# DO CONTRASTIVE TOPICS EXIST?

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## 1. Introduction

This paper investigates a phenomenon that has been referred to in the linguistic literature as *Contrastive Topic* (henceforth **CT**). (Examples of CTs are given in (1) and (2).) Traditionally CT is analyzed as an independent *Information Structural* (henceforth **IS**) notion that is linked to a particular interpretation and intonation.

The interpretation that CTs are associated with has been characterized as that of incompleteness or of a set of sets of propositions/ questions (Büring 2003). Thus, the sentences in (1) and (2) cannot be construed as offering a full answer to the questions in the context. Instead, they leave the impression that more needs to be said (as suggested by the continuations in the brackets). To be precise, in (1), the question in the context requests information about John, whereas the reply contains the statement that the proposition 'x ate the beans' is true of Fred but does not say anything about John. Similarly, in (2), the reply conveys that the proposition 'Fred ate x' holds of 'the beans' but it has nothing to say about 'the soup'. (Throughout, letters in bold capitals represent the vowel that bears the main sentential stress, while '\' stands for a falling and '/' for a rising intonational contour.)

(1) [What did John eat?]CONTEXT
\ / \
[Fred]CT ate [the b**EA**ns]FOC … (but I don't know about John)

(2) [Who ate the soup?]CONTEXT
\ \ /
[Fr**E**d]FOC ate [the beans]CT … (but I don't know about the soup)

In many languages CTs are marked with a rising intonational contour. In English, they carry a (fall)-rise contour (see (1) and (2)), which has been dubbed the B-accent in the linguistic literature (Jackendoff 1972). In Russian, CTs are characterized by a rise in pitch on the stressed vowel (see (3) and (4)). This intonational contour has been referred to in the Russian linguistic literature as IK3 (Bryzgunova 1971, 1981). In German, Topic-Focus structures are marked with a so-called hat contour (also bridge contour) with a rise on the CT and a fall on the focus. Moreover, unlike in English, in German and Russian CTs undergo fronting.

(3) [Čto el Ivan?]CONTEXT Russian
*'What did Ivan eat?'*
----/ ----------\
[Boris]CT el [bob**Y**]FOC (a nasčët Ivana ne znaju)
Boris ate beans.ACC (but I don't know about Ivan)
*'Boris ate the beans (but I don't know about Ivan).'*

(4) [Kto el sup?]$_{\text{CONTEXT}}$ Russian
*Who ate the soup?*
---- / ----------\
[Boby]$_{\text{CT}}$ el [Bor**I**s]$_{\text{FOC}}$ (a nasčët supa ne znaju)
beans.ACC ate Boris (but I don't know about the soup)
*'Boris ate the beans (but I don't know about the soup).'*

The aim of the present paper is to argue that the IS notion of CT is redundant and can be reduced to that of *Contrastive Focus* (henceforth **CF**).

An example of CF is given in (5).

(5) [Fred ate the beans.]$_{\text{CONTEXT}}$
\
No, Fred ate the [s**OU**p]$_{\text{CF}}$ (not the beans)

At first glance, CFs seem quite distinct from CTs, as they carry a distinct intonational contour and are associated with a distinct interpretation. Thus, CFs are marked with falling intonation, which for English has been referred to as the A-accent (Jackendoff 1972) and for Russian as IK2 (Bryzgunova 1971, 1981). Moreover, an utterance containing a CF does not convey an interpretation of incompleteness or of a set of sets of propositions, but rather that of opposition or counter-assertion to the proposition in the context.

However, I will argue that the apparent dissimilarity between CTs and CFs is due to a difference between the structures that contain them rather than any particular difference between the associated information-structural notions themselves. The structures that host CTs and CFs will be claimed to be distinct due to the nature of an additional focused element obligatorily present in the sentence. CTs and CFs themselves, in contrast, will be shown to be associated with identical interpretations, which results in their identical syntactic distribution, strongly suggesting that they in fact represent one and the same IS phenomenon in two different types of construction.

The paper is organized as follows: Section 2 examines the distribution of non-contrastive focus in Russian; Section 3 establishes the definition of contrast and looks at the distribution of contrastive categories; Section 4 discusses the similarities and differences between CT and CF and spells out the nature of the additional focused element present in sentences that contain them; Section 5 discusses the semantics of certain focus-sensitive operators and the reasons for its incompatibility with the semantics of sentences containing a CT; Section 6 concludes the paper.

