

PLURAL INFLECTION IN A CLASSIFIER LANGUAGE

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1 Introduction

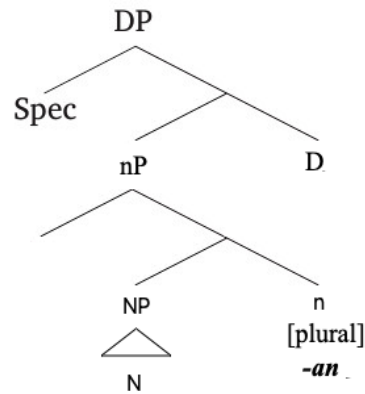
The literature generally assumes that numeral classifier languages lack number inflection, though the body of data suggesting otherwise has increased in recent years (Li 1999, Gimeshi 2003, Wiltschko 2008, Butler 2011, Kim and Melchin 2018). We add to this literature by presenting evidence of an additive plural existing alongside a numeral classifier in an underexplored language – Magahi – belonging to the Eastern Indo-Aryan family. We also compare the plural strategy of Magahi to that of Bangla, another classifier language from the EIA belt.

The Eastern Indo-Aryan language/EIA family is known for its numeral classifiers, and the concomitant absence of additive plurals (like the English plural inflection *-s*, in words like ‘boys’); see Grierson 1883-87, Chatterji 1926, Jha 1958, Dasgupta 1983, 1985, Yadav 1996, Bhattacharya 1999, 2001, Dayal 2014 and many others for the extensive literature on the subject. Apart from number inflection, these languages do not have gender agreement either, though they are mostly reported as strong person and honorificity agreement languages. The case alignment is typically nominative-accusative, with some deviations also reported in the literature (see Amritavalli and Sarma 2002 for some ergative patterns in Assamese).

While the language family is broadly marked as deprived of number-inflection, researchers have also noted that some EIA languages, such as Bangla, have plural markers, *-gulo* and *-ra*, in addition to the numeral-classifiers. These plural markers have however not been considered as additive plurals as English plural *-s*, but rather as plural classifiers and/or associative plurals (Bhattacharya 1999, Chacón, 2011, Biswas 2013, Dayal 2014). Currently, there is also no existing theoretical work on plural markings in other EIA languages, including Magahi, the language this paper is primarily concerned with. Our primary claims are:

- a) Magahi plural marker *-an* has many of the characteristics usually associated with additive plurals,
- b) It is structurally dependent on +D(efinite) or +H(uman) feature,
- c) It is a ‘modifying plural’ feature that base-generates on n, in a Num(ber)P-less nominal spine. Schematically (1):

(1)



We also show that in genealogically related languages such as Bangla, and unrelated languages such as Korean and Chinese, additive plurals are available along with numeral classifiers; however, there are interesting language-internal differences on the actual representations (especially concerning the presence of a separate NumP) underlying plural nominals.

2 Basic Facts about Magahi *-an*

The Magahi marker *-an* is optionally used to create plurals with oblique-case marked nouns.

- (2) a. paanch-o bakri-y-(**an**)-ke khaanaa khi-ya deli
 five-D goat-D-AN-Acc food eat-Caus give.1P
 ‘I gave food to all the 5 goats’
- b. paanch-o bakri-ya-***an** bhulaa gelai
 five-D goat-D-***AN** lost go.3P
 ‘All the five goats are lost’

The case-related restriction aside, the marker is robustly available across nominal paradigms, as can be seen from the following examples with [+]animate/[−]human nouns and [−]animate nouns.

- (3) a. bakri-*(y)-an
 goat-*(D)-AN
 ‘The goats’ (Def)
- b. bakri
 goat
 ‘Goat’ (Kind; Indef)
- (4) a. kursi-*(y)-an
 chair-*(D)-AN
 The chairs’ (Def)
- b. kursi
 chair
 ‘Chair’ (Kind; Indef)

Some detailing of the above examples is in order. The *-an* marker appears on [−]human and [−]animate nouns, but attached to an obligatory definite marker *-y* (eg. 3a, 4a). This combination yields an obligatory definite reading. Upon comparison with the examples provided in (3b, 4b), the dependence of *-an* on the definite marker is further confirmed. In all such cases with the missing markers *-an*, *-y* and *-o*, the bare noun receives an indefinite, kind meaning.

When a numeral is added to such structures as in (5-6), the definiteness effect is reinforced. When *-an* appears adjacent to the definite marker *-y*, the numeral also appears with a definite

marker *-o* (5a, 6a). In cases with a missing *-an*, the classifier *-go* is seen along with the numeral, yielding an indefinite reading, as shown in (5b, 6b).¹

- | | | | |
|--------|---|----|---|
| (5) a. | paanch-o kursi-y-an
five-D chair-D-AN
'Five chairs' (Def) | b. | paanch-go kursi
five-CL chair
'Five chairs' (Indef) |
| (6) a. | paanch-o bakri-y-an
five-D goat-D-AN
'Five goats' (Def) | b. | paanch-go bakri
five-Cl goat
'Five goats' (Indef) |

There is a different factor at play with [+]human nouns, as reflected in the following examples where *-an* appears with or without an accompanying definite marker, and with both definite and indefinite readings. In (7a), the NP+*an* combination receives an indefinite reading, whereas in (7b), the presence of the definite marker *-w*, brings in a definite reading.

