

# The syntax of multiple wh-questions in Tundra Nenets

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## 1. Introduction

There are two main aspects of questions with multiple wh-phrases that show systematic grammatical variation across languages, and that are usually discussed in the literature. One considers the *syntactic position* of wh-phrases in multiple questions. The literature usually accounts for four major types of languages with different multiple wh-question formation-strategies (see, e.g., Rudin 1988; Cheng 1991, 1997; Bošković 2002; Stoyanova et al. 2004; Chernova 2015; Dayal 2017; a.o.). These strategies are the following:

- (i) Multiple wh-fronting languages: in this type of languages all wh-phrases are fronted, i.e., the wh-phrases appear clause-initially. It is the case in Bulgarian, Russian, etc.
- (ii) Wh-*in situ* languages: in these languages, all of the wh-phrases remain *in situ*, i.e., they occupy their base position, and there is no wh-movement assumed. We observe this pattern, e.g., in Japanese, Chinese, etc.
- (iii) Mixed languages: one (and usually the first) wh-phrase occurs in initial position and the other(s) remains *in situ*, e.g., in German, English, etc.
- (iv) Languages with no multiple wh-question: these languages do not allow for a multiple wh-question formation at all, like Italian, Somali, Berber, etc.

Sometimes a fifth type of language is also distinguished in the literature whose multiple wh-questions can represent more than one pattern of the (i)–(iv) types (see, e.g., Sino-poulou 2008). A typical example of this is French, in which either all wh-phrases remain *in situ*, or only one wh-phrase moves and the other(s) remains *in situ*, i.e., its multiple wh-questions come in two types: *in situ* and mixed types.

The other parametric variation of questions with multiple wh-phrases concerns the *order* of wh-phrases relative to each other. This parametric variation assumes wh-movement, and therefore only concerns those languages in which at least one of the wh-phrases undergoes movement. Cross-linguistically, two constraints can be formulated which might be relevant to this aspect: the *Superiority Condition* and the *Specificity Filter* (see, e.g., Kuno & Robinson 1972; Comorovski 1989; É. Kiss 1993; Bošković 1997). The former says that in some languages, like in English, the multiple wh-questions are more acceptable if the higher

wh-phrase in the underlying representation moves and the lower one remains *in situ* (cf. Kuno & Robinson 1972; Bošković 1997; a.o.). It means that the relative order of the wh-phrases is sensitive to their syntactic status. In contrast, in some languages, e.g., in Hungarian, it is the specificity of the wh-phrase that constrains its position relative to the other wh-phrases (at least in one subtype of Hungarian multiple wh-questions). In these multiple wh-questions, the first wh-phrase has to be more specific than the following one(s) (cf. É. Kiss 1993). Accordingly, an inherently non-specific wh-phrase cannot precede an inherently specific wh-phrase in these constructions. This is what the latter constraint, i.e., the *Specificity Filter* postulates.

It is known that Tundra Nenets (Uralic, Samoyedic) allows for multiple wh-questions. It has been claimed in the literature that the relative order of wh-phrases in multiple wh-questions is free, i.e., the wh-phrases can occur in the clause in any possible order (1a–c) (cf. Nikolaeva 2014: 266).

- (1) a. *xib'a njamke-m xib'a-n? m'i-ca?*  
who what-ACC who-DAT give-INTER.3SG  
S O IO
  - b. *njamke-m xib'a xib'a-n? m'i-ca?*  
what-ACC who who-DAT give-INTER.3SG  
O S IO
  - c. *njamke-m xib'a-n? xib'a m'i-ca?*  
what-ACC who-DAT who give-INTER.3SG  
O IO S
- 'Who gave what to whom?' (Nikolaeva 2014: 266)<sup>1</sup>

Considering the basic word order pattern of Tundra Nenets (that is a SOV order with rigid verb finality), it is (1a) in which the wh-phrases seem to appear *in situ* on the surface. We can assume that in (1b) the object wh-phrase is fronted, and in (1c) both the object and the indirect object wh-phrases occur *ex situ*. This free variability of the wh-phrases is, however, not case in certain Tundra Nenets multiple wh-questions. Consider the examples in (2) and (3).

