# Exceptive constructions in Tundra Nenets[1]

Ekaterina Vostrikova — University of Göttingen

**Abstract.** This paper examines exceptive constructions in Tundra Nenets introduced by *xavna*. These constructions differ from the more familiar English exceptives, such as those introduced by *but*, in that they are compatible with existentials and modified numerals. They also differ from English *besides* in that they contribute a negative inference in such contexts. Another distinction from English exceptives is that the inferences introduced by *xavna* are cancellable.

I propose that all exceptives share the core semantic property of domain subtraction. The inferences they contribute arise through the same mechanisms: the alternatives they introduce and Exh. I argue that the key differences lie in how the alternatives are constructed. The variation in the obligatoriness of the inference is explained by the parameter of the obligatoriness of Exh.

## 1 Introduction

This paper examines exceptive constructions in Tundra Nenets introduced by *xavna*. Similar to the more familiar English exceptive constructions introduced by *except* or *but*, *xavna* contributes an inference of exception when paired with a universal or negative quantifier. In the case of *every* in (1) and *all* in (2), *xavna* triggers a negative inference about the individual it introduces. Conversely, with a negative quantifier in (3), *xavna* contributes a positive inference.

(1) *Xusuwej nje ŋacjeky Anja-$^{q}$ xavna to.*
every woman kid Anjya-GEN xavna came

'Every girl except Anja came.' ⇝ Anja did not come
Comments: 'Anja did not come, other girls did.'

(2)

a. *Mal$^{q}$ nje ŋacjeky-$^{h}$ Anja-$^{q}$ xavna to-$^{h}$.*
all woman kid-PL Anjya-GEN xavna came-PL

'All girls except Anja came.' ⇝ Anja did not come
Comments: 'Anja did not come.'; 'Anja was not there.'; 'It is clear from this sentence that Anja did not show up.'

[1] Tundra Nenets is a Uralic, Samoyedic language spoken in the far north of Russia. This paper is based on original fieldwork conducted in the Nenets Autonomous Region, Russia. I would like to express my heartfelt gratitude to my consultants for sharing their language with me: Matrjona Ivanovna Taleeva, Albert Grigorjevich Ardeev, Serafima Petrovna Durkina, Olga Ivanovna Varnicina, and Praskovja Ivanovna Vyuchejskaya.

The research reported here was supported by DFG grant STE 2555/4-1 'Investigating syntactic and semantic variation in exceptive-additive constructions from a crosslinguistic perspective'.

b. *Tej jalja*$^q$ *praznik.xana mal-*$^h$ *toxodanna-*$^h$ *Vanja*$^q$ *xavna xyno*$^h$*na.c'.*
yester day festival-AT all-PL students-PL Vanja-GEN xavna sang-PAST.3PL

'Yesterday all students except Vanja sang.' ⇝ Vanja did not sing
Comments: 'Vanja did not sing.'; 'All were singing and Vanja refused to sing.'

(3) a. *Ŋob-kart nje ŋacjeky Anja-*$^q$ *xavna ni tu.*
one-EVEN woman kid-PL Anjya-GEN xavna NEG came

'No girl except Anja came.' ⇝ Anja came
Comments: 'Anja was the only one who came.'; 'Anja came, other girls did not.'

b. *Xibja.xart*$^q$ *Vanja*$^q$ *xavna tjuku upražnenie.m*$^q$ *ni.da serta.*
Who-EVEN Vanja-GEN xavna this-ER exercise-ACC NEG-3SG do-PL

'No one except Vanja did this exercise.' ⇝ Vanja did this exercise
Comments: 'Vanja did it, others not.'; 'Vanja is the only one who managed to do the exercise .'

Exceptives in English can be categorized into two types based on their interaction with existentials. Exceptives introduced by *but* and *except* are ungrammatical when used with existentials (Horn 1989).

(4) *Some girls except Ann came.

In contrast, exceptives introduced by *besides* are grammatical with existentials, contributing an inference of addition in such contexts.

(5) Some girls besides Ann came. ⇝ Ann came

*Xavna* differs from both *except*/*but* and *besides*-exceptives. It differs from *except* and *but* in that it can co-occur with existential quantifiers. It also differs from *besides* in that, when it does, it contributes a negative inference.

(6) a. *Xanjany-*$^h$ *nje ŋacjeky-*$^h$ *Anja-*$^q$ *xavna to-*$^h$
some-PL woman kid-PL Anjya-GEN xavna came-PL

'Some girls other than Anja came' ⇝ Anja did not come
Comments: 'Anja did not come, some other girls did.'; 'No, *xavna* means that she did not come. '

b. *Tej jalja*$^h$ *praznik.xana xanjany-*$^h$ *toxodanna-*$^h$ *Vanja-*$^q$ *xavna xynohna-*$^h$*.*
Yesterday day festival-AT some-PL student-PL Vanja-GEN xavna sing-PL

'Yesterday some students other than Vanja sang at the festival' ⇝ Vanja did not sing
Comments: 'Here it is clear that Vanja did not sing'; 'You used *xavna*, that means that he did not sing, others were singing. '

This pattern extends to other quantifiers that are upward-entailing on their restrictor, such as *more than*. Speakers consistently report that the inference contributed by *xavna* is a negative one.

