Plurality in Buriat and structurally constrained alternatives *

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Abstract

In this paper we offer a solution to a puzzle in the number interpretation of nominals in Buriat. Buriat has a two-way number opposition in morphology (unmarked vs. plural), but semantically, both forms may be number neutral. We show that even though the number neutrality of unmarked nominals is heavily restricted (to inanimate nouns), it does not boil down to incorporation or pseudo-incorporation. Our proposal is that unmarked nominals can be either singular (projecting a NumP) or numberless (lacking a NumP). In case they are singular, they are semantically strictly atomic, but when there are numberless they are truly number neutral, just like the plurals. The plurality inferences of plurals and the consistent number neutrality of numberless nouns are accounted for in a Katzirian system with structurally defined alternatives.

1 The Puzzle

Nouns in Barguzin dialect of Buriat as spoken in the village of Baragkhan, Republic of Buryatia, Russian Federation (henceforth referred to simply as Buriat) show morphological distinction between two forms: one traditionally referred to as 'singular' (morphologically unmarked) – and 'plural' (hosting an overt plural suffix):[1]

(1) a. nom 'book' vs. nom-uːd 'books'
b. xʉbʉː(n) 'boy' vs. xʉbʉː-d 'boys'

In this paper, we focus on the range of number interpretations of morphologically unmarked and morphologically plural forms in different contexts. First, we show that the interpretation of these forms seems to posit a problem for two major classes of semantic theories of number, for which we use the labels STRONG SG / WEAK PL theory and WEAK SG / STRONG PL theory. Then, we introduce further data that will help us resolve the problem in favour of the STRONG

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[1] Buriat has several plural morphemes, each comes with non-trivial morphophonological properties. For the purposes of the current paper, we will treat them as variants of one plural suffix due to the lack of semantic differences between them. We also don't discuss stem alternations involving final *n* that will force the words like *xʉbʉː(n)* 'boy' to appear with or without it in different envirnonments.

SG / WEAK PL theory in combination with structural constraints on alternatives (as described in Katzir 2007; Fox and Katzir 2011).

Let's start with the unmarked ('singular') form. In Buriat, inanimate nouns unmarked for plurality systematically get number-neutral interpretation in a range of contexts, illustrated here for the direct object position:

(2) bʲi nom unʃ-aː-b
I book read-PST-1SG
'I read a book / books'

The word *nom* 'book' in (2) doesn't have number marking (or any other marking, for that matter) and, in this sentence, it can refer to one book or to more than one book.

This number interpretation of morphologically unmarked inanimate nouns is not restricted to direct object positions – the possibilities include (genitive) object of a postposition (3) and nominative subject (4):

(3) bʲi nom-iːn tʉləː xoʒomdoː-b
I book-GEN because.of was.late-1SG
'I was late because of the book / books'

(4) nom honʲin baig-aː
book interesting be-PST
'The book(s) was/were interesting'

They can also be subjects of collective predicates – predicates that require objects in their denotation to be pluralities:

(5) nom olon baig-aː
book many be-PST
'There were many books' / 'The books were many'

Morphologically unmarked *animate* nouns don't give rise to number-neutral interpretation – (6), for example, is only compatible with the speaker having seen one boy:

(6) bʲi xʉbʉː xar-aː-b
I boy see-PST-1SG
'I saw a boy / #boys'

Morphologically plural nouns (both inanimate and animate) in Buriat give rise to non-singularity inferences in upward-entailing (UE) contexts – (7) requires there to be more than one book the speaker was late because of; in (8) there was strictly more than one book that was interesting:

(7) bʲi nom-uːd-iːn tʉləː xoʒomdoː-b
I book-PL-GEN because.of was.late-1SG
'I was late because of the books / #book'

(8) nom-uːd honʲin baig-aː
book-PL interesting be-PST
'The books were / #book was interesting'

In downward-entailing (DE) contexts, however, the non-singularity inferences of morphologically plural nouns disappear – (9) is false if the speaker has one Buriat book; the question in

