1 INTRODUCTION

In Amharic (Ethiosemitic), a bare noun can be interpreted as referring to one or more entities (Kapeliuk 1994, Leslau 1995, Baye 1996).

(1) lidʒ mät’t’a
child come.PF-3MS
“One or more children came.”

• Corbett (2000:9) calls this phenomenon “general number.”

The analysis of general number nouns across languages is controversial.
• General number is a hallmark of incorporated nominals (see e.g., Massam 2009)
• General number signals that Num(ber)P has not been projected within a DP (see e.g., Déprez 2005 et seq., Wiltschko 2008).

Today: investigate the morphosyntax of general number nouns in Amharic
• Basic facts (Section 2)
• Argue that Amharic general number nouns are not incorporated nominals (Section 3)
• Develop a preliminary analysis of these nouns as lacking NumP (Section 4)
  o Show how this analysis makes correct predictions
• Conclude (Section 5)

Larger impact:
• No previous analysis of Amharic general number nouns in theoretical linguistics
• Little theoretical research on general number in African/Semitic languages (exception: Ajibóyè 2010 on Yoruba; please let me know if you know any others)
• Support for a heterogeneous approach to the analysis of general number nouns (cf. Paul 2012)
2 AMHARIC GENERAL NUMBER NOUNS: THE BASICS

(2) has a noun interpreted with general number.

(2)  lidʒ-u  māš’haf wässäd-ä
     child-DEF  book  take.PF-3MS
     ‘The child took one or more books.’

Key Observation: the noun is bare, i.e., in its dictionary/citation form. Compare:

(3)  lidʒ-u  māš’haf-u-n  wässäd-ä
     child-DEF  book-DEF-ACC  take.PF-3MS
     ‘The child took the book.’

(4)  lidʒ-u  māš’haf-plfj  wässäd-ä
     child-DEF  book-PL  take.PF-3MS
     ‘The child took some books.’

(5)  lidʒ-u  and māš’haf  wässäd-ä
     child-DEF  a  book  take.PF-3MS
     ‘The child took a book.’

Key Question: Are general number nouns lexically ambiguous between singular and plural interpretations, or are they truly unspecified for number?

(6)  **Option A: Lexically Ambiguous for Number**
   a.  māš’haf.s  b.  māš’haf.pl
       ‘a book’       ‘books’

(7)  **Option B: Unspecified for Number**
    māš’haf
    book
    ‘book’

Diagnostic: the interpretation of a lexically ambiguous word must be held constant over ellipsis.

(8)  Lee saw a pen, and Sam did, too.
    a.  ✔ Lee saw a writing implement, and Sam saw a writing implement, too.
    b.  ✔ Lee saw an animal enclosure, and Sam saw an animal enclosure, too.
    c.  ✗ Lee saw a writing implement, and Sam saw an animal enclosure.
    d.  ✗ Lee saw an animal enclosure, and Sam saw a writing implement.

If a general number noun is lexically ambiguous, then its number interpretation will be held constant over ellipsis.
• However, this is not borne out: (9) is four-way ambiguous.

(9) ATION 8
Kramer

Therefore, general number nouns in Amharic are truly unspecified for number.

• Just like general number nouns in Turkish (Bliss 2003:39-40), Mandarin (Rullmann and You 2006:177-178), Indonesian (Sato 2009), and Malagasy (Paul 2012:101-102), among other languages

**Key Theoretical Assumptions:**

• Focus on morphosyntactic properties of general number nouns
• Assume that DP’s cross-linguistically are structured as in (10):

(10)  

```
  DP
    D      NumP
       Num   NP
```


### 3 No Incorporation

**Recall:** general number nouns have been analyzed in two different ways:

• Incorporated nominals
• DPs that lack NumPs (but are not incorporated)

**This Section:** argue that general number nouns are not incorporated nominals (*pace* Kapeliuk 1994)

Incorporation has been a topic of intensive research for almost 30 years (Mithun 1984, Baker 1988, Massam 2009, Mathieu 2009, many, many others)

