The syntax and semantics of quantification with *barı* and *barıta* 'all' in Taimyr Dolgan

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1. The syntax and semantics of *barı* and *barıta* 'all'

Dolgan, a Turkic language of the Taimyr Municipal District (Krasnojarskij kraj) and the adjacent Anabar ulus in the Sakha Republic (also known as the Republic of Yakutia) of Northern Siberia is in many respects a typical agglutinative and head-final language of Eurasia. The order of elements in the NP follows the standard OV pattern which has the head in phrase-final position:[1]

(1)
(a)
iti	*ikki*	*ıt*	*tahaara*	*uruku-ttan*	*hüürel-iller*
this	two	dog	outside	long.time-ABL	run-PRES.3PL

'These two dogs are running on the street for quite a while already.' [AAB 12]

(b)
hette	*eder*	*čeelkee*	*taba-lar*	*on-no*	*hüürel-ii*
seven	young	white	reindeer-PL	there-LOC	run-CON

hıld'-allar
move-PRES.3PL

'Seven young white reindeer are running over there.' [AAB 23]

   A prominent exception to this rule is encountered in quantification. The universal quantifier *barı* 'all' appears, as expected, prenominally. Further, the pluralized noun phrase triggers agreement in number; predicates as well as predicatives have to appear in the plural:

(2)
barı	***er***	***kihi-ler***	*erde*	*komu-llu-but-tara*
all	man	person-PL	early	gather-PASS-PSTII-3PL

'<u>All men</u> gathered early.' [AAB I 20]

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[1] The practical orthography and the glossing follow the conventions introduced in Siegl (2015a, b).

However, when *barı* is followed by *-ta* (the suffix is apparently the marker encoding a third person possessor; we will return to this point below), the quantifier occurs in postnominal position. Although initially this appears to look like a floating quantifier, such an interpretation is unlikely because the quantifier requires special morphology to allow its displacement.[2] Apart from this, the quantifier shows concord with the noun it modifies, a point which will be taken up in section 4.4. in more detail. The noun quantified with *barıta* can appear with either singular or plural marking; predicate and predicative agreement show similar variation. In the following example from elicitation, the quantified NP is formally singular marked, but the verb shows semantic plural agreement with the quantified NP. In several instances of this type two translations become possible, either collective 'all' or distributive 'every':

(3)   **er   kihi   barı-ta** *paśolook-ka   ńuučča-lı   emie*
        man   person   all-PX3   village-DAT   russian-ADV   too

        kepset-e   hat-ıllar
        speak-CON   can-PRES.3PL

        'All men ~ every man in the village can speak Russian too.'
        [AAB I 20]

Similar instances are attested in written Dolgan:

(4)   **kas   törüt   baar-a   barı-ta** *beje-ler-e   hiir-deek*
        how.many clan   exist-CON all-PX3   self-PL-PX3   land-SOC

        e-ti-lere
        be-PSTI-3PL

        'All existing clans had their own land.' [Popov 112]

However, in elicitation even other constellations are attested. In example (5), both the NP and the verb are singular, even though the situation is semantically plural. Further, the interpretation of the quantifier allows both a distributive 'every' and a collective 'all' reading. It appears that Dolgan does not express this difference lexically and *barı* is used, regardless of intended reading:

(5)   **balık-čıt   barı-ta** *korguj-but   e-te*
        fish-ACT   all-PX3   be.hungry-PTCP.PST   be-PSTI.3SG

        'All fishermen were hungry ~ every fisherman was hungry.'
        [AAB I 20]

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[2] The co-territorial Samoyedic language Forest Enets (Siegl 2013: 225ff) and most probably all Taimyr Samoyedic languages (Forest Enets, Tundra Enets, Tundra Nenets and Nganasan) show floating quantifiers which makes Dolgan unusual from an areal Taimyrian perspective.

The postnominal quantifier *barıta* allows inflection and appears as e.g., *barıtın* in object position:[3]

(6) *min   uol-um   **et-i**   **barı-tı-n**   hie-bit*
     1SG   son-PX.1SG   meat-ACC   all-PX3-ACC   eat-PST.RES.3SG
     'My son has eaten <u>all meat</u>.' [AAB I 20]

Although it would appear that in instances such as (6), there seems to be agreement between the object and its postnominal quantifier, this statement is too strong because agreement within the noun phrase is not attested in Dolgan. Instead, one should speak of concord restricted to this constellation.[4] Concerning the interaction of the postnominal inflected quantifier with the noun, plural marking is occasionally attested. In the following example from elicitation, the quantified noun is a mass noun and plural marking is therefore absent:

(7) *ogo-lor **ah-ı**   **barı-tı-n**   hie-bit-tere*
     child-PL food-ACC   all-PX3-ACC   eat-PSTII-3PL
     'The children have eaten <u>all food</u> (lit: the food all of it).' [AAB I 21]

Concerning object marking, a short note is in order. Dolgan follows the standard Turkic pattern of showing differential object marking where the nominative case encodes indefinite objects (see 8a), and the accusative definite objects (see 8b):

(8)
(a) *bihigi   huruk   huruj-s-abıt*
     1PL   letter   write-REC-PRES.1PL
     'We write each other a letter.' [AAB, GSV I 32]

(b) *čemüe-ge   kep-pit   bihileg-i*
     finger-DAT   put-PST.RES.3SG ring-ACC
     'She put the ring on the finger.' [VB I 44]

Furthermore, Dolgan uses a third case to encode objects: the partitive. Its use is constrained and it appears only on objects in transitive clauses which refer to an event beyond the moment of speech, either in the future tense or in

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[3] Some instances of concord with other cases are attested too, but examples are few in the data currently available (see section 4).

[4] Corbett (2005: 5–7; 36) highlights problems which are connected to the concept 'concord' and opts against its implementation for cross-linguistics research. For a language-individual description, this concept is helpful because neither agreement, case-doubling nor the postulation of a construction cover this phenomenon reasonably well.

imperatives. When these conditions are satisfied, the following triplets become possible:

(9)

(a)　　*min*　　*eńieke*　　*et*　　　*bier-ie-m*
　　　　1SG　　2SG.DAT　　meat　　give-FUT-1SG
　　　　'I will give you meat.' [AAB II 47]

(b)　　*min*　　*eńieke*　　*et-i*　　　*bier-ie-m*
　　　　1SG　　2SG.DAT　　meat-ACC　give-FUT-1SG
　　　　'I will give you the meat.' [AAB II 47]

(c)　　*min*　　*eńieke*　　*et-te*　　*bier-ie-m*
　　　　1SG　　2SG.DAT　　meat-PART　give-FUT-1SG
　　　　'I will give you some meat.' [AAB II 47]

As either collective 'all' or distributive 'every' reading refers to a delimitable set of tokens within the domain quantified, the semantics of quantification seems to be responsible for the blocking of nominative and partitive case-marked forms of postnominal *barıta,* as these cannot refer to all tokens within a set. Such forms have not been mentioned in prior grammatical descriptions, are not attested in my field materials and, as a matter of fact, are not attested in the database assembled for this study either.[5, 6]

1.1 The goals of this investigation

Having introduced the basic properties of *barı, barıta* and its case-inflected forms, the aim of this study is to shed light on the interaction of quantification, number marking on the quantified noun and, where applicable, agreement between a quantified noun phrase in subject position and the predicate and/or predicatives.[7] Although this kind of agreement does not appear to be relevant from the point of view of quantification at first glance,

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[5] Of course, this is not final proof because their unacceptability has not yet been tested in the field. Still, the absence of these forms in the database is too obvious to be due to chance.

[6] For the sake of completeness, a third quantifier based on *barı*, namely *barıkaan* [all.DIM] 'absolutely all; each and every' (Stachowski 1993: 53), needs to be mentioned. This quantifier appears neither in my written field notes (including about 1 hour of transcribed narratives) nor in Popov (2011), and will therefore not be discussed here.

[7] In Dolgan (and Turkic in general) verbs agree with subjects only. Therefore, the interaction of number and predicate/predicative agreement is irrelevant for functions other than subject.

Turkish and Turkic in general are characterized as having 'the tendency to avoid two plural markers very close to each other [...] *Öğrenciler geldi(*ler)* 'Students/the students have come'' (Johansson 1998:53).[8] Therefore, this parameter is certainly relevant for this study. Our second aim is to attempt to clarify whether distinctive morphosyntactic predication patterns exist which would favor distributive readings of *barı* and *barıta* over collective ones.

