

A Split Analysis of Plurality: Evidence from Amharic

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1. Introduction

The typical syntactic location for plural inflection is Num(ber), the head of a Num(ber)P between DP and NP (see e.g., Ritter 1991 among many others). However, there is a growing body of research on the idiosyncratic/‘lexical’ properties of certain plurals cross-linguistically, and idiosyncratic plurality is often analyzed as the realization of a different head, closer to the noun than Num (see e.g., Lecarme 2002, Lowenstamm 2008, Acquaviva 2008, Wiltschko 2008, Alexiadou 2011). Nevertheless, it remains controversial which exact heads besides Num are capable of carrying plural features, and how idiosyncratic plurality interacts with Num-based plurality within the same language.

The intricate plural system of Amharic (Ethiosemitic) is a fertile area for investigating these issues. Amharic contains both regular and idiosyncratic plurality, and I propose that the two types each correspond to a different syntactic head: Num for regular plurality and the nominalizing head *n* for idiosyncratic plurality. Plural morphology is thus ‘split’ between two terminal nodes. I also develop an analysis where *n* and Num work together to generate the many different types of Amharic plurals. Overall, Amharic provides further evidence for two sources of syntactic plurality, and allows for one of the first in-depth analyses of the relationship between idiosyncratic plurality and regular plurality.

The plan for the paper is as follows. I present the plural system of Amharic in Section 2. In Section 3, I develop the split analysis of plurality, introducing and justifying why plurality is split between Num and *n*. Section 4 contains the mechanics of the split plurality analysis in Amharic, as well as some thoughts on split plurality across languages. Section 5 concludes.

2. Basic Data and Main Proposal

The Amharic plural system at first glance appears unremarkable. For example, singular nominals in Amharic are unmarked, e.g., the nominals in (1).

(1)	a. lidz	child	d. rwatfʼtʃʼ	runner
	b. kʼäbäle	district	e. anbässa	lion
	c. adäga	accident	f. bet	house

Also, plural nominals are marked: they generally take a suffix: $-(w)otʃʼtʃʼ$ (see e.g., Leslau 1995:169-171).¹ The plurals of the nominals in (1) are in (2).

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¹Certain unmarked indefinite nominals can be interpreted as either singular or plural, i.e., they are number-neutral. They may be incorporated nominals (along the lines of e.g., Farkas and de Swart 2003), and thus I set them aside.

(2)	a. lidz-otʃtʃ	children	d. rwatʃʔtʃʔ-otʃtʃ	runners
	b. kʔäbäle-wotʃtʃ	districts	e. anbässa-wotʃtʃ	lions
	c. adäga-wotʃtʃ	accidents	f. bet-otʃtʃ	houses

Some nominals are pluralized irregularly, and there are a variety of different irregular pluralization strategies. Irregular plurals can be formed via a different suffix, as in (3) (Leslau 1995:171-172).

(3)	a. mämhir- an	teachers	d. hisʔan- at	babies
	b. tʔäbib- an	wise people	e. amät- at	years
	c. kʔal- at	words		

Irregular plurals can also be formed via different vowelings, different phonotactics, and/or partial reduplication (Leslau 1995:172ff.), as in (4).

(4)	a. känfär	→ känäfir	lips	Different Vowels/Syllable Structure
	b. wäyzäro	→ wäyzazirt	ladies	Partial Reduplication
	c. ganen	→ aganint	demons	Combination

So far, the Amharic plural system seems like other plural systems: the plural Num(ber) head is realized as a regular allomorph for most nouns, but has irregular allomorphs in the context of certain nouns.

To be precise about the mechanics here, I adopt the framework of Distributed Morphology (Halle and Marantz 1993, Harley and Noyer 1999) where morphophonological exponents (Vocabulary Items) are inserted after syntax. In a typical plural system, the Num(ber) head will be realized as different Vocabulary Items depending on the context. A partial list of the Vocabulary Items that can be inserted at Num under a ‘typical plural system’ analysis of Amharic are in (5).

