

Verbal number suppletion in nominalizations

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1 Introduction

- “Suppletion refers to the phenomenon in which a single lexical item (lexeme) or root morpheme is associated with two phonologically unrelated realisations (exponents)” (Smith et al. 2019: 1030)
- A standard example of suppletion is the English comparative (and superlative) form of the adjective *good*:

- (1) English comparative¹
- a. hot – hott-er
 - b. good – bett-er

- A variety of languages display *verbal number suppletion*: the verb has two distinct exponents, which depend on the number value of one or more of its arguments.

- (2) Hiaki number suppletion (subject) (Bobaljik & Harley 2017: 143)
- a. Aapo vuite
3SG run.SG
'S/he is running.'
 - b. Vempo tenne
3PL run.PL
'They are running.'

- The phenomenon has recently received attention in the theoretical literature (e.g. Bobaljik & Harley 2017, Toosarvandani 2016, Duncan 2019, Johnson 2021).

- It has been taken as evidence for the existence of true root suppletion (and therefore Late Insertion) of roots in frameworks like Distributed Morphology (DM; Halle & Marantz 1993).

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¹Glosses follow the Leipzig glossing conventions with the following additions: AG = agentive, CL2 = Class II, PNC = punctual, PVB = preverb, SEC = secondary suffix, TH = thematic suffix, VENT = ventive.

- Cross-linguistic variation in patterns of verbal suppletion has shaped theories of locality conditions on allomorphy.
- In this talk, we examine a previously neglected aspect of the phenomenon of verbal number suppletion: the distribution of suppletive verbal forms in nominalizations. The data show that:
 - ⇒ suppletion is sensitive to morphosyntactic - and not semantic - number features (thus providing additional evidence for the existence of true root suppletion)
 - ⇒ structural adjacency as a locality condition on allomorphy is too strict (see also Moskal & Smith 2016, Choi & Harley 2019)

Roadmap:

Section 2: Background on verbal number suppletion

Section 3: Suppletion in Kipsigis

Section 4: Analysis and theoretical implications

Section 5: Conclusion

2 Background on verbal number suppletion

- In DM, “contextual allomorphy, which includes suppletion, amounts to VI [Vocabulary Insertion] conditioned by morpho-syntactically defined nodes” (Moskal 2015a: 6).
- In DM, Vocabulary Items are assumed to compete for insertion, with the result being regulated by the Subset Principle (Halle 1997).
- In early work in DM, lexical roots were assumed not to compete for VI (e.g. Marantz 1995, Embick & Halle 2005).
 - ⇒ Therefore true root suppletion could not exist.
 - ⇒ Apparent cases of suppletion (e.g. *go* vs. *went* in English) were analyzed by Marantz (1995) as light verbs (i.e. functional, and not lexical material).
- According to more recent work in DM (e.g. Harley 2014, Bobaljik 2012, Bobaljik & Harley 2017, Smith et al. 2019), lexical roots *do* compete for insertion (just like functional morphemes).
- A strong argument for the existence of true root suppletion has been made on the basis of verbal number suppletion in Uto-Aztecan languages (Harley 2014, Bobaljik & Harley 2017 a.o.).
- *Verbal number suppletion*: The number value of a DP argument can trigger suppletion of a verbal form:

(3) Hiaki number suppletion (subject) (Bobaljik & Harley 2017: 143)

- a. Aapo vuite
 3SG run.SG
 ‘S/he is running.’
- b. Vempo tenne
 3PL run.PL
 ‘They are running.’

(4) Hiaki number suppletion (object) (Bobaljik & Harley 2017: 144)

- a. Aapo/Vempo uka koowi-ta me'a-k
 3SG/3PL the.SG pig-ACC.SG kill.SG-PRF
 ‘He/They killed the pig.’
- b. Aapo/Vempo ume kowi-m sua-k
 3SG/3PL the.PL pig-PL kill.PL-PRF
 ‘He/They killed the pigs.’

- Verbal number suppletion is a robust pattern observable across language families (for a typological overview see Veselinova 2006: 149-173). It usually follows an unergative pattern (e.g. Durie 1986, Bobaljik & Harley 2017).
- Harley (2014) points out that the meanings associated with many verbs that display number-based suppletion in Hiaki are unexpected under a light verb analysis, and instead proposes that they are fully lexical, which implies that true root suppletion must exist.
 - Borer (2014) and de Belder (2014) argue that the Hiaki data could be analyzed as two distinct, semantically-related roots (e.g. *kill* vs. *massacre* in English).
 - Johnson (2021) reviews a number of arguments against this view. We will see more concrete evidence from Kipsigis later in this talk.
- Recently, verbal suppletion data from different languages have gained a lot of attention, as they offer additional testing grounds for theoretical accounts of suppletion (and allomorphy more generally). Here are some examples:
 - Toosarvandani (2016) on Northern Paiute (Uto-Aztecan)
 - Bobaljik & Harley (2017) on Hiaki (Uto-Aztecan)
 - Duncan (2019) on Me’phaa (Oto-Manguean)
 - Thornton (2019) on Niuean, Samoan (Polynesian); Koasati (Muskogean); Northern Paiute, Hiaki (Uto-Aztecan)
 - Johnson (2021) on Creek (Muskogean)
- The main theoretical concerns in this line of work are the mechanisms of and limitations on suppletion, namely how (non-)local the relationship between the trigger and target of suppletion can be.