- (2) *njamke-m? xanzer? pær-ŋa-n?*  
what-ACC how do-CO-2SG  
O Adv  
'How did you do what?' (KhO2018, TLC) [multiple question]
- (3) *xanzer? njamke-m? pær-ŋa-n?*  
how what-ACC do-CO-2SG  
Adv O  
'How did you do something?' [single question]  
#How did you do what? (KhO2018, TLC) [#multiple question]

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<sup>1</sup> The transcription and the glosses of Nikolaeva's (2014) examples have slightly been modified for the purpose of uniformity in the present paper.

The examples above show that it is only the clause in (2), that is interpreted as a multiple question. In (2), the wh-phrases seem to appear *in situ* on the surface. In contrast, the clause in (3), which exhibits the reversed order of the two wh-phrases in (2), represents a single content question with one wh-phrase. This pattern contrasts sharply with the suggestion of the literature, and shows that certain orders of the wh-phrases in multiple wh-questions cannot be invariant in Tundra Nenets. Thus, we can assume that the order of the wh-phrases is not always free in Tundra Nenets questions with multiple wh-phrases.

In this paper, I will argue that (i) in Tundra Nenets multiple wh-questions at least the first wh-phrase can move to a higher position, and (ii) this movement is constrained by the *Specificity Filter*.<sup>2</sup> Evidence on the application of the *Specificity Filter* comes from the ungrammaticality of certain relative orders, and the answers that are given to the multiple wh-questions (see 3.1). Similarly to that found in Hungarian, the first wh-phrase in the Tundra Nenets construction is interpreted as a distributive universal quantifier. This is supported by the fact that the first wh-phrase can trigger object agreement on verbs (that is otherwise not possible in the case of wh-objects; see 3.2). Additionally, it can be preceded by elements that normally cause Intervention effects in single wh-questions. So it supposedly undergoes topic movement (see 3.3). The available data are, however, not sufficient to determine the exact position of the first wh-phrase. Neither is it possible to decide whether Tundra Nenets belongs to the mixed type of languages, i.e., whether it is only the first wh-phrase that moves, or it is to be classified as a fronting-type, i.e., all wh-phrases move to a higher syntactic position. Before I start the discussion of the relative order and position of wh-phrases, I provide a short description of the Tundra Nenets language, and discuss the data gathering techniques used during the examination of the multiple wh-construction in Section 2.

## 2. The Tundra Nenets language and data

Tundra Nenets belongs to the Samoyedic branch of the Uralic language family. The language is spoken in the North-Eastern part of Europe and in the North-Western part of Siberia. There are c. 20,000 native speakers of Tundra Nenets (cf. Touluze 2003; Koshkarova 2005; Volzhanina 2007; and see the population census of the Russian Federation from 2010). The language is divided into three main dialect groups: the Western, the Central and the Eastern groups. These are mutually intelligible but show differences (at least) in their phonological and lexical characteristics.

The present paper is based on data of one native speaker of Tundra Nenets who speaks the Yamal subdialect of the Eastern dialect group. I tested the Tundra Nenets questions with multiple wh-phrases incrementally by using several methods during consulta-

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<sup>2</sup> This statement only holds for those Tundra Nenets multiple wh-questions in which one wh-phrase is interpreted as specific and the other gets a non-specific interpretation. In those multiple wh-questions where both of the wh-phrases are specific their relative order indeed seems to be free.

tions with the informant in Moscow in 2019. In the first stage, I used a simple grammaticality judgement test for which I constructed Tundra Nenets examples by using the dataset of the Tundra Nenets Monolingual Corpus (see Mus–Metzger 2021<sup>3</sup>). This first stage was necessary, because neither the grammars nor the available corpora/texts provided sufficient data-types to formulate a starting hypothesis. Therefore, I designed this test to investigate whether all the logically possible permutations of the wh-phrases result in grammatically acceptable constructions. I constructed example pairs containing two wh-phrases in two relative orders and randomized the question pairs. I used other types of sentences, such as single questions, existentials, locatives and belong-constructions as fillers. I repeated the test two times on different days with my consultant. Based on the results of this test, I was able to set up hypotheses which I tested in the second phase. In the second survey, I used various analysis-controlled elicitation techniques: situational context tests (acceptability test) with picture stimuli, and a target language complementation test in Tundra Nenets. The goal of the former test was to examine whether the grammatically possible orders I got from the first test are substitutional in different contexts. The latter was used to examine the grammatical characteristics of the two possible relative orders of the wh-phrases. Finally, I set up a questionnaire based on the results of phase 1 and phase 2 with target language manipulation tasks to determine the possible syntactic positions of the wh-phrases. The examples, if it is otherwise not indicated, are from these consultations.

