Copular verbs and copula drop in Tundra Nenets

Veronika Hegedűs[1], Nikolett Mus[1] and Balázs Surányi[*1,2]

[1]Research Institute for Linguistics Hungarian Academy of Sciences
[2]Pázmány Péter Catholic University

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1 Introduction

1.1 Background: general

- Copular sentences exhibit rich and multifaceted – and in many respects still ill-understood – morphosyntactic variation across languages. Parameters of both cross-linguistic and intra-linguistic variation in copular clauses:

  - **verbal** copulas vs **non-verbal** copulas:
    e.g. English has a verbal copula (*be*), while Russian has a verbal copula (*byt'*) as well as a pronominal one (*eto*).

  - the **number** of different copulas within a language:
    e.g. English is a language with one verbal element *be*, while Tundra Nenets has three distinct morphological forms corresponding to English *be*, all of them verbal (*ŋa-*, *me-*, *tańa-*)

  - the **distribution** of copulas across copular clause types:
    e.g. Hungarian uses *van* 'be' in copular sentences, in existential constructions and with predicative possessives, while English uses *be* in copular and existential sentences (and uses *have* for predicative possessives).

  - the licensing conditions of a **'zero copula'**, i.e., the possibility of absence of an overt copula:
    e.g. English always has overt *be* in full clauses, Hungarian allows for zero copula (has "nominal sentences") with nominal predicates in present tense indicatives with a third person subject.

[*]hegedus.veronika@nytud.mta.hu, mus.nikolett@nytud.mta.hu, suranyi.balazs@nytud.mta.hu

1.2 Background: Tundra Nenets

- Tundra Nenets is an endangered indigenous language that belongs to the Samoyedic branch of the Uralic language family. It is spoken in the Russian Federation, in the North-Eastern part of Europe and in the North-Western part of Siberia by c. 20,000 speakers.

- According to previous literature on Tundra Nenets (TN):

  - Three verbal copulas are used in clauses with non-verbal predicates:
    ŋæ-, *me-*, *tańa-*.
  - Their distribution seems at first sight to be determined by grammatical factors:
    * *ŋæ-* is the copula used with nominal, adjectival and numeral predicates, as well as, with locative predicates with inanimate subjects;
    * *me-* is only used in locative clauses with animate subjects;
    * *tańa-* appears in existential sentences and in predicative possession (see e.g. Nikolaeva 2014).

- There are copula-less sentences as well (often referred to as nominal sentences).

- Novel data show, however, that the distinction between existential/possessive vs locative copular sentences in their use of different be-verbs is not as clear-cut as previous descriptions suggest.

- Note: The Tundra Nenets data we present are from:
  - a pilot corpus that (dominantly) represents the written version of the language. It contains c. 210,000 tokens;
  - consultations with a native speaker (Khadry Okotetto) from the Yamal region.

1.3 Aims

- We focus here on two issues concerning Tundra Nenets:

Q1: What is the distribution of BE-verbs across different constructions in TN?

Q2: What are the conditions for no BE-verb to be present?

- In order to address **Q1** and **Q2**, we need to explore across the different copular clause types:

  - the properties of the subject, and
  - the properties of the predicate.

2 BE-verbs across constructions in Tundra Nenets

- BE-verbs in Tundra Nenets:

ŋæ-, *me-*	(and their negative forms *ńi- ŋaʔ/meʔ*)	[trad. copula]
tańa-	(and its negative form *jaŋko-*)	[trad. existential verb]

2.1 The copulas *ŋæ-* vs *me-*

2.1.1 [±animate] subjects with PP predicates

- *ŋæ-* has a broader distribution: the opposition is only present in copular clauses with PP predicates, otherwise *ŋæ-* is used.