2.1 Locality conditions proposed for verbal number suppletion

- Sisterhood locality (Bobaljik & Harley 2017)

(5) β may condition α in (a), not (b):

- a. $\alpha \dots]_{X^0} \dots \beta$
 b. $*\alpha \dots]_{X^n} \dots \beta$, where $n > 0$ (Bobaljik & Harley 2017: 150)

- Relativized Adjacency (Toosarvandani 2016)
 - (6) For any vocabulary entry of the form: $abc \leftrightarrow X[F1 : a] / Y[F2 : b] \text{ ____ }$, the exponent abc can be inserted at a node with syntactic category X and feature $[F1 : a]$, if there is no closer element of syntactic category Y than one with feature $[F2 : b]$. (Toosarvandani 2016: 1)
- Word-internal locality (Thornton 2019)
 - (7) The trigger [of suppletion] is a head within the complex head X^0 (Thornton 2019: 549)
 - Additionally Thornton (2019) assumes a structure in which a vP -internal number node is present, which acquires the number feature value of the closest DP argument:
 - (8) $[_v v \text{ ____ } \# \# \checkmark]$
- Other approaches took already existing locality conditions and manipulated the structure to derive the verbal suppletion patterns (as for example Duncan 2019).

	Ext. Arg.	Appl. Arg.	Int. Arg.	Additional condition	Discussed language
Bobaljik & Harley (2017)	✗	✗	✓		Hiaki
Duncan (2019)	✗	✗	(✓)	structure depend.	Me'phaa
Toosarvandani (2016), Thornton (2019)	(✓)	(✓)	(✓)	closest DP	Northern Paiute

Table 1: Overview of the predictions made by different theories of locality

3 Suppletion in Kipsigis

3.1 Number suppletion in the verbal domain

- Kipsigis is a Kalenjin dialect of the Southern Nilotic branch of Nilo-Saharan; it is spoken by approximately 2 million speakers in Kenya (Eberhard, Simons & Fennig 2020).
- The language is pro-drop, has VSO word order (Bossi & Diercks 2019) and a marked nominative case system (Toweett 1979, Kouneli & Nie 2021).
- Unless otherwise indicated, data in this handout come from original fieldwork.²
- The language has three verbs that are suppletive for number: *wa* 'to go', *no:* 'to come', and *labat* 'to run'.³
 - All three are intransitive and suppletion is conditioned by the number of the subject.

²Transcriptions are in IPA. Tone is transcribed whenever possible, but some transcriptions are incomplete (these are data that were either elicited online, where sound quality is not ideal, or via e-mail; tone is not represented in writing).

³These verbs are suppletive across Kalenjin dialects (see e.g. Creider & Creider 1989 on Nandi and Zwarts 2004 on Endo-Marakwet).

- There are no clear unaccusativity diagnostics in the language (Kouneli 2021a).

- (9) a. Ki:-Ø-wa Tfé:bê:t Nairobi.
PST-3-go.SG Cheebeet.NOM Nairobi
'Cheebeet went to Nairobi.'
- b. Ki:-Ø-pa là:gô:k Nairobi.
PST-3-go.PL children.NOM Nairobi
'The children went to Nairobi.'
- (10) a. Ki:-Ø-jɔ: Tfé:bê:t koja:ba Nairobi.
PST-3-come.SG Cheebeet.NOM from Nairobi
'Cheebeet came from Nairobi.'
- b. Ki:-Ø-bwa là:gô:k koja:ba Nairobi.
PST-3-come.PL children.NOM from Nairobi
'The children came from Nairobi.'
- (11) a. Ki:-Ø-labat Tfé:bê:t.
PST-3-run.SG Cheebeet.NOM
'Cheebeet ran.'
- b. Ki:-Ø-rwaj là:gô:k.
PST-run.PL children.NOM
'The children ran.'

- For at least the verb *labat* 'to run', applied arguments are possible but can never trigger suppletion.

- (12) a. Labat^ji:-n/*Rua:-tʃi:-n Tfé:bê:t là:gô:k.
run.SG-APPL-IPFV/run.PL-APPL-IPFV Cheebeet.NOM children
'Cheebeet is running for the children.'
- b. Rua:-tʃi:-n/*Labat^ji:-n là:gô:k Tʃè:bê: t.
run.PL-APPL-IPFV/run.SG-APPL-IPFV children.NOM Cheebeet
'The children are running for Cheebeet.'

- There is evidence from ellipsis that this is real suppletion and not two distinct roots.

- (13) a. Mary went to Nairobi, and Alan will \varnothing too.
b. *The mosquitoes weren't massacred, but the cockroach was killed.
- (14) a. \varnothing -rwaj là:gô:k.
3-run.PL.IPfV children.NOM
'The children are running.'
- b. \varnothing -labat-i ak Kibê:t ak ine:.
3-run.SG-IPfV and Kibeet and him
'Kibeet too.'

- Similarly, formal(=not interpretable) number features can trigger suppletion: mass nouns

in the language are idiosyncratically either singular or plural (Kouneli 2021c), and suppletion is triggered by these inherent number features.