- | | | | |
|--------|---------------------------------------|----|---|
| (7) a. | laikaa-an
boy-AN
'Boys' (Indef) | b. | laik-w-an
boy-D-AN
'The boys' (Def) |
|--------|---------------------------------------|----|---|

We have already seen that *-an* needs a definite host in the case of [-]human/[-]animate nouns. With [+]human nouns, this generalization does not hold up. As witnessed in (7a), the *-an* appears directly on the noun, without the mediation of a definite marker. (7b) however shows that *-an* may also appear with a definite marker, but this pattern is not a deviation from our general observation, and hence may be kept aside from the primary discussion here.

The question before us is: why does *-an* attach to [+]human nouns directly, but cannot do so with [-]human and [-]animate nouns without a [+]D feature. One possible answer is that [+]human nouns carry a [+]H(uman) feature (Chomsky 1965), which suffices as a host for *-an*, playing the same role that D does in [-]human/[-]animate nouns. If true, there are two features which *-an* needs for its expression, only one of which is sufficient: [+]H, and [+]D.^{2,3}

The difference in [+]D/[+H] dependency also shows up in constructions with numerals. When [+]human nouns are counted with numerals with a definite reading, the presence of *-an* is contingent on the compulsory presence of (i) the definite marker *-w*, and (ii) the definite marker *-o* on the numeral. In the case of indefinites, the +H feature on the noun is enough for the appearance of *-an*, and can co-occur with the numeral classifier *-go*. See below in (8a-b). Understandably, the definite and the indefinite markers cannot co-appear, as shown in (9).

¹ See Dayal (2012) for more details on the indefiniteness associated with classifiers.

² The default reading of a [+]human noun is indefinite. See the contrast below.

- | | | | |
|--------|------------------------------|----|--------------------------------------|
| (i) a. | <i>laika</i>
boy
'Boy' | b. | <i>laik-wa</i>
boy-D
'The boy' |
|--------|------------------------------|----|--------------------------------------|

³ This dependence on D also underlies the contrast one finds in the following sentences. The *-an* marker appears in argument positions, but is absent from predicative positions. We believe that this difference results from the DP/NP distinction. Arguments are DPs, with the D hosting the plural, while there is no such head to anchor it in the predicative position.

- | | | | |
|---------|--|----|---|
| (ii) a. | <i>Dakiy-an</i> (sab) samay par aaba hawa
Postmaster-pl (all) time Loc come be.Pres
'Postmasters come on time' | b. | <i>Anuj aar Amar dakiya-*an hawa</i>
Anuj and Amar postmaster-*Pl be.Pres
'Anuj and Amar are postmasters' |
|---------|--|----|---|

- (8) a. paanch-o laik-w-an
 five-D boy-D-AN
 ‘The five boys’
- b. paanch-go laik-an
 five-Cl boy-AN
 ‘Five boys’
- (9) *paanch-go laik-w-an
 five-Cl boy-D-AN

To summarize the properties of *-an*, as discussed in this section -

- (i) It is optionally used to denote plurality,
 (ii) While it is used on most nouns (see below for some more restrictions), it appears on [-]human and [-]animate nouns with the help of a [+D] feature, and on [+]human nouns with the help of a [+H] feature.
 (iii) When *-an* appears with a definite marker, then the numeral must appear with a definite marker; with indefinite [+]human nouns, the numeral classifier denoting an indefinite reading is allowed.

2.1 *-an* as additive plural

There are three crucial properties of the *-an* marker that certify it as an additive plural. The first property is that *-an* triggers (optional) number agreement on adjectives (10). Note that henceforth, we gloss *-an* as a Pl(ural).

- (10) a. gor-kaa laik-waa
 fair-Nmlz boy-def
 ‘The fair boy’
- b. gork-an laik-w-an
 fair-Pl boy-D-Pl
 ‘The fair boys’
- (11) a. tatal-kaa kursi-yaa
 broken-Nmlz chair-def
 ‘The broken chair’
- b. tatal-k-an kursi-y-an
 broken-Nmlz-Pl chair-D-Pl
 ‘The broken chairs’

Similar to additive plurals (as in English where ‘waters’ is not a word), *-an* also fails to attach to mass nouns (12-13).

- (12) a. ek-bighaa zameen
 one-bighaa land
 ‘One bighaa of land’
- b. char-bighaa zameen-*an
 Four-bighaa land-*Pl
 ‘Four bighaas of land’

- (13) a. ek-chipli bhaat
 one-plate rice
 ‘A plate of rice’
 b. chaar-chipli bhaat-*an
 four-plate rice-*Pl
 ‘Four plates of rice’

Finally, the *-an* marker in Magahi also gives an additive plural reading when attached to a proper noun/name, instead of an ‘associative reading’ (14).⁴

- (14) Jyoti-an
 Jyoti-Pl
 ‘Jyotis (multiple people by the name of Jyoti)’/*Jyoti and family

Contrast (14) with (15), where the *-an* marker occurs with a surname/family names and gives an associative reading. However, this contrast is expected of languages that have additive plurals. For example, in English, ‘Johns’ stands for ‘multiple individual Johns’, whereas ‘Bidens’ stands for ‘the Biden family’. This is so, since family and kinship terms depict group identities; the original meaning is retained even after we pluralize them. The associative meanings with family names therefore do not emerge from the use of the plural *-an* morpheme.