### 3. The order of wh-phrases in multiple questions

Tundra Nenets is considered to be a strict verbal final language, in which only dislocated constituents may appear post-verbally, compare (4) and (5) (cf. Nikolaeva 2014; Mus & Surányi 2021).

- (4) \*Sergei Masha-m? meńe jolće.  
Sergey Masha-ACC love.3SG very  
Intended: ‘Sergey loves Masha very much.’
- (5) jăxă-koća-? xæw-xăna jile-ja-xă?, jabta-ko jăxă-? xæw-xăna.  
river-DIM-GEN side-LOC live-CO-3DU narrow-DIM river-GEN side-LOC  
‘They lived near a small river, near a narrow small river.’

As (6) indicates, a wh-phrase cannot be dislocated and it cannot occur outside of the boundaries of the clause.

- (6) \*Sergei meńe xib'a-m??  
Sergei love.3SG who-ACC  
Intended: ‘Who does Sergei love?’

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<sup>3</sup> The corpus is available in the website <https://tundranenetsdata.nytud.hu/bonito>

The same restriction is expected in multiple wh-questions, i.e., all wh-phrase appears before the verb. As mentioned, the literature does not stipulate any ordering constraint in the multiple wh-questions, and it is suggested that the order of the wh-phrases is relatively free (Nikolaeva 2014).

### 3.1. Superiority Condition or Specificity Filter

The first stage of testing Tundra Nenets multiple wh-questions was to test all available relative orders of wh-phrases. This test resulted in the following patterns:

*Table 1.* The relative order of wh-phrases in Tundra Nenets multiple wh-questions

Grammaticality of the clause	Relative order of wh-phrases	Grammaticality of the clause	Relative order of wh-phrases
OK	S-O	OK/?OK	O S
OK	S-IO	OK	IO S
OK	IO-O	OK	O-IO
OK/OK?	Time/Place-S	OK	S-Time/Place
OK	Time/Place-O	OK	O-Time/Place
OK	S-Manner	*	Manner S
OK	O Manner	#/*	Manner O
OK	Time/Place Manner	*	Manner Time/Place

It is observed from the results, that wh-phrase-pairs can appear in the multiple wh-question in any relative order with one possible exception. The manner adverbial wh-phrase cannot be fronted, and so it cannot precede any other wh-phrase (7).

- (7) \*how who
- #how what
- \*how whatN
- etc.

The construction in which the manner wh-adverb precedes a wh-phrase can be rescued in those cases in which there is a possibility to interpret the second wh-phrase as an indefinite, see, e.g., #how what. As Nikolaeva (2014: 265) mentions, the wh-words *xib'a* ‘who’ and *yämke* ‘what’ in Tundra Nenets can have non-question (indefinite-like) reading. In these constructions, therefore, the single question interpretation is still available, and therefore the sentence does not result in an ungrammatical construction (8). It is,

however, needed to be mentioned that this rescuing mechanism seems to be available only for the wh-word meaning ‘what’. Note that the fronted wh-phrase does not necessarily occupy the leftmost position in the sentence.

- (8) *Igor' xānzer? nāmke-m? tola-ŋko-sa?*  
 Igor how what-ACC read-co-3SG.INTER  
 ‘How did Igor read something?’  
 #‘How did Igor read what?’

Now let us turn to the possible explanation of the order constraint illustrated in Table 1. There are languages in which the multiple question is more acceptable if the higher wh-phrase moves and the lower one remains *in situ* (see, e.g., Kuno & Robinson 1972; a.o.). This is referred to as the *Superiority Condition* in the literature. This phenomenon is observed, for instance, in English (9).

- (9) a. *Who read what?*  
 b. \**What did who read?*

Given that the subject wh-phrase in English occupies a higher position in the base structure, it can move higher to a dedicated wh-position. But this is not allowed for the object wh-phrase that sits lower in the base construction. Therefore, (9b) is not acceptable. It is also observed that the *Superiority Condition* is affected by the discourse status of the wh-phrase. Thus, the effect does not survive if the wh-expressions are D-linked DP-internal wh-elements (Pesetsky 1987). Therefore both (10a) and (10b) are acceptable.