- (15) a. \emptyset -rwaj pè:k.
 3-run.PL-IPFV water(PL).NOM
 ‘The water is running.’
- b. \emptyset -labat-i mwà:jtà.
 3-run.SG-IPFV oil(SG).NOM
 ‘The oil is running.’

3.2 Number suppletion in nominalizations

- Kipsigis has a tripartite number system separating inherently singular, inherently plural and numberless nouns (Kouneli 2021c: 1198).
- *Inherently singular* nouns are morphologically marked in the plural (16a), *inherently plural* nouns are morphologically marked in the singular (16b) and *numberless* nouns are morphologically marked in both singular and plural (16c).

- | | | |
|------|--|--|
| (16) | a. pe:t-u-it → pètút
day-TH-SEC
‘day (SG)’ | pe:t- u:s -ja-ik → pètù:sjèk
day- PL -TH-SEC
‘days (PL)’ |
| | b. ɲe:nt- ja:n -ta-it → ɲé:ndjárt
bean- SG -TH-SEC
‘bean (SG)’ | ɲe:nt-a-ik → ɲé:ndék
bean-TH-SEC
‘beans (PL)’ |
| | c. sikis- ja:n -ta-it → sìgìsjárt
sock- SG -TH-SEC
‘sock (SG)’ | sikis- i:n -ik → sìgìsì:ník
sock- PL -SEC
‘socks (PL)’ |

- Nominalizations of the verbs that supplete for number show that nominal number can also condition suppletion.

- (17) Agent nominalization of *labat* ‘to run’⁴
- a. labat- \emptyset _{+ATR-i:n}-ta-it (labati:ndet)
 run.SG-NMLZ-SG-TH-SEC
 ‘runner’
- b. rwaj- \emptyset _{+ATR-i}-ik (rwa:i:k)
 run.PL-NMLZ-TH-SEC
 ‘runners’

⁴We give the underlying representation of the morphemes on the left, and the surface form in brackets on the right (after regular phonological operations have taken place; see Kouneli 2019, 2021c for details).

(18) Result/event nominalization of *labat* ‘to run’⁵

- a. labat-Ø-a-it(labatɛ:t)-a:p 200m
run.SG-NMLZ-TH-SEC-POSS 200m
‘a 200m-race’
- b. rwaj-Ø-a-ik(rwaɛ:k)-a:p 200m
run.PL-NMLZ-TH-SEC-POSS 200m
‘200m-races’

- These data provide one more argument for treating verbal number suppletion as true suppletion conditioned by morphosyntactic features, rather than as two distinct semantically related roots of the *kill-massacre* type (Borer 2014, de Belder 2014).
 - The semantic interpretation of (i) a plural agent nominalization (‘runners’), (ii) a plural result nominal (‘races’), and (iii) a verb with a plural subject (‘They run’) is not uniform. What these environments have in common is the presence of a morphosyntactic plural feature.
- We could not elicit nominalizations from the verb *wa/pwa* ‘to go’.
- For the verb *no:* ‘to come’, there was one possible nominalization. In this case, suppletion was conditioned by the nominal complement (=verbal argument), and not nominal number.

(19) Result/event nominalization of *no:* ‘to come’

- a. no:n-un-Ø-a-it(no:nunɛ:t)-a:p dʒe:so
come.SG-VENT-NMLZ-TH-SEC-POSS Jesus
‘the coming of Jesus’
- b. pwa:n-un-Ø-a-it(pwa:nunɛ:t)-a:p pi:k
come.PL-VENT-NMLZ-TH-SEC-POSS people
‘the coming of people’
- c. no:n-un-Ø-o:s-ja-ik(no:nuno:sjek)-a:p dʒe:so
come.SG-VENT-NMLZ-PL-TH-SEC-POSS Jesus
‘the (multiple) arrivals of Jesus’

4 Analysis and theoretical implications

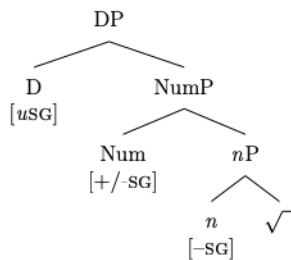
4.1 Background on the Kipsigis DP and nominalizations

- Kouneli (2021c) provides a DM analysis of the tripartite system of number marking in Kipsigis and proposes the following:
 - Interpretable number features are hosted on the Num(ber) head.

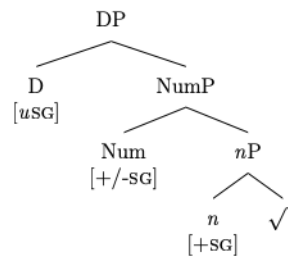
⁵The noun *labatɛ:t* can also mean ‘running’ as an activity (without reference to a particular race). One speaker also produced the noun *rwæ:t* (with the plural root, but singular secondary suffix) for the same meaning, but it is not clear what the meaning of this word is and/or how widely used it is. We will therefore set it aside for now.

- Additionally, the nominalizing head little n can host uninterpretable number features (akin to gender features in other languages).
- There are three nominalizing heads: $n_{[+SG]}$, $n_{[-SG]}$, and n : roots in the language combine with one of these heads.
- Number morphology realizes the Num node.
- When Num and n bear the same number feature value, Num is obliterated post-syntactically.
- The secondary suffix realizes D, which agrees with Num in number.
- Words are built via Head Movement.