- (15) Teewari-an
 Teewari-Pl
 Intended: ‘Teewari family’

3 On a representation for *-an*

The previous section presented facts that indicate that *-an* is an additive plural. The presence of an additive plural in a numeral classifier language challenges a prevalent view in the literature about the complementarity between classifiers and plural inflection. A seminal work to tackle this complementarity is that of Chierchia (1998a, b), where the typological distinction is explained in terms of a mass-count noun distinction found in languages. Some languages are assumed to have only mass nouns, while others have both count and mass nouns. Since mass nouns cannot be pluralized, languages with only this category of nouns lack a pluralization strategy, which explains why they lack additive plurals. Instead of additive plurals, these languages have classifiers which perform the function of individuation. On the other hand, the set of languages with both mass and count nouns, are able to pluralize count nouns with distinct inflections; they therefore have additive plurals. The complementary distribution between classifiers and additive plurals found quite robustly across languages, is thus a natural fallout of the mass/count noun distinction among languages; this view is quite prevalent in the literature on classifiers and plurality.

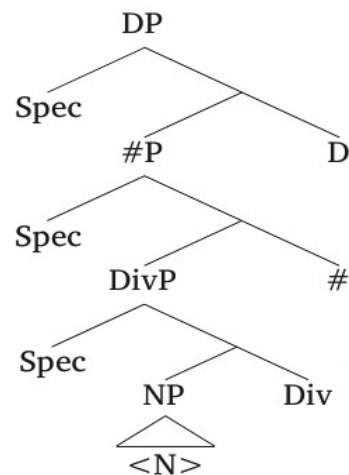
The complementarity between classifiers and additive plurals is also captured in Borer (2005), which departs from the standard view with its claim that all nouns in all languages are essentially mass nouns. The individuation semantics can be brought about by either classifiers

⁴ Magahi has an alternative associative plural marker *-ni* for pronouns (i). This further confirms that *-an* is not an associative marker.

(i) *toh-*an/toh-ni (sab)*
 you-Pl/you-Pl all

or additive plurals. Thus, classifiers and additive plurals occupy the same position in the nominal structure, shown in (16).

(16)



In (16), the DIV head encodes the classifier in classifier languages, and plural inflection in languages with additive plurals. The function of the DIV head is to divide the mass entity into count entities. The functional head # above DIV encodes numerals and weak quantifiers which count the divided nouns. Finally, the D head encodes definiteness, strong quantifiers and the argument-hood of the nouns.

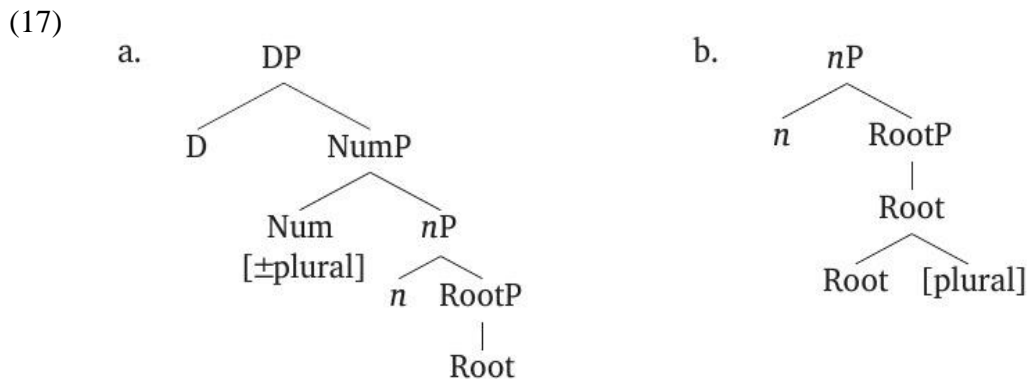
Recent research has shown that while most languages of the world reflect this complementarity, there are some languages that do have numeral classifiers as well as additive plurals. However, such languages do not allow the two to co-occur, such as Persian (Ghomeshi 2003) and Western Armenian (Bale & Khanjian 2008). Borer's analysis with a DIV captures these languages too, since the DIV may alternatively host the two heads.

What sets Magahi apart is that not only does it have an additive plural, despite being a classifier language, but it also allows the two to co-exist on [+]human nouns, albeit with indefinite readings. The challenge is to posit a representation with both the numeral classifier and the additive plural, since DIV alone cannot manage the two.

The dependence of the *-an* marker on [+]human or [+]definite nouns makes the task tougher, since DIV has an individuation function, and the literature does not commit to any other featural specification ([+]D, [+]H) on DIV. It is therefore amply clear that the Magahi plural is not attached to the DIV head.