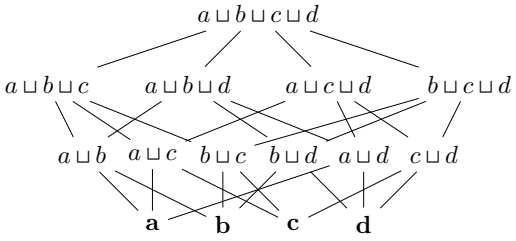

Figure 1: The domain of entities

(10) can get a true positive answer in case the addressee has only read one book in Buriat; in (11), one book satisfies the condition:

(9) namda burʲaːd nom-uːd ʉgiː
I.DAT Buriat book-PL COP.NEG
'I don't have Buriat books'

(10) ʃi xɘzɘːʃtaː burʲaːdaːr nom-uːd-iːjɘ unʃ-aː-nʃ?
you ever Buriat-INST book-PL-ACC read-PST-2SG
'Have you ever read books in Buriat?'

(11) ʃamda burʲaːd nom-uːd biː xada-nj, tɘdɘː-niːɘ asar-aa-raj
you.DAT Buriat book-PL COP if-3.POSS they-ACC bring-PST-PRSCR
'If you have Buriat books (even if you only have one), bring them.'

For most of this paper, we will focus on inanimate nouns, suggesting a speculation about number on animate nouns towards the end of the paper. For inanimate nouns in Buriat the following generalizations arise given the facts presented above: 1) nouns morphologically unmarked for number are semantically number-neutral (their denotation includes both singularities and pluralities); 2) morphologically plural nouns are semantically number-neutral as well (as revealed by DE contexts).

To make our reasoning easier, let's formulate these generalizations against a formal background in which the domain of individuals has the structure of complete join semilattice (Link 1983; Landman 1991, 2000 a.o.), see figure 1. The structure of the domain captures the 'part-of' relation – say, that John is part of John and Bill. Under this approach, there is no type-theoretic difference between singular and plural individuals, plural individuals are type e entities just like singular ones. The distinction between atomic (*john*, *bill*, ...) and sum (*john*⊔*bill*, ...) subdomains will be crucial. We notate predicates ranging exclusively over atoms as P, predicates with the whole semilattice as their domain will be $^*P$ (* being closure of P under 'join'), and predicates ranging over the non-atomic part of the semilattice will be $^*P \backslash P$.

Reformulating our generalization in these terms, both morphologically unmarked and morphologically plural Buriat nouns are $^*P$ predicates.

The puzzle is thus twofold: How come two forms with different number marking have the same number interpretation – $^*P$? And under what mechanism does one of these forms comes to bear non-singularity inferences?

Before moving on to approach this puzzle, we will show that the situation in Buriat is different from those described for other languages with with semantically number-neutral morphologically unmarked nouns.

2 Types of languages with number-neutrality

Buriat is far from the only known language in which nouns unmarked for number exhibit semantic number-neutrality. Similar observations have been made at least for Turkish (Öztürk, 2005; Bale et al., 2010), Hungarian (Farkas and de Swart, 2010), Western Armenian (Bale and Khanjian, 2014) and Hindi (Dayal, 2011). However, Buriat is different from all of these languages – either with respect to the properties of the unmarked forms, or with respect to the properties of the plural ones.

In most languages in question the distribution of number neutral unmarked nominal forms is very limited. In Hindi (Dayal, 2011), Hungarian (Farkas and de Swart, 2003) or Turkish (Öztürk, 2005), they can only be found in the (pseudo-)incorporation construction. It has been argued that such constructions don't involve full-fledged DPs, and these forms don't have argumental semantic type at all. This DP deficiency has been linked to number-neutrality (Farkas and de Swart 2003 a.o.).

But in Buriat, it would be hardly possible to treat all instances of number neutrality of unmarked forms as cases of pseudo-incorporation. The range of syntactic positions where number neutrality arises in Buriat is greater than what (pseudo-)incorporation is usually assumed to be able to target (although see Öztürk 2005 on the possibility of subject pseudo-incorporation in Turkish). Even for direct objects (DOs), which would be most likely to undergo (pseudo-)incorporation, it is easy to demonstrate that they lack the hallmark properties of the construction, which suggests that they are full-fledged DPs: they are separable from their predicate, can serve as antecedents of discourse anaphora, don't interact with aspect in a way typical for pseudo-incorporation and can have wide scope w.r.t. other quantificational elements in the sentence (tests following Farkas and de Swart 2003; Mithun 2010 a.o.). Here we illustrate the scopal behaviour of unmarked forms and their interaction with aspect.