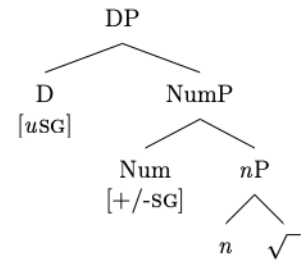
(20) a. Inherently plural



b. Inherently singular



c. Numberless



- Kouneli (2021c) argues that the same three types of little n 's used to derive simple nouns are also used to derive nouns from verbs, adjectives etc.
⇒ Nominalizations come with inherent number features.
- Our suppletive data involve two types of nominalization:
 - Result/event nominalization: zero nominalizer
 - Agent nominalization: (segmentally null) [+ATR] nominalizer
- Result/event nominals in Kipsigis are consistently unmarked in the singular and marked in the plural. Thus, we assume that they are formed with a $n_{[+SG]}$ head.
- Agent nominalizations are trickier: they are marked in the singular, but it is not immediately clear whether there is a plural morpheme in the plural.

- (21) a. tjen- \emptyset_{+ATR} -i:n-ta- it (tjeni:ndet)
sing-AG-SG-TH-SEC
'singer'
- b. tjen- \emptyset_{+ATR} -**in-i**-ik (tjeni:k)
sing-AG-PL-TH-SEC
'singers'

- On the basis of independent diachronic data, we argue that there is a plural suffix present. This means that agent nominalizations are formed with a n head, as in the numberless class. (See Appendix A for argumentation)

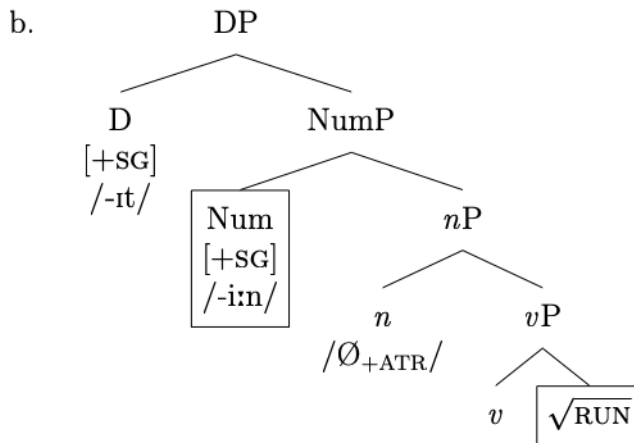
4.2 Complete derivations

4.2.1 Agent nominalization of $\sqrt{\text{RUN}}$

- Following Baker & Vinokurova (2009), we propose the following structures for the singular and plural counterparts of the agentive nominalization ‘runner’ in Kipsigis:⁶

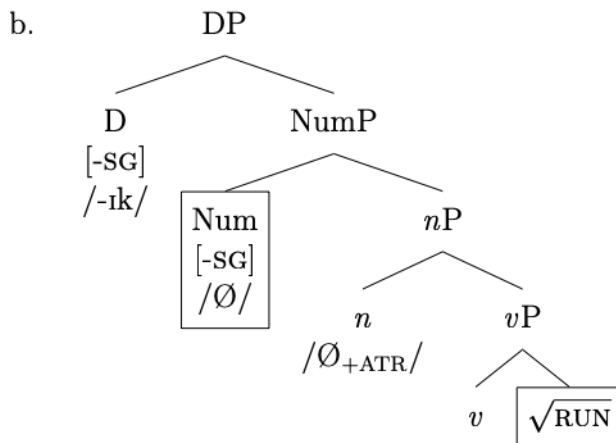
(22) Singular agent nominalization of $\sqrt{\text{RUN}}$

a. labat- \emptyset_{+ATR} -i:n-ta-it (labat:i:ndet)
run.SG-AG-SG-TH-SEC
‘runner’



(23) Plural agent nominalization of $\sqrt{\text{RUN}}$

a. rwa:j- \emptyset_{+ATR} -I-ik (rwa:i:k)
run.PL-AG-TH-SEC
‘runners’



- Num hosts the number features closest to the root and is assumed to be the suppletion trigger.
 ⇒ [+SG] on Num results in spell-out of the singular verb form (22), [-SG] results in spell-out of the plural verb form (23).
- This means that in agent nominalizations the Num head must be visible to the deeply embedded verb to ensure proper realization of the root node.
 - The sisterhood requirement for suppletion proposed in Bobaljik & Harley (2017) is too strict to account for this pattern, since Num is never a sister to the root.

⁶See Appendix B for arguments in favor of the presence of the verbalizing head v in the structure. We do not represent thematic suffixes on the tree, which are assumed to be merged post-syntactically (Kouneli 2021c).