(5) **Typical Plural Analysis: Selected Vocabulary Items for Num**

- a. Num, [+PL] ↔ -otʃtʃ
 b. Num, [+PL] ↔ -at / {√HISʔAN, √KʔAL, √AMÄT...}
 c. Num, [+PL] ↔ -an / {√MÄMHİR, √TʔÄBİB ...}

Regular and irregular affixes **compete** for insertion at the plural Num node (see Halle and Marantz 1993, Halle 1997; see also Embick and Noyer 2007 on English plurality). When one of the roots listed in (5)b or (5)c is present, the irregular affix must be inserted per the Pāṇinian Principle (a more specific rule applies before a more general one; see Halle and Marantz 1993:124). Otherwise, the regular affix is inserted as the default/elsewhere case.

However, there is evidence that plurality in Amharic is more complicated than this tidy picture. Specifically, there is evidence that irregular and regular plural morphology are not in competition for morphophonological insertion at Num.

The first piece of evidence against a competition analysis is that Amharic has double plurals, i.e., both irregular and regular plural morphology can be found on the same nominal (cf. Arabic, e.g., Zabbal 2002 and Breton, e.g., Trépos 1957). Some examples are in (6).

(6)	<u>Singular</u>	<u>Irregular Plural</u>	<u>Double Plural</u>	<u>Gloss</u>
	a. mämhir	mämhir-an	mämhir-an-otʃtʃ	teacher
	b. kʔal	kʔal-at	kʔal-at-otʃtʃ	word
	c. mäśʔhaf	mäśʔahift	mäśʔahift-otʃtʃ	book
	d. wäyzäro	wäyzazirt	wäyzazirt-otʃtʃ	lady

Every nominal that has an irregular plural has a double plural, and the double plurals have the same meaning as singleton plurals. Double plurals are difficult to deal with under a competition analysis:

only one Vocabulary Item can be inserted at a time at Num, so it is unclear how two exponents are present.²

Additionally, every nominal in Amharic has a regular plural, again with no change in meaning (Armbruster 1908:52). In other words, every nominal that can be irregularly pluralized can also be regularly pluralized. Some examples are in (7).

(7)	<u>Singular</u>	<u>Irregular Plural</u>	<u>Regular Plural</u>	<u>Gloss</u>
	a. māmhir	māmhir-an	māmhir-otʃtʃ	teacher
	b. k'al	k'al-at	k'al-otʃtʃ	word
	c. mäs'haf	mäs'ahift	mäs'haf-otʃtʃ	book
	d. wäyzäro	wäyzazirt	wäyzär-otʃtʃ	lady

If regular and irregular plural morphology were in competition for insertion, these regular plurals would flagrantly violate the Pāṇinian Principle (cf. English **womans*, **foots*, **childs*, etc.).

I conclude that regular and irregular plural morphology do not compete for insertion in Amharic, i.e., they do not occupy the same syntactic head (Num). Instead, I propose a split analysis of number: the 'regular' plural suffix is the realization of Num[+PL] and irregular plural morphology is the realization of *n*[+PL], a morpheme that nominalizes category-neutral roots.^{3,4} The relevant Vocabulary Items under the split analysis are in (8) (compare with (5)).

(8)	Split Analysis: Selected Vocabulary Items for Num and <i>n</i>	
a.	Num, [+PL] ↔ -otʃtʃ	Regular
b.	<i>n</i> , [+PL] ↔ -at / {√HĪS'AN, √K'AL, √AMĀT...}	Irregular
c.	<i>n</i> , [+PL] ↔ -an / {√MĀMHĪR, √T'ĀBIB ...}	Irregular

Why are Num and *n* the chosen loci of plurality? First of all, it is likely that plurality is at least on Num since there is strong evidence for NumP being involved in plurality cross-linguistically, and there is also some syntactic evidence for NumP in Amharic (Kramer 2009). Also, a Num/*n* split explains some otherwise elusive contrasts between irregular and regular plurals in Amharic. These contrasts are the topic of the next section.

3. Evidence for a Split Analysis of Number

Regular and irregular plurals behave distinctly in terms of morphological and semantic idiosyncrasy, ordering with respect to the nominal root, and gender. Having regular plurals be formed via Num and irregular plurals formed via *n* explain these contrasts, and I deal with each one in turn.