- (10) a. *Which student read which book?*  
 b. *Which book did which student read?*

In Tundra Nenets, the manner adverb is expected to occupy a low position in the sentence. Descriptive studies indicate that the manner adverb is situated in an immediately preverbal position in a neutral sentence (see, e.g., Salminen 1998; Nikolaeva 2014). The scheme of the order of a neutral declarative clause is given in (11).

- (11) time adjunct – subject – place adjunct – indirect object – direct object –  
 manner adverb – verb

If we accept that the manner adverb occupies the lowest position in the sentence before the verb, the *Superiority Condition* would explain the ordering constraint in Table 1. In this case, however, any other relative order that is grammatical violates the Condition. Consider, for instance, (12) and (13), in which the object wh-phrases precede the subjects and both sentences result in grammatically acceptable multiple wh-questions.

- (12) *nāmke-m? xīb'a p̪ire-mb'i?*  
 what-ACC who cook-dur.3SG  
 ‘Who is cooking what?’

- (13) *xib'a-m? xib'a jadabta-mb'i?*  
 who-ACC who meet-dur.3SG  
 'Who is meeting whom?'

Given that the syntactic status of the wh-phrases does not determine the relative order of wh-phrases in multiple wh-questions, it is unlikely that we deal here with the *Superiority Condition*. Now let us consider another possible explanation. It is observed that in those Hungarian multiple wh-questions in which all wh-phrases appear before the verb, the higher wh-expression (that has a wider scope) can only be represented by a specific wh-phrase, see (14a–b) (cf. É.Kiss 1993).

- (14) a. \**Miért / ??hogyan kit választottak meg?*  
 why how whom elected.they PERF  
 \*\*'Who did they elect why/how?'  
 b. *Kit miért / hogyan választottak meg?*  
 whom why how elected.they PERF  
 'Why/how did they elect who?'

As É. Kiss (1993) notes, certain Hungarian wh-phrases such as 'who' and 'what' can get specific interpretation from the discourse, i.e., they lend themselves to the relevant discourse reading in appropriate contexts. In addition, there are wh-phrases, like 'which'-phrases, that appear to bear the relevant interpretation discourse inherently. Finally, there are wh-phrases that are nonspecific and one can hardly render specific interpretation to them, e.g., 'how' and 'why'. Thus, the relative order of the wh-phrases is filtered by their specificity, and the non-specific wh-phrase cannot precede a specific one. Now let us assume that the question words in Tundra Nenets behave the same way: certain wh-phrases are inherently specific; others get specific interpretation from the context; and there is a group of wh-phrases that is non-specific (or it hardly gets specific interpretation). Consider the following context and the example in (15).

*Context:* Today, the children got cake after lunch.

- (15) (\**xánzer?*) *xánjai yačeki (xánzer?) torta-m?* (*xánzer?*) *xärwa-bta(-da)?*  
 how which child how cake-ACC how want-caus.3SG-SG  
 'Which child wants the cake how?'

In (15), the inherently non-specific wh-phrase 'how' can only occupy a position in which it follows the inherently specific 'which child' wh-phrase. Note that the object can intervene between the two wh-phrases, thus the wh-phrases can be separated.

A further evidence on this comes from the answer that can be given to a multiple wh-question in Tundra Nenets. The multiple wh-question in both relative orders of the wh-phrases requests an answer that identifies multiple pairs (16)–(17). Note that the order of the multiple pairs follows the order of the wh-phrases.

*Context:* Eduard and Olga went to the store. Eduard bought a Harry Potter book, Olga bought a newspaper.

- (16) Q: *xib'a njamke-m? temda-sa?*

who what-ACC buy-INT.3SG

'Who bought what?'

- A: *Eduard Garri Potter kniga-m? temda-š, Olga gazeta-m? temda-š.*  
 Eduard Harry Potter book-ACC buy.3SG-PST Olga newspaper-ACC buy.3SG-PST  
 'Eduard bought the Harry Potter book, Olga bought the newspaper.'

- (17) Q: *njamke-m? xib'a temda-sa?*

what-ACC who buy-int.3SG

'Who bought what?'