(7) *Njaxar.kad ŋoka.rka nje ŋacjeky-*$^{h}$ *Anja-*$^{q}$ *xavna to-*$^{h}$.
three-FROM many-ER woman kid-PL Anjya-GEN xavna came-PL

'More than three girls other than Anja came.' ⇝ Anja did not come
Comments: 'No, Anja was not there.'; 'Anja did not show up.'; 'No, *xavna*, *xavna*, that means she was not there .'

The same pattern holds true for numerals that are downward-entailing on their restrictor, such as those meaning *fewer than three* or *at most three*. Speakers report that in such contexts, *xavna* also contributes a negative inference.

(8) a. *Njaxar.kad tjanju.rka nje ŋacjeky-*$^{h}$ *Anja-*$^{q}$ *xavna to-*$^{h}$.
three-FROM few-ER woman kid-PL Anjya-GEN xavna came-PL

'Fewer than three girls other than Anja came.' ⇝ Anja did not come
Comments: 'Anja was not there.'; 'Anja did not come.'

b. *Ŋokavado*$^{q}$, *njaxar*$^{h}$ *nje ŋacjeky-*$^{h}$ *Anja-*$^{q}$ *xavna to-*$^{h}$.
Maximum three woman kid-PL Anjya-GEN xavna came-PL

'At most three girls other than Anja came.' ⇝ Anja did not come
Comments: 'Anja did not come.'; '*Xavna*, she was not among those who came.'

With non-monotonic (*exactly n*) numerals, we observe a different pattern. In such contexts, *xavna* contributes a positive inference. This pattern aligns with the behavior of English *besides*.

(9) *Ju*$^{q}$*.li*$^{q}$ *nje ŋacjeky-*$^{h}$ *Anja-*$^{q}$ *xavna tu-*$^{h}$.
ten-ONLY woman kid-PL Anjya-GEN xavna came-PL

'Exactly ten girls besides Anja came.' ⇝ Anja came
Comments: 'Here, I interpret it to mean that 11 people came in total—Anja and 10 others.'; 'Anja came.'

*Xavna* does not require the presence of a quantificational DP; it can also occur in sentences with *only*, and in such contexts, it similarly contributes an inference of addition.

(10) *Anja-*$^{q}$ *xavna man'-rin tjuku upražnjenie-m*$^{q}$ *serta-dm*$^{q}$.
Anjya-GEN xavna I-ONLY this exercise-ACC do-1SG

'Besides Anja, only I did this exercise.' ⇝ Anja did this exercise
Comments: 'Both Anja and I did this exercise.'; 'Two people overall did the exercise.'

The goal of this paper is to propose a theory that accounts for both the similarities between *xavna* and more familiar exceptives, as well as its differences from them.

## 2 Background on the semantics of exceptives

The central idea behind the meaning of sentences containing exceptives like *except* and *but* is that their interpretation comprises two components: (1) the quantificational claim over a domain excluding the individual(s) introduced by the exceptive, and (2) the negation of an alternative quantificational claim in which a different individual(s) is subtracted from the domain (von Fintel 1993, 1994).

The current consensus in the literature is that these two components must be contributed at two distinct syntactic positions (Gajewski 2008, Crnič 2021). The most recent implementation of this idea employs Exh (Hirsch 2016, Crnič 2021, 2024)—a mechanism widely applied across various areas of semantics, including the distribution of NPIs, free choice items, and scalar implicatures, among others. In this system, the exceptive itself contributes only domain subtraction. Exh serves as the mechanism responsible for negating the alternative quantificational claim in which a different element is subtracted. It is Exh that derives the exceptive inference and explains the restriction on the co-occurrence of exceptives with quantifiers of non-universal force. Below, I provide an illustration of how these mechanisms operate, using examples with *but*.

The assumed LF for an example involving a universal quantifier and *but* is presented in (11).

(11) $[_{IP2}$ EXHALT $[_{IP1}$ [every [ girl [ but Anja$_F$]]] came ]]

The semantics of *but* is outlined as follows: it is a function that first composes with an atomic or plural individual (the one introduced by the exceptive), then with a predicate of individuals (the restrictor of a quantifier), and outputs a new predicate of individuals. This resulting predicate is true for individuals who satisfy the initial predicate and do not overlap with the individual introduced by *but*, where overlap is understood as having a subpart in common (Hirsch 2016). Additionally, it introduces a presupposition of containment—that is, the claim that the individual does belong to the restrictor set.

(12) a. $[\![but]\!]^{g,w} = \lambda x_e.\lambda f_{<et>}: f(x).\ \lambda y_e.f(y)\ \&\ \neg(x \circ y)$

b. $x \circ y$ iff $\exists z[z \leq x \& z \leq y]$

The exceptive phrase combines with the predicate in the restrictor through Predicate Modification. The resulting interpretation is as shown in (13).