1.2 Notes on the data

The data for this study has been assembled from a number of resources. The smallest amount of data comes from elicitation with several Dolgans, resulting in 16 examples. Due to the fact that this data showed the kind of variation concerning number marking and agreement presented in the introduction, more data was assembled in order to exclude the possibility of artifacts of elicitation. The vast majority of examples on which this study relies were extracted from a recent Dolgan novel (Popov 2011) via TEXTSTAT which resulted in 87 additional examples.[9] Furthermore, 60 pages of Dolgan texts, mainly fairy tales from a folklore collection (Jefremov 2000, abbreviated DF) and eight partly annotated spontaneous narratives from my fieldwork, were searched to identify further and potentially diverging examples.[10] As none were encountered, that data remains outside this discussion.

2. The Dolgan language

Dolgan is a small Turkic language of Northern Siberia. It is predominantly spoken within the boundaries of the Taimyr Municipal District (Krasnojarskij kraj) and to some degree in the adjacent Anabar ulus in the Sakha Republic. The ethnic population is assumed to be around 8,000; roughly 5,500 reside within the Taimyr Municipal District (Siegl & Rießler 2015). A further 1,224

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[8] See also Lewis (1978: 246). Similar examples appear in other Turkic languages, as illustrated by an example from my Tuvin fieldnotes: *aalčı-lar kel-di* [guest-PL come-PSTII.3SG] 'The guests have come.' [VP 20]

[9] The journalist and writer Nikolaj Anisimovič Popov (1929-2009) belonged to the first generation of language activists instrumental for the introduction of Dolgan literacy (see Siegl & Rießler 2015).

[10] Dolgan data was collected in Dudinka in 2008 and 2011 and amounts to three months of almost daily work. All major consultants were female and between 50 and 80 years of age and representatives of the two major Dolgan dialects as spoken on the Taimyr Peninsula. Additional data was collected in Helsinki 2013 while one of the main consultants was visiting.

Dolgans were reported for the Anabar ulus in the Sakha Republic (Artem'ev 2010). Although the Dolgans are politically classified as a 'less-numeric people' distinct from Sakha (Yakut), the status of Dolgan as an independent language and not as a dialect of Sakha is not unanimously agreed. Given the fact that Dolgan is insufficiently documented, any discussion concerning the relationship of Dolgan to Sakha is actually counterproductive as a dedicated comparison would presuppose the existence of both a comprehensive grammatical description and a comprehensive lexicographic resource of Dolgan, but these are absent to date.[11] The standard grammatical resources such as Ubrjatova (1985) and Artem'ev (2001) are morphology-driven and exclude syntax to a large degree. The most comprehensive published lexicographic resources are Stachowski (1993, 1998). Recent comparative work on Dolgan and Sakha (Stapert 2013) has shown that more grammatical differences exist than were previously known (e.g., Ubrjatova 1960, 1966). On the other hand, prior research has overlooked the fact that Dolgans have been living next to speakers of Samoyedic languages or even among them for more than 300 years. As recently demonstrated, research on Dolgan must include an areal perspective because Nganasan, a co-territorial Samoyedic language, has left its traces in Taimyr Dolgan and vice versa (Siegl 2015a,b). The implications of Samoyedic-Dolgan contacts are not trivial because they offer further arguments about why Dolgan should be considered a language distinct from Sakha. The prevailing perspective in which Sakha continues to serve as *tertium comparationis* for Dolgan studies is unsatisfying because research remains in the sphere of contrastive grammar (e.g., Coseriu 1972) and presumably Dolgan appears to be closer to Sakha than it actually is. This study breaks with this perspective, and is to be understood as a step toward a functionally-orientated synchronic description of the grammar of Dolgan.[12]

3. A condensed typological profile of Dolgan

Due to the fact that quantification in Dolgan interacts with predication, but detailed studies about this in prior research are lacking, the following section offers some background information to ease orientation in the sections to follow.

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[11] The same would be required for those varieties of Sakha which are classified as being 'most closely' related to Dolgan, such as Sakha spoken in the Anabar ulus (Sakha Republic) and around Jessej in the Evenki Municipal District (Voronkin 1984, 1999).

[12] Work on a grammatical description of Taimyr Dolgan is in progress.

3.1. Central morphosyntactic properties of Dolgan

Dolgan is a typical head-final Turkic language, entirely suffixing and agglutinative. However, due to vowel harmony, regressive and progressive assimilation around morpheme boundaries and several fusional tendencies in possessive inflection of case, segmentation is occasionally problematic. There are seven productive cases: NOMinative, PARTtitive, ACCusative (all of which encode grammatical relations), DATive, ABLative (which predominantly encode spatial relations) INSTRumental and COMitative. The DATive case is multifunctional, encoding both goal (where to) and location (where at/in). Singular and plural numbers are morphologically distinguished. Verbs inflect for person, tense (several past tenses, one present and one future) and mood. Aspect plays a minor role and is mostly expressed periphrastically. For constituent order, SOV is standard, but SVO is also possible, yet clearly not the default. Complex sentences and subordination rely on nominalised verb forms, and especially on converbs.

3.2 Principles of verbal predication

Dolgan cross-references the subject on the verbal predicate by two different sets of verbal endings. As elsewhere in Turkic, one set shows striking parallels with nominal possessive markers (hereafter referred to as 'possessive suffixes'). The following examples present the verbal endings for first person singular from both sets:

(10)   *min enigin   bil-ebin*
         1SG 2SG.ACC   know-PRES.1SG
         'I know you.' [GSV I 78]
         (-*bIn* = set I)

(11)   *begehee min   ebe-b-er   huruk   huruj-but-um*
         Yesterday 1SG   grandmother-PX.1SG-DAT letter   write-PSTII-1SG
         'Yesterday, I wrote a letter to my grandmother. '
         [GSV, AAB I 32]   (-*Vm* = set II)

Table 1 subsumes both sets of verbal endings (VX) and contrasts them with possessive suffixes (PX) with singular reference.

VX	PRESENT TENSE	PAST I	PX	POSSESSOR/POSSESSUM$_{SINGULAR}$
1SG	*bar-abın*[13]	*bar-dı-m*	PX.1SG	*taba-m* 'my one reindeer'
2SG	*bar-agın*	*bar-dı-ŋ*	PX.2SG	*taba-ŋ* 'your one reindeer'
3SG	*bar-ar*	*bar-da*	PX3	*taba-ta* 'his one reindeer'
1PL	*bar-abıt*	*bar-dı-bıt*	PX.1PL	*taba-bıt* 'our one reindeer'
2PL	*bar-agıt*	*bar-dı-gıt*	PX.2PL	*taba-gıt* 'your one reindeer'
3PL	*bar-allar*	*bar-dı-lar*	PX3	*taba-lar-a* 'their one reindeer'

Table 1: Verb endings bar- 'go' and possessive suffixes taba 'reindeer'

Agreement between the NP in subject function and the verbal predicate is obligatory:

(12)
(a) *ogo   ıt-tan   kutta-m-mıt*
  child   dog-ABL   frighten-REFL-PST.RES.3SG
  'The child became afraid of the dog.' [AAB 5]

(b) *haijın   ogo-lor   hugun   komuj-allar*
  summer   children-PL   berry   collect-PRES.3PL
  'In the summer, the children collect berries.' [E I 51]

All verbal predicates, including auxiliaries, are treated similarly:

(13)
(a) *gini   üčügej   dogor-um   e-te*
  3SG   good   friend-PX.1SG   be-PSTI.3SG
  'He was a good friend of mine.' [AAB II 42]

(b) *iti d'ıl-lar-i   urut dulgaan-nar Ajdaan   d'ıl*
  this year-PL-ACC old Dolgan-PL   thunder   year
  d'ie-n   aatt- ır   e-ti-lere
  say-CON   name-PTCP.PRES   AUX-PSTI-3PL
  'These years, the old Dolgans called "thunder year".' [Popov 136]

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[13] The unglossed vocalic element (1SG form historically **bar-ar-bın*) is a reflex of the old present tense participle, which this form is based on. The current study operates with the standard assumption postulating the existence of two sets, but due to segmentation problems concerning the present tense forms I have argued that synchronically three sets should be postulated (Siegl, under review).

3.3 Principles of semi-verbal predication[14]

Similar to verbal predication, predicative agreement is obligatory as well. In contrast to regular predication, only verbal endings belonging to set I can appear.