- A: *Garri Potter kniga-m? Eduard temda-š, gazeta-m? Olga temda-š.*  
 Harry Potter book-ACC Eduard buy-3SG.PST newspaper-ACC Olga buy.3SG-PST  
 'The Harry Potter book was bought by Eduard, and the newspaper was bought by Olga.'

Thus, the answer does not specify values for the first wh-phrase in either of the relative orders but it pairs X and Y in both cases. It follows from this that the first wh-phrase that takes matrix scope always denotes a set in all possible orders. This set contains given, contextually identifiable elements. Then, this first wh-phrase behaving as a distributive universal quantifier requires this set to be exhaustively listed, i.e., to render a value to its every single element. This observation also indicates that there is no syntactic ambiguity in the relative orders of the wh-phrases, and therefore the order of the wh-phrases cannot be considered to be free in multiple wh-questions. Now let us discuss further evidence that supports this observation.

### 3.2. Wh-object agreement in multiple wh-questions

There is another argument that supports the observation that the first wh-phrase is not interpreted as a genuine wh-phrase in Tundra Nenets multiple wh-questions. This argument comes from the possibility of triggering object agreement on the verb. Let us first summarize the criterion of object agreement in Tundra Nenets. Transitive verbs may take object agreement suffix in the language. As observed by Dalrymple & Nikolaeva (2010) and Nikolaeva (2014) a third person lexical object that is topical/given triggers obligatory agreement on the verb (18).

- (18) Q: What did a/the man do to the reindeer?

- A: *xasawa ti-m? xada-\*Ø/-da?*

man reindeer-ACC kill-3SG/-3SG.SG

'A/the man killed a/the reindeer.'

Given that agreement is only possible with topical/given objects it is not expected and neither is possible with interrogative objects at least in single wh-questions (Nikolaeva 2014). As it is shown in (19), even a D-linked specific wh-object cannot trigger agreement.

- (19) *xăńaji kniga-m? pidar temda-sa-n/\*-r?*  
     which book-ACC 2SG buy-int.2SG/-2SG.SG  
     ‘Which book did you buy?’

In contrast, in multiple wh-questions with a fronted wh-object object agreement is possible (20). Note that this wh-object agreement is not obligatory.

- (20) *xăńaji kniga-m? xurka xasawa temda-sa-Ø/-da?*  
     which book-ACC what man buy-int-3SG/-3SG.SG  
     ‘What man bought which book?’

This is only observed if the wh-object is fronted. In the case of a non-fronted wh-object, i.e., if it is preceded by another wh-phrase, the object agreement is not possible again (21).

- (21) *xurka xasawa xăńaji kniga-m? temda-sa-Ø/\*-da?*  
     what man which book-ACC buy-int-3SG/-3SG.SG  
     ‘What man bought which book?’

Now let us turn to the question of sensitivity of the wh-phrases in multiple wh-question to Intervention effects.

### 3.3. The (in)sensitivity of multiple wh-questions to Intervention effects

Tundra Nenets multiple wh-questions are immune from certain Intervention effects that otherwise arise in single wh-questions. In single wh-questions, universal quantifiers, negative polarity items and focussed expressions cause Intervention effects. It means that a wh-phrase in a single wh-question cannot appear under the scope of these expressions, see, e.g., (22).

- (22) \**xusuwej xasawa xurka laxanako-m? tola-ŋko?*  
     every man which story-ACC read-fut.3SG  
     Intended: ‘Which story will every man read?’

The multiple wh-questions, in contrast, do not seem to be sensitive to Intervention effects. Thus, the wh-phrases can follow the universal quantifier (23), or appear within the scope of negation (24) in multiple wh-questions.

- (23) *xusuwej xasawa xăńana xib'a-m? jadabta-mb'i?*  
     every man where who-ACC meet-DUR.3SG  
     ‘Where is every man meeting whom?’

- (24) *xib'a-xarta-m?* *xib'a* *xăńana* *ni-śa* *maneć-??*  
 who-CONC-ACC who where NEG.AUX-INTERR.3SG see-CONN  
 'Who didn't meet anyone where?'

While negative polarity items can appear before the wh-phrases, intervene between them, or even follow them (25), a wh-phrase seemingly cannot precede the universal quantifier, i.e., no wh-phrase can occupy the leftmost position if there is a universal quantifier in the sentence (26).