(13) $[\![girl\ but\ Ann]\!]^{g,w} = \lambda y_e.y$ is a girl$_w$&$\neg(y \circ$ Ann)
is defined only if Ann is a girl$_w$

The prejacent of Exh receives the interpretation shown in (14a). Assuming the domain consists of only four girls—Ann, Barbara, Sveta, and Diana—this interpretation is equivalent to (14b). This represents the quantificational claim over a reduced domain that excludes Ann. However, we have not yet accounted for the exceptive inference.

(14) a. $[\![IP_1]\!]^{g,w}$ = T iff ∀x[x is a girl$_w$ & ¬ (x ∘ Ann) → x came$_w$]

b. $[\![IP_1]\!]^{g,w}$ = T iff ∀x[x∈{Barbara, Sveta, Diana} → x came$_w$]

*But* marks its complement with focus and must be c-commanded by Exh. Exh asserts the prejacent (the original claim) and negates the alternative propositions not entailed by it. The alternatives are generated by making a substitution in the focus-marked position, as shown in (16). Exh operates on the propositions derived from these sentences. Consequently, in each alternative, a different individual is subtracted from the domain of the quantifier.

(15) $[\![EXH_{ALT}\ \phi]\!]^{g,w} = [\![\phi]\!]^{g,w}\ \&\ \forall q\ [q \in Alt\ \&\ \lambda w'.[\![\phi]\!]^{g,w'} \not\models q \rightarrow \neg q(w)]$

(16) $\left\{\begin{array}{l} [_{IP_1}\text{ [ every [ girl [ but Ann ]]] came]} \\ [_{IP_1}\text{ [ every [ girl [ but Barbara ]]] came ]} \\ [_{IP_1}\text{ [ every [ girl [ but Sveta ]]] came ]} \\ [_{IP_1}\text{ [ every [ girl [ but Diana ]]] came ]} \end{array}\right\}$

The predicted meaning for the entire sentence is shown in (17). The only scenario in which it is possible for all girls who are not Ann to have come, while not all girls who are not Barbara, not all girls who are not Sveta, and not all girls who are not Diana came, is if Ann is the girl who did not come. Thus, the negation of the alternatives, together with the assertion of the prejacent, derives the exceptive inference.

(17) $[\![(11)]\!]^{g,w}$ = T iff ∀x[x∈{Barbara, Sveta, Diana} → x came$_w$] &
∃y[y∈{Ann, Sveta, Diana} & ¬y came$_w$] &
∃z[z∈{Ann, Barbara, Diana} & ¬z came$_w$] &
∃a[a∈{Ann, Sveta, Barbara} & ¬a came$_w$]

This approach also accounts for the incompatibility of existentials with *but*. For (18a) the LF shown in (18b) is predicted. The predicted meaning for this sentence is shown in (19). This meaning is contradictory: the first conjunct (contributed by the prejacent) states that at least one girl among Barbara, Sveta, or Diana came. This cannot hold together with the two subsequent conjuncts, which assert that no one among Ann, Sveta, and Diana came, and no one among Ann, Barbara, and Diana came. The inherent contradiction in the meaning derived from combining *but* with an existential accounts for the ungrammaticality of (18a).

(18) a. *Some girl but Ann came.

b. [$_{IP2}$ EXHALT [$_{IP1}$ [some [ girl [ but Anja$_F$]]] came ]]

(19) $[\![(11)]\!]^{g,w}$ = T iff ∃x[x∈{Barbara, Sveta, Diana} & x came$_w$] &
¬∃y[y∈{Ann, Sveta, Diana} & y came$_w$] &
¬∃z[z∈{Ann, Barbara, Diana} & z came$_w$] &
¬∃a[a∈{Ann, Sveta, Barbara} & a came$_w$]

Mayr and Vostrikova (2023) extend the treatment in terms of Exh to exceptives introduced by *besides*. To account for their compatibility with modified numerals and existentials, as well as the additive inference observed in such cases, they propose an approach in which this type of exceptive introduces a distinct, reduced set of alternatives. I will pursue a similar approach to capture the Nenets pattern.

# 3 The analysis

## 3.1 Universal and existential quantifiers

Our goal is to capture the negative inference contributed by *xavna* when it occurs with universal quantifiers, existentials, and modified numerals, as well as the positive inference it contributes when paired with negative quantifiers and *only*.

I propose that xavna carries the same meaning as the English *but*, as demonstrated in (20).

(20) a. $[\![xavna]\!]^{g,w} = \lambda x_e.\lambda f_{<et>}: f(x).\ \lambda y_e.f(y)\ \&\ \neg(x \circ y)$

b. $x \circ y$ iff $\exists z[z \leq x \& z \leq y]$

The key empirical difference between the two constructions lies in the way their alternatives are generated. I propose that the only alternative for for a sentence with *xavna* is the corresponding sentence with *nja*. I further suggest that *nja* is interpreted as 'overlap'.

(21)

| | | | | | |
|---|---|---|---|---|---|
| *Mal$^q$* | *nje* | *ŋacjeky-$^h$* | *Anja* | *nja* | *to-$^h$.* |
| all | woman | kid-PL | Anjya-GEN | with | came-PL |

'All girls including Anja came.'

The intended interpretation of this sentence is as follows, where x is understood as an atomic or plural individual.