3.3.1. Predicative nouns, adjectives and interrogatives

Verbal endings from set I attach directly to predicative nominals, and agreement is obligatory.[15] This also applies to complex semi-verbal predicates which include case and/or possessive morphology:

(14)
(a) *min   aga-bın*
     1SG   father-PRED.1SG
     'I am a father.' [AAB II 36]

(b) *en   össüö   eder-gin*
     2SG still   young-PRED.2SG
     'You are still young.' [Popov 196]

(c) *en   kan-na-gın=ij*
     2SG where-LOC-PRED.2SG=Q
     'Where are you?' [AAB II 34]

(d) *min   Girgo   ogo-to-bun*
     1SG   PN   child-PX3-PRED.1SG
     'I am Grigorij's child.' (Ubrjatova 1985: 89)

(e) *ehigi   Girgo   ogo-lor-o-gut*
     2PL   PN   child-PL-PX3-PRED.2PL
     'You are Grigorij's children.' (Ubrjatova 1985: 89)

(f) *min   üör-gö-bün*
     1SG   herd-DAT-PRED.1SG
     'I am among the reindeer.' (Lit: 'I am in the herd') [AAB II 36]

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[14] The concept *semi-verbal predication* is adapted from my description of a similar predication pattern in Forest Enets (Siegl 2013:334-343). Semi-verbal predication overlaps with categories such as 'predicate nominals and related constructions' (Payne 1997:111–128), 'non-verbal predication' (e.g., Dik 1997:193–216) or 'intransitive predication' as defined in e.g., Stassen (1997). I am not implying that the category and its morphosyntactic realization in Forest Enets and Dolgan are identical. The label *semi-verbal predicate* is to be understood as a cross-linguistic category, similar to the concept of converb.

[15] Semi-verbal predicates are negated as regular nominal categories and not as verbs, but due to restrictions on space, this cannot be exemplified here.

In non-present tense contexts, copulas which host tense and person become obligatory, as is agreement:

(15)
(a)   *gini   ojun   e-te*
          3SG   shaman   be-PSTI.3SG

          'He was a shaman.' [AAB II 42]

(b)   *min   eder   e-t-im* [...]
          1SG   young   be-PSTI-1SG

          'I was young...' [Popov 117]

(c)   *iti   üčügej   hırga   buol-uo*
          this   good   sled   become-FUT.3SG

          'This will become a good sled.' [AAB II 43]

3.3.2 Predicative locationals and existentials

In predication of location and existence, either semi-verbal (16a) or verbal predication with verbs of position (16b,c,d) is used. Agreement, again, is obligatory:

(16)
(a)   *ehigi   laabkı-ga-gıt*
          2PL   shop-DAT-PRES.2PL

          'You are in the shop.' [AAB II 34]

(b)   *min guorod-ka olor-bop-pun,   min   tıa-ga   olor-obun*
          1sg town-DAT   sit-NEG.PRES-1SG 1SG   tundra-DAT   sit-PRES.1SG

          'I am not living in town, I am living in the tundra.' [AAB 12]

(c)   *üčügej   tirii   hıt-ar   hırga-ga*
          good   skin   lie-PRES.3SG   sled-DAT

          'The good skin is on the sled.' [AAB, GSV I 31]

(d)   *ıt   olor-or   ostool   annı-tı-gar*
          dog   sit-PRES.3SG   table   under-PX3-DAT

          'The dog is under the table.' [E I 55]

   Predicative agreement is also obligatory in existential/possessive predication with the nominal predicators *baar* 'to exist' and *huok* 'to not exist':[16]

(17) Existential
(a)   *balık   holuur   ih-i-ger   baar*
       fish   bucket   in-PX3-DAT   exist.PRED.3SG
       'There is a fish in the bucket.' [E I 55]

(b)   *mas   arga-tı-gar   d'ie   baar*
       tree   behind-PX3-DAT   house   exist.PRED.3SG
       'Behind the tree is a house.' [GSV I 58]

(c)   *anı   giniler   kan-na   baallar=ıj[17]*
       now   3PL   where-LOC   exist.PRED.3PL=Q
       'Now, where are they?' [Popov 170]

(18) Possessive
(a)   *minieke   baar   elbek   tıı*
       1SG.DAT   exist.PRED.3SG   many   boat
       'I have many boats.' [AAB I 1]

(b)   *ehieke elbek   tıı-lar   baallar*
       2PL.DAT many   boat-PL   exist.PRED.3PL
       'You have many boats.' [AAB I 1]

3.4 Summary

As shown above, predicate/predicative agreement is the default in Dolgan. The first argument has a privileged syntactic status as it is tightly bound to the semi-verbal and verbal predicate by agreement markers (=verbal suffixes). The second argument of a verbal predicate does not show similar privileged syntactic status; although a predicate can govern more than one argument, only the first argument, which often coincides with the syntactic subject, is morphologically cross-referenced on the verb. As agreement in number between a third person plural subject and predicate is obligatory in Dolgan, the examples from Section 1 underline their unusual behavior. Further

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[16] The other frequently attested possessive construction with a sociative marked predicative noun belongs to the sphere of non-verbal predication: *en kas lodka-laak-kın* [2SG how.many boat-SOC-PRED.2SG] 'How many boats do you have?' (Lit: 'You are with how many boat?)' [GSV I 7]

[17] Change of *baar* to *baallar* is triggered by assimilation and is regular.

examples for this syntactically unusual pattern will be discussed in the remainder of this paper. The data below presents more instances of absent agreement. Even though an argument in subject function might be quantified, it can remain singular; however, the verb can show, and indeed quite often does show, plural marking. This is discussed in the following section in detail.

4. Quantification and its interaction with syntax and semantics

As shown in Section 1, the quantifiers *barı* and *barıta* appear in different positions within the noun phrase: *barı* in prenominal position and *barıta* and its case-inflected forms in postnominal position. Therefore, the quantifiers will be discussed according to their syntactic position. In particular, two syntactic questions and one semantic question are investigated in more detail:

a)   Do pluralized NPs in subject function trigger agreement with the predicate/predicative? In case of a mismatch, do the semantics of the quantified noun offer an explanation?

b)   For functions other than subject, does the quantifier trigger plural on the noun it quantifies?

c)   Dolgan quantifiers allow for two translations: either as collective 'all' or distributive 'every'. This suggests, at least initially, that *barı/barıta* may be underspecified because other languages, e. g., English and Russian use separate quantifiers (English *all/every;* Russian *vesʹ/každyj).* Is the universal quantifier in Dolgan really underspecified or are there morphosyntactic constellations which favor one interpretation over the other?

4.1 Quantification with prenominal *barı*

The prenominal quantifier *barı* is attested 19 times in Popov (2011). Five instances of *barı* appear with subjects, five with objects and five with adjuncts. The other examples appear in non-verbal predication and show unusual behavior which needs to be discussed separately. At this point it needs to be mentioned that *barı* predominantly expresses collective 'all' readings.

4.1.1. Quantification of subjects

When *barı* quantifies the syntactic subject, the NP is plural marked and verbal agreement is plural. This is the default in the database; counter-examples are currently not attested:

(19) **barı oloktook-tor** *ürek* *kıtıl-ı-gar*   *komu-llu-but-tara*
      all   camp-PL   river shore-PX3-DAT gather-PASS-PSTII-3PL
      'All camps gathered on the shore of the river.' [Popov 172]

As Dolgan lacks agreement between modifier(s) and head, number is marked on the head only:

(20) *D'ögüör*   *kieŋ*   *d'ukaat-ı-gar*   **barı**   **ulakan**
      PN   wide   conic.tent-PX3-DAT   all   big

      er   *kihi-ler*   *komu-llu-but-tara*
      man   person-PL   gather-PASS-PSTII-3PL
      'All adult men gathered in Jegor's tent.' [Popov 171]

In one example from elicitation, *barı* serves as the subject. In order to make the transition from a modifier to an argument, the quantifier needs further morphological material which is provided by plural marking and a possessive suffix:

(21) **barı-lar-a**   *mas*   *egel-bit-tere*
      all-PL-PX3   wood   bring-PSTII-3PL
      'All brought fire wood.' [AAB I 21]

4.1.2. Quantification in object position

The database contains only five examples in which *barı* quantifies a syntactic object. Due to the limited amount of data, the description remains vague for the time being. Singular marking appears four times and plural marking once. A closer look at singular-marked examples suggests that the absence of plural marking is triggered by semantics: the quantified lexemes appearing in the singular can be analyzed as either mass or collective nouns. In (22) the situation is plural, but a collective or mass noun reading is most likely:

(22) **barı**   **hurug-u-n**   *aag-an*   *bar-aan*   *bihigi*
      all   letter-PX3-ACC   read-CON   go-CON   1PL

      ör   *bagajı*   *kül-büp-püt*
      long   very   laugh-PST.RES-1PL
      'After having read all the letters, we laughed for quite a while.'
      [Popov 123][18]

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[18] In the Russian text, the quantified noun is in the plural *podpisi* 'signatures', but the Dolgan text has singular.

