenuatives, receive the same acceptability judgments as gye, e.g. o-ku-kóm-á-ho, o-ku-kóm-á-mu ‘to tie a little’.

38 In addition, although tense affixes are usually excluded, other Bantu languages allow certain aspect markers on infinitives, e.g. Chichewa -ka- ‘motion away from speaker’, -dzá- ‘motion towards speaker’, -ngo- ‘just’: ku-méeny-a ‘to hit’, ku-ká-méény-á ‘to go and hit’ (Hyman & Mtenje 1999:94,101), kú-ngo-méeny-a ‘to just hit’ (personal notes).
The ki-/a construction does not lag much further behind as a “mixed category” invariant subject relative—also supported by the phonological criteria. As seen in (53), ki-/a agentives can take object and adverbial complements.

(53) a.  
ki-rágír-a  
ki-húrír-a /-á/  
‘commander, one having commanded’

b.  
ki-rágír-a Kakúru  
ki-húrír-a Kakúru  
‘one having commanded Kakuru’

c.  
ki-rágír-a Muhwezi  
ki-rágír-á Muhwezi  
ki-húrír-á Muhwezi  
‘one having heard Muhwezi’

d.  
ki-rágír-a gye  
ki-rágír-á gye  
ki-húrír-á gye  
‘one having commanded well’

The forms in (53a) show ki-/a is marked by an M2H if the verb root is toneless (-rágír- ‘command’) and by a final H if the verb root is /H/ (-húrír- ‘hear’). In (53b) we observe the verbal pattern, since HTD obligatorily applies before Kakúru even though ki-rágír-a and ki-húrír-a are unaugmentable nouns (compare (54) below). In (53c), where Muhwezi is toneless, ki-rágír-a can either maintain its M2 tone (= the nominal pattern), or its H can undergo HTD, followed by final HTI (= the verbal pattern). The final H of ki-húrír-á is ambiguous as it could either be from direct assignment of the suffixal H to the FV, or from HTD+HTI. The same nominal and verbal patterns are observed in (53d), where the two derivatives are followed by the adverb gye ‘well’.

Now compare the above forms with those in (54).

(54) a.  
ki-rágír-a mu-hângo  
ki-húrír-á mu-hângo  
‘a big commander’

b.  
*ki-rágír-a mu-hângo  
*ki-húrír-a mu-hângo  
‘a big hearer’

c.  
ki-rágír-a mu-rungi  
ki-húrír-á mu-rungi  
‘a good commander’

d.  
*ki-rágír-á mu-rungi  
‘a good hearer’

In (54a) the two derivatives realize their H tones before H tone mu-hângo since, recall from (43), unaugmentable nouns do not undergo HTD before a nominal modifier. Thus, the forms in (54b) are ungrammatical. The same M2 and FV Hs are observed before toneless mu-rungi in (54c). What is crucial is that (54d) is ungrammatical, since HTI can only apply if the HTD also deletes the M2H, which it can’t. This contrasts with the application of HTD in (53b) and HTD+HTI in (53c,d). We conclude that the verbal HTD pattern applies in a verbal context (nominalization + object/adverb), while the more restrictive nominal pattern applies in a nominal context (nominalization + modifier).39

From (51)-(54) we see that both the infinitive and ki-/a derivatives show conflicting nominal vs. verbal properties, depending on the frame in which they function: If followed by a noun phrase

39 The only complication is the first realization in (53c,d), where ki-rágír-a is allowed to surface with its M2H. This output is not possible in conjugated verb forms: tu-ka-kóm-a ‘we tied’, tu-ka-kom-á Muhwezi ‘we tied Muhwezi’ (*tu-ka-kóm-a Muhwezi).
modifying, they adhere to the nominal HTD pattern. If followed by a verb phrase complement, *ki/-a derivatives realize the verbal HTD pattern. Infinitives also show a split behavior, but the reverse: they fail to undergo HTD when followed by a verb phrase complement, but undergo HTD before a noun modifier:

(55) a. o-ku-bar-a
    o-ku-kóm-a
    ‘to count’
    ‘to tie’

b. o-ku-bar-a kwéitu
    o-ku-kóm-a kwéitu
    *o-ku-kóm-a kwéitu
    ‘our counting’
    ‘our tying’

c. o-ku-bar-á kwangye
    o-ku-kóm-á kwangye
    *o-ku-kóm-á kwangye
    ‘my counting’
    ‘my tying’

d. o-ku-bar-a Kakúru
    o-ku-kóm-a Kakúru
    *o-ku-kóm-á Kakúru
    ‘to count Kakuru’
    ‘to tie Kakuru’

e. o-ku-bar-á Muhwezi
    o-ku-kóm-á Muhwezi
    *o-ku-kóm-á Muhwezi
    ‘to count Muhwezi’
    ‘to tie Muhwezi’

f. o-ku-bar-á gye
    o-ku-kóm-á gye
    *o-ku-kóm-á gye
    ‘to count well’
    ‘to tie well’

Starting with the the two infinitives in (55a), we see that the H of -kóm- ‘tie’ undergoes HTD before the class 15 H tone possessive kwéitu ‘our’ in (55b), but not before the toneless possessive kwangye ‘my’ in (55c), where the toneless infinitive does undergo HTI. In (55b,c) the infinitive is thus acting like any other augmentable noun.40 The situation is different in (55d-f). While the toneless infinitive o-ku-bar-a undergoes HTI, as expected, o-ku-kóm-a does not undergo HTD when it is followed by Kakúru, Muhwezi, or gye. Since HTD does not apply, the verbal infinitive can be added to the group of TAMs that have to be marked as failing to undergo HTD no matter what follows.41

Having addressed the subject relative, agentive ki/-a, and the infinitive, I now turn to the three remaining derivatives which have some verbal properties. As seen in Table 4, the compound and

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40 The crucial distinction is that the noun be “augmentable”, not that the augment has to be present (Hyman 2021). Thus, HTD applies also in tí ku-kóm-a kwéitu ‘it’s not our tying’, where the augment is absent after the negative copula tí. Interestingly, the presence vs. absence of the infinitive augment can mark subtle semantic distinctions. Thus, ni-ku-kund-á ku-tund’ é-bi-tabo ‘we like to sell books’ requires that ‘we’ do the book selling, while in ni-ku-kund’ ó-ku-tund’ é-bi-tabo ‘we like book-selling’ the selling could be by someone else. In the first sentence ku-tund-a ‘to sell’ is more verbal than o-ku-tund-a ‘to sell, selling’ in the second example. Compare also ni-ku-kund-á ku-zína ‘we like to dance’ vs. ni-ku-kund’ ó-ku-zína ‘we like (the) dancing’, e.g. when we go to the theater.

41 Although Hyman and Watters (1984) identify the other TAMs (progressive, imperative, subjunctive, negatives) as having an inherent focus, marked [+F] in closely related Ruhaya, it is not clear why the infinitive should join them. While verbal [+F] marking is based on the above semantic properties, the only distinction on nouns is between augmentable and non-augmentable, where the latter set has many exceptional members that have to be lexically marked [-A].
agentive -a nominalizations have nearly the same verbal properties. First note, however, in (56a) that compound -a derivatives cannot occur by themselves.