3.1. Idiosyncrasy

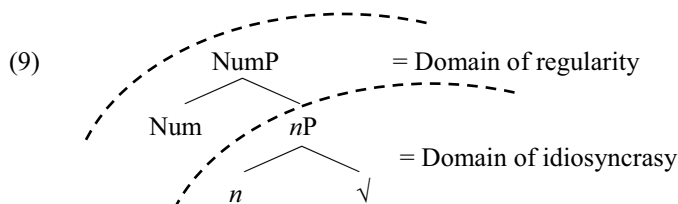
I assume that lexical categories are made up of a category-neutral root (√) and a category-determining head (*n*, *v* or *a*; see Marantz 1997, 2001; Arad 2003, 2005 for Distributed Morphology

² It is unlikely that a post-syntactic operation 'splits off' or 'copies' the plural feature into a separate node. This would be an ad hoc operation, i.e., not one of the well-known morphological operations like Fission (Noyer 1997). It would also be difficult to ensure that the separated plural feature would be realized as a regular plural. Double plurals crucially never involve two irregular affixes or two regular affixes. See Section 3.2.

³ Acquaviva 2008, Lowenstamm 2008 and Alexiadou 2011 also at least partially develop split plurality analyses. See Section 4.1 for some discussion.

⁴ It is relatively unexpected to have plurality realized on two separate morphemes with no change in meaning; see Kramer 2010 for evidence that irregular plurals are not formal/high register allomorphs, do not denote a different type of plural meaning (e.g., a collective) and are not paucal/multal forms.

perspectives on this idea).⁵ For example, in English, the root $\sqrt{\text{HAMMER}}$ can combine with a verbalizing head v to make the verb ‘to hammer,’ or it can combine with a nominalizing head n to make the noun ‘a hammer.’ Marantz (1997, 2001) proposed that forming a word by combining n , v , or a and a root will result in phonological and semantic idiosyncrasies, and will depend on properties of the root, whereas forming a word by combining a functional head and a xP will result in phonological and semantic regularity and be non-root-specific.⁶ In this approach, NumP is a domain of regularity for word formation, whereas words formed by combining n and the root will lead to idiosyncrasies.



Some of the predictions of Marantz (1997, 2001) have been shown to be too strong (see e.g., Gribanova 2010, Embick 2010), but I will focus here on areas where the proposal remains viable, namely, productivity and idiomatic interpretations

As for productivity, only certain Amharic nominals can be inflected via irregular plural morphology, whereas every nominal can be regularly pluralized (see (7)). This is predicted assuming that idiosyncratic plurality is n : paradigmatic gaps are typical of category-determining head and root combinations (Arad 2003, 2005), whereas productivity is expected for inflectional heads combining with a xP .⁷

I assume that idiomatic interpretations of the root are available as long as categorizing heads are being merged (see e.g., Borer 2008, 2009, 2010, forthcoming, Alexiadou 2009, Anagnostopoulou and Samioti 2009, Harley 2009a⁸). In terms of plural formation, then, nP allows idiosyncratic interpretations, and NumP will only allow compositional interpretation. This predicts that irregular plurals will be able to trigger idiosyncratic interpretations of the root, whereas regular plurals will not.

Both predictions are correct. Some irregular plurals do trigger idiosyncratic interpretations, as shown in (10). For example, the root $\sqrt{\text{NĀFS}}$ usually means ‘soul,’ but when it is irregularly pluralized, it can mean ‘small insects’ (as well as ‘souls’).

(10)	<u>Singular</u>	<u>Gloss</u>	<u>Irregular Plural</u>	<u>Gloss</u>
a.	nāfs	soul	nāfs-at	souls, small insects
b.	lib̄s	piece of clothing	albasat	clothes, sacerdotal garments
c.	hizb	nation	ahzab	nations, barbarians

In contrast, regular plurals do not generally trigger idiosyncratic interpretations. Moreover, the regular plurals of the nominals in (10) cannot be associated with the idiosyncratic interpretations. The regular plural of *nāfs*, for example, cannot mean ‘small insects.’

⁵ This idea predates Distributed Morphology (see e.g., van Riemsdijk 1990 on n), and Distributed Morphologists are not the only ones who subscribe to it (see e.g., Lowenstamm 2008). See also Borer 2005 for a similar approach, although Borer (2005:20-21) argues against the Distributed Morphology analysis adopted here.

⁶ Marantz was building on previous work which had discovered an empirical contrast between certain types of word formation (see e.g., Wasow 1977), and explained this contrast as one of lexical vs. syntactic word-formation. Marantz re-mapped this contrast for a non-lexical theory of morphology as inner vs. outer affixation wrt the root.