In (23), the use of the singular suggests a similar collective or mass-noun interpretation:

(23)   ***barı***   ***tahagah-ı-n***   *ogońńor*   *türgennik*
       all   belonging-PX3-ACC   old.man   quickly

       tıı-lar-ı- gar   *tas-pıt-a*
       boat-PL-PX3-DAT   bring-PSTII-3SG

       'All his belongings the old man brought quickly to his boats.'
       [Popov 169]

In (24), the adjective *üčügej* 'good' is promoted to object function. Substantivization preserves the property concept and the absence of plural marking can be motivated without problems:

(24)   *aga-tı-ttan*   ***barı***   ***üčügej-i***   *ıl-bıt-a...*
       father-PX3-ABL   all   good-ACC   take-PSTII-3SG

        'He inherited all goodness from his father...' [Popov 124]

In (25), a regular plural-marked NP appears as expected:

(25) [...] ***barı***   ***taba-hıt-tar-ı***   *komuj-aarı* [...]
           all   reindeer-ACT-PL-ACC   gather-CON

        '...in order to gather all reindeer herders...' [Popov 173]

4.1.3. Quantification in adjunct position
Likewise, *barı* triggers plural in adjunct position:

(26)   *ile*   ***barı***   ***pösüölök-tör-tön***   *kihi-ler*   *bari-ta*
       of.course   all   village-PL-ABL   person-PL   all-PX3

       mun-na   *kel-er*   *e-ti-lere*
       here-LOC   come-PTCP.PRES   be-PSTI-3PL

        'Of course, from all villages, all people came here.' [Popov 189]

(27)   *harsierda* ***barı***   ***muora-hıt-tar***   ***kördük*** *N'ukuu*   *holo-to*
       morning   all   tundra-ACT-PL   like   PN   free.time-PX3

       huok
       not.exist.PRED.3SG

       'In the morning, like all people of the tundra Nikolaj has no free time.' [Popov 128]

An elicited example needs to be added to this group. The Russian prompt (meaning 'I bought a knife for each of my three sons') failed to elicit a distributive example, but the sentence given shows *barı* with dative case and plural marking:

(28) *min   üs   uol-laak-pın.*   **barı-lar-ı-gar**   *min   bahak*
     1SG   three   son-SOC-PRED.1SG   all-PL-PX3-DAT   1SG   knife

     atılas-pıt-ım
     buy-PSTII-1SG

     'I have three sons. For each (lit: <u>for all</u>) I bought a knife.' [AAB I 21]

The two attested counter-examples show singular due to semantic restrictions. In (29) *d'on* 'people' is inherently plural and therefore blocks further plural marking:[19]

(29) *min   hajıın   **barı   d'on-u**   kıtta   Pjasina   on-no*
     1SG   summer   all   people-ACC   with   Pjasina   there-LOC

     Dudıpta   ebe-ler-ge   d'ieri   köhüs-püt-üm
     Dudypta   river-PL-DAT   until   move-PSTII-1SG

     'In the summer I moved with <u>all the people</u> to the rivers Pjasina and Dudypta.' [Popov 172]

In (30), a distributive reading seems most likely responsible for singular marking. Although the Russian text has quantitative *so vsex storon* <from all.GEN.PL side.GEN.FEM.PL> 'from all sides', an alternative distributive 'from every side' appears preferable:

(30) *ginieke   **barı   öttü-tten**   hıstı-bıt   e-ti-lere...*
     3SG.DAT   all   side-ABL   surround-PTCP.PST   be-PSTI-3PL

     'They surrounded him <u>from all sides</u>... (perhaps: <u>from every side</u>...)' [Popov 172]

In (31), *barı* appears in a dative adjunct within an equative. In this instance it does not trigger agreement and *barı* results in a distributive reading:

(31) *ol   emie **barı kihi-ge   kılı-laak   bagajı kihi e-te***
     that   too   all   person-DAT   honor-SOC   very   man   be-PSTI.3SG

     'that, too, was a man that <u>every person</u> honored.'
     (lit: a man honored by every man) [Popov 124]

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[19] The postposition *kıtta ~ gıtta* governs accusative case, not be confused with definite object marking, the primary function of the accusative.

4.1.4 *barı* in predicatives

In predicative constructions *barı* is attested twice, though only one example needs to be discussed here. In (32), *barı* is marked for number and possessor and thereby is in subject function. As expected, it triggers agreement:

(32)   *brigada-tı-gar*   **barı-lar-a**   *ede*   *uol-attar*   *e-ti-lere,*
        brigade-PX3-DAT   all-PL-PX3   young   boy-PL   be-PSTI-3PL

        bert   *üle-hit-ter.*
        very   work-ACT-PL

        'In the brigade, <u>these all</u> were young boys, very working ones.'
        [Popov 148]

4.1.5 Summary

Summing up the syntax and semantics of *barı*, it appears that plural interpretation is triggered by default. In instances where this is not attested, lexical semantics can be considered responsible for singular marking. Occasionally, singular seems to point to distributive readings, but not exclusively. Pluralized noun phrases in subject function trigger number agreement on the verb.

4.2 Quantification with postnominal *barıta*

Postnominal *barıta* is attested 43 times in Popov (2011), which makes it the most frequent instance of quantification in the database of this study. Further, *barıta,* in contrast to *barı,* shows much variation, both syntactically and semantically. Before the data from Popov (2011) is approached in detail, a short look at qualitative data from elicitation is in order. As already mentioned in Section 1, *barıta* allows for two translations: collective 'all' or distributive 'every'. In (33), the distributive translation 'every' is most natural; the NP remains singular and the verb shows singular agreement:

(33)   **er   kihi   barı-ta**   *hat-ıır*   *buraan-ınan*   *hıld'-a*
        man   person   all-PX3   can-PRES.3SG   snow.mobile-INSTR   drive-CON

        '<u>Every man</u> knows ~ <u>all men</u> know how to drive a snowmobile.'
        [AAB I 20]

In (34), which has a singular-marked NP, both interpretations are equally likely. However, the verb shows plural marking and a collective 'all' interpretation becomes preferable:

(34)   **ogo   barı-ta**   *ah-ı*   *hie-bit-tere*
        child   all-PX3   food-ACC   eat-PSTII-3PL

        '<u>All children</u> have ~ <u>every child</u> has eaten the food.' [AAB I 21]

The third logical option, *barıta* with a plural-marked NP, is equally possible. However, this constellation is infrequently attested and a collective 'all' interpretation appears to be the default:

(35)   **bihigi**   **ogo-lor-but**   **barı-ta**   *ah-ı*   *hie-bit-tere*
      1PL   child-PL-PX.1PL   all-PX3   food-ACC   eat-PSTII-3PL

      'All our children have eaten the food.' [AAB I 21]

For the sake of completeness it needs to be mentioned that *barıta* appears once with semantics close to English 'whole'. This is, however, a problem of translation and not a counterexample. In (36) Dolgan has postnominal *barıta* and the Russian clause (37) used for elicitation had *ves'* 'all':

(36)   **bu**   **d'ie**   **barı-ta**   *ald'a-m-mıt*
      this   house   all-PX3   destroy-REFL-PST.RES.3SG

      'The whole house got destroyed.' [AAB I 21]

(37)   *ves'*   *dom*   *razrušen*
      all   house   destroy.ADJ.MASC.SG

      'The whole house is destroyed.'

4.2.1 Excursus: characterizing and etymologizing *-ta*

So far, *-ta* has been glossed as PX3 without any further explanation; this decision will now be motivated. Dolgan has at least two suffixes *-ta*: a derivational suffix, and the homonym allomorph of the possessive suffix for third person. According to Stachowski (1997:31), the derivational suffix *-TA* has two functions. It either derives multiplicatives from numerals, e.g., *bies* 'five' → *bies-te* 'five times' or specialized pronominals and interrogatives, e.g., *kačča* 'how many' → *kačča-ta* 'how many times'. Further, it appears on secondary possessive demonstratives e.g., *ol* 'that' → *on-tu-m* <that-DER-PX.1SG> 'that one which is mine; that of mine' (Ubrjatova 1985:101).[20] Although the element *-TA* is attested with different nominal parts of speech such as numerals and demonstratives, its pluralizing function is weak, if not absent. When pluralizing, as in *bieste* 'five times', it appears on syntactic adjuncts and when appearing on secondary demonstratives, *-TA* is restricted to prenominal position and requires possessive suffixes in order to fulfill wordhood criteria. In this function, *-TA* does not pluralise, but individualises and therefore, this analysis needs to be dismissed. This means that *barıta* is indeed a possessive-marked form of *barı* with the possessive suffix for third person *-(T)A*; *barı* is a vocalic stem and requires the allomorph *-TA*, consonantic stems use *-A*:

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[20] Allomorphy *ol* → *on-* is regular.

