Focus feature percolation: Evidence from Tundra Nenets and Tundra Yukaghir

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1 Basic data

The paper intends to enhance the empirical basis for the typology of constituent questions and syntactic islands by presenting new data on systematic island constraints violations in two languages of the extreme north of Eurasia, Tundra Yukaghir (TY, north-eastern Siberia, isolate) and Tundra Nenets (TN, north-western Siberia, Uralic). Both languages display a lack of strong island effects in questioning: questions are possible out relative and adverbial clauses illustrated in (1) for TN and in (2) for TY. In both languages such clauses are headed by non-finite verbal forms such as participles, action nominals or converbs, and the wh-word remains in-situ.

(1) a. [[xən′ana yil′e-wi°] n′enec′°] xəya
where live-PF.PTCP man go.3SG
lit. 'The man who lived where left?'

b. Pet´a [Wera-h ŋəmke-m xada-qma-xəd°] to-sa ?
Petya Wera-GEN **what-ACC** kill-PF.AN-ABL come-INTERR.PAST.3SG
lit. 'Petya came after Wera killed what?'

(2) a. [[qaduŋudəŋ uː-nu-j] köde] ŋol-k?
whither go-IMPF-PTCP person be-INTERR.2SG
lit. 'You are a person who goes where?'

b. [neme lew-rəŋ] qudoːl-ŋu-Ø?
what eat-SS.CVB lie-PL-INTERR.3
lit. 'While eating what are they lying?'

While TN and TY behave identically with respect to questions, they diverge with respect to the other types of filler-gap dependencies. In TN relativisation and topicalisation obey island constraints, while in TY they do not, similar to questioning. This difference is illustrated below for topicalisation: TN does not allow the topical element to be extracted out of the adverbial clause (3a), but this appears possible in TY (3b).

(3) a. *ti [n′ĭs′a-nta __ xada-qma-xəd°] Wera xəya-s′°
reindeer father-GEN.3SG kill-PF.AN-ABL Wera go-PAST.3SG
'The reindeer, Wera left after his father killed __.'

b. čoγojə-lə met mə=kewečəŋ [amaː-gi met-in __ kiː-də-γa].
knife-ACC 1SG EX=leave.INTR.1SG father-3POSS 1SG-DAT give-3-DS.CVB
'Knife, I left after his father gave __ to me.'

This asymmetry suggests that islands violations in questions do not come from the same source as in other types of extractions. We argue that it has to do with how focussing works in these languages, cf. Matić (2014).

2. Focussing sub-constituents

Both TN and TY have complicated systems of focus marking on core arguments and focus-sensitive agreement, and exhibit pied-piping effects in non-clausal structures. In particular, if a sub-constituent of a complex phrase is interpreted as focussed, the whole phrase is treated as focus for the purpose of syntactic processes within a larger clausal domain.

In Tundra Nenets focussed objects cannot trigger object agreement on the verb, although a non-focused object can, cf. (4a) and (4b).

(4) a. ti-m xadaə(-da)
reindeer-ACC kill.3SG(>**SG.OBJ)**
'He killed a/the reindeer.'

b. ŋəmke-m xada-sa(*-da)? ti-m xadaə(*-da).
what-ACC kill-INTERR.3SG(*-**SG.OBJ)** reindeer-ACC kill.3SG(*>**SG.OBJ)**
'What did he kill? He killed a reindeer.'

If any subconstituent of the object NP is focused, agreement with the object is impossible, suggesting that the whole NP is marked as focus.

(5) a. [xībʹa-h ti-m] xada-sa(*-da) ?
who-GEN reindeer-ACC kill-INTERR.PAST.3SG(*>**SG.OBJ)**
'Whose reindeer did he kill?'

b. [Wera-h ti-m] xadaə(*-da).
Wera-GEN reindeer-ACC kill.3SG(*>**SG.OBJ)**
'He killed WERA'S$_{[FOC]}$ reindeer.'