(pseudo-)incorporation normally comes with obligatorily narrow scope, however, in (12), number-neutral *nom* can have wide scope with respect to the modal. (12) can be truthfully used in a situation in which: 1) there is a requirement to buy more than one book; 2) the quantity and identity (say, titles) of the books are part of the requirement:

(12) bʲi nom xudalda-ʒa aba-xa johotoj-b
I book sell-CONV take-POT need-1SG
'I have to buy a book / books'
(Can be used if the requirement is to buy 'War and Peace' and 'Crime and Punishment')

Dayal (2011) argues that NPs undergoing pseudo-incorporation in Hindi and Hungarian are always specified for number (singular), and the apparent number neutrality is a result of embedding under certain aspectual operators. Crucially for her argument, pseudo-incorporated DOs in Hindi are incompatible with the telic interpetation. In Buriat this generalization does not seem to hold. In (13), the unmarked *nom* 'book' denotes a plurality in a telic clause.

(13) ʉglɵː-gʉːr xʉbʉːn nom ʉnʃ-aː-d bai-gaː
morning-INST boy book read-CONV be-PST
'By the morning, the boy has read the books'

Beyond that, there is extensive evidence that number neutrality of unmarked nouns in Buriat cannot be reduced to atomicity under aspectual operators. Consider (14), which is ambiguous between an atomic and a non-atomic interpretation of the unmarked noun, with the non-atomic interpretation (*hiding between houses*) clearly **not** arising from quantifying over events of *hiding in the middle of a house*, even under an atelic interpretation.

(14) badma gɔr dunda xorgod-oo
Badma house middle hide-PST
a. 'Badma hid in the middle of a house'
b. 'Badma hid between houses'

We conclude that unmarked number-neutral nominal forms in Buriat are not (pseudo-)incorporated, and can constitute regular full-fledged argumental DPs, semantic number-neutrality thus being a property of unmarked argumental DPs in Buriat.

Western Armenian may be the only language that has been claimed to have number-neutral NPs unmarked for number in argument positions without (pseudo-)incorporation (Bale and Khanjian, 2014). In this respect, Western Armenian patterns with Buriat, however, there is a crucial difference. As Bale and Khanjian (2014) argue, plural forms in Western Armenian are not semantically number-neutral, but rather range over only the non-atomic part of the domain of entities ($^*P \backslash P$). In Buriat, on the other hand, there is evidence that the plural forms are number neutral. The number neutrality of plurals becomes evident in non-upward-entailing environments, as in examples (9)-(11) above.

It seems that situation in Buriat is unique: it has a two-way number distinction in morphology (unmarked and plural), both forms show semantic number-neutrality in argument positions – unmarked number-neutral forms can't be brushed off as pseudo-incorporation, plural forms can't be argued to denote strictly non-atoms. The next section briefly summarizes two big classes of theories of number as candidates for an analysis for this situation.

3 Two theories of number

Semantic theories of number can be divided into two broad groups – after (Farkas and de Swart, 2010), we call them STRONG SG / WEAK PL theories and WEAK SG / STRONG PL theories.

STRONG SG / WEAK PL theories of number offer an analysis for the situation in which morphologically plural forms get number-neutral ($^*P$) interpretation in DE contexts and strictly plural ($^*P \backslash P$) interpretation in UE contexts (the situation in Buriat). According to these theories, morphologically plural forms have both atoms and sums as their domain ($=^*P$) (Sauerland, 2003; Sauerland et al., 2005; Spector, 2007; Zweig, 2009). To account for non-singular inferences in UE contexts, these theories invoke pragmatic mechanisms relying on the singular form as an alternative to the plural form (P vs. $^*P$ semantically). Implementations range from Maximize Presupposition (Sauerland, 2003; Sauerland et al., 2005) – to scalar implicature based on comparative logical strength of P and $^*P$ alternatives in context (Spector 2007 a.o.). Importantly, all these theories build on singular alternative being atom-denoting (P). This is where Buriat data becomes problematic – in the examples we've seen so far, morphologically unmarked forms don't have exclusively atomic reference. Similar concerns have been raised for non-singularity inferences of Japanese plurals in (Sudo, 2017).