(38)
(a)   *ıt*   'dog'   →   *ıt-a*   <dog-PX3>   'his dog'
(b)   *taba* 'reindeer' →   *taba-ta*   <reindeer-PX3>   'his reindeer'
(c)   *barı* 'all'   →   *barı-ta*   <all-PX3>   'its allness'

   Note that *barıtın,* the form appearing in object function, is the expected accusative case-marked form:

(39)
(a)   *ıt-a*   <dog-PX3>   →   *ıt-ı-n*   <dog-PX3-ACC>
(b)   *taba-ta*   <reindeer-PX3>   →   *taba-tı-n*   <reindeer-PX3-ACC>
(c)   *barı-ta*   <all-PX3>   →   *barı-tı-n*   <all-PX3-ACC>

   Although PX3 *-ta* does not trigger any obvious semantic modification of the underlying quantifier *barı,* the possessive suffix is correlated with placement of the quantifier in postnominal position. From a historical perspective, and as already shown in the two preceding examples, *barıta* should be translated literally as 'its allness', in both subject and object functions:

(40)   ***ogo***   ***barı-ta***   *ah-ı*   *hie-bit-tere*
       child   all-PX3   food-ACC   eat-PSTII-3PL

       'All children have eaten the food.' [AAB I 21]
       (Lit: the child, its allness, the food have eaten)

(41)   *ogo*   ***uu-nu***   ***barı-tı-n***   *is-pit*
       child   water-ACC   all-PX3-ACC   drink-PST.RES.3SG
       'The child has drunk all the water.' [AAB I 19]
       (Lit: the child, the water, its allness has drunk)

   For reasons of exhaustiveness, some further details need to be discussed. The postnominal position of barıta is certainly unusual because postnominal modifers are otherwise rare in Dolgan. As postnominal position is highly unusual, one would perhaps try to assign *barıta* and case-inflected forms thereof to adjunct position (NP + its allness), and this could indeed be its historical origin.[21] Synchronically, there is sound syntactic and prosodic evidence demonstrating that *barıta* (and forms thereof) is not an adjunct but a

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[21] Comparison with my Tuvin notes where I elicited the same examples suggests another potential scenario which is mentioned for the sake of completeness. In instances where Tuvin *šuptu* 'all' is marked with PX3, the quantifier occurs in postnominal position as well and the structure of the NP is as follows: noun + all.PX3; however, quite often the quantified noun is encoded in the genitive case and the possessive-marked quantifier becomes the head, resulting in the following constellation: noun.GEN + all.PX3. As Dolgan (and Sakha) have lost the genitive case, compounds of the type noun + noun.PX3 are functional equivalents of adnominal possessive constructions in which e.g., Tuvin would use the genitive. If these two constructions indeed share a common origin, then Dolgan *barıta* would not have started as an adjunct; however, this question needs to be postponed for the time being.

postnominal quantifier. First, if *barıta* were an adjunct, one should be able to omit it in example (40). However, the resulting clause is ungrammatical; the verb shows plural agreement, but the argument is singular-marked. Due to the existence of similar examples to be discussed below, this interpretation must be discarded. Second, recorded examples from elicitation with *barıta* have the postnominal quantifier under the same intonation unit as the constituent it modifies. This adds further support to the fact that the quantifier is part of the NP and not an adjunct.

4.2.2. Postnominal *barıta* with syntactic subjects

Postnominal *barıta* following a syntactic subject is registered 22 times in Popov (2011). In 20 instances, it follows the head of the NP, as in:

(42)   ***hir***   ***barı-ta***   *čeber* [...]
       ground   all-PX3   clean.PRED.3SG
       '<u>All the ground</u> is clean...' [Popov 186]

In one example, the demonstrative *iti* 'this' functions as subject and serves as the head of the NP which is quantified by postnominal *barıta*:

(43)   ***iti***   ***barı-ta***   *buol-but-a*   *kıtıl-ga*   *tur-aaččı*
       this   all-PX3   become-PSTII-3SG   shore-DAT   stand-PTCP.PST

       tıataagı-lar   *karak-tar-ı-n*   *ińńi-ti-ger*
       tundra.people-PL   eye-PL-PX3-ACC   before-PX3-DAT
       'This all happened before the eyes of the tundra people standing on the shore.' [Popov 173]

Occasionally, *barıta* appears in a construction 'all different kinds of X':[22]

(44)   ***itte-te***   ***barı-ta:***   *et-e*   *tirii-te,*   *muoh-a...*
       different-PX3   all-PX3   meat-PX3   skin-PX3   antler-PX3
       '<u>All different kinds of things</u>: meat, skin, antlers' [Popov 130]

As for predicate/predicative agreement, a plural-marked NP followed by *barıta* triggers agreement in number with the predicate (twice) or a predicative (once) for a total of 3 out of 22 examples:

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[22] The third person possessive suffix on *itte* is referential and not possessive. In addition, the possessive suffix of second person is also used in Dolgan in this function, a Northern Samoyedic substrate influence (Siegl 2015b).

(45) **tıal-lar-a**   **barı-ta**   *bihieke*   *huok*   *dorgoot-tor-ton*
word-PL-PX3   all-PX3   1PL.DAT   not.exist   sound-PL-ABL

taks-ar   *bıhıı-laak*   *e-ti-lere*
come.out-PTCP.PRES   image-SOC   be-PSTI-3PL

'All words were like quickly appearing noise for us.' [Popov 160]

In 11 out of 22 examples, the NP is singular and the predicate/predicative is as well:

(46) *gini*   *d'ie-ti-ger*   **kergen-e**   **barı-ta**   *komu-llu-but*
3SG   house-PX3-DAT   family-PX3   all-PX3   gather-PASS-PTCP.PST

e-te
be-PSTI.3SG

'In her house, all her family had gathered.' [Popov 133]

Initially this constellation suggests that *barıta* does not seem to assign number to the subject, but this assumption is not without problems. The remaining examples (8 out 22) show that the semantics of *barıta* have at least some effect concerning predicate/predicative agreement; whereas the subject remains singular marked, the predicate/predicative shows plural, similar to the elicited examples presented in the introduction. These examples are interesting for at least one more reason. Five examples from this group have the Russian distributive *každyj* 'every' in their translation, and the distributive reading is indeed convincing for all of them:

(47) *tıa-ga*   **kihi**   **barı-ta**   *haŋa*   *kel-bit*   *ıald'ıt-ı*
tundra-DAT   person   all-PX3   new   come-PTCP.PST   guest-ACC

kıtta   *kepseet-iek-ter-i-n*   *bagaraa-ččı-lar*
with   speak-NMLZ-PL-PX3-ACC   want-HAB-3PL

'Every person in the tundra wants to talk with a newly arrived guest.' [Popov 143]

Additionally, three examples from this group have a singular-marked subject, but show semantic plural agreement with the predicate. The subject denotes kin and/or people for which an inherent plural value may be assumed:

(48) **uruu-ta**   **barı-ta**   *ostool-go*   *ah-ıı*   *olor-or*
relative-PX3   all-PX3   table-DAT   eat-CON   sit-PTCP.PRES

e-ti-lere
be- PSTI-3PL

'All her relatives are sitting eating around the table.' [Popov 157]

(49) *čaaj*   *ih-eet*   **kihi**   **barı-ta**   *tahaara*   *taksı-bıt-tara*
tea   drink-CON   person   all-PX3   outside   go.out-PSTII-3PL

'After having drunk tea, all people went outside...' [Popov 145]

(50) *Prahıı́nı̇k   buol-la,   kihi   barı-ta   tıataagı-lar*
      festivity   become-PSTI.3SG person all-PX3   tundra.people-PL

      hieraa   üŋküülee-čči   hir-der-i-ger   komu-lun-nu-lar
      xeiro   dance-PTCP.PST   place-PL-PX3-DAT gather-PASS-PSTI-3PL

      'The festivities began, all people gathered at the places to dance the xeiro dance of the tundra people.' [Popov 192]

Although examples (49) and (50) would allow a distributive 'every' reading, a collective interpretation is preferred.[23]

4.2.3. *barıta* as a predicative complement

There is a hapax legomenon in the database in which *barıta* appears as a predicative complement that requires mentioning. The encoded statement is generic and does not allow for any further semantic characterization:

(51) *taba   buo   barı-ta - d'ie,   taŋas,   as   onton*
      reindeer PTC   all-PX3 house   cloth   food   then

      ajannıır-ga   naada
      transport-DAT   necessary.PRED.3SG

      'A reindeer is everything (lit: all) - one needs it for housing, clothing, and food.' [Popov 152]

4.2.4. *barıta* promoted to subject

The remaining 20 examples for *barıta* show a pattern which is not attested in my fieldnotes. The postnominal quantifier appears in subject function with verbal and semi-verbal predicates. In contrast to *barı*, which requires further morphology in order to fulfill morphosyntactic subject requirements, *barıta*, which already is PX3 marked, does not. In 18 out of 20 instances, the verbal predicate (as in 52) or the semi-verbal predicative (as in 53) appears in the singular and agreement is syntactic. Again, a pluralising effect of *barıta* cannot be observed:

(52) *onton   barı-ta   hımnaa-bıt-a* [...]
      then   all-PX3   smile-PSTII-3SG

      'Then, <u>all</u> smiled...' [Popov 163]

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[23] This is supported by the Russian text which does not have a distributive reading either. Example (49) has the singular noun *rodnaja* 'relative/kin', and (50) has the plural *l'udi* 'people'.