(22) $[\![(21)]\!]^{g,w}$ = T iff $\forall$x[x is a girl$_w$ & x $\circ$ Anja $\rightarrow$ x came$_w$]

The proposed LF for a sentence with a universal quantifier and *xavna* in Nenets is shown in (23). In this structure, the focus marking is placed on *xavna*.[2] Consequently, the alternatives are derived by substituting *xavna* with its alternative, *nja*.

(23) $[_{IP2}$ EXHALT $[_{IP1}$ [all [ girls [ Anja [xavna]$_F$ ]]] came ]]

Accordingly, the prejacent of Exh receives the interpretation familiar from the earlier discussion of English *but*: it is a quantificational claim made over a domain of individuals that do not overlap with Anja. Thus, *xavna*, like *but*, is responsible for domain subtraction.

[2]Placing focus on *xavna* does not always align with the observed prosody. Instead, alternatives might be introduced lexically.

(24) $[\![IP_1]\!]^{g,w}$ = T iff ∀x[x is a girl & ¬ (x ∘ Anja) → x came$_w$]

Accordingly, the set of alternative sentences is as shown in (25).

(25) $\left\{ \begin{array}{l} [_{IP_1} \text{ [ all [ girls [ Anja xavna ]]] came]} \\ [_{IP_1} \text{ [ all [ girls [ Anja nja ]]] came ]} \end{array} \right\}$

Exh negates the proposition derived from interpreting the second alternative, as it is not entailed by the prejacent. The resulting interpretation is provided in (26), capturing the negative inference associated with the sentence. According to these truth conditions, all girls who are not Anja came, while some atomic or plural individual in the set of girls overlapping with Anja did not come. This scenario can only occur if Anja herself did not come.

(26) $[\![23]\!]^{g,w}$ = T iff ∀x[x is a girl & ¬ (x ∘ Anja) → x came$_w$] &
∃x[x is a girl$_w$ & x ∘ Anja & ¬ x came$_w$]

Our primary goal in altering the computation of alternatives compared to English *but*-exceptives was to account for the compatibility of *xavna* with existentials and its contribution of a negative inference in such contexts. To illustrate, the LF for the previously discussed example involving an existential and *xavna* is presented below.

(27) [$_{IP2}$ EXHALT [$_{IP1}$ [some [ girls [ Anja xavna$_F$ ]]] came ]]

Exh asserts the prejacent and negates the sole alternative distinct from it. The resulting interpretation is in (28): there is a girl, other than Anja, who came, and there is no individual (atomic or plural) who overlaps with Anja and who came. This can only be true if Anja did not come.

(28) $[\![23]\!]^{g,w}$ =T iff ∃x[x is a girl & ¬ (x ∘ Anja) & x came$_w$] &
¬∃x[x is a girl$_w$ & x ∘ Anja & x came$_w$]

This treatment extends to all other cases of upward-entailing numerals, such as the case of *njaxarkad ŋokarka* (‘more than three’) discussed above. In such cases, a negative inference regarding the individual introduced by *xavna* is predicted. The expected truth conditions are shown in (29).

(29) $[\![7]\!]^{g,w}$ = T iff ∃d[d>3 & ∃x[|x|=n & x is a girl$_w$ & ¬ (x ∘ Anja) & x came$_w$]] &
¬∃d[d>3 & ∃x[|x|=n & x is a girl$_w$ & x ∘ Anja & x came$_w$]]

Let’s consider a scenario where the first conjunct—contributed by the prejacent—is true. Assume that four girls, other than Anja, came. Now we reason about Anja. If Anja did not come, the second conjunct can hold together with the first: there will be no plural individual overlapping with Anja who came whose cardinality is four or greater. However, if Anja did come, the second conjunct cannot hold. This is because, even without counting Anja, there are already four girls who came.

## 3.2 Negative quantifier

Analyzing the interaction between negative quantifiers and *xavna* provides the additional motivation behind some theoretical choices made in this work and helps to rule out alternative approaches to *xavna*.

For example, focusing only on an existitial or a universal quantifier, one might suggest that, instead of computing the alternative by replacing *xavna* with an expression meaning *overlap*, it would be more natural to derive the alternative 'Anja came' in the cases discussed above. While including this alternative in the set might suffice for simpler cases, it fails to work for negative quantifiers. Recall that in such cases, *xavna*, like English *but*, contributes a positive inference. However, negating the alternative 'Anja came' in (30) clearly does not yield the positive inference.

(30)

| | | | | | | |
|---|---|---|---|---|---|---|
| *Ŋob-kart* | *nje* | *ŋacjeky* | *Anja-q* | *xavna* | *ni* | *tu.* |
| one-EVEN | woman | kid-PL | Anjya-GEN | xavna | NEG | came |

'No girl except Anja came.'
⇝ Anja came

Another idea we can dismiss by examining cases with a negative quantifier and *xavna* is that the exceptive inference is inherently encoded in the semantics of *xavna* itself, rather than being contributed by Exh, as proposed here.

Tundra Nenets is a negative concord language, which means that a negative quantifier must co-occur with negation within the same clause (Nikolaeva 2014).