(56) a. *mu-bar-a intended: ‘a counter’
   *mu-kóm-a intended: ‘a tier’
   b. mu-bar-a bi-kópo ‘a cup counter’
      mu-kóm-a bi-kópo ‘a cup tier’
   c. mu-bar-a bi-tabo ‘a book counter’
      mu-bar-á bi-tabo
   d. mu-kóm-a bi-tabo ‘a book tier’
      mu-kóm-á bi-tabo
      mu-kóm-a bi-tabo
   e. mu-bar-á gye ‘one who counts well’
      *mu-bar-a gye
   f. mu-kóm-a gye ‘one who ties well’
      mu-kóm-á gye
      *mu-kóm-a gye

(56b) shows that the H of mu-kóm-a undergoes HTD before bi-kópo, while mu-bar-a optionally undergoes HTI in (56c), both of which were also seen in (17). When followed by toneless bi-tabo in (55d), mu-kóm-a has three possible realizations: no change, HTD+HTI, or HTD without HTI. Contrastings with (56c,d), HTI is required with gye in (56e) and also in (56f) if HTD deletes the H of mu-kóm-a.43

Forms of both Cpd -a and CP -a in nominal and verbal contexts are shown in (57).

(57) a. *mu-bar-a mu-rungi ‘a good counter’
   *mu-kóm-a mu-hângo ‘a big tier’
   b. o-mu-ragír-w-a ‘a commanded person’ /-ragír-/ o-mu-húrir-w-a ‘a heard person’
   c. o-mu-ragír-w-a mu-rungi ‘a good commanded person’
      o-mu-ragír-w-á mu-rungi
   d. o-mu-húrir-w-a mu-rungi ‘a good heard person’
      *o-mu-húrir-w-á mu-rungi
   e. (o-)mu-ragír-w-a mu-ntu ‘a person commanded by someone’
      mu-ragír-w-á mu-ntu (?*o-mu-ragír-w-á mu-ntu)
      mu-ragír-w-a mu-ntu (?*o-mu-ragír-w-a mu-ntu)
   f. (o-)mu-húrir-w-a mu-ntu ‘a person heard by someone’
      mu-húrir-w-á mu-ntu (?*o-mu-húrir-w-á muntu)
      mu-húrir-w-a muntu (?*o-mu-húrir-w-a muntu)
   g. o-mu-gur-is-a ‘s.o. who makes (s.o.) buy/buys (sth.) with (sth.)’
      o-mu-zín-is-a ‘s.o. who makes (s.o.) dance’

42 There are two differences between the two constructions, as causative-passive -a nominalizations can stand alone and can also take a nominal modifier. See (57).
43 The obligatory application of HTI is likely due to the fact that gye, an adverb, is unaugmentable. Thus, while HTI is optional, but dispreferred before augmentable bi-tabo in (56c,d), it is strongly preferred in mu-gur-á magaro ‘pliers-buyer’, where magaro ‘pliers’ is unaugmentable.
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h. (o-)mu-gur-ís-a muntu
   mu-gur-ís-á muntu
   mu-gur-ís-a muntu

i. (o-)mu-žin-ís-a muntu
   mu-žin-ís-á muntu
   mu-žin-a muntu

We already saw in (56a) that mu-bar-a and mu-kóm-a cannot stand alone. (57a) shows that they also cannot occur alone with nominal modifier, here an adjective. Instead, they require a verb complement, as also seen in (56), in which case a nominal modifier can follow: mu-bar-a bi-tabó mu-rungi ‘a good book counter’. In (57b) I show two passive -a derivatives with a longer stem which better distinguish the M2H vs. root H stem-tone distinctions. Recall that toneless causative and passive -a derivatives generally acquire an M2H, seen in the first example in (57c). The final H in the second example is from HTI, which applies if the M2H option is not taken. (Recall that some speakers do not require the M2R on causative and passive nominalizations derived from a Ø tone root.) (57d) shows the H of o-mu-húrir-w-a realized unchanged; the verbal HTD+HTI is ungrammatical, since nouns do not undergo HTD before a toneless modifier. Turning to the verbal context, where (obligatorily augmentless) mu-ntu is the passive agent, we see that the nominal M2H and root H patterns in (57e, f) can occur whether the augment o- is present or not. As also shown, o- must be absent to get fully acceptable HTD+HTI and HTD realizations. The causative forms in (57g-i) show the same: The augment must be present in (57g), since the derivatives appear without a verbal complement. Only when present in (57h,i), are the M2H and FV H realizations acceptable. When absent, the HTD+HTI and HTI are also grammatical. While the judgments marked ?* stand at the border of grammaticality, we can extract from (57) that HTD+HTI is more acceptable with a verb complement than with a noun modifier.