(53) *taba-nı*   *kıtta*   **barı-ta**   *meene*
      reindeer-ACC   with   all-PX3   easy.PRED.3SG
      'With a reindeer, <u>everything</u> (lit: all) is easy.' [Popov 144]

The two examples with semantic agreement are reproduced below. Example (54) is a complex equative construction with an embedded relative clause. Although equative constructions are known for unusual behavior cross-linguistically (Stassen 1997:106ff), this isolated example does not allow any further analysis and counts as another hapax legomenon:

(54) ***iti***   **barı-ta**   *ehigi*   *uruu-lar-gıtı-n*   *kıtta*
      this   all-PX3   2PL   relative-PL-PX.2PL-ACC   with

      bil-s-er   *kihi-ler*   *ile*   *tıataagı-lar*
      know-REC-PTCP.PRES   person-PL   of.course   tundra.people-PL

      e-ti-lere
      be-PSTI-3PL

      'These all, the people acquainted with your relatives, were of course people of the tundra.' [Popov 160]

The other example, another hapax legomenon, shows plural on a nominalized verb expressing temporal-conditional adverbial modification.[24] The internal constituency within the adverbial clause is otherwise another equative:

(55) *en*   *ıstaada-g-ar*   **barı-ta**   *intinnik*   *taba-lar*
      2SG   herd-PX.2SG-DAT   all-PX3   such   reindeer-PL

      buollaktarına...
      be.COND.NMLZ.3PL

      'If <u>all in your herd</u> are such reindeer...' [Popov 178]

4.2.5. Summary

For postnominal *barıta* a pluralizing effect cannot be postulated. This is a marked difference in comparison to the prenominal quantifier *barı*. The few examples of *barıta* in which semantic agreement is attested are triggered by the semantics of the head and not by the quantifier. Although several examples allow a distributive interpretation, a distinctive grammatical construction which would favor distributive 'every' over collective 'all' readings could not be identified, and disambiguation remains impossible. It is

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[24] The segmentation of the nominalized verb is complicated because it contains several petrified morphemes and more specific segmentation is not feasible in this context. The plural allomorph *-tar (buollak**tar**ına)* proves that the category is indeed non-singular.

the semantics of a given clause and the reference to situational context which holds the key to successful decoding; morphosyntactic means do not contribute to disambiguation.

4.3. Quantification with *barıtın*

Popov (2011) contains 25 examples of postnominal *barıtın* with the argument occupying object function. Again, a pluralizing effect is not a prototypical property of the quantifier. In 20 out of 23 examples, singular appears with the postnominal quantifier :

(56) **itte-ni**   **barı-tı-n**   *ıjıtal-ıır*
     different-ACC   all-PX3-ACC   be.interested-PRES.3SG

     'He[PRO DROP] is interested in <u>all kind of things</u>.' [Popov 116]

As for the three instances with plural marking, an instructive pair of examples appears within a short stretch of text where the transportation of private belongings over a river is discussed. Whereas 'things' in (57) would allow a collective reading, the appearance of singular on the object is surprising because the possessor is plural and one obviously transports more than just one collectively owned thing over the river. Nevertheless, singular appears:

(57) **tahagas-pıt-ın   barı-tı-n**   *biir baru-nnan   ill-iek-pit* [...]
     thing-PX.1PL-ACC all-PX3-ACC   one crossing-INSTR carry-FUT-1PL

     'We will bring <u>all our things</u> with one boat ride (over the river)...'
     [Popov 168]

Several lines later, a plural form appears (example 58). Nevertheless, plural marking on the quantified lexical noun is certainly not triggered by the postnominal quantifier because the preceding example lacked plural. Therefore, pluralising must have been a contextual choice which does not allow any further interpretation at this moment:

(58) *oŋostu-but   luotka-ta* **tahagas-tar-ı-n   barı-tı-n**   *biir*
     make-PTCP.PST boat-PX3 thing-PL-PX3-ACC all-PX3-ACC   one

     baru-nnan   ill-ieg-e   d'ie-n   ogońńor
     crossing-INSTR carry-NMLZ-PX3 say-CON   old.man

     bert   üör-er   e-te.
     very   be.happy-PTCP.PRES   be-PSTI.3SG

     'The old man was happy that the boat he equipped will transfer all <u>the</u> <u>things</u> in (only) one crossing of the river.' [Popov 169]

Similar to *barıta*, which does not require additional morphosyntactic material to allow its appearance in subject function, *barıtın* can also appear as an object on its own. This is attested twice and exemplified by:

(59)   *bihigi*   **barı-tı-n**   *tıa*   *tuhunan*   *bil-ebit...*
       1PL   all-PX3-ACC   tundra   about   know-PRES.1PL

     'We know <u>all</u> about the tundra...' [Popov 112]

Finally, a short note on the distributive 'every' versus collective 'all' readings is in order. For three examples from this group, the Russian text has the distributive *každyj* 'every', yet only for two Dolgan examples does this interpretation look convincing. Example (60), which has distributive *každyj* in the Russian text, is collective in Dolgan – a the quantified object 'area, land, ground' is abstract.[25] No other convincing examples are attested:

(60)   *gini*   **uokrug**   **hir-i-n**   **barı-tı-n**   *bil-er*
       3SG   county   earth-PX3-ACC   all-PX3-ACC   know-PTCP.PRES

    e-te
    be-PSTI.3SG

    'He knew <u>all the county</u>.' [Popov 112]

Surprisingly, one of the two examples with an indisputable distributive reading belongs to the group of three tokens in which the object appears pluralized. This demonstrates, again, that a distributive versus collective interpretation has no morphosyntactic correlation which would allow disambiguation:

(61) [...] *kas*   *baar*   **huruup-tar-ı-n**   **barı-tı-n**   *bigee-bite*
         how.many   exist   screw-PL-PX3-ACC   all-PX3-ACC   test-PSTII-3SG

    '... and he tested <u>every screw</u> (lit: all screws).' [Popov 144]

Having discussed *barıtın,* the following picture emerges. First, postnominal *barıta* does not assign number to the head noun and singular is default. Occasionally, plural is attested, but number-marking is not triggered by the postnominal quantifier. Second, concerning a distributive versus collective interpretation, distributive readings of *barıtın* are vastly outnumbered by collective ones, but a morphosyntactic correlation which would make one reading more likely than the other could not be identified.

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[25] The Russian translation is *on znal každyj ugolok okruga* 'He knew every corner of the county' and contains a lexical collocation which is absent in Dolgan.

4.4 Varia: *barıta* in adjunct position

In this section, the few instances of *barıta* appearing in adjunct position are presented and discussed. Currently, all of them are instances of hapax legomena.

In example (62), the postnominal quantifier is inflected for dative, as is the noun it quantifies. The semantics clearly refer to a collective reading: 'all ~ whole'[26]:

(62)   *haŋa*   *d'ie-n*   *aat-taak*   *olok*   **tıa-ga**   **barı-tı-gar**
       new   say-CON   name-SOC   life.NMLZ   tundra-DAT   all-PX3-DAT

       tij-bite
       spread-PST.RES.3SG

       'The so-called new life started to spread <u>in the whole tundra</u>.'
       [Popov 189]

Example (63) has *barıta* in a postpostional phrase with *kıtta* 'with'. The postpositional phrase itself encodes coordination at phrase level. The dependent is formally singular-marked and a collective reading emerges:

(63)   **tahagas-pıt-ın**   **barı-tı-n**   *kıtta*   *luotka-bıt-ın*   *bejebit*
       thing-PX.1PL-ACC   all-PX3-ACC   with   boat-PX.1PL-ACC   self.PX.1PL

       tas-pıp-pıt
       carry-PST.RES-1PL

       'We had to carry our boat with <u>all our things</u>.' [Popov 121]

In two examples, *barıta* is inflected for instrumental case, which appears embedded in an equative clause. In both instances a potentially quantifiable entity is missing and a collective reading emerges:

(64)   *gini*   **barı-tı-nan**   *boskuoj*   *kihi*   *e-te ...*
       3SG   all-PX3-INSTR   beautiful   person   be-PSTI.3SG