Under one version of WEAK SG / STRONG PL approach (Bale and Khanjian, 2014), the domain of singular nouns includes both atoms in sums ($^*P$) and plural forms are strictly plural ($^*P \backslash P$). Singular forms sometimes – but not always – give rise to non-plurality inferences. They do so when in proper competition with morphologically plural forms. The conditions for such competition are structural: (Bale and Khanjian, 2014) argue that in Western Armenian, unmarked indefinites are not embedded in a DP, while indefinites marked for plural are, and this makes them too different structurally for competition, so the non-plurality inferences of unmarked forms don't arise. Unmarked and plural definites, to the contrary, both form DPs and thus compete, which gives rise to non-plurality inferences of unmarked forms.

Although we believe that structural properties are crucial for number inferences (see below), two considerations preclude application of this particular theory to Buriat data: 1) Unmarked number-neutral forms *do* form DPs in Buriat, unlike what (Bale and Khanjian, 2014) argue for Western Armenian; 2) Buriat plural forms are not strictly non-atomic but number-neutral.

A more complicated version of the WEAK SG / STRONG PL approach (Farkas and de Swart, 2010) suggests that the domain of singular nouns (in Hungarian, and potentially more generally) includes both atoms and sums ($=^*P$), while plural forms are ambiguous between the same and exclusively non-atomic reading ($^*P \backslash P$). This seems promising as it in principle allows for both unmarked and plural forms to satisfy the diagnostics for semantic neutrality ($^*P$), as is the case in Buriat. According to (Farkas and de Swart, 2010), plurals are subject to an additional requirement of having sum witnesses in their denotation, precluding them from having exclusively atomic reference. The choice between the $^*P$ and $^*P \backslash P$ readings of the plural is regulated by a pragmatic principle (Strongest Meaning Hypothesis), giving rise to non-singularity inferences in UE contexts. Singular DPs under this view are structurally strictly simpler than plural DPs – they lack a layer hosting the privative [Pl] feature. Still, in argument positions singulars and plurals form alternatives, and via this competition a strictly singular reading of non-plurals should arise. This is compatible with Hungarian data – non-pseudo-incorporated argumental unmarked forms semantically are strictly atomic. However, this is not the situation in Buriat, as shown above – argumental unmarked DPs are still semantically number-neutral. Apart from this empirical problem, this account has a theoretical problem – derivation of the non-plurality inference for the unmarked form invokes an alternative that is structurally more complex than the original item.

Summing up, existing theories don't cover Buriat data. Either they rely on the basic meanings that cannot be maintained for Buriat, or make wrong empirical predictions, while being problematic in the light of what is known about structural constraints on alternatives. The next section section explicates such constraints, relying on (Katzir, 2007; Fox and Katzir, 2011), and introduces more Buriat data that strengthens the point that structural considerations are relevant for number interpretation in Buriat. After that, we can formulate our analysis.

4 Structural constraints

As discussed above, accounts of number inferences of DPs often make use of some mechanism that crucially refers to the set of alternatives of a nominal form.

This section discusses one constraint on the set of alternatives, the constraint that has been argued to be active no matter what particular mechanism using alternatives this set is then input to (scalar implicature, focus, etc.). (Katzir, 2007; Fox and Katzir, 2011) argue that the ability of a structure to enter the set of alternatives of some other structure depends on the relative complexity of these structures. Here is how structural complexity is defined:

(15) STRUCTURAL COMPLEXITY (somewhat simplified)
Let ϕ, ψ be parse trees. If we can transform ϕ into ψ by a finite series of deletions, contractions, and replacements of constituents in ϕ with constituents of the same category taken from the lexicon, we will write $\psi \lesssim \phi$. If $\psi \lesssim \phi$ and $\phi \lesssim \psi$, we will write $\psi \sim \phi$.