We must then enquire about the right host for *-an* inside the nominal. One way to proceed is to ask if *-an* base-generates on a separate Num(ber) head, or whether it appears on some projection in a nominal spine that lacks a separate NumP. This question is in line with Wiltschko's (2008) claim that plurals have two separate representations – as a plural feature either appearing on a Num head (aka 'head plural'), or as appearing in a Num-less NP (aka 'modifying plural'). There are other ramifications to Wiltschko's analysis too. As suggested in Kim and Melchin (2018)⁵, only the Num-hosted plural feature is bivalent ([+]/[-] plural); a Number less plural feature is monovalent ([+]plural). Thus, a language which has 'head plurals' will have the plural feature on Num (17a) with binary values, and that with a 'modifying plural' will have it on either the root, nP or even a DP (17b), with a monovalent value.

⁵ A similar proposal is also made in Kramer (2016) which suggests that plurals can be of two types – attached to either nP or realized in NumP.



In order to figure out the ‘head plural’ versus ‘modifier plural’ status of the plural, Wiltschko (2008) proposes a set of diagnostics which we will now deploy on the Magahi data. One such diagnostic is that, with ‘head plurals’ hosted on a Num head, agreement with determiners or adjectives is obligatory. English for instance has ‘these boys’, ‘this boy’, but not ‘these boy’ or ‘this boys’. On the other hand, languages with ‘modifying plurals’ do not need to show the plural marker on the noun as well as all accompanying elements such as the Det and the adjective; Halkomelem is one such language (18a-c).

(18) a. T’ílém ye s-í:wí:qe
 Sing det.pl man.pl
 ‘The men are singing’

b. T’ílém te s-í:wí:qe
 sing det man.pl
 ‘The men are singing’

c. T’ílém ye swíyeqe
 sing det.pl man
 ‘The men are singing’

(Wiltschko, 2008: (23-24))

This difference is due to the presence of the Num head in one set of languages, and its absence in the other. In cases where Num is present, the functional head with its [+]/[-]plural feature will trigger obligatory agreement on all relevant heads/items. On the other hand, when the Num head is missing, agreement is not compulsory with the plural.

When we use this test on Magahi, the *-an* marker patterns like a ‘modifying plural’. This is illustrated with the following examples (19a-c), where agreement with the adjective is optional. The *-an* marker itself can be dropped from the noun, while showing up on the adjective, and retaining the plural meaning. This indicates that the Num head is missing in Magahi.

(19) a. gor-k-an laik-an
 fair-Nmlz-AN boy-Pl
 ‘Fair boys’

- | | | |
|----|--------------|---------|
| b. | gor-kaa | laik-an |
| | fair-Nmlz | boy-Pl |
| | 'Fair boys' | |
| c. | gor-k-an | laikaa |
| | Fair-Nmlz-Pl | boy |
| | 'Fair boys' | |

A second diagnostic provided by Wiltschko concerns the number semantics of the noun, in instances when the plural marker is dropped. In both sets of languages (with 'head plurals' and 'modifying plurals'), the presence of the plural obligatorily yields plural nouns. Differences emerge when the marker goes missing. In 'head-plural' languages, such structures will always receive a singular reading ('the boy'). This is because there is a [-]plural feature under the Num head. 'Modifying plural' languages, on the other hand, receive number-neutral readings (either singular or plural), since there is no alternative number value to the monovalent plural. Consider the Halkomelem examples given below -

- | | | | | |
|---------|----------|----|-----------------|------------------------|
| (20) a. | swóweles | b. | swíweles | |
| | boy.pl | | boy | |
| | 'boys' | | 'a boy or boys' | (Wiltschko 2008: (15)) |

In Magahi, the presence of the *-an* marker is always interpreted as plural, as shown in section II.1, and also depicted through examples (21a, 22a). Its absence gives a generic/kind (indefinite) reading to the noun (21b, 22b).

- | | | | |
|---------|-------------|----|--------|
| (21) a. | laika-an | b. | laikaa |
| | boy-Pl | | boy |
| | 'Boys' | | 'Boy' |
| (22) a. | bakri-y-an | b. | bakri |
| | goat-D-Pl | | goat |
| | 'The goats' | | 'Goat' |

We take these examples to indicate that Magahi *-an* is a 'modifying plural', and a monovalent feature. When it is absent from the noun, there is no feature value to be assigned, which results in the noun taking a generic or kind reading.

The third diagnostic is that 'head plural' languages have form-meaning mismatches which gives rise to pluralia tantum nouns. For example, in English, 'pants/scissors' may be interpreted as singular, despite carrying the plural marker. Whereas, in modifying plural languages, there are no form-meaning mismatches. To take up Halkomelem examples again, *saleqiws* ('pants.pl') will always be interpreted as 'multiple pairs of pants' and never as 'one pair of pants'.

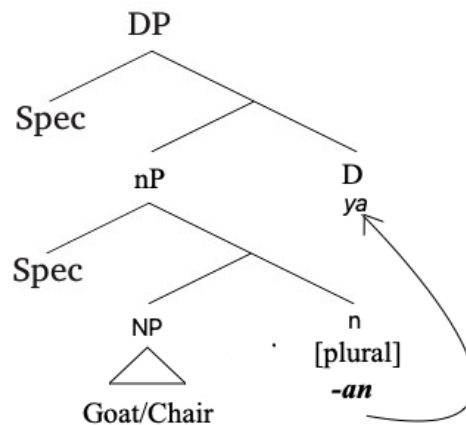
Magahi also behaves like a 'modifying plural' language as it has no pluralia tantum nouns, as seen in (23).