- (25) *(xib'a-xarta-m?) xib'a (xib'a-xarta-m?) xăńana (xib'a-xarta-m?)*  
 who-CONC-ACC who who-CONC-ACC where who-CONC-ACC  
*ni-śa* *maneć-??*  
 NEG.AUX-INTERR.3SG see-CONN  
 'Who didn't meet anyone where?'
- (26) a. *(xusuwej xasawa) xăńana (\*xusuwej xasawa) xib'a-m?*  
 every man where every man who-ACC  
*(\*xusuwej xasawa) jadabta-mb'i?*  
 every man meet-DUR.3SG  
 'Where is every man meeting whom?'  
 b. *(xusuwej xasawa) xib'a-m? (\*xusuwej xasawa) xăńana*  
 every man who-ACC every man where  
*(\*xusuwej xasawa) jadabta-mb'i?*  
 every man meet-DUR.3SG  
 ('Where is every man meeting whom?')

This suggests that the universal quantifier has to outscope the wh-phrases. This pattern leads us to a possible sequence of the quantifiers and wh-phrases in Tundra Nenets:

- (27) universal quantifier > distributive universal quantifier expressed by a wh-phrase > genuine wh-phrase

There is only one intervener that the wh-phrases do not seem to avoid in multiple wh-questions. This is the focussed expression that cannot precede the wh-phrases in multiple questions in either of the orders (28)–(29).

- (28) *\*Igor-ři xăńana xib'a-m? jadabta-mb'i?*  
 Igor-only where who-ACC meet-DUR.3SG  
 ('Where is only Igor meeting whom?')  
 (29) *\*Igor-ři xib'a-m? xăńana jadabta-mb'i?*  
 Igor-only who-ACC where meet-DUR.3SG  
 ('Where is meeting only Igor whom?')

Nevertheless, the focus can intervene between the two wh-phrases in either of the orders again (30)–(31).

- (30) *xăńana Igor-ři xib'a-m? jadabta-mb'i?*  
 where Igor-only who-ACC meet-DUR.3SG  
 'Where is only Igor meeting whom?'
- (31) *xib'a-m? Igor-ři xăńana jadabta-mb'i?*  
 who-ACC Igor-only where meet-dur.3SG  
 'Where is only Igor meeting whom?'

We could now assume that the focussed expression is prohibited from occupying a surface position in which it c-commands a wh-phrase. However, such an assumption would leave the patterns in (23) and in (24) without an explanation. Thus, we fail to explain why the multiple wh-phrases are not vulnerable to the Intervention effect caused by the universal quantifier and the negative polarity item. Instead, the fact that the focussed expression cannot precede the fronted wh-phrase may suggest that the first wh-phrase has to occupy a position before the focus. This position can be the position of topic(s), that is then precede(s) foci in Tundra Nenets. The possibility of fronting the wh-phrase to a topic position is supported by the wh-object agreement pattern discussed in Section 3.2.

This favours of characterizing Tundra Nenets as a mixed language-type (cf. Cheng 1997): the first wh-phrase moves to topic position, which position is however not necessarily at the left edge of the clause, and the other appears *in situ*.

#### 4. Conclusions

In this paper, I discussed the syntactic position and relative order of wh-phrases in Tundra Nenets multiple wh-questions. Contrary to previous proposals, the wh-phrases in multiple wh-questions are rigidly ordered and their order is constrained by the *Specificity Filter*.<sup>4</sup> It means that it is the specificity of a wh-phrase that determines its position in the question relative to the other wh-phrases. It is evidenced by ungrammaticality of the wh-sequence in which the manner adverb precedes any other wh-phrase. Further evidence comes from the pair-list answer that can only be given to a multiple wh-question in either orders. These suggest that the first wh-phrase is always specific and behaves as a distributive universal quantifier. The facts that the fronted wh-phrase can trigger object agreement on the verb, and that it is only the focus phrase that cannot precede the wh-sequence imply that the first (and specific) wh-phrase undergoes movement. It supposedly appears in the topic position. Note however, that the fronted wh-phrase does not necessarily occupy the leftmost position in the clause.

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<sup>4</sup> It is to be noted that this statement does not hold for multiple wh-questions in which both of the wh-phrases get specific interpretation.

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