(31)

| | | | | |
|---|---|---|---|---|
| *Ŋob-kart* | *nje* | *ŋacjeky* | **(ni)* | *tu.* |
| one-EVEN | woman | kid-PL | NEG | came |

'No girl except Anja came.'

These constructions are generally interpreted as consisting of an existential quantifier within the scope of negation, as represented in the LF below.

(32) $[_{IP2}$ NEG $[_{IP1}$ [one [ girls ]] came ]]

Accordingly, under the theory that attempts to derive the meaning of *xavna*-containing sentences without Exh, the exceptive inference is expected to be computed at the position where *xavna* appears, as shown in (33a). The expected truth conditions for the sentence would then be as shown in (33b) or equivalently (33c). However, this meaning is too weak, as it predicts the sentence to be true in a situation where one of the two disjunctions holds: either no one other than Anja came, or Anja came.

Thus, considerations that motivate the distribution of meaning in English exceptive sentences between two elements similarly apply to exceptives in Tundra Nenets (Gajewski 2008).

(33) a. $[_{IP2}$ NEG $[_{IP2}$ [one [ girls [ Anja xavna$_F$ ]]] came ]]

b. $\neg(\exists x[x \text{ is a girl}_w \ \& \ \neg\ (x \circ \text{Anja}) \ \& \ x \text{ came}_w] \ \& \ \neg\exists y[y \text{ is a girl}_w \ \& \ y \circ \text{Anja} \ \& \ y \text{ came}_w])$

c. $\neg\exists x[x \text{ is a girl}_w \ \& \ \neg\ (x \circ \text{Anja}) \ \& \ x \text{ came}_w] \vee \exists y[y \text{ is a girl}_w \ \& \ y \circ \text{Anja} \ \& \ y \text{ came}_w]$

The analysis proposed here accurately derives the meaning of this sentence. The proposed LF is presented in (34a), and the predicted truth conditions are given in (34b). The sentence is predicted to be true if and only if no girl other than Anja came, and Anja herself came.

(34) a. $[_{IP3}$ EXHALT $[_{IP2}$ NEG $[_{IP1}$ [one [ girls [ Anja xavna$_F$ ]]] came ]]

b. $[\![34a]\!]^{g,w}$ =T iff $\neg\exists x[x \text{ is a girl}_w \ \& \ \neg\ (x \circ \text{Anja}) \ \& \ x \text{ came}_w] \ \& \ \exists y[y \text{ is a girl}_w \ \& \ y \circ \text{Anja} \ \& \ y \text{ came}_w]$

## 3.3 Non-monotone quantifiers

Can this treatment be extended to non-monotonic quantifiers, such as *exactly-n*? It is important to remind the reader that in such cases, *xavna* consistently contributes a positive inference. In the example below, repeated from above, this corresponds to the inference that Anja came.

(35)

| *Ju$^q$.li$^q$* | *nje* | *ŋacjeky-$^h$* | *Anja-$^q$* | *xavna* | *tu-$^h$.* |
|---|---|---|---|---|---|
| ten-ONLY | woman | kid-PL | Anjya-GEN | xavna | came-PL |

'Exactly ten girls besides Anja came.' ⇝ Anja came

The challenge posed by such a case is that if we apply the standard semantics to *exactly* and combine it with the assumptions about the meaning of *xavna* in this paper, we fail to capture the positive inference. Adopting a fairly standard semantics for *exactly*, expressed in terms of maximality (Hackl 2000, Buccola and Spector 2016), yields the following predicted truth conditions: the maximal cardinality of a plurality of comers not overlapping with Anja is 3, but the maximal cardinality of a plurality of comers overlapping with Anja is not 3. This is compatible with both Anja coming and not coming. From the first conjunct, we know that if Anja is subtracted, there are exactly 3 comers. Now we turn to the second conjunct and analyze the scenarios under which it holds true. If Anja did not come, then the maximal plurality of comers overlapping with Anja is 0—thus not equal to 3. If Anja came, then the maximal plurality of comers overlapping with Anja is 4—thus also not equal to 3. This means that the prediction is that the sentence is compatible with both scenarios: Anja coming and Anja not coming.

(36) a. $\max(\lambda d.\exists x[|x| \leq d \ \& \ x \text{ is a girl}_w \ \& \ \neg\ (x \circ \text{Anja}) \ \& \ x \text{ came}_w]] = 3 \ \&$
$\max(\lambda n.\exists x[|x| = n \ \& \ x \text{ is a girl}_w \ \& \ x \circ \text{Anja} \ \& \ x \text{ came}_w]]\ ) \neq 3$

b. $\max(P_{<dt>}) = \iota n[P(n) \ \& \ \forall m[P(m) \rightarrow m \leq n]]$ if $\exists d[P(d)]$, 0 otherwise

I suggest that the solution lies in the way exactly-n numerals are constructed in Nenets. As evident from (35), they are formed by applying *only* to a numeral. The LF for this sentence is presented below.