- The use of *ŋæ-* vs *me-* is dependent on the animacy of the subject (Nikolaeva 2014, 263; Tereshchenko 1973, 201–202):

(1)   kniga tolᵒ-h   ŋilᵒna **ŋa**.
      book table-GEN under be
      'The book is under the table.' (Nikolaeva 2014, 263)   [inanimate subject]

(2)   weńako ńa-kana **meᵒ**.
      dog   tent-LOC be
      'The dog is in the tent.' (Nikolaeva 2014, 263)   [animate subject]

(3)   məń tolᵒ-h   ŋilᵒna **me-dᵒm**.
      I   table-GEN under be-1SG
      'I am under the table.' (Nikolaeva 2014, 263)   [animate subject]

2.1.2 A note on animacy

- Animacy is a gradient hierarchy that does not depend on the biological attributes of the entity, but on "the speaker's identification or empathy" with this entity (Kuno & Kaburaki 1977, 628), or "to what extent speakers treat referents linguistically *as if they were animate*" (Rosenbach 2008, 154).

(4)   taʔ   ti-ʔ   xańana **me-ʔ**?
      summer reindeer-PL where   be-3PL
      'Where are the reindeer during the summer?' (Vanuyto 2012, 36)

(5)   ťiki xaĺa xańana **ŋa**?
      that fish where   be.3SG
      'Where is that fish?' (Vanuyto 2012, 34)

2.2 *ŋæ-/me-* vs *tańa-*

2.2.1 Literature

- The distribution of *ŋæ-/me-* vs *tańa-* is determined by grammatical factors:
  - *ŋæ-* is found in (copular) sentences with nominal, adjectival and numeral predicates, and with (formally) locative predicates (where it alternates with *me-*).

  - *tańa-* is used in existential sentences and in predicative possession
    (see Kupriyanova et al. 1957, Almazova 1961, Tereshchenko 1973, Nikolaeva 2014)

(6)   məńᵒ toxolko-da-mᵒd   ŋæ-ŋku-dᵒm.
      I   study-IMPF.PART-1SG be-FUT-1SG
      'I will be a student.' (Nikolaeva 2014, 255)   [nominal predicate]

(7) wæwa-dᵒm ŋæ-ŋku-dᵒm.
bad-1SG   be-FUT-1SG
'I will be bad.' (Nikolaeva 2014, 252)   [adjectival predicate]

(8) tolᵒ   komnata-xᵒna ŋa.
table toom-LOC   be
'The table is in the room.' (Nikolaeva 2014, 263)   [locative predicate]

(9) pedara-xᵒna tudako-ʔ   təńaᵒ-ʔ.
forest-LOC   mushroom-PL exist-3PL
'There are mushrooms in the forest.' (Nikolaeva 2014, 251)   [existential]

(10) məńᵒ weńako-ḿi təńa.
I   dog-1SG   exist
'I have a dog.' (Nikolaeva 2014, 250)   [predicative possession]

Initial generalizations based on data in the literature:

⇒ only ŋœ-/me- can appear in copular/locative sentences with definite subjects

⇒ tańa- is restricted to clauses with an indefinite (non-specific) subject/theme element

Nominal predicates	Locative predicates	Existential sentence	Predicative possessive
ŋœ-	ŋœ- / me-	tańa-	tańa-

2.2.2   Revising the generalizations

New observation 1: Existential and possessive sentences (usually containing *tańa-*) can also contain the verbal copulas *ŋœ-* and *me-*, i.e., *ŋœ-* and *me-* have a broader distribution than so far assumed.

Existential clauses:

- with *tańa-* (the "expected" pattern)

(11) ŋileka-ʔ tańa-wi-ʔ.
devil-PL be-INFER-3PL
'There were devils.' (Yangasova 2001)

(12) labe-kana xasawa tańa.
room-LOC man   be.3SG
'There is a man in the room.'

- with *ŋœ-* and *me-* (the "unexpected" pattern)

(13) t́ika-n   ŋile-da   śudba ja-ʔ   śi ŋae-wi.
that-GEN under-POSS3SG giant land-GEN hole be-INFER.3SG
'Under that there was a large hole in the ground.'
(Pushkareva & Khomich 2001: 128)

(14) skafxa-ʔ   ḿuńa ŋobkad ńoxol ŋa.
drawer-GEN inside often   dust be-3SG
'There is often dust inside of the drawer.'