- (23)a. kainchi
 scissor
 ‘A pair of scissors’
- b. kainchi-y-an
 scissors-D-pl
 ‘Multiple pairs of scissors’

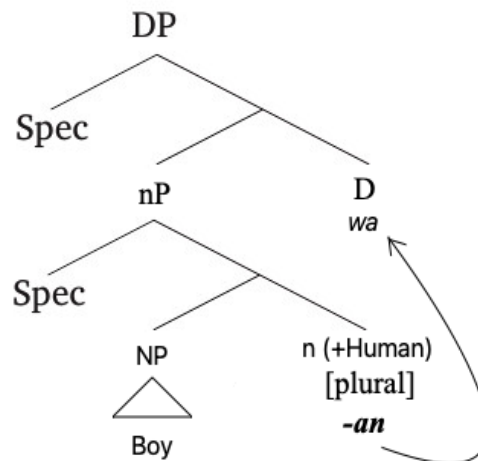
To summarize, Magahi *-an* is a ‘modifying plural’ that enters the derivation without a Num head. This explains why number agreement is not obligatory with it, and why it may appear on any of the elements inside the NP, including the Det, the adjective and the noun. The lack of a [-]plural reading on nouns without the *-an* plural, also suggests that there is only one value (plural) of this feature. The last fact regarding the absence of a form-meaning mismatch indicates that when the monovalent plural feature is present in the structure, it obligatorily generates a plural semantics for the noun.

Based on these facts, we propose (24a) as the representation for the [-]human/[-]animate plural noun *bakri-y-an/kuRsi-y-an*, and (24b) as the representation for the plural [+]human noun *laika-an*. In both cases, the plural base-generates on n. However, for the [-]human/[-]animate nouns, the *-an* raises to a higher D hosting the definite marker *-yaa/-waa*. For +human nouns, the *-an* is hosted on n[+human], and moves and attaches to D containing the definite marker, which also gives the correct morpheme order (boy-D-pl).

(24) a.

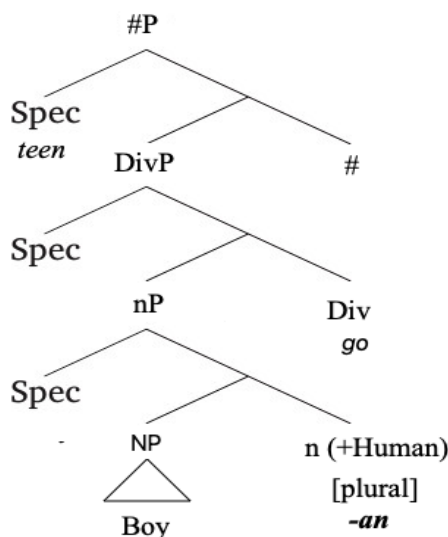


b.



Since the expression of the plural in [-]human/[-]animate nouns is dependent on a D, the indefinite numeral classifier *-go* cannot appear with the DP. The same restriction holds for definite [+]human nouns. However, when the [+]human noun is indefinite, the nP can be selected by DIVP hosting the numeral classifier. This is shown in (25) below.

(25)



In this section, we have shown a representation for the plural marker *-an* which co-appears with the classifier. We have claimed that *-an* does not emerge in the Num head, and attaches to n instead. We now enquire whether Magahi is uniquely placed within the Eastern Indo-Aryan belt with a plural inflection that does not depend on a NumP. For this, we compare Magahi with a related numeral-classifier language, Bangla.

4 The Plural in Bangla

Bangla is an interesting case to take up here, since it has two markers *-raa* and *-gulo*, which are used to pluralize nouns (26a-c). Bangla is also a numeral classifier language (27a-b), which makes the plural markers doubly interesting.

- | | | | | | |
|---------|-------|----|-----------|----|------------|
| (26) a. | chele | b. | chele-raa | c. | chele-gulo |
| | boy | | boy-RAA | | boy-GULO |
| | 'Boy' | | 'boys' | | 'boys' |

- | | | | | | |
|---------|--------------|-------|----|---------------|------|
| (27) a. | teen-Te | chele | b. | teen-Te | boi |
| | three-Cl | boy | | three-Cl | book |
| | 'Three boys' | | | 'Three books' | |

Though *-raa* and *-gulo* are both plural markers, Bangla imposes different restrictions on them. From the following examples with *-raa* (28a, b) and *-gulo* (29a, b), it is evident that the *-raa* marker is more restricted than *-gulo*. The former can be attached only to [+]human nouns (see 26b, again) and in certain contexts to [+]animate nouns (28a), but never to [-]animate nouns (28b), whereas *-gulo* can be used with [+]human (see 26c again), [-]human (29a) and [-]animate nouns (29b).