This brings us to manner nominalizations, which also have (some of the) verbal properties. As seen in (58), manner nominalizations accept an object noun phrase, the adverbial gye and, marginally, an object pronoun marker:

(58) a. e-mi-bar-ír-e
    e-mi-kóm-er-e
     ‘way of counting’
     ‘way of tying’

b. e-mi-bar-ír-e Kakúru
   e-mi-kóm-er-e Kakúru
     ‘way of counting Kakuru’
     ‘way of tying Kakuru’

c. e-mi-bar-ír-e Muhwezi
   e-mi-bar-ír-é Muhwezi
   e-mi-kóm-er-e Muhwezi
   e-mi-kóm-er-é Muhwezi
     ‘way of counting Muhwezi’
     ‘way of tying Muhwezi’

(d. e-mi-bar-ír-e gye
   e-mi-bar-ír-é gye
   e-mi-kóm-er-e gye
   e-mi-kóm-er-é gye
   ‘way of counting well’
   ‘way of tying well’

c. ?e-mi-bi-bar-ír-e
   ?e-mi-bi-kóm-er-e
     ‘way of counting them (class 8)’
     ‘way of tying them (class 8)’

(58a) shows that Ø roots receive an M2H, while H roots have no suffixal H. Both the M2H and root H obligatorily delete before a H tone complement, as in (58b). (58c) shows that the M2H and root
H can be maintained before a toneless complement, or can undergo HTD+HTI. (DN accepts both, but prefers the latter realization.) The same possibilities are seen before adverbial gyē in (58d). Finally, as indicated by the question marker in (58e), on different occasions the object marker was accepted, other times rejected, sometimes sounding better with some verbs rather than others.

The last issue concerns the interpretation of the compounding column in Table 4. The construction can be unambiguously identified when the deverbal form ends in -a and is followed by an augmentable noun that lacks its augment, e.g. mu-gur-a bi-tabo ‘book-buyer’ (lit. buyer-books), as in (17) above. Although compounding clearly represents a nominalization, I did not color-code the column as either nominal or verbal. This is because both the most nominal (first two) rows and the most verbal (last two) rows in Table 4 categorically fail to participate in compounding:

(59)  
<table>
<thead>
<tr>
<th>Column</th>
<th>Form</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agt -i</td>
<td>*o-mu-kom-i bi-tabo</td>
<td>(intended: ‘book-tier’)</td>
</tr>
<tr>
<td>Pat -e</td>
<td>*e-bi-kóm-e bá-ana</td>
<td>(intended: ‘children-tied things’)</td>
</tr>
<tr>
<td>Cl -y-o?</td>
<td>e-ki-kóm-y-o bi-tabo</td>
<td>(intended: ‘book-tying thing’)</td>
</tr>
<tr>
<td>Cl -is-i-0?</td>
<td>e-ki-kóm-es-o bi-tabo</td>
<td>(intended: ‘book-tying thing’)</td>
</tr>
<tr>
<td>Loc -ir-o</td>
<td>e-i-kóm-er-o bi-tabo</td>
<td>‘book-tying place’</td>
</tr>
<tr>
<td>Man -ir-e</td>
<td>e-mi-bar-ir-e bi-tabo</td>
<td>‘book-tying manner’</td>
</tr>
<tr>
<td>CP -a</td>
<td>(o-)*mu-kóm-y-a mu-guha</td>
<td>‘rope-tier’</td>
</tr>
<tr>
<td>Cpd -a</td>
<td>mu-kóm-a bi-tabo</td>
<td>‘book-tier’</td>
</tr>
<tr>
<td>Agt ki/-a</td>
<td>ki-kom-a bá-ana</td>
<td>‘children-tied person’</td>
</tr>
<tr>
<td>Inf -a</td>
<td>*o-ku-kóm-a bi-tabo</td>
<td>‘book-tying’</td>
</tr>
<tr>
<td>SRel</td>
<td>*o-kóm-a bi-tabo</td>
<td>‘book-tying person’</td>
</tr>
</tbody>
</table>