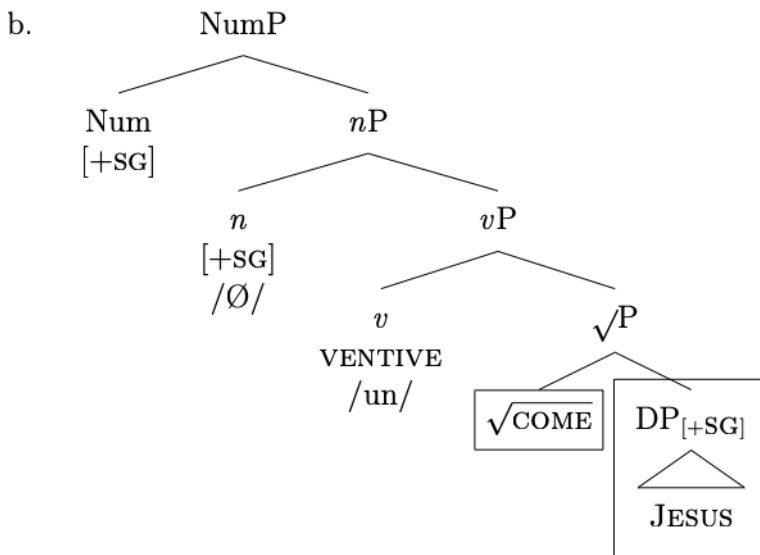
- The data are compatible with theories which relax this locality condition (we will come back to this later).

4.2.2 Result/event nominalization of $\sqrt{\text{COME}}$

- In the result/event nominalization of $\sqrt{\text{COME}}$ the vP containing this root is selected for by a [+SG] little n nominalizer.
- We assume that the little v heading the nominalized vP is realized as the VENTIVE exponent.
- Following Harley (2014) and Bobaljik & Harley (2017), among others, we assume that the root $\sqrt{\text{COME}}$ directly selects for its DP argument.
- Here are the concrete structures that we propose:

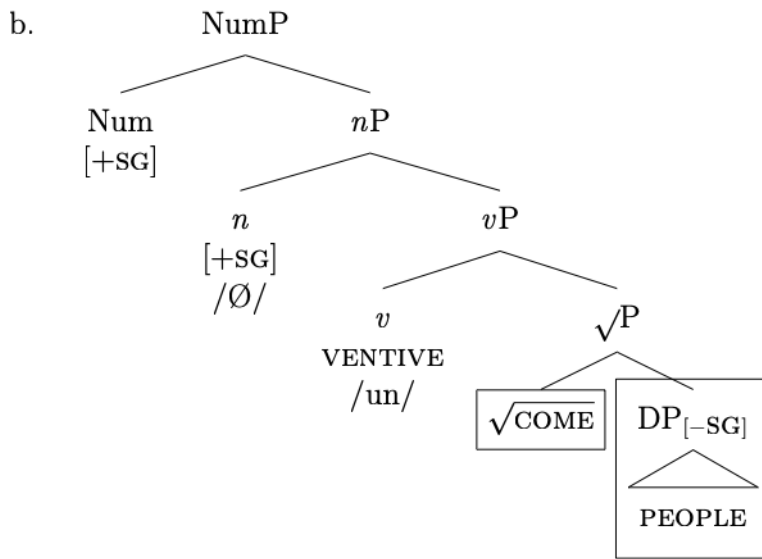
(24) Singular result/event nominalization of $\sqrt{\text{COME}}$ with a singular argument

a. jo:n-un- \emptyset -a-it(jo:nunet)-a:p dʒe:so
 come.SG-VENT-NMLZ-TH-SEC-POSS Jesus
 ‘the coming of Jesus’



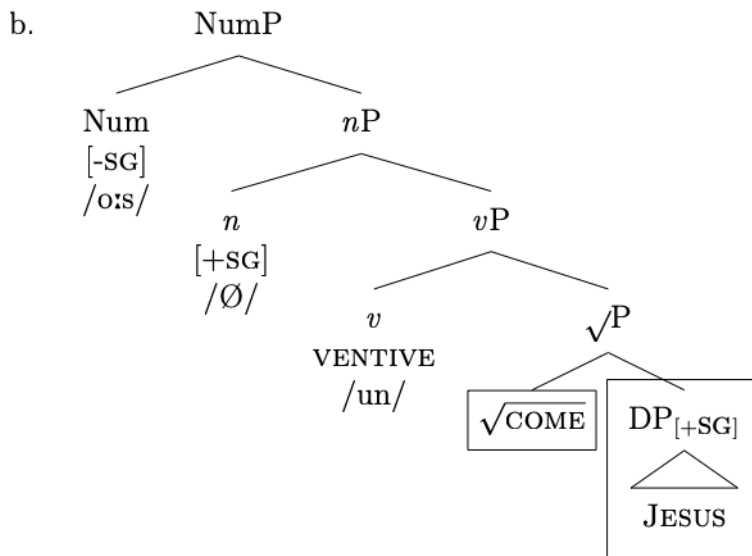
(25) Singular result/event nominalization of $\sqrt{\text{COME}}$ with a plural argument

- a. pwa:n-un-a-it(pwa:nunε:t)-a:p pi:k
 come.PL-VENT-NMLZ-TH-SEC-POSS people
 ‘the coming of people’



(26) Plural result/event nominalization of $\sqrt{\text{COME}}$ with a singular argument

- a. no:n-un-∅-o:s-ja-ik(no:nuno:sjek)-a:p dʒe:so
 come.SG-VENT-NMLZ-PL-TH-SEC-POSS Jesus
 ‘the (multiple) arrivals of Jesus’



- Under those structures, the DP complement of the root is always the closest element bearing number features.

