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Introduction

Tundra Nenets has two types of junctors:

Type 1: A general one, applicable across categories and expressed with zero morphology via juxtaposition (Payne 1985; Nikolaeva 2014)(1) Vesako, xabcja^h
Old.man, sickness**Type 2:** *Njabi* - restricted distribution (appears only with noun phrases):(2) Vesako **njabi** xabcja^h
Old.man **and** sickness
(the title of a traditional tale)

✓ referential DPs

(3) Anja (**njabi**) Petja to.ɲaxa /nelej.xa/
Anja (**and**) Petja came.DU/got.married.DU
'Anja and Petja came/got married'.

✓ bare nouns, *VPs

(4) Vanjako (**njabi**) koxska madarna.c' (***njabi**) muno⁹nac'.
Dogs (**and**) cats bark.PAST.PL (***and**) make-sound. PAST.PL
'Dogs and cats barked and made sounds'.

*Sentences (both unembedded and embedded):

(5) (Njebja jexera,) Anja to.s' (***njabi**) Petja xaja.s'.
(Mother not-know) Anja come.PAST.SG (***and**) Petja leave.PAST.SG
'Mother does not know that Anja came and Petja left'.

*adverbs:

(6) Man' tjuku jala^h (***njabi**) xunjana manzara.ɲgu.dm^h
I this day (***and**) tomorrow work.FUT.1SG
'I will work today and tomorrow'.

*adjectives

(7) Numlaxa (***njabi**) paderaxa sjanako.
Blue (***and**) green toy✓ PPs with the exception of *without*(8) Maša Petja.⁹ nja (**njabi**) Sveta.⁹ nja jadernamas'.
Masha Petja.GEN with (**and**) Sveta.GEN with walked.
'Masha walked with Petja and Sveta'(9) Maša padar.si^h (***njabi**) ručkasi.si^h tovy.
Masha paper.without (***and**) pen.without come.PART.PAST
'Masha came without paper and without a pen'

Only juxtaposition permits the insertion of modals before the second conjunct.

(10) Anja (***njabi**) xabvabta Petja to.ɲaxa.
Anja (***and**) possibly Petja came.DU
'Anja and, possibly, Petja came'.

The plot

Many languages distinguish between morphemes that express conjunction in the nominal versus verbal or clausal domains (Haspelmath 2004, 2007, Mitrović & Sauerland 2016).

However, this distinction does not always correspond to the same semantic contrast across languages.

This paper, based on original fieldwork conducted in the Tundra Autonomous Region of Russia, argues that Tundra Nenets has a dedicated word for non-Boolean conjunction in the nominal domain.

To my knowledge, conjunctions with similar semantic restrictions have not been previously identified and described.

Semantic, not syntactic

Njabi can conjoin two DPs, as evidenced by (3) and (10), but not any two DPs.(11) Tjuky nje ɲaceky (**njabi**) tiky xasavy ɲaceky to.ɲaxa
This women kid (and) that man kid came.DU
'This girl and that boy came'.* two quantifiers (e.g., *no NP, all NP, every NP*) with each other(12) Dob.kart^h nje ɲaceky (***njabi**) ɲob.kart^h xasavy ɲaceky nji⁹ to⁹
one.even women kid (***and**) one.even man kid NEG.PL come.
'No girl and no boy came'. (Negative concord)(13) Mal toxodanna.⁹ (***njabi**) mal tokolxoda.⁹ narka jalja.xana me.c'.
All student.PL (***and**) all teacher.PL big day.to be.PAST.PL
'All students and all teachers were there at the celebration'.(14) Xusuvej toxodanna (***njabi**) xusuvej tokolxoda narka jalja.xana me.s'.
Every student (***and**) every teacher big day.to be.PAST.SG
'Every student and every teacher was there at the celebration'.

The restriction does not extend to existentials, presumably because they can get a non-quantificational analysis (Heim 1982; 1983).

(15) Xurkavava tokolxoda.⁹ (**njabi**) xurkavava toxodanna.⁹ me.c'.
Some teacher. PL (**and**) some student.PL be.PAST.PL
'Some teachers and some students were there'.

* a quantifier and a referential term

(16) Tokolxoda (***njabi**) mal toxodanna.⁹ narka jalja.xana me.c'.
Teacher (***and**) all student.PL big day.to be.PAST.PL
'The teacher and all students were there on at the celebration'.

✓ two noun phrases inside a quantificational phrase.

(17) Xusuvej toxodanna (njab) tokolxoda narka jalja.xana me.s'.
Every student (and) teacher big day.to be. PAST.SG
'Every student and teacher were there at the celebration'.

Contrasts in the interpretation

In (18), juxtaposition produces an ambiguity: the sentence is acceptable both
• in a situation where each individual received 1000 rubles
• in one where they received 1000 rubles cumulativelyThe insertion of *njabi* allows only the cumulative reading.(18) Anja (**njabi**) Petja jonar selkojm^h nja⁹am.naxanz'.
Anja (**and**) Petja 1000 money receive.PAST.DU
'Anja and Petja received 1000 rubles'.Under negation *njabi*-conjunction shows homogeneity. It is also the preferred (but not necessary) interpretation for juxtaposition.(19) Man' Vanja.m⁹ (**njabi**) Maša.m⁹ ni.damz' manes^h.
I Vanja.ACC (**and**) Masha.ACC NEG.PAST see
'I saw neither Vanja nor Masha'.

The proposal

Njabi is the natural-language realization of the Link-style sum operator (\oplus).**Juxtaposition:** the full range of interpretations of English *and*: it can express Boolean conjunction, Link-type summation, and possibly conjunction reduction (for 10).

In general, conjunction in natural language contributes two types of meaning:

- **Intersective (Boolean) Conjunction**

(20) Anja is walking and talking

Boolean conjunction has been generalized to all conjoinable types (i.e., semantic types ending in *t*) (the underlying operation is set intersection) (Partee & Rooth 1983)

- **Collective (Non-Boolean) Conjunction**

(21) Petja and Anja got married.

Type *e* expressions cannot be directly conjoined by Boolean conjunction.Type-shifting *e*-type arguments to type $\langle\langle e,t \rangle, t \rangle$ via lift ($p \rightarrow \lambda P.P(p)$) (Partee 1983) incorrectly predicts distributive application of the VP to each individual.Link (1983) proposes that non-intersective *and* is a **sum-forming operator** (the underlying operation is **set union**).Schwarzschild's (1996) version of Link's proposal: individuals are identified with their singleton sets (e.g., $j = \{j\}$).A unified lexical entry for *and*, applying to individuals (in (3), (11)) or sets (in (17)):(22) $\llbracket \text{and}_{\text{non-Boolean}} \rrbracket = \lambda P_{\langle e, t \rangle} . \lambda Q_{\langle e, t \rangle} . \lambda X_{\langle e, t \rangle} . \exists y \exists z [P(y) \ \& \ Q(z) \ \& \ X = \{y\} \cup \{z\}]$
(Champollion 2015)

- (12)-(14)/(16) require Boolean conjunction and are incompatible with *njabi*.
- The cumulative reading in (18) is directly predicted
- (19) is due to homogeneity (Szabolcsi and Haddican 2004)
- (9) due to the complex quantificational semantics of *without*