• …and in that time it has grown to include more and phenomena under its rubric.
• Will look at two broad types:
  o Incorporation of N (e.g., Baker 1988)
  o Incorporation of NP (pseudoincorporation; e.g., Massam 2001)

3.1 Incorporation of N

Focus on incorporation of N into V: see e.g., Baker 1988, 1995, 2009, Baker et al. 2005
- Example language: Mapudungun (Mapudungu; Chile)

(11) **Non-Incorporated**

Ni choo kintu-ley [Mapudungun]
ta chi pu waka
my father seek-PROG-IND.3S the COLL cow
‘My father is looking for the cows.’ (Baker 2009:149)

(12) **Incorporated**

Ni choo kintu-waka-ley [Mapudungun]
my father seek-cow-PROG-IND.3S
‘My father is looking for the cows.’ (Baker 2009:149)

(13) N-Incorporation Analysis

```
NP       VP
  S
          my father
               V
                         NP
                              seek
t               cow
```

- Method of incorporation: syntactic head movement
- Key morphosyntactic properties (Baker 2009):
  - Morphophonological incorporation of N into V: form one complex head
  - Incorporation only possible for objects (and unaccusative subjects) due to the Head Movement Constraint
  - The incorporated nominal cannot be modified by e.g., adjectives

Amharic general number nominals are not incorporated N’s.
- No clear morphophonological incorporation of N into V
  - There is a word break after mäs’haf orthographically and (impressionistically) prosodically

(14) lidʒ-u mäs’haf wässäd-ä
child-DEF book take.PF-3MS
‘The child took one or more books.’

- General number nominals never intervene between the verb and its inflectional morphology, as they do in Mapudungun

(15) innat-e k’it’äl iyyä-t’ärräg-ätʃf
mother-my leaf PROG-sweep.PF-3FS
‘My mother, sweeping leaves…’ (Kapeliuk 1994:15, orig. translation)

- General number nouns are not limited to objects and unaccusative subjects.
(16) **Indirect Object (Object of Preposition)**

Almaz  kärämela-wotʃ-u-n  lá-ʃidʒ  sät’t-ātʃʃ
Almaz  candy-PL-DEF-ACC  to-child  give.PF-3FS
‘Almaz gave the candy to one or more children.’

(17) **Transitive Subject (not adjacent to V)**

lā-šidʒ  kek-u-n  bäll-a-w
child  cake-DEF-ACC  eat.PF-3MS-3MS.O
‘One or more children ate the cake.’

- It is possible to modify a general number noun with an adjective.

(18)  

lā-ʃidʒ-u  k’āyy mās’haf  wāssād-ā
child-DEF  red  book  take.PF-3MS
‘The child took one or more red books.’

- A nominal phrase containing a general number noun can even be quite complex:

(19)  

ʃukka-na  mānkiya  kā-birtʃik’k’o  gar  yi-k’atʃ’il-āl
fork-and  spoon  with-glass  with  3MS-clank.IMPF-3MS
‘Fork[s], spoon[s], glass[es] clank together.’ (Kapeliuk 1994:15, orig. translation)

- It is highly unlikely that this coordinated structure with a PP is N-incorporated.

So, it seems safe to conclude that general number nouns in Amharic are not incorporated N’s.⁴

### 3.2 Pseudoincorporation: Incorporation of NP

Focus on the analysis of pseudoincorporation in Turkish in Öztürk 2009…⁵

- …with supporting role played by the analysis of pseudoincorporation in Niuean in Massam 2001

(20) **Nonpseudoincorporated Nominal**  

Ali  kitab-ı  okudu.
Ali  book-ACC  read
‘Ali read the book.’ (Öztürk 2009:335, (1b))

(21) **Pseudoincorporated Nominal**  

Ali  kitap  okudu.
Ali  book  read

---

⁴ It is likely that they are not incorporated roots, either (Wiltschko 2009) because, for example, they saturate an argument position. Also, if nouns in Amharic are formed via root and pattern morphology (as in Kramer to appear, following Arad 2005 on Hebrew), the nominal root is actually an unpronounceable string of consonants, which makes this analysis even less likely.