For a structure ϕ, the alternatives will be all those structures that are at most as complex as ϕ:

(16) STRUCTURALLY DEFINED ALTERNATIVES
Let ϕ be a parse tree. The set of structural alternatives for ϕ, written as A_{str}, is defined as $A_{str}(\phi) := \{\phi' \mid \phi' \lesssim \phi\}$

Motivating examples for this kind of constraint are along the lines of (17) (from Katzir 2007):

(17) a. If any **tall man** comes to the party, he will be disappointed.
b. If any **man** comes to the party, he will be disappointed.

(17-b) $\lesssim$ (17-a). DE context makes sure that the less complex pair is the more informative one. Empirically, (17-a) bears an implicature that the (17-b) couldn't have been used instead. This means that (17-b) $\in A_{str}$(17-a), although it is strictly less complex than (17-a) – we can transform (17-a) into (17-b) by deletion.

If the context is changed from DE to UE, the more complex structure will be the more informative one. However, empirically, (18-a) does not have an implicature that (18-b) was not assertable – in fact, (18-a) suggests nothing about its (18-b) counterpart, so (18-b) $\notin A_{str}$(18-a):

(18) a. A **man** came to every party.
b. A **tall man** came to every party.

Back to semantics of number in Buriat – can unmarked and plural forms in Buriat end up in each other's A_{str}? Would non-singularity inferences of plural forms be then derivable? What is the structure of the DPs these forms are part of?

To answer these questions, we introduce further data showing that number readings of non-plural forms in Buriat are conditioned morphosyntactically. Configurations that induce strictly atomic reference include DOs with overt Acc case marking, 1&2-person possessive morphology and adjectival modification[2] of the noun. Data concerning positions requiring Dat, Instr or Comit case are less straightforward and we omit them.

(19) bʲi {nom-iːjə} / {honʲin nom} unʃ-aː
I book-ACC / interesting book read-PST
'I read a(n interestinxg) book' (#books)

(20) {nom-ʃni} / {ulaːn nom honʲin} baigaː
book-2SG / red book interesting was
'Your book / The red book was interesting' (#books)

We take these facts to mean that number interpretation is sensitive to the size of the DP structure the unmarked noun is part of – extended structure requires atomic semantics. We build our analysis on this suggestion.

5 Analysis

We propose that morphologically unmarked DPs in Buriat are structurally ambiguous. They can either lack the projection hosting number morphology or have a silent singular morpheme in it (ignoring linearisation): $[_{DP}...[_{\surd}$ nom]] 'book' vs. $[_{DP}...[_{NumP}\ \varnothing\ [_{\surd}$ nom]]] 'book-SG' (we locate NumP below DP following Farkas and de Swart 2010 a.o.). Thus we conjecture that in Buriat, the lack of NumP layer does not preclude the formation of DP (unlike, maybe, in some other languages). All DPs with overt plural morphology contain a NumP layer: $[_{DP}...[_{NumP}$ uːd $[_{\surd}$ nom]]] 'book-PL'. The interpretations of the three relevant substructures are the following: the form without the number projection has number-neutral interpretation:

[2]There is a certain amount of inter-speaker variation in whether adjectival modification precludes number-neutrality. Within our system, it may signal different attachment sites of adjectives in individual grammars.

(21) a. $[\![[_{\surd}\ \text{nom}]]\!] = \lambda x.{}^*\textsc{book}(x)$
b. $[\![[_{NumP}\ \varnothing\ [_{\surd}\ \text{nom}]]]\!] = \lambda x.\textsc{book}(x)$
c. $[\![[_{NumP}\ \text{u:d}\ [_{\surd}\ \text{nom}]]]\!] = \lambda x.{}^*\textsc{book}(x)$

The argument for such solution comes from data in (19) and (20) that suggest that extended syntactic structure correlates with the strictly atomic reading of unmarked forms. We think that this has to do with syntactic requirements of certain elements of DP structures. Namely, we suggest that adjectives, possessive morphology and certain case markers can't merge in the absence of NumP. We treat this fact as strictly syntactic.

The marked/unmarked direct object contrast buttresses this argument. Although in general the DO position can remain unmarked for Acc case (the conditions under which it happens are orthogonal to our point), whenever Acc is present, nouns with non-atomic reference have to host a plural morpheme and nouns not overtly marked for number denote strictly within atoms. This suggests that Acc selects for NumP. Similarly, (19)-(20) suggest that adjectival modification and possessive morphology generally require NumP to be projected.