- ⇒ A singular complement will condition the singular form *no:n*, and a plural complement will condition the plural form *pwa:n*.
- ⇒ Number features on Num can never condition suppletion in this case, since - even in the absence of a complement - features on little *n* intervene.
- ⇒ The analysis makes the prediction that in the absence of a complement, the singular form of the verb should surface (because of [+SG] on little *n*). However, the language readily allows *pro* arguments, and so this prediction cannot be easily tested.

4.2.3 Result/event nominalization of $\sqrt{\text{RUN}}$

- This nominalization is exceptional in being unmarked for number in both singular and plural:

- (27) a. $\boxed{\text{labat}}$ -Ø-a-it(labatɛ:t)
run.SG-NMLZ-TH-SEC
'race'
- b. $\boxed{\text{rwaj}}$ -Ø-a-ik(rwa:ɛ:k)
run.PL-NMLZ-TH-SEC
'races'

- Thus, one cannot easily 'diagnose' the nominalizing head. Nevertheless, it follows the general pattern of (underived) suppletive nouns in the language, where number is never marked via an affix.

- (28) a. tɛ̀: tá
cow.SG-SEC
'cow'
- b. tù: gá
cow.PL-SEC
'cows'

- The most straightforward way to account for this pattern in Kouneli's (2021) analysis is to assume that the singular and plural involve different kinds of nominalizing heads:

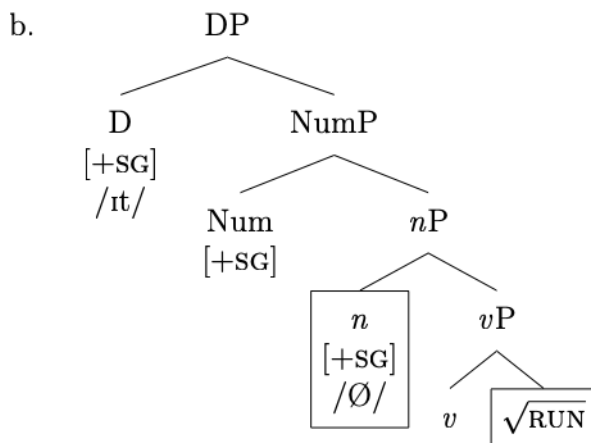
- a [+SG] flavour of n in (29)
- a [-SG] flavour of n in (30)

- This ensures that the [+SG] Num node is obliterated in the singular, and the [-SG] Num node is obliterated in the plural.

- Here are the concrete structures:

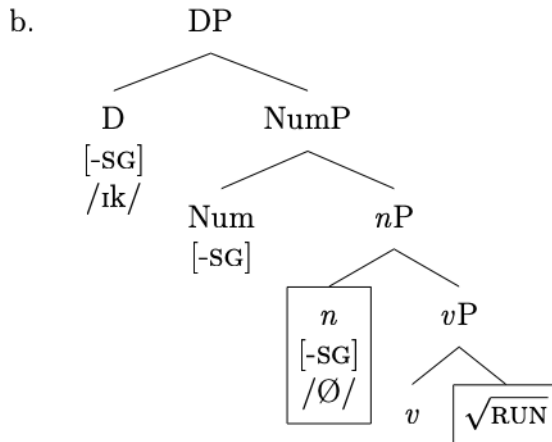
(29) Singular result/event nominalization of $\sqrt{\text{RUN}}$

- a. $\boxed{\text{labat}}$ -Ø-a-it(labatɛ:t)
run.SG-NMLZ-TH-SEC
'race'



(30) Plural result/event nominalization of $\sqrt{\text{RUN}}$

a. $\boxed{\text{rwaj}}$ - \emptyset -a-ik(rwa:ɛ:k)
 run.PL-NMLZ-TH-SEC
 ‘races’



- In this configuration suppletion is triggered by the number value of a little n head, which is always closer to the root than the features on Num head:
 - a value [+SG] triggers the root $\sqrt{\text{RUN}}$ to be spelled out as *labat* (as in (29))
 - a value [-SG] triggers the root $\sqrt{\text{RUN}}$ to be spelled out as *rwaj* (as in (30))
- Since v always intervenes between n (=the suppletion trigger) and the root, this pattern is also incompatible with the strict sisterhood locality condition proposed in Bobaljik & Harley (2017).

5 Conclusion

- In this talk, we examined data from verbal number suppletion in nominalization, and showed that it provides an additional argument for the existence of true root suppletion.
- In section 2.1, proposals devised to account for the accessibility of a DP argument’s number value for the purposes of verbal number suppletion were reviewed. Once other cases of suppletion (and allomorphy) are considered, one finds a broader range of locality conditions in the literature, which are presented below in ascending order of permissiveness.
 1. Sisterhood relationship (e.g. Arad 2003, Harley 2008)
 2. Structural adjacency within a given domain (e.g. Bobaljik 2012)
 3. Linear adjacency within a given domain (e.g. Embick 2010); this approach also assumes that non-overt morphemes can be pruned (and thus ignored for locality)
 4. Membership to the same domain, irrespective of adjacency (e.g. Moskal 2015b); this can be coupled with an additional requirement that the relevant elements are part of the same complex head (e.g. Choi & Harley 2019).
- Our data (and analysis thereof) show that both the sisterhood relationship and the structural adjacency hypotheses are too strict as locality conditions on suppletion (see also Moskal & Smith 2016, Choi & Harley 2019 a.o.).
 - They also clearly show that in nominalizations, v , n and Num are all able to access the root. Thus, at least v , n must be in the same spellout domain.