⁵ But see Cagli 2009 for an alternative analysis of the Turkish facts.
Key properties:

- No case marking
- General number
- Habitual interpretation (although will not focus on this)

Öztürk 2009 argues that this is not N incorporation:

- Transitive subjects/agents incorporate

(22) Ali-ACC bee stung

‘Ali got bee stung.’ (Öztürk 2009:335, (3a))

- Incorporated nominals can be modified by adjectives

(23) Ali sour apple ate

‘Ali did sour apple eating.’ (Öztürk 2009:339, (14a))

Instead, Öztürk proposes that the incorporated nominal is merged as the immediate NP sister to V.

(24)

\[
\text{VP} \quad \text{Pseudoincorporation Analysis}
\]

\[
\begin{array}{cc}
\text{NP} & \text{V}
\end{array}
\]

- Since there is no NumP, it is unspecified for number ( = general number).
- Since there is no KP projection, it does not have case marking.
- Assuming APs are adjoined to NP, they are licit modifiers of the pseudoincorp nominal.

However, there are several arguments against analyzing Amharic general number nouns as pseudoincorporated.

- **Case marking:** when an Amharic general number noun is specific (e.g., when it has a possessor), the DP that contains it is marked for case:

(25) child-DEF of-Almaz-ACC book take.PF-3MS

‘The child took one or more books of Almaz’s.’

- NB: it is normal in Amharic for the accusative case for the whole DP to be marked on the possessor

(26) Almaz-ACC book see.PF-3FS-3MS.O

‘Almaz saw Girma’s brother.’
- Pseudoincorporated nominals never have case markers in Turkish (Öztürk 2009) or Niuean (Massam 2001).6

- **Relative clauses**: in both Turkish and Niuean, pseudoincorporated nominals can be modified by infinitival relative clauses / participles.

(27) Ali oku-yacak kitap aldı [Turkish]
Ali read-PCPLE book bought
‘Ali bought books to read.’ (Öztürk 2009:349, (14b))

(28) . . . ke kumi motu ke noonofo ai [Niuean]
SBJNCTV seek island SBJNCTV settle there
‘…to seek an island where they could settle.’ (Massam 2001:160, (7d))

- Massam (2001:169, fn.14) suggests that this is because participles/infinitival relatives are complements to N, following Howatt 1998.

- However, it has been argued that finite relative clauses are introduced higher in the nominal structure (see e.g., Larson 1994, Ghomeshi 1996, Finer 19987).

- They are accordingly impossible with pseudoincorporated nouns in Niuean (no data from Turkish).

(29) *ne inu kof ne taute e au a Sione [Niuean]
PST drink coffee NONFUT make ERG I ABS Sione
*Sione drank coffee that I made.’ (Massam 2001:168, (14b))

- Nevertheless, finite relative clauses are grammatical with general number nouns in Amharic.

(30) astämari-w kā-Vermont yā-nābbār-ā-n pom gäzz-a
teacher-DEF from-VT C-be.PF-3MS-ACC apple buy.PF-3MS
‘The teacher bought one or more apples which were from Vermont.’

- **Referentiality**: general number nouns in Amharic introduce discourse referents.

(31) lidʒ-u māš’haf wāssād-ā. Sāmayawi nābbār-ā
child-DEF book take.PF-3MS. Blue be.PF-3MS
‘The child took (a) book. It was blue.’

- However, pseudoincorporated nouns are nonreferential in Turkish and Niuean (Massam 2001:171), in part because they are not truly arguments.

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6 Pseudoincorporated nominals never take possessors in Niuean (Massam 2001:168; no data on possessors in Öztürk 2009). However, it is unclear whether this is a hallmark of pseudoincorporation. It is possible that possessors are within NP in Amharic, in which case they would be expected in a pseudoincorporated nominal.