⁷ There are certain stems that can be inflected via irregular plural morphology (e.g., stems ending in the gentile suffix $-awi$), but others cannot (e.g., stems ending in the agentive suffix $-āñña$). This demonstrates the lack of productivity of irregular plurals, and points up their similarity to derivational morphology (= categorizing heads).

⁸ Borer (2009, 2010) claims that the first functional head above the categorizing head can be part of the domain of idiosyncrasy. Her evidence for this is from idiosyncratic plurality: pluralia tantum nouns and plurals within compounds are cases of Num triggering idiosyncratic interpretations. However, I suspect that either these cases can be dealt with via plurality on n (see Acquaviva 2008 for pluralia tantum, Harley’s 2009 DM analysis of compounds) or that the plural functional head involved here is what Borer (2005) calls DIV – a lower, potentially more idiosyncratic locus of plurality that is separate from NumP (Borer’s #P).

(11)	<u>Singular</u>	<u>Regular Plural</u>	<u>Gloss</u>
	a. näfs	näfs-otʃtʃ	souls, *small insects
	b. libs	libs-otʃtʃ	clothes, *sacerdotal garments
	c. hizb	hizb-otʃtʃ	nations, *barbarians

Overall, then, the Num/*n* split analysis predicts the non-productivity and semantic idiosyncrasy of irregular plurals and the productivity and semantic regularity of regular plurals.

3.2. Double Plurals

The Num/*n* split analysis also correctly predicts the ordering of plural affixes in double plurals. Double plurals must be of the form [Root-irregular plural-regular plural]. All other orderings are ungrammatical, as shown for *mämhir* ‘teacher’ in (12).

(12)	a. mämhir-an-otʃtʃ	[√-Irreg-Reg]	c. *mämhir-otʃtʃ-otʃtʃ	[*√-Reg-Reg]
	b. *mämhir-otʃtʃ-an	[*√-Reg-Irreg]	d. *mämhir-an-an	[*√-Irreg-Irreg]

A split analysis rules out double plurals with identical plural marking like (12)c and (12)d: there are not two Num’s or two *n*’s, just one of each in the proposed structure. A split analysis also predicts (12)b without any kind of additional stipulation: *n* (irregular plural morphology) is closer to the root than Num (regular plural morphology) in the hierarchical structure (see (9)). So, no matter how the root, *n* and Num combine, *n*[+PL] will always be closer to the root than Num[+PL].

3.3. Gender

The split analysis additionally accounts for some unusual interactions between gender and number in Amharic. In Kramer 2009, 2012, I argue that *n* is where the gender feature associated with a nominal is located (cf. Ferrari 2005, Lowenstamm 2008, Acquaviva 2009). A feminine nominal is thus formed by combining a root with a *n*[+FEM], whereas a masculine nominal is formed by combining a root with a *n*[-FEM].

If *n* has a gender feature and a plural feature, it is predicted (*ceteris paribus*): (i) that irregular plurals will be capable of varying with gender (cf. Somali plurals; Lecarme 2002), and (ii) regular plurals will not be (since they do not have gender). Both predictions are borne out in Amharic. Certain irregular plurals are gendered: they take separate masculine and feminine suffixes. An example with *k’iddus* ‘saint’ is in (13).

(13)	a. k’iddus-an ‘saints’ (masc. pl. or mixed group)
	b. k’iddus-at ‘saints’ (fem. pl.)

However, no regular plurals vary with respect to gender; both masculine and feminine nominals take *-otʃtʃ* as the plurals in (14) demonstrate.

(14)	<u>Masculine</u>		<u>Feminine</u>	
	bet-otʃtʃ	houses	mäkina-wotʃtʃ	cars
	nägär-otʃtʃ	things	agär-otʃtʃ	countries
	abbat-otʃtʃ	fathers	innat-otʃtʃ	mothers
	tämari-wotʃtʃ	(male) students	tämari-wotʃtʃ	(female) students

The restriction of gendered plurals to irregular plurals is puzzling unless gender is a feature on *n*, thus creating a feature bundle that has both gender and number.

There is also a curious asymmetry in the behavior of the feminine suffix *-it* with respect to plurals. Nominals ending in *-it* are freely regularly pluralized (recall that every nominal has a regular plural; see (7)).