- | | |
|---|---|
| (28) a. */?chaagol-raa
goat-RAA
'Goats' | b. *tebil-raa
table-RAA
'Tables' |
| (29) a. chaagol-gulo
goat-GULO
'Goats' | b. tebil-gulo
table-GULO
'Tables' |

In addition to these differences, the markers also have variant semantic contributions. While *-raa* always yields out an associative meaning when attached to nouns (30a), *-gulo* always has a plural interpretation (30b).

- | | |
|---|---|
| (30) a. John-e-raa
John-RAA
'John and associates' | b. John-gulo
John-GULO
'Multiple Johns' (-honorific/derogatory) |
|---|---|

-raa being an associative plural marker, we do not subject it to further inquiry in this paper (see Chacon 2011, Biswas 2013 and Dayal 2014 for details). From here on, we concentrate on *-gulo* due to its ability to function as an additive plural.

A close examination of *-gulo* reveals a number of new and unexplored facts about it. To begin with its core property, *-gulo* functions as an additive plural on count nouns. Take (31) for instance, *caal* or 'grain of rice' can be pluralized with *-gulo*, generating the meaning 'grains of rice'.⁶

- (31) caal-gulo
rice-GULO
'Grains of rice'

However, *-gulo* is also seen on mass nouns. For instance, *-gulo* can occur with 'boiled rice' or 'water', which are non-discrete mass entities. For (32a-b), *-gulo* denotes a larger quantity of the item it modifies. This is one major difference between *-gulo* and other canonical additive plurals such as English *-s*, Magahi *-an* etc.

- | | |
|---|--------------------------------------|
| (32) a. bhaat-gulo
rice-GULO
'Rice' | b. jol-gulo
water-GULO
'Water' |
|---|--------------------------------------|

The difference in semantics with count and mass nouns is foregrounded with the contrast given in (33a, b). The example in (33a) with *caal* shows that *-gulo* can refer to multiple grains

⁶ Biswas (2013) notes that *-gulo* excludes a reference to atomic individuals and must imply the presence of more than one entity. Therefore, (i b) is a perfect response to (i a). This contrasts directly with the English plural construction, which disallows reference to individual atoms in a group (ii a,b).

- (i) a. *apnar bacca-gulo-ke parTi-te niye aSben*
your child-GULO-acc party-loc bring-fut-3
'Please bring your children to the party.'
b. *tahole to ami aSte parbo na. amar to ekTa bacca*
then prt I come-inf be-able-neg. I-gen prt one-Tachild
'Oh! I can't come then, I have only one child!'
- (ii) a. Please bring your children to the party.
b. #Well, I can't come then, I have only one child!

of rice that can be picked up and thrown away, one at a time. This reading is disallowed for *bhaat* (33b, reading i); reading (ii), referring to a plate of boiled rice, is however possible. This reinstates the fact that *-gulo* pluralizes only discrete objects, similar to additive plurals.⁷

- (33) a. ek ek kore caal-gulo phele de
 one one by rice grain-GULO throw give.LV
 ‘(You) throw the rice grains one by one’
- b. *ek ek kore bhaat-gulo phele de
 one one by rice-GULO throw give.LV
 *i) ‘(You) throw away the cooked rice one by one’
 ii) ‘You throw away the plates of cooked rice one by one’

Some recent research on *-gulo*, while acknowledging its additive plural semantics, proposes a Num head as its head, with a null Cl(assifier) providing the individuation semantics. The individuals denoted by the Cl are then pluralized (yielding atomic plurals) by *-gulo* (see Biswas 2013). Interestingly, nominals with *-gulo* strictly prohibit numeral classifiers (34). The suggestion to posit two separate heads to host them in the same structure is therefore without much motivation.

- (34) *teen-Te/jon chele-gulo
 three-Cl boy-GULO
 ‘Three boys’

Instead, a simple analysis of the additive plural *-gulo* would be along the same lines as proposed for Magahi *-an*. The plural may attach to either a Number head with a [+]/[-]plural value, or to any head in a Num-less nominal as a plural feature. What we need to enquire therefore is if Bangla nominals have a NumP or lack one.⁸

The first diagnostic to figure out the presence of a Num head is obligatory agreement. *-gulo* gives mixed results here. While it fails to trigger number agreement on adjectives, as we show in (35a-b, 36a-b), there are certain other contexts where number agreement is obligatory. These examples, given in (37), are from Biswas (2013). In the absence of *-gulo* in (37a), both the singular as well as the plural pronoun can be bound by the quantifier, whereas with *-gulo* in (37b), only the plural pronoun can be bound.

- (35) a. bhaangaa ceyaar
 broken chair
 ‘Broken chair’
- b. bhaangaa ceyaar-gulo
 broken chair-GULO
 ‘Broken chairs’
- (36) a. forjaa chhele
 fair boy
 ‘Fair boy’
- b. forjaa chhele-gulo
 fair boy-GULO
 ‘Fair boys’

⁷ See Ghomeshi (2003) for similar accounts of using classifiers resulting in *coercion effects*, where a mass noun is interpreted as count or vice-versa.