(6) a. [xurka ti-m] xada-sa(*-da) ?
what.kind reindeer-ACC kill-INTERR.PAST.3SG(*>**SG.OBJ)**
'What kind of reindeer did he kill?'

b. [serako ti-m] xadaə(*-da).
white reindeer-ACC kill.3SG(*>**SG.OBJ)**
'He killed a WHITE$_{[FOC]}$ reindeer.'

In TY focus on S (intransitive subject) and O (direct object) is indicated by the focus marker and special subject agreement (indicating subject-focus or object-focus). Focus on other elements is unmarked, but if it is associated with A (transitive subject), there is no agreement on the verb; when it is associated with an oblique element, the verb displays the so-called neutral agreement in declaratives and the interrogative agreement in questions. Crucially, if a modifier or a possessor is in focus, the whole NP behaves like focus. This is illustrated below for S focus (7) and oblique focus (8).

(7) a. tət-ək werwə-l.
you-**FOC** be.strong-**SFOC**
'YOU$_{[FOC]}$ are strong'.

b. pure-n [neme nime-k] oγo:la:-l? [joqon nime-k] oγo:la:-l.
above-LOC **what** house-**FOC** stand-**SFOC** Yakut house-**FOC** stand-**SFOC**
'What kind of house stands on the top? A YAKUT$_{[FOC]}$ house stands (there).'

(8) a. qaduŋudəŋ kewej-Ø? Jakuskəj-ŋiń keweč.
where leave-**3SG.INTERR** **Jakutsk-DAT** leave.**NEUT.INTR.3SG**
'Where$_{[FOC]}$ has he gone? He has gone to YAKUTSK$_{[FOC]}$.'

b. [kin nime-də-γa] ewre:-nu-k? [wolʹbə nime-də-γa] ewre:-nu-jəŋ.
who house-3-LOC walk-IMPF-**2SG.INTERR** **friend** house-3-LOC walk-IMPF-**NEUT.INTR.1SG**
'To whose house are you going? I'm going to a FRIEND's house.'

Island clauses behave identically to non-clausal phrases with respect to illocution- and focus-sensitive agreement and focus-sensitive case marking. In TN, if a sub-constituent of a relative clause is focused and the relative clause modifies the object of the main verb, this verb cannot be marked for object agreement, cf.:

(9) a. [[Wera-h sʹax°h xo-wi°] noxa-m] xada-sa-n° / *xada-sa-r° ?
Wera-GEN **when** find-PF.PTCP polar.fox-ACC kill-INTERR-2SG / kill-INTERR-2SG>**OBJ.SG**
lit. 'You killed the polar fox which Wera found when?'

b. [[Wera-h t′en′ana xo-wi°] noxa-m] xadaə-d°m / *xadaə-w°
Wera-GEN yesterday find-PF.PTCP polar.fox-ACC kill-1SG / kill-1SG>**OBJ.SG**
lit. 'I killed the polar fox which Wera found YESTERDAY$_{[FOC]}$.'

In the past tense questions the main verb must stand in the interrogative form independently of whether the wh-word is located in the main or embedded clause, as in (9a).

The TY examples in (10) show that questioning out of the relative clause that modifies the object of the main verb requires focus marking on that object and object-focus agreement on the verb, while neutral agreement is impossible. In (11) we show the relative clause that modifies the transitive subject, while the examples in (2) above illustrate the situation when either the relative clause modifies an oblique element or the island corresponds to the adverbial clause. This results in neutral agreement on the main verb in declaratives and the interrogative marking on the main verb in questions.

(10) a. [[kin jaqta:-nu-l] jaqtə-k] möri:-məŋ?
who sing-IMPF-AN song-**FOC** hear-**OFOC.1/2SG**
lit. 'The song that who was singing did I hear?'

b. [[ama: jaqta:-nu-l] jaqtə-k] möri:-məŋ.
father sing-IMPF-AN song-**FOC** hear-**OFOC.1/2SG**
lit. 'You heard the song that FATHER$_{[FOC]}$ was singing.'