- | | | |
|------|---|---|
| (15) | a. mänäk ^w s-it-otʃf
monk-FEM-PL
nuns | c. arog-it-otʃf
old.person-FEM-PL
old women |
| | b. muʃirr-it-otʃf
wedding.participant-FEM-PL
brides | d. t'ot'-it-otʃf
ape-FEM-PL
female apes |

However, nominals ending in *-it* cannot be irregularly pluralized.

- | | | | |
|------|---|-------------------------|-----------------------------------|
| (16) | <u>Singular</u> | <u>Irregular Plural</u> | <u>*Feminine Irregular Plural</u> |
| | a. mänäk ^w se(-it)
monk(-FEM) | mänakos-at
monk-PL | *mänakos-it-at, *mänakos-at-it |
| | b. mämhir(-t)
teacher(-FEM) | mämhir-an
teacher-PL | *mämhir-t-an, *mämhir-an-t |

In (16)a, the root $\sqrt{\text{MÄNÄK}}^{\text{wSE}}$ ‘monk’ can be nominalized and feminized with the addition of *-it* to mean ‘nun.’ The root can also be irregularly pluralized with the *-at* suffix, but both the plural *-at* suffix and the feminine *-it* suffix cannot co-occur (the preferred plural for nun is (15)a *mänäk^ws-it-otʃf*). The same goes for the root $\sqrt{\text{MÄMHİR}}$ ‘teacher’ in (16)b – it can be feminized via a suffix, but that suffix cannot co-occur with its irregular plural suffix.

This asymmetry is predicted if gender features are on *n*. In this approach, the feminine suffix and the regular plural suffix are independent heads in the syntax (*n* and Num, respectively) and don’t compete for morphophonological insertion at the same slot. However, the feminine suffix and any irregular plural affixes **compete for insertion** at the *n* node. Only one Vocabulary Item may be inserted at a time in that slot, so the two suffixes cannot co-occur.⁹

3.4. Summary

I have proposed a split analysis of plurality where regular plurals are formed via a Num[+PL] combining with a *nP* whereas irregular plurals are formed by combining a *n*[+PL] with the root. The evidence for a Num/*n* split is summarized in (17).

- (17) **Evidence for a Num/*n* Split**
- Lack of productivity of the irregular plural, uniform productivity of the regular plural
 - Semantic idiosyncrasies of the irregular plural, semantic regularity of the regular plural
 - Ordering of plural morphemes in the double plural
 - Only irregular plurals display gender distinctions
 - Ban on realizing a gender suffix and an irregular plural suffix at the same time

Some questions remain open though. How are the different types of plurals generated? What is the relationship between Num and *n*? How does this relate to the morphosyntax of plurality in other languages? These questions are addressed in the next section.

⁹ One might wonder why the irregular plural ‘wins’ the competition, i.e., why the plural suffix is inserted and not the feminine suffix when *n* is plural. I hypothesize that this is because the Vocabulary Item for the feminine suffix contains a [-PL] feature. This means that it would not match one of the features of the syntactic feature bundle for a plural *n*, and thus it could not be inserted (as per the Subset Principle; Halle 1997). See Kramer 2009:261 for further evidence for a [-PL] feature as part of the Vocabulary Item for *-it*.

4. Analysis

4.1. *The Gist*

We have seen three different types of plural nominals in Amharic: regular, irregular and double. All the plurals are synonymous, but they differ in whether Num[+PL], n [+PL] or both are realized morphologically. How can we best capture this array of facts?¹⁰

As a place to start, let us suppose that only one of the plural features is interpretable. It is commonly assumed that features vary in interpretability (see e.g., Chomsky 2000, 2001), so this is not a radical move. Moreover, if there is only ever one interpretable plural feature per DP, it is correctly predicted that all the plurals will be synonymous. If this interpretable plural feature is on Num, the interpretation of plurality in Amharic will be on a par with other languages, and this seems appropriate. Amharic varies from other plural systems morphosyntactically, not semantically.