⁸ The marker *-gulo* prima facie appears to provide evidence for Borer’s DIV head (occupied either by classifier or plural) since it can attach to mass nouns (cooked rice) as well as count nouns (rice grains), and it doesn’t co-occur with the classifier. If indeed *-gulo* occupies the DIV head, then as per Borer, it should perform the individuation function for both mass and count nouns. However, we have shown in example (33b), that *-gulo* doesn’t individuate mass nouns directly. There is always an implied meaning such as ‘plates of cooked rice’.

- (37) a. onek chele taar/taader laptop eneche
 many boy his/their laptop brought
 ‘Many boys brought his/their laptop(s)’
- b. onek-gulo chele *taar/taader laptop eneche
 many-GULO boy *his/their laptop brought
 ‘Many boys brought their laptop(s)’

The second diagnostic to decide on the presence or absence of a Num head is the (un)availability of a singular reading in cases where the plural marker goes missing. In Bangla, we see that the absence of the *-gulo* marker with [-]human nouns, results in a generic reading. The absence of a singular reading is a strong indicator that *-gulo* is a modifying plural (38a). However, in other contexts (38b), a singular reading is possible, indicating a head-plural status for *-gulo*.

- (38) a. goru ghaas khaai
 cow grass eat
 ‘Cows eat grass’
- b. baaccaa pore gelo
 child fall go
 ‘A child fell down’

Finally, in Bangla, there are no cases of pluralia tantum nouns. This piece of evidence may be taken to support *gulo* as a modifying plural.

- (39) a. kaanchi
 scissor
 ‘A pair of scissors’
- b. kaanchi-gulo
 scissor-GULO
 ‘Multiple pairs of scissors’

The conflicting results of these diagnostics inform us that *-gulo* may occupy different positions in the nominal structure. While in some cases, it behaves like a head plural with a bivalent [+] plural feature appearing on Num, in some other cases, it attaches to other heads as a modifying plural. The broad implication is that Bangla plural nouns have both instances, ones where Num may appear, and others, where it goes missing. Schematically –

- (40) a. [DP D [nP *gulo*] NP]
 b. [DP D [NumP *gulo*] [nP] NP]]]

The representation in (40a) has *gulo* on n, while in (40b), it appears on NumP. Both structures, nP and NumP, can be selected by DP, as confirmed by the data below in (41a). Note that the nP/NumP *-gulo* can appear with a numeral as long as there is a definite marker attached to it (41b).

- (41) a. oi chele-gulo
 Those boy-GULO
 ‘Those boys’

- b. chele-gulo du-to-i bodmaish
 boy GULO two-Cl-Def naughty
 ‘Both boys are naughty’

5 Going beyond the EIA Belt

One last question we would like to address here is whether other numeral classifier languages also have additive plurals, and whether the debate on Num/Num-less nominals also extends to them. One language to start with is Chinese, another numeral classifier language which possesses a plural morpheme *-men*. The literature mostly reports *-men* as a ‘collective’ marker which is attached to [+]human nouns (Norman 1988, Iljic 1994 among others), though there are some, most notably Li (1999) who believe it to serve both as a collective and as an ‘additive’ plural form. Take for instance (42), where *-men* attached to proper nouns can mean both (i) a collective or a set of people associated with XiaoQiang and (ii) multiple people with the name of XiaoQiang (as shown in Jiang 2012).

- (42) XiaoQiang-men
 XiaoQiang-MEN
 ‘XiaoQiangs / XiaoQiang and the others’

Li (1999) also goes on to show that the additive plural reading is available with pronouns, and also with *dou*, a distributive marker, all of which counter the claim that *-men* is only a collective marker (see Chao 1968 for some distributive properties of the marker). Another important characteristic of *-men* is that it mostly co-occurs with the classifier when the plural marker precedes the classifier, and not the other way round (43a-d). With group classifiers, however, the opposite order is allowed, as illustrated in the following example from Jiang (2012), see the contrast with (44).

- (43) a. wo qing **ta-men** sange (haizi) chifan
 I invite them three-Cl (child) eat
 ‘I invited them three-Cl (children) to eat’
- b. wo qing **XiaoQiang-men**/xiao Zhang-men sange (ren) chifan
 I invite XiaoQiang-MEN/Principal-MEN three-Cl (person) eat
 ‘I invited XiaoQiang/Principal and two others (in the group) for a meal.’
- c. *wo qing **pengyou-men** sange (ren) chifan
 I invite friend-MEN three-Cl person eat
 ‘I invited three friends for a meal’
- d. *wo qing sange **pengyou-men** (ren) chifan
 I invite three-Cl friend-MEN person eat
 ‘I invited three friends for a meal’

- (44) zhe yi qun haizi-men pao na-er qu le?
 This one group kid-MEN run where go Asp
 ‘Where did this group of kids go?’

To summarise, *-men* serves the dual function of an associative plural marker and a canonical plural marker. With pronouns, its pre-classifier position is obligatory, but the order is otherwise quite flexible vis-a-vis the numeral classifier. There is however no direct association between the order and the collective/plural reading. It is a standard practice in the literature on Chinese classifiers to assume that *-men* attaches directly to N, and only occasionally raises to D.