(37) $[_{IP2}$ EXHALT $[_{IP1}$ only [three [ girls [ Anja xavna$_F$ ]]] came ]]

Let's examine the expected meaning of the prejacent of Exh: the *only*-claim. The assertive content arises from negating alternative claims by *only*, where the cardinality is substituted with larger values. This amounts to the claim that there is no plurality of girls, not overlapping with Anja, with a cardinality greater than 3 who came. *Only* presupposes its prejacent, which, in this case, is the presupposition that there exists a plurality of comers among girls who are not Anja with a cardinality of 3 or greater. Taken together, the two amount to the *exactly 3* claim.

(38) $[\![IP_1]\!]^{g,w}$ =T iff $\neg\exists x[|x|>3$ & x is a girl$_w$ & $\neg$ (x $\circ$ Anja) & x came$_w$]
$[\![IP_1]\!]^{g,w}$ is defined only if $\exists x[|x|\geq 3$ & x is a girl$_w$ & $\neg$ (x $\circ$ Anja) & x came$_w$]

Factoring in Exh associated with *xavna*, the overall truth conditions are as shown in (39). These truth conditions accurately capture the additive inference: if no more than 3 girls, excluding Anja, came, but there exists a plurality overlapping with Anja that exceeds 3 who came, it follows that Anja came and the total number of comers exceeded 3. The presupposition introduced by *only* projects—namely, that at least 3 people, excluding Anja, came (39b). I also assume that the presupposition of the alternative projects as well (39c) (Spector and Sudo 2017)

These truth conditions accurately capture the perceived meaning of the sentence: in addition to Anja, exactly three other girls came.

(39) a. $[\![35]\!]^{g,w}$ =T iff $\neg\exists x[|x|>3$ & x is a girl$_w$ & $\neg$ (x $\circ$ Anja) & x came$_w$] &
$\exists x[|x|>3$ & x is a girl$_w$ & x $\circ$ Anja & x came$_w$]

b. $[\![35]\!]^{g,w}$ is defined only if $\exists x[|x|\geq 3$ & x is a girl$_w$ & $\neg$ (x $\circ$ Anja) & x came$_w$]

c. $[\![35]\!]^{g,w}$ is defined only if $\exists y[|y|\geq 3$ & y is a girl$_w$ & y $\circ$ Anja & y came$_w$]

# 4 Cancellability of exceptive inferences

Another reason not to encode the exceptive inference directly into the semantics of *xavna* is that, while the exceptive inference is strongly suggested in out-of-the-blue contexts, it is cancellable.

To test the cancellability of this inference, consultants were asked to evaluate the consistency of discourses below. They were presented with the following question: Can these two sentences be said together by the same speaker? In the examples below, the exceptive inference would render the discourse contradictory if it were an obligatory part of the semantics.

The consultants consistently accepted these discourses, indicating that the exceptive inference is not an inherent and necessary component of the semantics of *xavna*.

(40) a. *Man' sac majmbi-dm$^q$, Anja to! Mal$^q$ toxodanna-$^h$ Anja-$^q$ xavna ŋobtarem$^q$ to-$^h$.*
I very glad-1SG Anja come! all student-PL Anjya-GEN xavna also came-PL

'I am very glad that Anja came! All students other than Anja also came.'

b. *Man' sac majmbi-dm$^q$, Anja to! Xanjany-$^h$ nje ŋacjeky-$^h$ Anja-$^q$ xavna to-$^h$*
I very glad-1SG Anja come! some-PL woman kid-PL Anjya-GEN xavna came-PL

'I am very glad that Anja came! Some girls other than Anja came'

c. *Ibkova$^q$ Anja ni tu-$^h$. Ŋob-kart nje ŋacjeky-$^h$ Anja-$^q$ xavna ŋobtarem$^q$ ni tu-$^h$.*
Unfortunately Anja NEG come. one-EVEN woman kid-PL Anjya-GEN xavna also NEG came-PL

'Unfortunately, Anja did not come. No girl other than Anja came.'

This fact can be explained within this system by proposing that Exh is optional and that there is no requirement for *xavna* to be c-commanded by Exh. Nenets exceptives differ from English exceptives introduced by *but* or *except*, as the corresponding discourse in English is perceived as contradictory. This indicates that the obligatoriness of Exh represents a parameter of cross-linguistic variation.

(41) #John came. All boys but/except John came too.

The cancellability of the exceptive inference in Tundra Nenets is not unique. A similar phenomenon is observed in German. In German, exceptives introduced by *außer* trigger the exceptive inference in out-of-the-blue contexts.

(42) *Alle Jungs außer John sind hier.*
All boys außer John are here

'All boys but John are here.' ⇝ John is not here

However, this inference is cancellable, as demonstrated by the consistency of the following discourse.

(43) *John ist hier. Und alle Jungs außer John sind auch hier.*
John is here. And all boys außer John are also here

'John is here. All other boys are also here.'

Thus, in this system, exceptive constructions crosslinguistically share the following core features: the exceptive item performs domain subtraction, and the exceptive inference is derived by considering alternatives constructed with other domains.

Crosslinguistic and within-language variation between different constructions arises in two key areas. The first is the obligatoriness of Exh. In exceptive constructions, the use of Exh is mandatory, whereas in others, it is optional, resulting in differences in how obligatory the exceptive inference is. The second area of variation lies in the method used to compute the alternatives. Different constructions adopt distinct strategies for generating these alternatives, resulting in variations in how exceptives interact with different quantifiers and the inferences they yield.