(15) labe-kana xasawa me.
      room-LOC man   be.3SG
      'There is a man in the room'

Predicative possessives:

- with *taŋa-* (the "expected" pattern)

(16) wesako-ʔ   xaĺe(-da)   taŋa.
      old.man-gen fish(-POSS3SG) be.3SG
      'The old man has fish.'

(17) maŋ ŋu-w   taŋa.
      1SG child-POSS1SG be.3SG
      'I have a child.' (Pushkareva & Kohmich 2001, 256)

- with *ŋœ-* and *me-* (the "unexpected" pattern)

(18) pædara-ʔ ŋiĺeka-ʔ ŋaxarʔ ŋe   ŋu-da   ŋæ-wi.
      forest-GEN devil-GEN three   woman child-POSS3SG be-INFER.3SG
      'The Spirit of the forest had three daughters.' (Yangasova 2001, 25)

(19) ŋat́seki-ʔ ŋiśa(-da)   me.
      child-gen father(-3SG) be.3SG
      'The child has a father.'

⇒ *ŋœ-/me-* is an alternative to the so-called existential verb *taŋa-* in these contexts

New observation 2: Locative sentences with a definite subject, i.e., copular clauses with a PP/adverbial predicate, can contain the so-called existential verb *taŋa-*.

Locative copular clauses:

- with *ŋœ-* and *me-* (the "expected" pattern)

(20) t́uku xasawa labe-kana me.
      this man   room-LOC be.3SG
      'This man is in the room.'

(21) Q: kŋiga stol   ŋiŋa ŋa?
         book table on   be.3SG
         'Is the book on the table?'
      A: kŋiga stol   ŋi-ŋa ŋi   ŋa-ʔ,   polka ŋi-ŋa ŋa
         book table on   NEG.AUX.3SG be-CNG shelf on   be.3SG
         'The book is not on the table, it is on the shelf.' (EL 2012)

- with *taŋa-* (the "unexpected" pattern)

(22) t́uku xasawa labekana   taŋa.
      this man   room-LOC be.3SG
      'This man is in the room.'

(23) ŋaŋ-ŋiʔ   toĺ-ŋiʔ   ŋiŋa taŋa.
      bread-POSS1SG table-GEN-POSS1SG on   be.3SG
      'My bread is on my table.' (Narana Ngaerm 1999)

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(24)   Saša   labe-kana   tańa.
       Sasha room-LOC be.3SG
       'Sasha is in the room.'

- The appearance of *tańa-* in this grammatical environment of regular assertive locative/locational copular sentences has not been described before.

- The existence of the "unexpected" is corroborated by examples noted by Wagner-Nagy & Viola (2009:140-141) involving the negated counterpart of *tańa-* occurring in negated existential/possessive and negated locative sentences:

(25)   ńa-waʔ   t́ukona jaŋgu.
       friend-1PL here   not.exist.3SG
       'Our friend is not here.' (Wagner-Nagy & Viola 2009: 140)

2.3   Interim summary

- Our corpus and questionnaire data show that the division of labor between *ŋœ-/me-* and *tańa-* is not as straightforward as described before: Both *ŋœ-/me-* and *tańa-* seem to be available in locative copular sentences, existential sentences and predicative possessives (including both affirmative and negative forms).

Nominal predicates	Locative predicates	Existential sentence	Predicative possessive
ŋœ-	*ŋœ- / me- / tańa-*	*ŋœ- / me- / tańa-*	*ŋœ- / me- / tańa-*

- The factors governing the choice between the two verbs are to be explored: We intend to test their possible interaction with focusing on the verb, as well as the word order options.