Now on to the question of whether in the case of *-men* acting as an additive plural, there is a separate Num head hosting it, or whether it appears in a nominal spine without a Num head. The majority of the literature supports the presence of separate NumP and a CIP in Chinese. Li (1999), for instance, proposes that the *-men* marker originates at Num and raises to D to get attached to definite nouns. Jiang (2012), while providing a semantic account of *-men*, acknowledges the presence of NumP but claims that it is not the locus of *-men*. The marker *-men* stays local to the noun which shows that it merges with the N to form a syntactic object.

In order to support a NumP in the nominal spine, it is imperative that we try out the diagnostics provided by Wiltschko that we have so far applied to the other languages under study here. The first diagnostic relates to the number agreement. Chinese lacks number agreement. Therefore, we can presume that the number marker is not a head plural, but a modifying plural.

- | | | | | | | | |
|---------|--------------|------|--------|----|----------------|------|--------|
| (45) a. | yi | tiao | shé | b. | liǎng | tiáo | shé |
| | One | Cl | snake | | two | Cl | snake |
| | ‘A snake’ | | | | ‘Two snakes’ | | |
| c. | zhè | liè | huǒchē | d. | zhèxiē | | huǒchē |
| | this | Cl | train | | this-Pl | | train |
| | ‘This train’ | | | | ‘These trains’ | | |

The second diagnostic is about the number semantics of the bare nouns. It is suggested that if, in the absence of a plural marker, the nouns receive a number neutral reading and not a singular or plural reading, then the plural is a modifying plural. In Chinese, the bare nouns yield a number-neutral reading, thereby suggesting the modifier status of the plural marker.

- | | | | |
|---------|--------------|----|------------|
| (46) a. | shu | b. | gou |
| | book | | dog |
| | ‘Book/books’ | | ‘Dog/dogs’ |

The third diagnostic pertains to the pluralia tantum nouns. Chinese does not possess pluralia tantum nouns.

- | | | | |
|---------|--|----|--|
| (47) a. | jiǎndāo
scissor
'A pair of scissors' | b. | kùhtz
trouser
'A pair of scissors' |
|---------|--|----|--|

It is thus evident that the Chinese plural marker is a modifying plural which merges with N and is not the head of the category NumP contrary to the claims made in the literature regarding the obligatory presence of a NumP in Chinese nominal structures.

Another numeral-classifier language that we look at is Korean. In a recent account, by Kim and Melchin (2018), the plural marker *-tul* in Korean has also been proposed to be a modifying plural. The modifying status of *-tul* explains how it co-occurs with the classifier (48).

- | | | | |
|------|---------------|------|-------|
| (48) | salam(-tul) | ney | myeng |
| | human-PL | four | Cl |
| | 'four people' | | |

Following the diagnostics proposed in Wiltschko (2008), Kim and Melchin show that number agreement is not obligatory in Korean, which attests to the modifying status of *-tul*.

- | | | | | | | |
|---------|-----------------------|--------------------------|-------|--------------------------|--------------------------|-----------|
| (49) a. | i/ce/ku | sakwa | b. | i/ce/ku | sakwa-tul | |
| | this/that/the | apple | | this/that/the | apple-pl | |
| | 'this/that/the apple' | | | 'these/those/the apples' | | |
| | c. | i-tul/ce-tul/ku-tul | sakwa | d. | i-tul/ce-tul/ku-tul | sakwa-tul |
| | | this-pl/that-pl/the-pl | apple | | this-pl/that-pl/the-pl | apple-pl |
| | | 'these/those/the apples' | | | 'these/those/the apples' | |

The absence of the plural marker from nouns gives a number neutral reading, which also suggests that *-tul* is a modifier. This shows that plural is a monovalent feature in Korean and not a binary feature in the form of [\pm] plural, as the absence of the *-tul* marker doesn't lead to a singular reading. This suggests that *-tul* is not a head, rather it's a modifier.

- | | | | |
|---------|-----------------------|----|----------------------|
| (50) a. | salam | b. | sakwa |
| | 'a person or persons' | | 'an apple or apples' |

Lastly, Korean has no pluralia tantum nouns, which also shows that the language has a modifying plural and not a head plural.

- | | | | | | |
|---------|-------|----|----------|----|---------|
| (51) a. | paci | b. | kawui | c. | ankeyng |
| | Pants | | scissors | | glasses |

Therefore, the *-tul* marker in Korean has also been analysed as a modifying plural, on lines of Wiltschko (2008). Our analysis of Magahi *-an*, Bangla *-gulo* and Chinese *-men* falls in line with these existing works.

6 Conclusion

To conclude, in this paper we have presented novel data from Magahi to show that it has an additive plural, despite being a classifier language. This is, to the best of our knowledge, the first such analysis for an Eastern Indo-Aryan language which is known for its lack of plurality. However, Magahi plural *-an* is still different from English plural *-s*, as the former is a modifier to *n*, while the latter is a feature of the Num head. While the modifying plural account of classifier languages holds ground when we look at unrelated languages like Chinese and Korean, it is not entirely true for a language like Bangla. The plural marker *-gulo* in Bangla shows a dual nature, i.e., it behaves like a modifier as well as a head plural. This property of *-gulo* is unexplainable under a uniform account of modifying plural for all classifier languages. The question of what enables a classifier language to have both head and modifying plurals, is a topic of further research.

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