# 5 Open issues

## 5.1 Downward entailing numerals

We've observed that with downward-entailing numerals, such as *njaxarkad tjanjurka* ('fewer than three'), the inference is also negative. This presents a challenge for the approach developed here.

The predicted truth conditions for our example with *fewer than three* are given below. These truth conditions fail to capture the meaning of the sentence: fewer than three girls came, excluding Anja, but including Anja, exactly three or more girls came. These two conjuncts can only be true together if exactly three girls, including Anja, came. The sentence, however, does not impose this requirement and is compatible with scenarios where 0, 1, or 2 girls, excluding Anja, came.

(44) $[\![8a]\!]^{g,w}$ = T iff $\neg\exists$x[|x|≥3 & x is a girl$_w$ & ¬ (x ∘ Anja) & x came$_w$] &
$\exists$y[|y|≥3 & y is a girl$_w$ & y ∘ Anja & y came$_w$]

This raises two questions: why is this reading not perceived by native speakers, and how is the negative inference about Anja derived in this case?

It is possible that this reading is not easily available because this comparative quantifier normally is not used in a situation when the exact number is known (Mayr and Meyer 2014).

While I will not resolve this issue in this paper, I will consider one possibility. This potential explanation assumes a decompositional approach to modified numerals, treating them as degree quantifiers that move at LF, leaving behind a degree trace (Hackl 2000). This trace is interpreted via a silent *many*, which is essentially an existential quantifier (shown in (45b)). Under this approach, the modified numeral is assigned the meaning shown in (46a): it combines with the predicate of degrees formed by abstraction resulting from QR. The meaning of the predicate of degrees in our case is provided in (46b).

(45) a. [$_{IP3}$ fewer than 3 [$_{IP2}$ 1 [$_{IP1}$ [[d$_1$ many] girls] came ]]]

b. $[\![many]\!]^{g,w} = \lambda n_d.\lambda f_{<et>}.\lambda g_{<et>}.\exists x[|x|=n \ \& \ f(x) \ \& \ g(x)]$

(46) a. $[\![\textit{fewer than 3}]\!]^{g,w} = \lambda f_{<dt>}.\ \neg\exists m[m{\geq}3\ \&\ f(m)]$

b. $[\![IP_1]\!]^{g,w} = \lambda d_d.\exists x[|x|{=}d\ \&\ x \text{ is a girl}_w\ \&\ x \text{ came}_w]$

Given these assumptions, there is an additional position where Exh associated with *xavna* can be merged. This alone, of course, is insufficient, as under the scope of the negative quantifier, the contribution of Exh would be too weak and would not capture the negative inference for Anja.

(47) $[_{IP4}$ fewer than 3 $[_{IP3}$ 1 $[_{IP2}$ $\text{Exh}_{Alt}$ $[_{IP1}$ [[$d_1$ many] [ Anja $\text{xavna}_F$ ] ] came ]]]]

The option I would like to consider is that Exh contribues the negation of alternatives at the presuppositional level, not altering the assertive contribution of its prejacent (Bassi et al. 2021). In this case, the meaning of the node $IP_2$ is predicted to be as shown in (48).

(48) a. $[\![IP_2]\!]^{g,w}$ = T iff $\exists x[|x|{=}g(1)\ \&\ x \text{ is a girl}_w\ \&\ \neg\ (x \circ \text{Anja})\ \&\ x \text{ came}_w]$

b. $[\![IP_2]\!]^{g,w}$ is defined only if $\neg\exists x[|x|{=}g(1)\ \&\ x \text{ is a girl}_w\ \&\ x \circ \text{Anja}\ \&\ x \text{ came}_w]$

The question now is what happens to the degree variable in the presuppositional component in (48b). The only way to derive the negative inference about Anja is to assume that it is universally bound, as shown in (49a). Specifically, for all degrees, there is no individual overlapping with Anja who came with that cardinality. To achieve this result, the presupposition would need to project universally. This assumption might be plausible given that downward-entailing numerals function essentially as negative quantifiers (see (Chemla 2009) for a discussion of universally projecting presuppositions from the scope of negative indefinites).

However, to derive the correct inference, it would be necessary to drop the numeral's restrictor—that is, the condition that the degree we are quantifying over must be equal to or greater than 3. Otherwise, the inference obtained would be incorrect: as shown in (49b), the resulting inference would suggest that the plurality of comers, including Anja, has a maximal cardinality of 2. This would render the sentence compatible with scenarios in which Anja either came or did not come if the overall number of comers is 2 or fewer, failing to capture the intended meaning.

(49) a. $\forall d[\neg\exists x[|x|{=}d\ \&\ x \text{ is a girl}_w\ \&\ x \circ \text{Anja}\ \&\ x \text{ came}_w]]$

b. $\forall d[d{\geq}3 \rightarrow [\neg\exists x[|x|{=}d\ \&\ x \text{ is a girl}_w\ \&\ x \circ \text{Anja}\ \&\ x \text{ came}_w]]$

It remains unclear whether the assumption of universal projection without the restrictor can be theoretically justified or empirically supported. I leave this question for future research.