Assuming that the rows in (59) represent a scale with agentive -i and patient -e the most nominal and the infinitive and subject relative the most verbal (cf. Table 6 below), it appears that only the intermediate values of the scale support a deverbal compound. It is interesting to note that three of the four derivatives that are clearly able to function as the first element of a compound all end in the FV -a. However, since infinitives also end in -a, but cannot compound, something more is needed. Locative -ir-o derivatives also readily appear as the first element in a compound.

In order to better view the results, Table 5 contains the most probative of the noun-verb criteria of Table 4.

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44 Subject relatives can also end in -a, depending on the TAM, e.g. in the habitual in (24). Recall that the only criterion I have adopted to establish compounding is the ability of an augmentable noun to appear without an augment after each of the derivatives (e.g. mu-gur-a bi-tabo ‘book-buyer’ vs. e-bi-tabo ‘books’). The affirmative infinitive (and subject relative) require a following object to have an augment (o-ku-gur’ é-bi-tabo ‘to buy books’, *o-ku-gur-a bi-tabo). Since the augment is frequently absent after a negative verb, including the infinitive (o-ku-ta-gur-a bi-tabo ‘to not buy books’), this criterion is not applicable. However, such phrases are clearly not compounds since elements can intervene, e.g. gyē o-ku-ta-gur-á gyē bitabo ‘to not buy books well’.

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Deverbal Nominalizations in Runyankore

Neg  OM  Adj  DO  gye  2H  HTD/Ø  RedHTI  RedHH
Agt -i - - + - - - + +
Pat -e - - + - - - + +
Cl -y-o - - + - - - + +
Cl -is-i-o - - + - - - + +
Loc -ir-o - - + - - - + +
Man -ir-e - ± + ± + - (+) n.a. +
CP -a ± - + + + - (+) n.a. +
Cpd -a ± - - + + - (+) + +
Agt ki/-a ± + + + + - (+) n.a. +
Inf -a + + + + + - - -
SRel + + - + + + + - -

Table 5. Deverbal Nouns Tested Against the Major Noun vs. Verb Criteria

In the above table I have not included the augment, extensions, or nasal class marking, as they were of less value in comparing the behaviors of different derivatives. I have also eliminated compounding as a criterion, since DN found so many to be marginal (±) and because both the most nominal and most verbal derivatives fail to occur in compounds. As also alluded to concerning (48), the results show the noun-verb properties of deverbal nominalizations to be in a scalar relationship, as in Table 6.

<table>
<thead>
<tr>
<th>Nominal</th>
<th>Verbal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient -e</td>
<td>Agentive ki/-a</td>
</tr>
<tr>
<td>Caus/Instr -y-o</td>
<td>Ag</td>
</tr>
<tr>
<td>Caus/Instr -is-i-o</td>
<td>Ag</td>
</tr>
<tr>
<td>Locative -ir-o</td>
<td>Ag</td>
</tr>
</tbody>
</table>

Table 6. Deverbal Nouns on a Nominal to Verbal Scale

In the leftmost column are the five derivatives that have only nominal values of the remaining nine criteria, while subject relatives are in the right-most column, having only verbal values. The values 2-4, 3-4, and 4-5 in the last row indicate the number of verbal values excluding vs. including DN’s variable judgments and marginal acceptances (±). Although the above scalar values are of course only an approximation, they do give an idea of which constructions are more nominal vs. verbal. Perhaps the most striking result comes from tone, to which I return in the next section.