- There seems to be some interaction with word order:
  - Existential sentences tend to show LOC S V order; when *ŋœ-* appears in such sentences (with non-specific subjects), it appears with the same order
  - Copular sentences with specific/definite subjects tend to have S LOC V order; when *tańa-* appears in such sentences, it appears with the same order
  - The influence of Russian on the originally stricter SOV (S LOC V) order may be shifting the distinction between copular sentences (with the structural subject as the logical subject) and existential sentences from one based on choice of verbal predicate to one marked by a difference in word order.

3   Copula drop

3.1   Copula drop with Nominal predicates

- Tundra Nenets **licenses copula omission with nominal, adjectival and numeral (=Nominal) predicates**.

(26)   t́uku tu ŋano.
       this fire boat.3SG
       'This is a steamer.' (Okotetto 1998, 5)

(27) t́uku ŋano ŋarka.
　　　 this boat big.3SG
　　　 'This boat is big.' (Okotetto 1998, 83)

(28) ŋawar ŋoka.
　　　 food   many.3SG
　　　 'There is a lot of food' (lit. 'The food is much.'; Pushkareva & Khomich 2001, 116)

- Copula omission is **independent of the number and person of the subject**: it is attested in all numbers and persons.

(29) mań Jadne wesako-dmʔ
　　　 1SG Yadne old.man-1SG
　　　 'I am the old Yadne.' (Labanauskas 2001, 135)

(30) mań ŋarka-dmʔ
　　　 1SG big-1SG
　　　 'I am an adult/I am big.' (Orlova et al. 1996, 74)

(31) t́uko-xona tu ŋano-ʔ ŋoka-ʔ
　　　 this-LOC   fire boat-PL many-3PL
　　　 '*lit.* The steamers here are many.' (Okotetto 1998, 64)

- The **copula is omitted** not only in the present tense but also **in the past tense**:

(32) ńenej wada uroka-waʔ   sawa-ś.
　　　 Nenets word lesson-POSS1PL good-3SG.PST
　　　 'Our Nenets lesson was good.' (Narana ngaerm, 1998)

- However, the **copula is obligatory when the predicate is future-marked** (33).

(33) t́uku jaĺa-ʔ   num-da   sawa ŋæ-ŋku.
　　　 this day-GEN weather-POSS3SG good be-FUT.3SG
　　　 'The weather will be good today.' (Vanuyto 2012, 63)

- Whether future marking in TN is tense-marking (Nikolaeva 2014) or not (Hajdú 1968; Salminen 1997) has been a controversial issue, and we find the arguments against its Tense status more conclusive than those against it.

- Copula omission in sentences with Nominal predicates is affected by the aspectual and mood properties of the predication: **in any (marked) aspects and non-indicative moods the copula must be overt**.

(34) t́uku jaxa wæwa ŋæ-wi.
　　　 this river bad   be-INFR.3SG
　　　 'This river must have been bad.' (Lar & Pushkareva 2001, 141)

(35) mań ŋarka xarda-xana me-na-dm.
　　　 1SG big   city-LOC   be-PTCP.IPFV-1SG
　　　 'I live in a big city.' (Nikolaeva 2014, 261)

- Copula omission is also **impossible in negated sentences**: negation is expressed by a negative auxiliary, which selects a nonfinite form of the verb (in copular clauses: the copula). More generally, the copula cannot be dropped in any syntactic context in which it must appear in a **non-finite** form.

(36)   mań ŋardaĺo-dm   ńi-dm   ŋa-ʔ.
         1SG Ngardalyo-1SG NEG.AUX1SG be-CNG
         'I am not Ngardalyo.' (Labanauskas 2001: 66)

- NOTE: Whenever copula omission is possible, it is obligatory.

Copula Drop Generalization 1: In clauses with a Nominal predicate no copula appears if the only inflections an overt verbal copula would bear are tense and subject agreement.