(11) sespə-lə [[qaduŋudəŋ kewej-l′əl-d′ə] köde-Ø] joŋotej-Ø?
door-ACC **whither** leave-EV-IMPF.PTCP person-**AFOC** open-**AFOC**
lit. 'The man who went where opened the door?'

It is important to emphasize that it is not the syntactic role of the questioned/focused element within the island that affects the patterns of agreement and focus marking in the main clause, but the syntactic role of its head. That is, the modified nominal in the relative clause or the dependent verb form in the adverbial clause are morphosyntactically treated as focussed elements.

Descriptively speaking then, the focus feature responsible for the marking of the phrase as focussed and for the patterns of agreement it triggers on the verb must be associated with the head of that phrase, even if the semantic operation of focussing initially targets one of its non-head daughters.

3. Complex focus structures

Based on the evidence presented in the previous section, we propose that pied-piping effects in TN and TY result from feature percolation but, crucially, the targeted feature is [FOC] rather than [WH]. Focus is here understood as an operator of various sizes of scope that triggers alternatives and can originate from both interrogative and non-interrogative contexts (Rooth 1992; Krifka & Musan 2012). We follow Abusch (2010) in assuming that wh-words are a subtype of focus with a semantic contribution of their own. Minimally, they are soft presupposition triggers; the presupposition induces existential quantification over the question word and thus creates the ordinary semantic value with specific indefinite interpretation.

Syntactically, the grammar has to include a constraint ensuring that whenever a word is specified as [FOC] this specification is passed up to the whole phrase containing that word. The percolation mechanism resembles the standard theory of focus projection that accounts for the placement of the focal accents in English by allowing internal arguments to project focus to the head of their phrase (Selkirk 1995), but it is freer in TN and TY. We are not aware of any structural restrictions which would permit the focus feature to be transmitted to the maximal projection from certain positions only, so any non-head subconstituent of the phrase carrying [FOC] can pass it to the head, cf. Bürings's (2006) 'Unrestricted Vertical Focus Projection'. This results in the head being focus-marked.

Semantically, the propagation of the focus feature to the head of the phrase results in a double focus structure or a 'complex focus' (Krifka 1991), in which both the head of the clause and the original carrier of focus are interpreted as foci, i.e. as expressions whose denotations have alternatives in the context. These two foci are not interpreted independently, but rather as a pairwise list, such that the focus background is applicable to this list, but not to other alternative lists. Question islands are a special case of this more general semantic operation. For instance, in the TN example (12) the question word 'who' denotes a set of

men who kill reindeer and the question ranges over the set of reindeer who have the property of having been killed by these men and are defined in terms of this property.

(12) [xīb′a-h xada-wi°] ti-m məne-ca-n° ?
who-GEN kill-PF.PTCP reindeer-ACC see-INTERR-2SG
'You saw the reindeer killed by whom?'

(12') For which pair (reindeer, person), such that it is true that person killed the reindeer, is it true that you saw the reindeer?

(12'') $[\![\alpha]\!]^o$ = see' (you, reindeer) & kill' (person•reindeer))
$[\![\alpha]\!]^f$ = see' (you, x) & kill' (y•x)~C & C ⊆ Q
$[\![\alpha]\!]^f$ = {see' (you, reindeer1) & kill' (Petya•reindeer1), see' (you,reindeer1) & kill' (Misha•reindeer1), see' (you,reindeer1) & kill' (Vasya•reindeer1)...
see' (you, reindeer2) & kill' (Petya•reindeer2), see' (you,reindeer2) & kill' (Misha•reindeer2), see' (you,reindeer2) & kill' (Vasya•reindeer1)...
see' (you, reindeer3) & kill' (Petya•reindeer3), see' (you,reindeer3) & kill' (Misha•reindeer3), see' (you,reindeer3) & kill' (Vasya•reindeer3)...}

This creates the broadening of the object of inquiry formally expressed as the broadening of question focus (cf. Nishigauchi 1990). Like in Japanese and a number of other languages, question islands inquire about the identity of the whole island, making a crucial use of the identity of the element represented by the question word: this is due to the list-reading induced by complex focus. Although some variations are observed, normally a felicitous answer must recapitulate the entire island with the specified question word variable.