- Whether linear adjacency (as in Embick 2010) is too strict for our data depends on how one is to analyze the linearization of featural affixes like a floating [+ATR] feature:
 - The head it spells out is structurally between Num and the root in agent nominalizations, but its overtness still does not act as an intervener for suppletion.
- Future plans: cross-linguistic implications for suppletion in nominalization.
- For languages with true verbal number suppletion, we predict that suppletion should also appear in nominalizations, just like in Kipsigis.
- Most languages will differ from Kipsigis in not having number features on little *n*.
- This means that there are two possible triggers for suppletion:
 - number features on Num
 - number features on complements (that are embedded in the nominalization)
- We present a preliminary survey of the attested patterns in the Appendix.

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A Arguments for plain *n* in agent nominalizations

- Agent nominalizations certainly belonged to the numberless class, at least until Toweett (1979)
- They involved the plural morpheme *-in*, which used to surface as zero (alternatively: the *-n* was deleted and the thematic suffix was zero) when co-occurring with the secondary suffix (Toweett 1979).

- (31) a. tjen- \emptyset _{+ATR}-in
sing-AG-PL
'singers'
- b. tjen- \emptyset _{+ATR}-in-I-ik (tjeni:k)
sing-AG-PL-TH-SEC
'singers'

- Plural nouns in Kipsigis can no longer appear without a secondary suffix. It is therefore impossible to know for certain whether the plural morpheme is underlyingly present.
- Given how recent the disappearance of primary forms seems to be, we assume in this talk that agent nominalizations do involve a plural suffix and are therefore derived via a plain *n* (*contra* Kouneli 2021c).
- It should be noted that this reanalysis does not affect Kouneli's argument that nominalizations come with inherent number features: result/event nominals are inherently singular, agent nominalizations are numberless, and instrument nominalizations (not discussed in Kouneli 2021c, but see Toweett 1979) are inherently plural.
- It does change her claim that there are no numberless derived nominals, since agent nominalizations now exemplify this type. This is a welcome result, as those are predicted to be possible under her analysis.

B Arguments for the presence of little *v* in Kipsigis nominalizations

- Kipsigis verbs are traditionally sorted into two conjugation classes, called Class I and II in the Nilotic literature (Dimmendaal 1983 a.o.). Class I is morphologically unmarked, while Class II is marked by a prefix.
- Kouneli (2021b) presents morphosyntactic evidence for placing Class II features on the verbalizing head little *v*.
- All nominalizations (including the ones under investigation in our work) that are derived from Class II verbs appear with the prefix *ka:-*, which Kouneli (2021b) analyzes as the allomorph of a Class II *v* in the context of little *n*.

(32) Agent noninalization of Class I *tem* ‘to farm’ vs. Class II *next* ‘to teach’

- a. *tem-Ø*_{+ATR-i:n-ta-ɪt} (temi:ndet)
farm-AG-SG-TH-SEC
‘farmer’
- b. **ka:-next-Ø**_{+ATR-i:n-ta-ɪt} (ka:nexti:ndet)
CL2-teach-AG-SG-TH-SEC
‘teacher’

(33) Result/event noninalization of Class I *tem* ‘to farm’ vs. Class II *next* ‘to teach’

- a. *tem-a-ɪt* (teme:ɪt)
farm-TH-SEC
‘farming’
- b. **ka:-next-a-ɪt** (ka:nexte:ɪt)
CL2-teach-TH-SEC
‘teaching’

- The presence of *ka:-* in nominalizations provides morphological evidence for the presence of a verbalizing head in the structure.
- Furthermore, Towett (1979) shows that a variety of verbal morphemes (e.g. applicative, antipassive) can appear inside of the nominalizing morpheme.
- This evidence is also in line with theories in which *n* embeds (at least some amount of) verbal structure in nominalizations (see e.g. Alexiadou 2001, Wood 2019 for event nominals and Alexiadou & Schäfer 2010, Baker & Vinokurova 2009, Alexiadou 2022 for agent nominals).

C Cross-linguistic implications

C.1 Uto-Aztecan

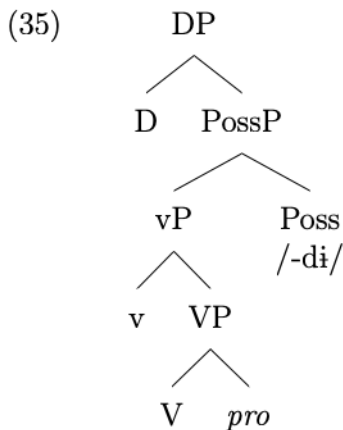
- Northern Paiute (Toosarvandani 2014) in (34) and also Hiaki (Harley 2021) exhibit suppletion in nominalizations

(34) a. u-su oʔo katti
3-NOM DEM sit.SG
‘He sat over there.’