Some type/flower of n in the language must also bear a plural feature since n can be realized with a distinct plural exponent. Since plural Num and plural n can co-occur without any change in meaning, the plural feature on n must be uninterpretable.¹¹ I also assume that the nominalization of roots in Amharic is on a par with other languages. That is, n selects for any category-neutral root and nominalizes that root, e.g., the root $\sqrt{\text{HHS}'\text{AN}}$ (NB: Amharic is a head-final languages and its trees will be represented as such).

$$(18) \quad \begin{array}{c} n\text{P} \\ \swarrow \quad \searrow \\ \sqrt{\text{HHS}'\text{AN}} \quad n \end{array} = \text{'baby'}$$

The difference is that Amharic also has a n with an uninterpretable plural feature that selects for and nominalizes certain roots.

$$(19) \quad \begin{array}{c} n\text{P} \\ \swarrow \quad \searrow \\ \sqrt{\text{HHS}'\text{AN}} \quad n \text{ u } [+PL] \end{array} = \text{'babies'}$$

This characterization of noun-forming in Amharic seems intuitively correct: certain nominals can be formed that are “inherently” plural but n is not otherwise involved in number inflection.¹²

The question now remaining is how these two types of plural features interact to form all the types of plurals. To explain this, I first assume that plural Num has no selectional restrictions: it combines with ‘plain’ $n\text{P}$ or n [+PL] P . If a plural Num selects for a plain $n\text{P}$, the result is a regular plural, as in (20). Every root can be nominalized by plain n , so this is why every nominal has a regular plural.

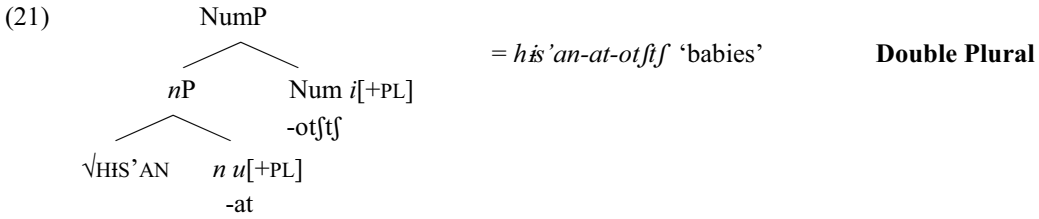
$$(20) \quad \begin{array}{c} \text{NumP} \\ \swarrow \quad \searrow \\ n\text{P} \quad \text{Num } i \text{ [+PL]} \\ \swarrow \quad \searrow \quad \searrow \\ \sqrt{\text{HHS}'\text{AN}} \quad n \quad -\text{ot}\{\text{t}\} \\ \quad \quad \quad \emptyset \end{array} = \text{h}\acute{\text{š}}'\text{an-ot}\{\text{t}\} \text{'babies'} \quad \textbf{Regular Plural}$$

When a plural Num selects for a plural $n\text{P}$, a double plural is generated, as in (21).

¹⁰ Other split plurality analyses are not helpful in answering this specific question. They either do not overtly discuss the interaction of Num and n (Alexiadou 2011), or do not address the interpretation of multiple plural features in the same DP (Acquaviva 2008, Lowenstamm 2008).

¹¹ I am assuming a framework where it is unvalued features that cause a crash, not uninterpretable features (cf. Legate 2002, Epstein et al. 2010, Carstens 2011). Note also that the plural features on Num and n are both valued.

¹² This is an improvement on Kramer 2009 where all roots had to combine with a n [+PL] or a n [-PL], thus equating the formation of lexical categories with the expression of number in Amharic.

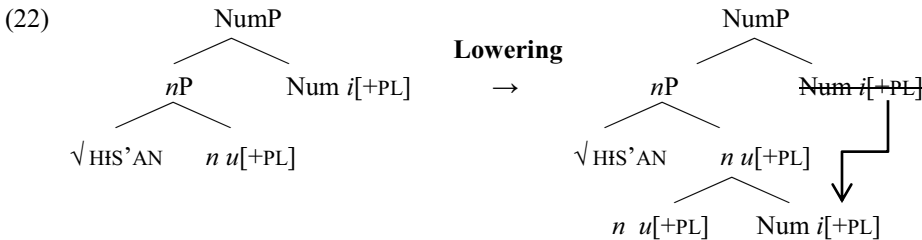


The challenge then becomes generating an irregular plural, i.e., a plural where $n[+PL]$ is morphologically realized and Num is null (i.e., default/singular).¹³