7 Technically, these sources all adopt various versions of the head-raising analysis of relative clauses, which is a difficult approach to adapt to Amharic (Demeke 2001, pace Kayne 1994). However, the argument still goes through as long as relative clauses are introduced in the projection of some functional head higher than N.
I conclude that Amharic general number nouns are neither incorporated N’s, nor pseudoincorporated NPs.

So, how should they be analyzed?

4 ANALYSIS: NO NUMP

This Section: develop a preliminary analysis of general number nouns in Amharic as lacking NumP

Support NumP-less analyses of general number nouns like Déprez 2005 et seq., Wiltschko 2008

4.1 The Fundamentals of the Analysis

Putting it All Together: what do we know about the general number nouns?

General number nominals behave most of the time as if they were in typical Amharic DPs.

- Have the syntactic distribution of DPs
  - Transitive subject ((17))
  - Intransitive subject: unaccusative (1)
  - Intransitive subject: unergative

b. wäf bä-zaf-u žämmär-ä
   bird in-tree DEF sing.PF-3MS
   ‘One or more birds sang in the tree.’

- Direct object ((2))
- Indirect object ((16))
- Object of preposition ((19))

- Capable of being case-marked ((25),(30))
- Can appear with adjectives ((18)), possessors ((25)), relative clauses ((30))
- Can control a discourse referent ((31))
- Not (pseudo)incorporated (Section 3)

However, they are unlike typical Amharic DPs in two key respects:

- General number (the puzzle we started with)
- Obligatory indefinite

a. ‘a book’

b. ‘books’

c. ‘the book’

d. ‘the books’
If a noun is definite, then it cannot have general number

(35) mäs’haf-u
book-DEF
a. ‘the book’
b. × ‘the books’

Proposal: An Amharic general number noun is a DP that lacks NumP (cf. Wiltschko 2008)

(36)

\[
\begin{array}{c}
  \text{DP} \\
  \text{D} & \text{NP} \\
  \emptyset & N \\
  mäs’haf
\end{array}
\]

This predicts that they will behave like typical DPs in Amharic (distribution, case marking, discourse reference, etc.)…

… and that they do not incorporate because they are DPs, not N’s or NP’s.

The lack of NumP generates the general number interpretation under the following assumptions (Wiltschko 2008:648-650, cf. Link 1983):

- A bare noun denotes a set of atomic entities and pluralities.

(37) If there were only three books in the world, then:

\[
\text{mäs’haf} \text{‘book’} = \\
\{ \{b1\}, \{b2\}, \{b3\} \} \quad \leftarrow \text{atomic entities} \\
\{b1, b2\}, \{b2, b3\}, \{b1, b3\}, \{b1, b2, b3\} \quad \leftarrow \text{pluralities}^8
\]

- A Num(ber) head restricts the denotation of a noun to either…

  - just atomic entities: Num[-PL]
  - just pluralities: Num[+PL]

- Since bare nouns in Amharic lack Num, they can be interpreted as ‘one or more.’

(38) lidʒ-u mäs’haf wässäd-ä
child-DEF book take.PF-3MS
‘The child took one or more books.’

‘Book’ is interpreted as an atomic entity (e.g., \{b1\}) or a plurality (e.g., \{b1+b2+b3\}).

---

8 I represent the denotation of a nominal here as a set, but see Link 1983 for a formalization of this approach using join semi-lattices.
Thus, treating general number nouns as DPs that lack NumP explains why…
  o …they behave like DPs morphosyntactically
  o …but they are interpreted as if they lack number.

4.2 Fleshing out the Analysis

Constraining the Distribution of Num: what determines whether Num is present in an Amharic DP?
Proposal: syntactic selection by D.

(39) Selectional Properties of D in Amharic (first pass)
  a. D [+DEF] selects for NumP.
  b. D [-DEF] selects for NP.

This derives the generalization that general number nouns are always indefinite, and that definite nouns cannot have general number.