## 2. The Distribution of Non-Contrastive Focus in Russian

I will assume two binary interpretative features, <±presupposed> and <±contrastive>, to characterize the information-structural categories I discuss in the paper. A key hypothesis on which my analysis will rely is that CT, CF and non-contrastive focus all share the feature <-presupposed>.

While the above features are not intended as syntactic, but merely specify interpretative properties of the categories that carry them, this is not to say that

they do not have any impact on the distribution of these categories. However, I will argue that these distributive effects come about as a result of mapping principles that relate syntactic structures to IS interpretations.

In this section, I consider the distribution of <-presupposed> material and propose a mapping principle that captures the observation that non-contrastive focus in Russian consistently surfaces in clause final position. As a null hypothesis, I propose that Russian is subject to the generalization introduced by Neeleman and Titov (2009). A slightly modified version of it is given in (6).[1]

(6) <-presupposed> categories are licensed in clause final position

Admittedly, the generalization in (6) does not hold on the surface. Non-contrastive focus must indeed show up clause-finally, as illustrated in (7).[2] Contrastive categories, however, typically occupy positions further to the left, as will be demonstrated below (see Krylova and Khavronina 1988, King 1995, and Brun 2001). However, as will be argued in section 3, the launching site for the movement of contrastive categories is the position in which non-contrastive focus must surface.

(7) a. [Čto čitaet Anja?]CONTEXT — Russian
*What does Anna read?*

Anja čitaet [kn**I**gu]FOC — SV[O]F
Anna reads book.ACC
*'Anna reads the/a book.'*

b. [Kto čitaet knigu?]CONTEXT
*'Who reads the/a book?'*

Knigu čitaet [**A**nja]FOC — OV[S]F
book.ACC reads Anna
*'Anna reads the/a book.'*

c. [Komu Anja dala knigu?]CONTEXT
*'Who did Anna give a book to?'*

Anja dala knigu [K**A**te]FOC — SVO[IO]F
Anna gave book.ACC Catherine.DAT
*'Anna gave a book to Catherine.'*

d. [Čto Anja dala Kate?]CONTEXT
*'What did Anna give to Catherine?'*

[1] Neeleman and Titov (2009) do not use the interpretative features discussed here but instead refer to the more familiar notion of focus.

[2] The focused constituents in (7) must surface in clause final position unless they are enriched with emphatic interpretation (Krylova and Khavronina 1988). Emphatic focus is analyzed by the present paper as <+contrastive>, which accounts for the fact that it is allowed to undergo A'-fronting in Russian (see the discussion around the examples in (20) in the main text).

| | | | | |
|---|---|---|---|---|
| Anja | dala | Kate | [kn**I**gu]FOC | SVIO[O]F |
| Anna | gave | Catherine.DAT | book.ACC | |

*'Anna gave a book to Catherine.'*

It must be noted that the term *presupposition* has traditionally been used in two different fields of linguistics to describe two separate phenomena: In semantics, it is used to refer to a condition that has to be fulfilled for a sentence to be either true or false; in works on Information Structure, it denotes the background of a sentence (see Lambrecht's 1994 *pragmatic presupposition*). In the present paper I use the term presupposition in its latter definition. Hence, the focus of a sentence is always <-presupposed>, whereas the background is <+presupposed>.[3,4]

In (7), the sentences are divided into background and focus, with the background consisting of presupposed material and the focus offering non-presupposed information. For instance, in (7a), the question in the context presupposes that Anna reads something but it is not known what exactly, whereas the answer contains a non-presupposed part that fulfills the background and turns it into a true proposition. In other words, the non-presupposed constituent in (7a) provides a value for x in Anna reads x.

The examples in (7) contain a non-contrastive focus or so-called *New Information Focus* (henceforth **NIF**). This type of focus is also marked with a falling intonation (IK1), which is similar to IK2 assigned to CF but slightly lower-pitched and less intense (Bryzgunova 1971, 1981), and is either not linked to anything in the preceding discourse, or, when used in a question-answer context, is linked to a wh-phrase.