- The copula cannot be absent in **locative sentences**, or in sentences in which the copula is complemented by an **ordinary adverb**. ⇒ This is because neither ordinary adverbs nor locatives are Nominal: they cannot take number and case markers and they cannot be modified by adjectives (Nikolaeva 2014, 50–51, 186–187).[1]

(37)   kńiga stol ńińa ŋa.
        book table on   be.3SG
        'The book is on the table.' (EL 2012)   [locative clause]

(38)   ťuku taŕem ŋa.
        this so   be.3SG
        'This is how it is.' (VT 2002)   [ordinary adverb]

Nominal predicates can morphologically bear both tense and subject agreement inflections (and they generally must do so in the absence of the copula), while locative predicates and ordinary adverbs cannot.

3.2   An apparent exception: The case of predicative possession

- In **possessive clauses** *tańa-* is not omitted.
- This is perhaps contrary to expectations since both the possessum and the possessor are Nominal, and if one of them is the subject, the other is the predicate, we would expect copula drop.

(39)   mań ńe   ńa-ńi   tańa.
        1SG woman friend-POSS1SG be.3SG
        'I have a wife.' (Labanauskas 2001, 63)

(40)   ťeda-w, ti-daʔ   tańa-ʔ.
        now-AFF reindeer-POSS.PL.3SG be-3PL
        'Now, he had reindeer.' (Nikolaeva 2014, 476)

- The possessum displays person and number agreement with *tańa-* and possibly animacy agreement with *ŋœ-/me-*

(41)   a. wesako-ʔ   xaĺe(-da)   ŋa.
            old.man-gen fish(-POSS3SG) be.3SG
            'The old man has fish.'

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[1]There are two special adverbs (*tamna* 'still, another' and *ťi* 'so, here') that can bear subject agreement and past tense markers and can appear without an overt copula (Nikolaeva 2014, 187).

b. ŋatśeki-ʔ ńiśa(-da) me.
child-gen father(-POSS3SG) be.3SG
'The child has a father.'

- Arguably, the possessor is not a grammatical predicate in this clause type but has been externalized from the noun phrase headed by the possessor (Szabolcsi 1983, 1992).

- Possessors in copular clauses expressing possession bear exactly those cases that they can bear as possessors in a nominal phrase, namely: Nominative and Genitive.

(42)   a. pidoʔ wesako-ʔ xaĺa-mʔ ŋawor-ŋa-ʔ.
3PL old.man-gen fish-ACC eat-CO-3PL
'They are eating the old man's fish.'
    b. pidoʔ wesako-ʔ maĺe xaĺa-mda ŋawor-ŋa-ʔ.
3PL old.man-gen already fish-ACC.POSS3SG eat-CO-3PL
'They have already eaten the old man's fish.'

(43)   mań ŋatśeke-ḿi ŋoka.
1SG child-POSS1SG many.3SG
'My children are many.' (E.La 2002)

- Following Szabolcsi's (1983, 1992) account developed for Hungarian, we assume that in sentences expressing possession the possessum and the externalized possessor jointly constitute the (unaccusative) subject.
→ on this account, possessive copular clauses would have no predicate other than the copula itself

- Alternatively, one may adopt Freeze's (1992) approach to them by postulating that they involve a silent locative predicate (like existential sentences in some accounts).
→ on this account, the predicate in possessive copular clauses would be a locative phrase.

⇒ Neither of these proposals involves a Nominal predicate. Thus, these sentences conform to the generalization in G1.

We can then say this about the condition on copula drop:

Copula Drop Generalization 2 (to be revised): The copula remains absent when it does because its tense and subject agreement AFFIXES appear elsewhere, namely, on the Nominal predicate.

- Copula Support approach (Benveniste 1966; Lyons 1968, 1977; Dik 1980, 1983, 1989): the copula itself is essentially an expletive, a dummy element (Stassen's 1994 Dummy Hypothesis)

- **G2** is a direct adaptation of Chomsky's (1957) Affix Hopping treatment of English verbal inflections to Copula Support. The Affix Hopping rule moves the verbal affix to an appropriate verbal stem if one is present; otherwise do-insertion is triggered to 'support' the otherwise 'stranded' affix (Lasnik 1981).