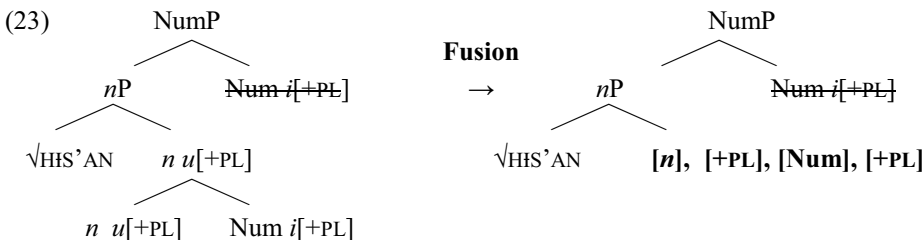
This challenge can be met via at least two independently-proposed DM operations. The first is Impoverishment (Bonet 1991, Halle 1997): remove a feature from a terminal node to cause the default Vocabulary Item to be inserted at that node. This would optionally remove $[+PL]$ from Num so that it surfaces in its default form. The second operation potentially at play here is Fusion (Halle and Marantz 1993, Halle 1997): combine two sister terminal nodes into one single node, which contains the union of the sets of features of the two terminal nodes. In this approach, Num and n would optionally undergo Fusion so that only one plural Vocabulary Item is inserted. Across both approaches, the broad motivation is the same: morphological economy (cf. Acquaviva 2008, Lowenstamm 2008:128). n and Num end up as part of the same complex head and both have a $[+PL]$ feature; it has been previously discovered that if a feature is replicated between two terminal nodes that are part of the same complex head, the feature only needs to be realized once (Kinyalolo 1991, Carstens 2003, 2005, Rezac 2008).

I will pursue a Fusion approach here, for two main reasons. First of all, Impoverishment faces certain implementational difficulties, including why it is Num (and not n) which is Impoverished. Moreover, the Fusion of Number with various DP-internal nodes is well-attested cross-linguistically. A single exponent can express number and case (Latin, Latvian, Russian; Halle and Marantz 1993), number and gender (Italian, Tsez, Bantu) or even number and definiteness (Persian; Ghaniabadi 2009).

As for the details of the Fusion approach, I assume first that Num lowers to n since they are part of the same complex head. This is shown in (22).



Since Num and n are now sisters, they can fuse to make one terminal node instead of two. I assume that Fusion is optionally triggered when both n and Num have a plural feature. Fusion is shown in (23), with the result that n and Num's features are combined into one terminal node, sister to the root.



¹³ An alternative solution is that there is no NumP projected in irregular plural DPs (see Lowenstamm 2008 for Yiddish). In Amharic, however, NumP has syntactic effects (e.g., it hosts possessors; Ouhalla 2004) and these effects are still present in irregular plurals. Even more seriously, since Num hosts the interpretable plural feature, there would be no way to interpret irregular plural n Ps as plural. See Kramer 2009 for detailed argumentation.

At PF, the fused terminal node must be morphophonologically realized. To see how this is accomplished, consider again some Vocabulary Items for plural Num and *n* (repeated from (8)).

- (24) **Selected Vocabulary Items for Num and *n***
- | | |
|---|------------------|
| a. Num, [+PL] ↔ -ot{tʃ} | Regular |
| b. <i>n</i> , [+PL] ↔ -at / { √HĪSʼAN, √KʼAL, √KAHĪN... } | Irregular |
| c. <i>n</i> , [+PL] ↔ -an / { √MĀMHĪR, √MĀZĀMMĪR... } | Irregular |

The regular plural (24)a matches the same number of features of the fused *n*/Num node as the irregular plurals (24)bc. However, (24)bc have specific contexts, and thus will be inserted per the Pāṇinian Principle. Therefore, when plural Num/*n* fuse, general principles of competition ensure that the irregular plural Vocabulary Item will be inserted for the resulting single node. This was the final desideratum: the Fusion of plural Num and plural *n* results in an irregular plural.