• The NumP in a definite DP forces an interpretation of N as
  o …an atomic entity (Num[-PL])
  o …or a plurality (Num[+PL]): ‘the book’ or ‘the books.’
• The lack of NumP in indefinite N’s allows for an interpretation as…
  o …either an atomic entity or a plurality simultaneously: ‘one or more books.’

However, Amharic has indefinite plural-marked nouns:

(40) \text{lid}ʒ-u mās’ḥaf-otʃʃ wässäd-ä
    \text{child-DEF book-PL take.PF-3MS}
‘The child took some books.’

• Assuming that the plural marker –otʃʃ is a realization of Num (Baye n.d., Kramer 2009,
  2012, to appear), then an indefinite D must be able to select for a NumP as well.

(41) Selectional Properties of D in Amharic (final version)
  a. D [+DEF] selects for NumP.
  b. D [-DEF] selects for either NumP or NP.$^9$

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$^9$ I use NP here and throughout for convenience, but I assume the projection in question is nP. However, in Kramer (2009, 2012, to appear), I suggest there is a n[+PL] and it is realized with irregular plural morphology. This then predicts that irregular-plural-marked nouns can be interpreted with general number, since they are nPs and can be selected for by D[-DEF]. To the best of my knowledge, this prediction is not borne out, and I suggest this is due to blocking: to avoid homophony (an irregular plural noun interpreted as either singular or plural), the exponent of a n[+PL] can only be inserted in the context of Num[+PL]. This kind of restriction is independently necessary to prevent irregular plural nouns from occurring in singular contexts as well. See Embick and Marantz 2008, Kramer to appear.
Table 1: Types of DPs in Amharic

<table>
<thead>
<tr>
<th></th>
<th>Num[-PL]</th>
<th>Num[+PL]</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>D[+DEF] –u</td>
<td>Definite singular: mäs’haf-u ‘the book’</td>
<td>Definite plural: mäs’haf-otʃʃ-u ‘the books’</td>
<td>N/A</td>
</tr>
</tbody>
</table>

- Note that there are two formally distinct ways to form indefinite plurals:
  - …with a bare noun (resulting in general number)
  - … with a plural suffix.
- This may explain why it has been reported that indefinite plurals with the plural suffix are used in particular contexts: for specific indefinites, for humans, for small numbers, etc. (see e.g., Kapeliuk 1994, Baye 1996:69-70, Baye n.d.)…
  - …it avoids redundancy to have one indefinite plural used in one set of environments, whereas the other is used in a different set.
  - …but this is very speculative – not all speakers share this contrast.

Further Support for the Analysis: this analysis makes predictions about the distribution of bare and plural-marked N’s in the context of numerals.

Assumption: numerals require their referents to be non-atomic, i.e., a plurality (Wiltschko 2008:650).

Prediction 1: In an indefinite DP, numerals can combine with either bare N’s (selecting for NP) or plural-marked N’s (selecting for NumP), since both contain pluralities.

(42) a. sost mäs’haf  three book
     b. sost mäs’haf-otʃʃ‘ three book-PL
        ‘three books’  ‘three books’

Prediction 2: In a definite DP, numerals can combine only with plural-marked N’s, since definite D only selects for NumP (cf. Kapeliuk 1994:78).
- I suggest that this prediction is also borne out:

(43) a. sost-u mäs’haf  three-DEF book
     b. sost-u mäs’haf-otʃʃ’ the three books
        ‘the three books’

(43)a is grammatical with the interpretation ‘the three books,’ which is indefinite.