5. Summary and conclusion

In the preceding sections we have examined 11 deverbal nominalization processes in Runyankore and have seen that the derivatives which result from these processes are quite different from each other. Some acquire exactly the properties of basic nouns, while others maintain access to some of the properties of their verbal source. (Despite the nominal augment, the subject relative maintains all of the properties of conjugated verbs.) In §3 I established a set of morphological, syntactic, and
phonological properties which are distinct on basic nouns vs. verbs, then used these as nominal vs. verbal criteria to test the 11 nominalizations in §4. While the nine disparate criteria in Table 5 produced the verbal property values 0 to 9 in Table 6, the question is how to interpret these results. First, concerning nominal diagnostics, we have noted that the nominal morphological criteria (augment, nasal prefix) and extensions were the least helpful, followed by the nominal syntactic criterion, since all but compound -a and the subject relative can occur with a noun modifier, e.g. adjective. While the two verbal morphological criteria (negative, OM) were inconsistent, the two verbal syntactic criteria (direct object, adverbial gye) clearly split the 11 into two groups. What this suggests is that the most significant variation concerns the extent to which the derived nominal has access to external properties of verbs. This includes not only the two syntactic criteria, but also the phrasal tone properties, since these are in turn sensitive to the syntax. This suggests that the most nominal derivatives have the structure in (60a), that more verbal derivatives have the structure in (60b), and the subject relative has the structure in (60c).

(60)  a. [prefix(es) [ [root-extensions ]_V FV ] ]_N
b. [prefix(es) [ [root-extensions ]_V FV ] ]_N, _N
  c. [prefix(es) [ [root-extensions ]_V FV ] ]_V

As seen, with the likely exception of the subject relative, the remaining constructions produce an output noun, hence marked [+N] in both (60a) and (60b). The question is whether the [+V] percolates to the external bracket, as in (60b), in which case it will have access to the syntactic properties of verbs, e.g. the ability to take an object or adverbial. Where DN’s judgments vary, or in case of possible cross-speaker disagreements, the hesitation concerns whether the grammar treats a specific derivative as (60a) or (60b).

While the feature analysis in (60) references the external [+N], [+N, +V] or [+V] behavior of deverbal nominalizations, an ultimate analysis will also have to further consider the internal structure of these derivatives. We have seen that object marker is rather restricted in nominalizations, occurring in the [+V] subject relative and the [+N, +V] infinitive and agentive ki/-a (and marginally in manner -ir-e). As seen in (61), however, the reflexive OM /é/ has a wider distribution:

(61)  Agt -i o-mw-éké-kom-i ‘a self-tier’ (s.o. who ties self)
  Pat -e o-mw-éké-kom-e ‘a self-tied person’
  Cl -y-o e-ky-éké-kom-y-o ‘sth. used to tie oneself’
  Cl -is-i-o e-ky-éké-kom-es-o ‘sth. used to tie self’
  Loc -ir-o e-ry-éké-kom-er-o ‘somewhere to tie self’
  Man -ir-e e-my-éké-kom-er-e ‘way of tying self’
  CP -a o-mw-éké-kom-es-a ‘s.o. who makes self tie’
  Cpd -a (o-)mw-éké-kom-er-a bitabo ‘book-tier for self’
  Agt ki/-a ky-ee-kóm-a ‘s.o. who has tied self’
  Inf -a o-kw-éké-kom-a ‘to tie/tying self’
  SRel o-yé-kom-a ‘s.o. who ties self’

Although it is well-known that the reflexive OM has properties of its own (see Marlo 2015a,b), and that it usually is required to immediately precede the verb root (and follow other OMs, if they can co-occur), it is rather puzzling that it can occur in all of the deverbal constructions. This certainly does not follow from a [+N] or [+V] marking, nor apparently from any syntactic characterization.
Whereas OMs are considered a spell-out of inflectional features, it would appear that the reflexive is treated as a derivational category affecting the internal structure of the verb stem similarly to suffixal verb extensions.\textsuperscript{45} From the point of view of nominalization in Runyankore, the /é/- prefix of a reflexivized verb appears always accessible.