(Thornes 2003: 497)

- b. maʔa=tui aata-u
 DEM.DEF=any sit.PL-PNC
 ‘Sit anywhere you all!’ (Thornes 2003: 190)
- c. Su=nana ka=mi=aataa-di yadu’i.
 NOM=man DEF.ACC=PL=sit.PL.-NMLZ talk.to.DUR
 ‘The man is talking to the ones who are sitting.’ (Toosarvandani 2014: 797)
- d. Su=pidi kati-di oo ya’i-hu.
 DEF.NOM=just sit.SG-NMLZ there die
 ‘The one who just sat down died there.’ (Toosarvandani 2014: 793)

- According to the analysis presented by Toosarvandani (2014) the suppletion in (34) is local (in the terms of Bobaljik & Harley (2017)). Toosarvandani assumes that the arguments of the nominalized verb are present in vP as *pro*, see (35). Thus, number information on *pro* can trigger suppletion from a local sisterhood relation.



- Another Uto-Aztecan language that shows number suppletion in nominalizations is Tohono O’odham.⁷

- (36) a. meḡ - run.SG
- b. voopoʔo - run.PL (Mathiot 1973-78: 291)
- c. meḡ-dam
 run.SG-NMLZ
 ‘something that runs continually without stopping’ (Mathiot 1973-78: 59)
- d. voopoʔo-dam
 run.PL-NMLZ
 ‘something or somebody running constantly; runners’ (Mathiot 1973-78: 292)

⁷The data are taken from Mathiot’s (1973-78) dictionary and did not originally include glossing. However, in order to present the data in a clear way, we included glosses as far as we could analyze the data (for *-dam* being analyzed as the agentive nominalizer in Tohono O’odham, see Zepeda 1984: 71).

- (37) a. muʔa - kill OBJ.SG
 b. kokda - kill OBJ.PL (Mathiot 1973-78: 481)
 c. kokda-i-meɔ
 kill.PL-?-run.SG
 ‘SUBJ.SG go and kill OBJ.PL’
 d. kokda-io
 kill.PL-?
 ‘SUBJ.PL go and kill OBJ.PL’
 e. kokda-i-m[e]ɔ-am
 kill.PL-?-run.SG-NMLZ
 ‘one on his way to kill things’
 f. kokda-iok-am
 kill.PL-?-NMLZ
 ‘ones on their way to kill things’ (Mathiot 1973-78: 482)

C.2 Georgian

- The Georgian verb for ‘throw’ shows suppletion on the verb depending on the number of the direct object.

- (38) a. gada-gd-eba
 PVB-throw-NMLZ
 ‘throwing (singular object).’
 b. gada-qr-a
 PVB-throw-NMLZ
 ‘throwing (plural object).’

- Agent nominalization seems to be possible with both suppletive forms independently of whether the object is in the singular or the plural. It is not clear to us at this point whether there are any semantic differences.

- (39) a. kvis gada-m-gd-ebebi
 stone.GEN.SG PVB-?-throw-NMLZ.NOM.PL
 ‘throwers of a stone.’
 b. kvebis gada-m-qr-elebi
 stone.GEN.PL PVB-?-throw-NMLZ.NOM.PL
 ‘throwers of a stone.’
 c. kvebis gada-m-gd-ebebi
 stone.GEN.PL PVB-?-throw-NMLZ.NOM.PL
 ‘throwers of stones.’

- d. kvis gada-m-qr-elebi
stone.GEN.SG PVB-?-throw-NMLZ.NOM.PL
‘throwers of stones.’
- e. kvis gada-m-gd-ebi
stone.GEN.SG PVB-?-throw-NMLZ.NOM.SG
‘a thrower of a stone.’
- f. kvebis gada-m-qr-ebi
stone.GEN.PL PVB-?-throw-NMLZ.NOM.SG
‘a thrower of a stone.’
- g. kvebis gada-m-gd-ebi
stone.GEN.PL PVB-?-throw-NMLZ.NOM.SG
‘a thrower of stones.’
- h. kvis gada-m-qr-ebi
stone.GEN.SG PVB-?-throw-NMLZ.NOM.SG
‘a thrower of stones.’

- While at first glance, the pattern seems to be the same for ‘kill’, agent nominalization is not possible with both suppletive forms.
- The nominalization of the verb to ‘kill’ shows suppletion depending of the number of the object:

- (40) a. mo-kvl-a
PVB-kill-NMLZ
‘killing (singular object).’
- b. da-xotsv-a
PVB-kill-NMLZ
‘killing (plural object).’

- Unlike for ‘throw’ agent normalization is **only** possible with ‘killing (singular object)’:

- (41)
- a. m-kvl-eli
PVB-kill-NMLZ.NOM.SG
‘killer’
 - b. m-kvel-elebi
PVB-kill-NMLZ.NOM.PL
‘killers’
 - c. mglis m-kvl-eli
wolf-GEN.SG PVB-kill-NMLZ.NOM.SG
‘killer of a wolf’
 - d. mglebis m-kvl-eli
wolf-PL.GEN PVB-kill-NMLZ.NOM.SG
‘killer of wolves’
 - e. mglis m-kvel-elebi
wolf-GEN.SG PVB-kill-NMLZ.NOM.PL
‘killers of a wolf’
 - f. mglebis m-kvel-elebi
wolf-PL.GEN PVB-kill-NMLZ.NOM.PL
‘killers of wolves’