---

10 This is almost certainly an oversimplification of the semantics of numerals, but it serves as a placeholder for now. See e.g., Kobuchi-Philip 2006 for further details.
This prediction is also borne out in the following near-minimal pair from Kapeliuk 1994’s corpus data:

\[(44)\] ammist t’at-u-n \hspace{1cm} \textbf{Indefinite, No Plural Marking}
\[
\text{five finger-his-ACC}
\]
\[\text{‘five of his fingers’ (Kapeliuk 1994:79)}\]

\[(45)\] ammist-u-n-imm t’at-otʃʃ-u \hspace{1cm} \textbf{Definite, Plural Marking}
\[
\text{five-DEF-ACC-and finger-PL-his}
\]
\[\text{‘and his five fingers’ (Kapeliuk 1994:79)}\]

Future Work: test these predictions with non-numeral quantifiers that combine with pluralities

\begin{itemize}
  \item When a DP lacks Num, it also lacks number features.
  \item The verbal head that agrees with the subject (perhaps Asp) agrees with the general number DP, but receives no value for number.
\end{itemize}

\[(48)\]
\[
\begin{array}{c}
\text{Asp} & \ldots & \text{DP} & \rightarrow & \text{Asp} & \ldots & \text{DP} \\
[\_\_\_]\text{PERS} & [3\text{ PERS}] & \text{AGREE} & [3\text{ PERS}] & [3\text{ PERS}]
\end{array}
\]
\[
[\_\_\_]\text{FEM} & [-\text{FEM}] & [-\text{FEM}] & [\_\_\_]\text{PL} & [-\text{PL}]
\]

\begin{itemize}
  \item This valueless number feature is realized as the default, i.e., singular at PF.
\end{itemize}

\[(49)\] \textbf{Redundancy Rule for Number}
\[
[\_\_\_]\text{PL} \rightarrow [-\text{PL}]
\]

\begin{itemize}
  \item Support for the new proposals about agreement in Preminger (2014)…
\end{itemize}
\[
\begin{itemize}
  \item Agreement as an obligatory operation: grammaticality determined on the basis of whether agreement is attempted, not in whether it is (wholly) successful
\end{itemize}

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\[11\] Kapeliuk (1994:15) notes two exceptions: adjectives with reduplicated plural forms are licit with general number nouns, and general number nouns that denote humans trigger plural agreement. The latter observation is not strictly true given data like (46), and I have yet to test general number nouns with adjectives.
5 CONCLUSION

Recap

- Amharic has nouns with general number.
- They behave mostly like normal DPs (i.e., they are not incorporated), except they must be indefinite.
- Preliminary analysis:
  - The DP that contains a general number noun lacks NumP\(^{12}\)
  - Only the indefinite D selects for NP
- This analysis makes correct predictions about the interaction of numerals and plural-marking.

Larger consequences

- Support for a heterogeneous approach to the analysis of general number nouns (Paul 2012)…
  - General number is a characteristic/property that is compatible with several different analyses
  - ‘General number nouns’ are not necessarily a natural class.
- Evidence in favor of NumP not being obligatory (Déprez 2005 et seq., Wiltschko 2008)

Future work

- Compare these results to Kapeliuk’s (1994) functionalist typology of Amharic nominals
- Are general number nouns “semantically” incorporated? (see e.g., Van Geenhoven 1998, Farkas and de Swart 2003, Carlson 2006, Dayal 2011)
  - For example, do they have obligatorily low scope?
  - If so, this is another difference between general number nouns and regular DPs in Amharic – how should it be accounted for?
- Developing a cross-linguistic picture of the syntax of number (building on e.g., Wiltschko 2008)
  - Halkomelem: plurality adjoined to root, no NumP in any DP
  - English: plurality in NumP, D obligatorily selects for NumP

REFERENCES


\(^{12}\) Ouhalla (2004) proposes that possessors and relative clauses are merged in Spec,NumP. If this were true, then it is predicted that number neutral nouns would lack possessors and relative clauses – and this prediction is contraindicated by data in Section 3. However, Ouhalla seems to use NumP in this way only because of parallels with Hebrew and Arabic; any non-D functional projection could serve the purposes of hosting possessors and relative clauses in his analysis without a loss of explanation. See also Kramer 2010 on arguments against this analysis in general.

13 The copy of the manuscript that I have access to is untitled; this is my best guess at a title.