3.3 Subject agreement need not be morphologically realized for copula drop

- Subject agreement can appear both on the copula and on the predicate in cases when the copula is present for an independent reason (e.g., to support FUT) (Nikolaeva 2014)[2]

  (44)   mań ŋarka-dm ŋæ-ŋku-dm.
         1SG big-1SG   be-FUT-1SG
         'I will be an adult/I will be big.'

- This shows that it is not a particular morphological affix, but an abstract feature bundle, that is in need of a host. Otherwise subject agreement would never appear on more than one element of the predicate phrase.

- This is closer to Dik's (1989, 55) formulation of Copula Support: the copula "is inserted into predications with non-verbal predicates in order to help express those grammatical distinctions which are otherwise encoded in the verbal predicate."

> **Copula Drop Generalization 2' (to be revised): The copula remains absent when it does because its tense and subject agreement FEATURES receive morphological realization elsewhere, namely, on the Nominal predicate.**

- G2' does not make a claim about the hosting of a particular affix, but about abstract morphosyntactic features
- **This is still too strong: Subject agreement inflections do not appear in the morphology** of the Nominal predicate at all when it bears independent agreement features. This occurs in two cases:

  - when the Nominal predicate is a **personal pronoun** (Nikolaeva 2014, 257)

    (45)   pidar mań(*-an).
           2SG   1SG(*-2SG)
           'You are me.'

    (46)   sawa Íekarʔ mań-ś.
           good doctor 1SG-PST
           'The good doctor was me.'

  - when the Nominal predicate is a **possessed noun** that has a pronominal possessor (Nikolaeva 2014, 256)

    (47)   pidar mań ŋatseke-m̀i.
           this 1SG child-POSS1SG
           'This is my child.'

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[2]According to Nikolaeva's (2014) data, the appearance of agreement on the Nominal predicate is merely an option in such cases: the agreement affix may also appear only on the verbal copula. In the corpus we have only been able to find copular sentences in which agreement is realized both on the copula and the Nominal predicate. This may indicate that affixal concord is the preferred choice, or that the availability of the non-concordial form is subject to inter-speaker variation.

$\rightarrow$ In both these types of cases the copula is absent.

- NOTE: **lexical possessors generally do not trigger agreement on the possessed noun**. In such cases the possessed noun behaves like any other Nominal predicate, namely, it bears a subject agreement affix:

(48) t́iki t́ir-t́a ŋano-ʔ śo.
that fly-PTCP.IPFV boat-GEN sound.3SG
'That is the sound of an aircraft.' (Okotetto 1998, 26)

(49) mań Ṕaśaʔ teta-ʔ ńe-dam-t́s.
1SG Pyasya master-GEN woman-1SG-PST
'I was Pyasya farmer's wife.' (Labanauskas 2001, 137)

- Nikolaeva (2014): In sentences with a possessed noun predicate with a pronominal possessor or with a personal pronoun predicate the **subject must appear overtly**. $\Rightarrow$ This fulfills the requirement of the morphological realization of the (subject) agreement features, though this time not on the predicate, as G2' demands.

Copula Drop Generalization 2": The copula remains absent when it does because its tense and subject agreement features (i) receive morphological realization elsewhere, and (ii) enter syntactic Agreement with the predicate.

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4 Conclusions

- We have shown that
  - the distribution of the different BE verbs in Tundra Nenets across different constructions is not as straightforward as previously assumed;
  - the conditions on copula drop are the morphological realization of its tense and agreement features elsewhere and syntactic Agreement with the predicate.

- Having arrived at these generalizations, our next steps will be determining what factors govern the choice between the different verbs (possible interaction with focusing and the influence of discourse factors in general)

- Outlook: Various Uralic languages have copula drop to some extent, however, the conditions on morphological and syntactic agreement seem to show cross-linguistic variation. The long term goal is a comparative study of these phenomena.

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