(13) a. Wera-h xada-wi° ti-m
Wera-GEN kill-PF.PTCP reindeer-ACC
'the reindeer killed by Wera.'

b. ?/* Wera-h (xada-wi°-m)
Wera-GEN kill-PF.PTCP-ACC
'(killed) by Wera.'

TN provides an additional indication that focus within island clauses triggers complex interpretation forming a pairwise list with the head. It comes from the focus-sensitive suffix *-r′i-* 'only' that can take different scopes within a relative clause, but the head noun always has to have the [FOC] feature, as follows from the lack of object agreement on the main verb. In the complex focus structure both the head and the subconstituent which is in the scope of *only* are foci, i.e. the expressions whose denotations have alternatives in the context. The important point is that different scopes of *only* result in different focus readings, as indicated in translations and shown below.

(14) a. [[Wera-r′i-h]$_{FOC}$ xada-wi°] ti-m maneqŋa-d°m / *maneqŋa-w°
Wera-**ONLY**-GEN kill-PF.PTCP reindeer-aCC see-1SG / see-1SG>SG.OBJ
'I saw the reindeer which only Wera killed (and not anybody else).'

b. [Wera-h [pedara-r′i-xəna]$_{FOC}$ xada-wi°] ti-m maneqŋa-d°m /*maneqŋa-w°
Wera-GEN forest-**ONLY**-LOC kill-PF.PTCP reindeer-aCC see-1SG / see-1SG>SG.OBJ
'I saw the reindeer which Wera killed only in the forest (and not anywhere else).'

(14a') For the pair (reindeer, Wera), such that it is true that Wera (and no-one else) killed the reindeer, it is true that I saw the reindeer.

(14a'') $[\![\alpha]\!]^o$ = see' (me, reindeer) & kill' (Wera•reindeer)
$[\![\alpha]\!]^f$ = see' (me, x) & ∀x•y [kill'(x•y) ⇒ x=Wera]~C & C ⊆ Q

(14b') For the pair (reindeer, forest), such that it is true that Wera killed the reindeer in the forest (and not anywhere else), it is true that I saw the reindeer.

(14b'') $[\![\alpha]\!]^o$ = see' (me, reindeer) & kill' (Wera, reindeer•in.forest))
$[\![\alpha]\!]^f$ = see' (me, x) & $\forall$x•y [kill'(Wera, x•y) $\Rightarrow$ y=in.forest]~C & C $\subseteq$ Q

These data appear to challenge the view that the target of focus is an overt or covert operator that either adjoins to the whole phrase or takes it as its complement, e.g. a Q(uestion)-particle (e.g. Cable 2007, 2010ab; Coon 2009) or some kind of Exhaustivity Operator (Horvath 2007). This analysis creates the effect of the whole phrase/clause being available for focusing and eliminates the mechanism of feature percolation from the grammar altogether. However, it is not immediately clear how it can account for the difference between (14a) and (14b): while the focus operator is accessible to the larger clause, the word within the scope of *only* remains inside the island and does not have any bearing on grammaticality and the overall semantics because none of its features are targeted. In contrast, in our analysis the focusing of a non-head subconstituent and the percolation of the focus feature to the head results in the formation of a pairwise list, in which the head denotes a set of entities defined in terms of the properties specified in the focus phrase, so both the head of the phrase and its subconstituent are focused.

Abbreviations

ABL – ablative; ACC – accusative; AFOC – agent focus; AN – action nominaliser; COM – comitative; CVB – converb; DAT – dative; EX – existential; EV – evidential; GEN – genitive; FOC – focus; IMPF – imperfective; INTERR – interrogative; INTR – intransitive; LOC – locative; NEUT – neutral; OBJ – object; OFOC – object focus; PAST – past tense; PF – perfective; PL – plural; PTCP – participle; SFOC – subject focus; SG – singular; SS – same subject; TR – transitive

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