       'He was <u>with all</u> a good (lit: beautiful) person...' [Popov 114]

4.5. Why *barıta* is not a floating quantifier

As already stated in Section 1, *barıta* should not be analyzed as a floating quantifier, and in this section the central arguments against such an interpretation are presented. The crucial counter-argument against a floating quantifier interpretation is morphological. In order to appear postnominally, *barı* requires additional possessive marking and it is the possessive suffix

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[26] The modified noun *tıa* 'tundra' does not allow pluralization.

which is responsible for appearance in postnominal position.[27] In languages which allow floating quantifiers (e.g., English, French, Forest Enets), specialized morphology is not required but for Dolgan, specialized morphology is the syntactic trigger. Although the postnominal modifier could be analysed as an adjunct meaning 'its allness', evidence from intonation and agreement with the predicate or predicative have shown that *barıta* and inflected forms thereof are part of the noun phrase they modify. Another crucial observation needs to be added to this. In languages such as English, it is not clear whether a floating quantifier should be considered part of the noun phrase which it is dislocated from:[28]

(65)

(a)   *All hunters returned from the tundra.*

(b)   *The hunters returned all from the tundra.*

For Dolgan, this question is not problematic. Firstly, the postnominal quantifier and the quantified noun are under the same intonation contour, suggesting that they belong together. Second, *barıta* and case-inflected forms thereof show concord with the noun they modify; this is the only instance of concord which appears to exist in Dolgan. Concord signals tight syntactic linking and thereby a privileged morphosyntactic relation between the noun and the quantifier. This offers additional proof that both elements appear in the same constituent; for convenience, three examples are now given:

(66)
(a)   **balık-čıt**   **barı-ta**   *korguj-but*   *e-te*
        fish-ACT   all-PX3   be.hungry-PTCP.PST be-PSTI.3SG
        'All fishermen were hungry ~ Every fisherman was hungry.'
        [AAB I 20]
(b)   *ogo-lor* **ah-ı**   **barı-tı-n**   *hie-bit-tere*
        child-PL food-ACC   all-PX3-ACC   eat-PSTII-3PL
        'The children have eaten all food (lit: ...the food all of it have eaten).'
        [AAB I 21]

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[27] An anonymous reviewer mentioned that in Sakha, even *barı* can appear as a floating quantifier. However, in the corpus on contemporary Dolgan I am currently compiling, this is not found. In the folklore collection DF some potential yet isolated instances are attested as in the following example from 1964: *kötördör barı kötüteleen kaalbıttar* 'All the birds started to fly away.' [DF 6: 190].

[28] See Szabolcsi (2010: 129ff) and the references quoted there.

(c)   *haŋa*   *d'ie-n*   *aat-taak*   *olok*   **tıa-ga**   **barı-tı-gar**
       new   say-CON   name-SOC   life.NMLZ   tundra-DAT   all-PX3-DAT

       tij-bite
       spread-PST.RES.3SG

       'The so-called new life started to spread <u>in the whole tundra</u>.'
       [Popov 189]

4.6. Summary

The analysis of both quantifiers *barı* and *barıta* has revealed the following properties. First, prenominal *barı* triggers plural by default. When *barı* quantifies a syntactic subject, agreement in number with the predicate or the predicative appears almost as a default. In contrast, postnominal *barıta* co-appearing with subjects does not have a pluralizing effect. This applies even to instances in which *barıta* functions as subject. For the few examples with plural reference, agreement is triggered by lexical semantics, but not by syntax. Second, case-inflected variants of *barıta* do not show a pluralising effect either. Although the data for this study is quantitatively restricted, the attested distribution points toward some kind of subject-object asymmetry. Plural-marking on subjects is the default with prenominal *barı.* As for postnominal *barıta*, some tendencies for plural marking are retrievable; however, in these instances predicate/predicative agreement is driven semantically, not syntactically. Pluralising of arguments in object and adjunct functions is clearly less usual for either prenominal *barı* or case-marked forms of postnominal *barıta.* Whether this trend is a syntactic or a semantic phenomenon is currently not clear due to the absence of sufficient examples of *barı* quantifying syntactic objects. This would require the compilation of a larger corpus for further investigation. Such a corpus would be needed to minimize animacy effects which underlie the current data set. In the present corpus, count nouns and mass nouns appear more frequently in object function, whereas nouns ranking high on the animacy hierarchy tend to appear in subject function. Despite this, the picture is somehow disturbed by another crucial property of Dolgan semantics: mass and collective interpretations are not necessarily dependent on formal plural-marking and in fact do not necessarily coincide with syntactic function either. Historically, this appears to be a property of Turkic in general[29] and requires some additional discussion with Dolgan data, here exemplified with the noun *mas.* As a count noun, *mas* is the translational equivalent of 'tree' and allows for plural morphology:

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[29] This behavior is mentioned as a property of Turkic in general (e.g., Dmitriev 1956; Johanson 1998: 38, 51).

(67)
(a)   *huop-ka   mas   üüń-er*
        hill-DAT   tree   grow-PRES.3SG

        'A tree grows on the hill.' [VB I 46]

(b)   *mas   ih-i-ger   leŋkei   koroon-nook*
        tree   inside-PX3-DAT   owl   cave-SOC

        'In the tree is an owl hole.' (Lit: owl with cave) [GSV I 61]

(c)   *d'ie   attı-tı-gar   mas-tar   üüń-eller*
        house   side-PX3-DAT   tree-PL   grow-PRES.3PL

        'Trees are growing around the house.' [GSV I 59]

On the other hand, *mas* allows for a translation as a mass noun 'wood' which then blocks plural morphology:

(68)
(a)   *mas-ta   egel*
        wood-PART   bring.IMP.2SG

        'Bring some wood!' [AAB II 46]

(b)   *kihi   barı-ta   mah-ı   egel-bit-tere*
        person   all-PX3   wood-ACC   bring-PSTII-3PL

        'All persons brought the firewood.' [AAB I 22]

Furthermore, *mas* allows for a third translation as 'forest'. In this instance, mas is used as a collective noun where the lexeme again only appears in the singular. In both examples below, a literal translation 'inside the tree' does not make any sense, although only one tree is actually referred to:

(69)
(a)   *mas   ih-i-nen   kel-en   ih-en   gini*
        tree   inside-PX3-INSTR   come-CON   go-CON   3sg

        kılla-m-mıt
        hunt.wild.reindeer-REFL-PST.RES.3SG

        'While going through the forest, he hunted wild reindeer.'
        [NNA I 87]

(b)   *mas   ih-i-ger   ıt   baar*
        tree   inside-PX3-DAT   dog   exist.PRED.3SG

        'There is a dog in the forest.' [AAB II 36]

Finally, although both *barı* and *barıta* allow collective 'all' and distributive 'every' readings, a morphosyntactic construction or distinct agreement patterns which would favor one interpretation over the other are not evidenced. This means that semantic vagueness is not disambiguated morphosyntactically and the intended reading needs to be inferred contextually.

5. Variation in other domains of quantification and agreement

Having shown that plurality is triggered by the prenominal quantifier *barı,* but not by postnominal *barıta,* how can the few instances of *barıta* with a pluralizing effect on subjects be explained? As already shown above, *barı* and *barıta* differ not only in respect to their position within the NP, but also when functioning as subject. The postnominal quantifier *barıta* contains one of the required morphosyntactic elements (case, number, possessive suffix) which allows it to serve an argument function, namely the PX3 maker:

(70)

(a)   *gini   d'ie-ti-ger   **kergen-e   barı-ta**   komu-llu-but*
        3SG   house-PX3-DAT   family-PX3   all-PX3   gather-PASS-PTCP.PST
        e-te
        be-PSTI.3SG

        'In her house, <u>all her family</u> had gathered.' [Popov 133]

(b)   *onton   **barı-ta**   hımnaa-bıt-a* [...]
        then   all-PX3   smile-PSTII-3SG

        'Then, all smiled...' [Popov 163]

In contrast, prenominal *barı* needs to attract further morphosyntactically relevant morphology in order to serve as subject:

(71)

(a)   ***barı   oloktook-tor**   ürek   kıtıl-ı-gar   komu-llu-but-tara*
        all   camp-PL   river   shore-PX3-DAT   gather-PASS-PSTII-3PL

        'All camps gathered on the shore of the river.' [Popov 172]

(b)   ***barı-lar-a**   mas   egel-bit-tere*
        all-PL-PX3   wood   bring-PSTII-3PL

        'All brought fire wood.' [AAB I 21]