The final issue concerns cases where the underlying verb root is accessible in nominalizations that modify the root-final consonant. Such mutations were seen in the agentive -i and causative/instrument -y-o nominalizations in §2.1 and §2.3, respectively. As seen in (62) and (63), there are several possible realizations of such nominalizations in reduplication:\textsuperscript{46}

\[(62)\]
\[
a. \ o-ku-rir-a \quad \text{‘to cry’}
b. \ o-mu-riz-i \quad \text{‘s.o. who cries’}
c. \ o-mu-riz-i-riz-i \quad \text{‘s.o. who sort of cries, cries a lot’}
d. \ o-mu-riz-a-riz-i
\]
\[(63)\]
\[
a. \ o-ku-bóh-a \quad \text{‘to tie’}
b. \ o-ku-bós-y-a \quad \text{‘to tie with, to make tie’}
c. \ e-ki-bós-y-o \quad \text{‘sth. to tie with’}
d. \ e-ki-bós-y-o-bos-y-o \quad \text{‘sth. sort of to tie with’}
e. \ e-ki-bós-y-a-bos-y-o
f. \ e-ki-bóh-a-bos-y-o
\]

The verb infinitives are given in (62a) and (63a), the causativized verb infinitive also in (63b). As seen, the agentive -i suffix modifies the final /r/ of -rir- to [z], and causative-instrumental -y-modifies the final /h/ of -bóh- to [s]. Exact total reduplication of the verb stem is seen in (62c) and (63d), while (62d) and (63e) show that a final -a can optionally replace the -i and -o on the first stem. These options are quite general in noun (and verb) reduplication in Runyankore (Hyman 2022b) and replicated in certain other Bantu languages. What is unexpected are the options in (62e) and (63f), where the unmutated verb roots -rir- and -bóh- appear in the first stem. In order for these possibilities to follow from the bracketings in (60), we must assume that the two stems are produced in parallel, as in morphological doubling theory (Inkelas \& Zoll 2005), and that the first stem is subject to optional truncation and replacive final -a. Since the noun class prefix is not available to reduplication, the above forms show that the nominalization process targets the stem, not the full word. This is supported by the fact that singular-plural and noun class determination is largely independent of the nominalization process. The major exceptions have been noted: class 4 e-mi-manner, classes 15 o-ku- and 14 o-bu- infinitive, and unaugmentable ki-agentives which take class 1/2 agreement. Curiously, although reflexive é- can appear in nominalizations, it cannot be reduplicated. Thus, e-ky-éé-bos-y-o ‘sth. used to tie self’ can be reduplicated as e-ky-éé-bos-y-o-

\textsuperscript{45} This conclusion is reminiscent of Mchombo’s (1993) treatment of the Chichewa reciprocal as “morphological” rather than inflectional. Applying Mchombo’s analysis to Runyankore, o-ku-kóm-an-a ‘to tie each other’ might better be translated as ‘to mutual-tie’. What I am speculating here is that o-ku-rir-a ‘to tie oneself’ can be viewed as ‘to self-tie’, although this is not Mchombo’s conclusion—nor is it consistent with Marlo’s (2015b:14) view that “the reflexive more commonly has inflectional tonal properties than do other OPs [OMs in Bantu].” Since it also has its own specific properties, also treated by Marlo (2015b), I note that the first person singular homorganic nasal OM /N/- acts like other OMs in nominalization.

\textsuperscript{46} I ignore tonal variants, e.g. o-mu-riz-i-riz-i with HTI in (62) and e-ki-bos-y-o-bós-y-o with the H on the second stem in (63).
bos-y-o, but not as *e-ky-éé-bos-y-ee-bos-y-o. This is but one outstanding issue that bears further investigation.

References


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