## 5.2 Cases where the inference is not cancellable

Earlier, we discussed cases in which the inference about the individual introduced by an exceptive was cancellable. However, there are also cases where the exceptive or additive inference systematically resists cancellation.

These are cases where no quantificational expression is present, and the exceptive operates on focus associates, as in (50a). In such instances, similar to English *besides*, *xavna* contributes a positive inference. The fact that the inference is not cancellable in such cases is shown in (50b).

(50) a. *Puškin-$^q$ xavna, man' Dostoevskoj-$^q$$_F$ menje-dm$^q$.*
Pushkin-Gen xavna I Dostoevskij-Acc love-1sg

'Besides Pushkin, I love Dostoevskiy$_F$.'
⇝ I love Pushkin

b. # *Man' Puškin-m$^q$ ni-dm$^q$ mene$^h$. Puškin-$^q$ xavna, man' Dostoevskoj-$^q$ menje-dm$^q$.*
I Pushkin-Acc NEG-1sg love. Pushkin-Gen xavna I Dostoevskij-Acc love-1sg

Intended: '#I don't love Pushkin. Besides Pushkin, I love Dostoevskiy.'

The same phenomenon is observed in German: to my knowledge, this is the only case where the inference contributed by *außer* is not cancellable.

(51) # *Ich liebe Pushkin nicht. Außer Pushkin, Ich liebe Dostoevsky.*
I love Pushkin not. Außer Pushkin, I love Dostoevsky.

Vostrikova (2019) proposes that, in such cases, exceptives operate on a silent question under discussion. In Tundra Nenets, however, *xavna* contributes a negative inference in a question (as shown in (52a)), unless it is a rhetorical question expecting a negative answer, as illustrated in (52b). This observation suggests that uses like the one in (50a) are distinct from other uses of *xavna*.

(52) a. *Xurka-$^h$ toxodanna-$^h$ Vanja$^q$ xavna xyno$^h$na.c'?*
Which-pl students-pl Vanja-gen xavna sang-Past.3pl

'Which students other than Vanja sang?.' ⇝ Vanja did not sing

b. *Njebjan$^q$ xavna xibja vadje-ta-da?*
Mother-gen xavna who say-fut-obj3sg

'Who but mother will say this?' ⇝ Mother will say this, no one else will

# 6 Conclusion

In this paper, I examined Nenets exceptive constructions introduced by *xavna*. These constructions differ from English constructions introduced by *but* and *except* in that they can co-occur with existentials and modified numerals. They also differ from English *besides* in that, in such contexts, *xavna* contributes a negative inference. Additionally, the inference contributed by *xavna* is cancellable in Tundra Nenets.

I proposed a model in which all exceptive constructions crosslinguistically share the same core semantics: they subtract an atomic or plural individual from the domain of a quantifier. The variation in the resulting inferences across constructions is explained by assuming that different constructions introduce different sets of alternatives. The variation in the optionality of the inference is accounted for by the parameter of the obligatoriness of Exh: mandatory in English constructions involving *but* and *except*, and optional in Nenets constructions with *xavna*.

# References


Bassi, I., G. Del Pinal, and U. Sauerland (2021). Presuppositional exhaustification. Semantics and Pragmatics 14(11).

Buccola, B. and B. Spector (2016). Modified numerals and maximality. Linguistics and Philosophy 39(3), 151–199.

Chemla, E. (2009). Presuppositions of quantified sentences: experimental data. Natual Language semantics 47, 299–340.

Crnič, L. (2021). Exceptives and exhaustification. In Proceedings of WCCFL 39.

Crnič, L. (2024). A distributed analysis of *only*. Linguistics and philosophy 47, 611–652.

Gajewski, J. (2008). NPI *any* and connected exceptive phrases. Natural Language Semantics 16, 69–110.

Hackl, M. (2000). Comparative Quantifiers. Ph. D. thesis, Massachusetts Institute of Technology.

Hirsch, A. (2016). An unexceptional semantics for expressions of exception. In University of Pennsylvania Working Papers in Linguistics, Volume 22.

Horn, L. R. (1989). A Natural History of Negation. Chicago: University of Chicago Press.

Mayr, C. and M.-C. Meyer (2014, September). More than at least. talk at Two Days at least workshop.

Mayr, C. and E. Vostrikova (2023). A unified semantics for exceptive-additive *Besides*. In Proceedings of Sinn und Bedeutung 27, pp. 399–416.

Nikolaeva, I. (2014). A grammar of Tundra Nenets. De Gruyter Mouton.

Spector, B. and Y. Sudo (2017). Presupposed ignorance and exhaustification: How scalar implicatures and presuppositions interact. Linguistics and Philosophy 40(5), 473–517.

von Fintel, K. (1993). Exceptive constructions. Natural Language Semantics 1(2), 123–148.

von Fintel, K. (1994). Restrictions on Quantifier Domains. Ph. D. thesis, University of Massachusetts-Amherst.

Vostrikova, E. (2019). Phrasal and clausal exceptive-additive constructions crosslinguistically. Ph. D. thesis, UMass Amherst.