Given the structures and meanings in (21), we can ask which of them can and do serve as alternatives to each other. $[_{\surd}$ nom] is strictly the least complex of these structures (the other two can be transformed into it by deletion of the Num head) – therefore, $A_{str}(...[_{\surd}$ nom]...) will be empty. $A_{str}(...[_{NumP}\ \varnothing\ [_{\surd}$ nom]]...) and $A_{str}(...[_{NumP}$ u:d $[_{\surd}$ nom]]...) can in principle contain the other two forms, as they are at most as complex – either of the same complexity, or, in the case of $[_{\surd}$ nom], strictly less complex. However, regardless of the entailment properties of the environment, $[_{\surd}$ nom] can't be kept as an alternative to *nom-u:d* 'book-PL': as they are synonymous, the negation of the sentence containing $[_{\surd}$ nom] would contradict the original sentence. There is no such dependence in (22-b):

(22) a. $A_{str}(...[_{NumP}$ u:d $[_{\surd}$ nom]]...) = { [...$[_{NumP}\ \varnothing\ [_{\surd}$ nom]] ...]}
b. $A_{str}(...[_{NumP}\ \varnothing\ [_{\surd}$ nom]]...) = { [...$[_{\surd}$ nom] ...], [...$[_{NumP}$ u:d $[_{\surd}$ nom]] ...]}

In sum, the plural (${}^*P$) form invokes the singular (P) form as an alternative; the singular (P) form invokes ${}^*P$ forms as alternatives. In this way, the problem of non-singular inferences of plural DPs via competition of two ${}^*P$-denoting forms does not arise – these forms are not in competition. This system is not very different from English, except for the existence of one more ${}^*P$ form as an alternative to the singular one (22-b). This unmarked alternative is not always active: sometimes, using the unmarked form instead of the singular one will result in ill-formedness due to requirements of other elements in the DP (case or possessive morphology or the adjective), but sometimes not. Even in the latter case, the semantic relationship between the source and its alternatives is never ${}^*P$ vs. ${}^*P$.

We do not argue here for any particular flavour of a strong sg / weak pl theory deriving non-singularity inferences of plurals by some pragmatic mechanism – be it scalar implicature (Spector, 2007; Zweig, 2009) or Maximize Presupposition (Sauerland, 2003; Sauerland et al., 2005). Rather, we point out that the underlying properties of the number system in Buriat, although it looks quite exotic, turn out surprisingly similar to that in English, and is reducible to it with the help of structurally filtered alternatives.

6 Extensions and discussion

We discussed Buriat data that seemed quite puzzling on the face of it – both number forms have number-neutral interpretation, but plural forms also show non-singularity inferences in UE

contexts. WEAK SG / STRONG PL theories have a problem covering Buriat data, STRONG SG / WEAK PL theories in combination with structural constraints on alternatives look promising.

Extensions of the analysis should cover 1) animate nouns (we talked about inanimate nouns only so far); 2) nominal number in quantificational DPs (with numerals, *many*, *all* etc.).

Animate nouns without plural morphology in Buriat range strictly over atoms. We encode this as a lexical requirement of animate nouns to project NumP.

Independent evidence for the presence of NumPs always projected by animate nouns, but not necessarily by inanimate nouns, comes from the distribution of agreeing demonstrative pronouns. Buriat demonstratives have distinct plural and singular (unmarked) forms: "ədə" 'these' and "ənə" 'this'. With animate nouns, it looks like demonstratives agree with the NumP, but the plural agreement is optional (verbal number agreement in Buriat is also optional), and the unmarked form "ənə" could be used on a par with the plural "ədə":

(23) bʲi ədə/ənə xʉbʉ:-d-i:jə xar-a:-b
I this.PL/SG boy-PL-ACC see-PST-1SG
'I saw these boys'

The pattern with inanimate nouns is more intricate. Most interestingly, the plural form "ədə" can appear with inanimate singulars, leading to the plural interpretation.

(24) basaga:-d xurgu:li-da: ədə nom asar-a:
girl-PL school-DAT.REFL this.PL book bring-PST
'The girls brought these books to their school'

The plural form "ədə" is incompatible with morphologically unmarked animate nouns.