- (25)
- | | | | |
|---------|-----------------------------------|-----------------------------|-------------------------|
| NumP | | | |
| / | | | |
| nP | Num <i>i</i> [+PL] | = <i>hĭsʼan-at</i> ‘babies’ | Irregular Plural |
| / | | | |
| √HĪSʼAN | [<i>n</i>], [+PL], [Num], [+PL] | | |
| | -at | | |

Thus, the analysis generates all the plurals. In a regular plural: Num *i*[+PL] combines with *n*. In a double plural, Num *i*[+PL] combines with *n u*[+PL] and both are realized. In an irregular plural, Num *i*[+PL] combines with *n u*[+PL]; they undergo Fusion for purposes of morphological economy; an irregular plural allomorph is inserted at the fused terminal node. The end result is that all the plurals have one interpretable plural feature on Num, but have differing morphological realizations.¹⁴

4.2. A Cross-Linguistic Perspective

Most languages with a contrast between irregular and regular plurals (e.g., English) don't show evidence for a split analysis, i.e., irregular and regular plurals are in competition for the realization of Num. These languages do not have double plurals (**feets*, **childrens*), and the noun stock is relatively cleanly divided into nouns that have regular plurals and nouns that have irregular plurals.¹⁵

On the other hand, some languages have been argued to have only idiosyncratic plurals, e.g., Somali (Lecarme 2002), Halkomelem Salish (Wiltschko 2008), and Korean (Kwon and Zribi-Hertz 2004). This type of plural is almost always analyzed as involving some kind of head that is closer to the root than Num (*n*: Lecarme 2002, Acquaviva 2008, root modifier: Wiltschko 2008).

Amharic then appears to have a hybrid plural system involving both Num and *n*. I speculate that Amharic has this type of system because of historical accident. Other Semitic languages (e.g., Arabic, Hebrew) have been analyzed as Num-based plural systems. (Zabba 2002, Ritter 1991, etc.), whereas the Cushitic language Somali (Lecarme 2002) has been analyzed as a purely *n*-based plural system. There has been extensive contact between Amharic and the Cushitic languages of Ethiopia, which may

¹⁴ It remains to be explained how the idiosyncratic interpretations of the root for certain irregular plurals are generated (see (10)). I assume that the Encyclopedia is where the meaning of a root is determined, and the meaning is dependent on the categorizing heads that dominate the root (see e.g., Marantz 2001, Arad 2003, 2005, Alexiadou 2009, Borer 2008, 2009, forthcoming). Borer (2008, 2009, forthcoming) in particular proposes that Encyclopedia searches are limited to a root plus any categorizing heads that may dominate it, and the searches operate over a post-syntactic structure where Vocabulary Items have already been inserted. The prediction then is that whenever *n*[+PL] is realized, the idiosyncratic interpretation will be available. This is correct: idiosyncratic interpretations are available for both irregular plurals (see (10)) and double plurals (e.g., *nĭfs-at-otʃtʃ* ‘souls’ or ‘small insects’).

¹⁵ There are a smattering of interesting exceptions, though (Acquaviva 2008); see e.g., double plural *cherubims* and *brothers* vs *brethren* in English. See also Alexiadou 2011 on how Greek plural mass nouns are *n*-plurals.

have led to an earlier Semitic Num-based plural system changing into a plural system that still includes Num but also has some *n* plurality.

This approach overall leads to a typology of the morphosyntax of plurality. Languages can have wholly Num-based plurals (e.g., English), *n*-based plurals (all plurals act idiosyncratically), or split plurality (an irregular/regular contrast in plurality expressed through two different heads).

- (26) **Morphosyntactic Typology of Plurality:**
- a. Num-based plurality (English, Hebrew, etc.)
 - b. *n*-based plurality (Somali, Halkomelem Salish, etc.)
 - c. Split plurality (Amharic)¹⁶

Identifying further predictions of this typology (and investigating whether they are correct) is a central goal for future research.

5. Conclusion

I have argued that Amharic has regular and irregular pluralization strategies, but they are not in competition for insertion. A variety of evidence supports the idea that the regular plural suffix is the realization of Num[+PL] and the various irregular pluralization strategies are the realization of *n*[+PL]. All the types of Amharic plurals can be generated from these assumptions, as well as assuming that plural *n* and plural Num optionally undergo Fusion.

This paper adds to the growing literature on multiple syntactic locations for plurality, and provides an explicit analysis of how Num and non-Num plurality work together within the same language. Finally, it points towards a typology of the morphosyntax of plurality that provides a plausible starting point for future research on cross-linguistic variation in plurality.

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¹⁶ Other potential split plural languages include Maay (Cushitic; Paster 2010), Yiddish (Lowenstamm 2008), and possibly Breton (Trépos 1957); all these languages have double plurals and an irregular/regular contrast.

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