It appears that the predication frame to which *barı* and *barıta* belong seems to impose constraints on agreement. Whereas *barı* triggers plural, *barıta* does not. This behavior seems to be preserved when the modifiers appear in subject function. Even though a number of examples are attested in which *barıta* triggers semantic agreement, all examples in the assembled database show that lexical semantics are responsible for semantic agreement; all examples in this group (47), (48), (49), (50), (54), (55) are count nouns and although they are formally singular, they refer to a set of people or animals, and are semantically non-singular. However, this behavior triggers a further question. Given that mass and collective interpretations seem to cluster around nouns formally unmarked for number, does the quantifier (either prenominal *barı* or postnominal *barıta* and its case-inflected forms) contribute to semantic agreement at all? This has already been answered positively for *barıta* above for example (40), repeated here. If one were to remove *barıta,* the clause would

become ungrammatical due to the agreement mismatch between the singular-marked subject *ogo* 'child' and the predicate. This means that it is the quantifier which is responsible for semantic agreement, and not the syntactic subject:

(40) **ogo**   **barı-ta** *ah-ı*   *hie-bit-tere*
      child   all-PX3   food-ACC   eat-PSTII-3PL
      'All children have eaten the food.' [AAB I 21]
      (Lit: the child, its allness, the food have eaten)

Variation in number-marking and predicate/predicative agreement is not restricted to *barı* and *barıta* alone; this appears to be a more common problem in Dolgan, and thus needs to be sketched here shortly, although a detailed account remains beyond the scope of this article. For example, the quantifier *elbek* 'much, many' is compatible with both singular and plural marking as well. If the quantified noun receives plural marking, the predicative shows obligatory agreement:

(72)
(a)   *mińieke*   *baar*   *elbek*   *tıı*
      1SG.DAT   exist.PRED.3SG   many   boat
      'I have many boats.' [AAB I 1]

(b)   *ehieke*   *elbek* *tıı-lar* *baallar*
      2PL.DAT   many   boat-PL   exist.PRED.3PL
      'You have many boats.' [AAB I 1]

Furthermore, noun phrases quantified with numerals are attested with either singular or plural marking on the noun but predicate/predicative agreement prefers plural. Again, parallels with *barı*, and especially *barıta*, are obvious:

(73)
(a)   *iti* *ikki* *ıt*   *tahaara* *uruku-ttan*   *hüürel-iller*
      this two   dog   outside   long.time-ABL   run-PRES.3PL
      'These two dogs have been running on the street for quite a while already.' [AAB 12]

(b)   *hette* *eder*   *čeelkee* *taba-lar* *on-no*   *hüürel-ii*
      seven   young   white   reindeer-PL there-LOC   run-CON
      hıld'-allar
      move-PRES.3PL
      'Seven young white reindeer are running over there.' [AAB 23]

As mentioned in Section 1, Turkic is classified as having 'the tendency to avoid two plural markers very close to each other' (Johansson 1998: 53) and against this background, the Dolgan preference for syntactic agreement is noteworthy because it violates this Turkic tendency. However, this cross-Turkic tendency neither covers nor explains the attested Dolgan pattern in

which a quantified noun phrase remains singular, yet agrees in number with its predicate. As a matter of fact, this pattern is already attested in the oldest Dolgan texts from the 1930s and therefore it can hardly be classified as a recent development due to increasing bilingualism in Russian:

(74)

(a)   *ikki*   *kihi*   *bul-but-tar*
        two   man   find-PST.RES-3PL

        'Two men have found them.' [DF 28: 326]

An illustrative example with another potential postnominal quantifier *bütünnüü* 'all' from a text from 1931 shows further intriguing instances.[30] In the first example, the quantified NP remains singular but the predicate shows plural agreement (75a). In the other example (75b) a few lines later, the noun is quantified, but now appears in the plural, which further triggers predicate agreement:

(75)

(a)   *d'ie*   *ih-i-ger*   *kiir-bit-e*   *hahıl*   *bütünnü*
        house   inside-PX3-DAT   enter-PSTII-3SG   fox   all

        muńńu-s-t-an   *bar-aan*   *kır-a*   *hıt-allar*
        gather-REC-CAUS-CON   go-CON   shamanize-CON   lie-PRES.3PL

        'He entered the house; all the foxes had gathered to follow a shamanic séance.' [DF 9: 198]

(b) [...] *bu*   *hahıl-lar-ıŋ*   *bütünnüü*   *d'e*   *külüs-tü-ler*
        this   fox-PL-PX.2SG   all   PTC   laugh-PSTI-3PL

        'All these foxes were laughing.' [DF 9: 198][31]

This shows that the agreement constellation SUBJECT$_{SINGULAR}$ QUANTIFIER PREDICATE$_{PLURAL}$ is most certainly not a new feature in Dolgan, even though the quantifier *bütünnüü* is no longer attested in contemporary Dolgan. This suggests that semantic agreement has resulted in syntactic agreement. Evidence for a contrary development in which syntactic agreement would be given up in favor of semantic agreement is not available in the database assembled for this study. This leaves the quantification pattern of prenominal *barı* triggering plural as the only candidate with a potential answer at hand:

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[30] In the texts from the 1930s collected by the Soviet ethnographer A. Popov, *bütünnüü* frequently appears instead of *barı*. This lexeme is most likely related to *bütün* 'whole, completely' (Stachowski 1993:69) but *bütünnü* is not mentioned in Stachowski (1993, 1998). It is also absent in Popov (2011) and my field notes.

[31] The possessive suffix for 2nd person singular marks a re-activated topic (see Siegl 2015b).

recent Russian influence.[32] In DF, examples for prenominal *barı* quantifying syntactic subjects can be encountered without a pluralizing effect on the noun even though predicative agreement may, and often does, show plural, as in this example from a narrative recorded in 1964:

(82)	*barı*	*köt-ör*	*kür-een*	*köt-ön*	*is-pit-ter*
	all	fly-PTCP.PRES	run.away-CON	fly-CON	go-PST.RES-3PL

'All the flying ones (birds) flew away.' [DF 11: 204]

6. Conclusions

This study focused on the syntax and semantics of the Dolgan quantifiers *barı* and *barıta* as encountered in field data and in a recent Dolgan novel. It suggests the following results. Prenominal *barı* triggers plural on subjects by default. Postnominal *barıta* quantifying subjects shows some affinity with plural-marking but in these instances, number assignment appears to be motivated semantically, not syntactically. Arguments in object and adjunct functions are less commonly pluralised by either prenominal *barı* or case-marked forms of postnominal *barıta*, suggesting that in such instances pluralisation is triggered semantically, but not syntactically. In several instances in which the postnominal quantifier *barıta* appears with syntactic subjects, semantic agreement between a singular-marked subject and a plural-marked predicate or predicative is attested. In such instances, postnominal *barıta* appears to have a pluralizing function on the predicate/predicative, but this is clearly not the default. As data extracted from a major Dolgan folklore collection shows, this and similar syntactically unusual constellations were already attested in the oldest written materials.

Although the database for this study was quantitatively restricted, extracted data suggests the existence of a kind of subject-object asymmetry. For the time being, it remains unclear whether this asymmetry is indeed syntactically motivated as interference with semantics (notably the count versus mass noun distinction clustering around different syntactic functions) cannot be studied in more detail due to the absence of a sufficiently large corpus. What makes Dolgan quantification intriguing is its tight interaction with syntactic function where subjects appear to occupy a privileged position and co-occur with plural morphology, notably *barı*. This suggests that a pluralizing effect is not a prototypical property of the quantifier itself.

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[32] A similar development has occurred in the co-territorial Samoyedic languages Forest Enets with *oka* 'much' (Siegl 2013: 227).

Data

e.g., [AAB] = Data from elicitation

[DF] = Jefremov, P. E. (ed.) 2000. *Fol'klor Dolgan*. Pamjatniki fol'klora narodov Sibiri i dal'nego vostoka 19. Novosibirsk: Izdatel'stvo instituta arxeologii i etnografii SO RAN. [text: page]

[Popov] = Popov, N. A. 2011. *Avaam bies ürekterin üstün*. Dudinka.

Glossing

e.g., 3PL	pronoun
e.g., 1SG.DAT	inflected pronoun
e.g., .3PL	verb suffix
e.g., -PX.1SG	possessive suffix
e.g., -PRED.1SG	predicative suffix
=Q	interrogative clitic
ABL	ablative case
ACC	accusative case
ACT	action nominalizer
ADJ.MASC.SG	adjective masculine gender singular
ADV	adverbializer
CON	converb
DAT	dative case
FUT	future tense
INSTR	instrumental case
LOC	locative case
PART	partitive case
PASS	reflexive-passive
PL	plural
PRES	present tense
PST.RES	resultative past tense
PSTI	first past tense
PSTII	second past tense
PTCP.PST	past participle
REC	reciprocal voice
REFL	reflexive voice
SOC	sociative

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