(25) *bʲi ədə xʉbʉ: xar-a:-b
I this.PL boy.ACC see-PST-1SG
Intended: 'I saw these boys'

The contrast could indicate that with the inanimate nouns, "ədə" does not manifest agreement, but rather spells out the Num head (valued as "plural"). This option is not available for the animates, since they always project NumP independently, with demonstratives in a different syntactic position.

If we hypothesize further that the agreeing demonstratives only combine with phrases that have a NumP layer, we predict that we will not find the singular form "ənə" with unmarked inanimate nouns with non-atomic reference. This prediction is borne out:

(26) basaga:-d xurgu:li-da: ənə nom asar-a:
girl-PL school-DAT.REFL this.SG book bring-PST
'The girls brought this book/ #these books to their school'

In principle, "ənə" could either manifest agreement with the NumP or spell-out the Num head itself. But since, as we argue, unmarked number-neutral inanimates lack the NumP, only the latter option is available for them. Thus, in (26) the presence of "ənə" clearly signals that the value of Num is "singular", which is incompatible with the number-neutral interpretation.

Finally, we won't have much to say about the combinations of nouns with numerals and nominal quantifiers. Numerals combine with all three number options: unmarked, SG (secured by overt ACC marking) and PL:

(27) seren gurban nom / nom-u:d-i:jə / nom-i:jə-mni unʃ-a:
Seren three book / book-PL-ACC / book-ACC-1SG.POSS read-PST

'Seren read three books / my three books.'

We suggest that selectional restrictions of nominal quantifiers don't necessarily have consequences for the semantics of nominal number.

References

Bale, A. and H. Khanjian (2014). Syntactic complexity and competition: The singular-plural distinction in Western Armenian. *Linguistic Inquiry 45*(1), 1–26.

Bale, A., H. Khanjian, and M. Gagnon (2010). Cross-linguistic representations of numerals and number marking. In *Proceedings of SALT 20*, pp. 1–15.

Dayal, V. (2011). Hindi pseudo-incorporation. *Natural language and linguistic theory 29*(1), 123–167.

Farkas, D. and H. de Swart (2003). *The semantics of incorporation: from argument structure to discourse transparency*. Stanford, CA: CSLI.

Farkas, D. and H. de Swart (2010). The semantics and pragmatics of plurals. *Semantics and Pragmatics 3*, 1–54.

Fox, D. and R. Katzir (2011). On the characterization of alternatives. *Natural Language Semantics 19*(1), 87–107.

Katzir, R. (2007). Structurally-defined alternatives. *Linguistics and Philosophy 30*, 669–690.

Landman, F. (1991). *Structures for semantics*. Kluwer.

Landman, F. (2000). *Events and plurality*. Kluwer.

Link, G. (1983). The logical analysis of plurals and mass terms: A latticetheoretical approach. In R. Bauerle, C. Schwarze, and A. von Stechov (Eds.), *Meaning, use and interpretation of language*. Berlin: De Gruyter.

Mithun, M. (2010). *Constraints on compounding and incorporation*, pp. 37–56. Amsterdam: John Benjamins.

Öztürk, B. (2005). *Case, referentiality and phrase structure*. John Benjamins Publishing Company.

Sauerland, U. (2003). A new semantics for number. In R. B. Yound and Y. Zhou (Eds.), *Proceedings of SALT 13*, Ithaca, NY, pp. 258–275. Cornell Linguistics Club.

Sauerland, U., J. Andersen, and K. Yatsushiro (2005). The plural is semantically unmarked. In S. Kepser and M. Reis (Eds.), *Linguistic evidence*, pp. 413–434. Mouton de Gruyter.

Spector, B. (2007). Aspects of the pragmatics of plural morphology: on higher-order implicatures. In U. Sauerland and P. Stateva (Eds.), *Presuppositions and implicatures in compositional semantics*, pp. 243–281. New York: Palgrave-Macmillan.

Sudo, Y. (2017). Another problem for alternative-based theories of plurality inferences: the case of reduplicated plural nouns in japanese. *Snippets 31*, 26–28.

Zweig, E. (2009). Number-neutral bare plurals and the multiplicity implicature. *Linguistics and Philosophy 32*, 353–407.