The variation in the word order found in Russian sentences with non-contrastive focus exhibits properties of A-scrambling (Titov 2007).[5] That is, it

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[3] Importantly, what is being referred to here as presupposed must be distinguished from discourse-anaphoric. The latter interpretation can be indicated by the <±D-linked> feature. This feature is often redundant because in most cases presupposed material is <+D-linked>, whereas the non-presupposed part of a sentence consists of <-D-linked> material, as in (7). However, syntactic constituents that are associated with the non-presupposed interpretation may contain discourse-anaphoric material. In fact, the entire non-presupposed constituent can be discourse-anaphoric, as shown in (i).

(i) [Who kissed John's wife?]CONTEXT

[J**O**hn]FOC kissed John's wife.

[4] Rochemont and Culicover 1990 reject the term 'presupposed' on the basis of its ambiguity and replace it with 'c(ontext)-construable'. However, the latter notion fails to distinguish pragmatic presupposition from discourse-anaphoricity.

[5] Notably, the difference between the arguments as regards the <±presupposed> feature can license an A-scrambled OVS structure even when both arguments are <+D-linked> (see (i) below), further supporting the view that pragmatic presupposition and discourse-anaphoricity are distinct information structural interpretations.

(i) [Kto poceloval ženu Ivana?]CONTEXT — Russian
*Who kissed Ivan's wife?*

| | | | |
|---|---|---|---|
| Ženu Ivana | poceloval | [Iv**A**n]NIF | OV[S]NIF |
| Ivan's wife.ACC | kissed | Ivan | |

*''Ivan kissed Ivan's wife.'*

feeds anaphoric binding (see (8a) vs. (8b))[6], does not give rise to weak crossover effects (see (9)), is clause-bound (not demonstrated here), and does not give rise to scope-reconstruction (see (10)).[7]

(8) a. *Vystrely drug druga$_1$ ubili milicion**E**rov$_1$ SVO
shots.NOM each other.GEN killed milicia-men.ACC

b. Milicionerov$_1$ ubili vystrely drug dr**U**ga$_1$ OVS
milicia-men.ACC killed shots.NOM each other.GEN
*'Milicia men were killed by each others shots.'*

(9) Každuju devočku ljubit eë m**A**ma OVS
every girl.ACC loves her mum
*'Every girl is loved by her mum.'*

(10) a. Každuju otkrytku podpisali [dva stud**E**nta]$_{NIF}$
every postcard.ACC signed two students
*'Every postcard was signed by two students.'*
∀> ∃; ?∃>∀

b. Dve otkrytki podpisal [každyj student]$_{NIF}$
two postcards.ACC signed every student
*'Two postcards were signed by every student.'*
∃>∀; *∀> ∃

It has been claimed that scope reconstruction and WCO effects are unreliable tests for an A-position in Russian because it has so-called 'frozen' scope and obviates WCO effects in general (King 1995, Ionin 2001, Bailyn p.c., 2004a). However, the examples in (11) below demonstrate that WCO violations and scope reconstruction obtain whenever an A'-moved quantifier undeniably crosses an argument, suggesting that the scrambled sentences that are taken to have 'frozen' scope or to lack WCO violations involve reconstruction of an A'-moved object to

[6] Ionin (2001) argues on the basis of the examples like (i) below that anaphoric binding is impossible in Russian.

(i) a. * Roditeli drug druga$_1$ videli det**E**j$_1$ SVO
parents.NOM each other.GEN saw children.ACC

b. * Detej$_1$ videli roditeli drug dr**U**ga$_1$ OVS
children.ACC saw parents.NOM each other.GEN
(Ionin 2001:44)

However, careful examination of the data reveals that the Russian reciprocal resists being embedded in an animate argument carrying the most prominent θ-role in the predicate's argument structure. This suffices to explain the ungrammaticality of (i). It is beyond the scope of the present paper to investigate this selective behavior of the Russian reciprocal. What matters is that embedding the reciprocal in an inanimate argument, as in (8b), results in a grammatical sentence, strongly suggesting that anaphoric binding is possible in Russian neutrally scrambled sentences.

[7] In (10a), the apparent wide scope reading of the existential quantifier is accessible due to the availability of a specific interpretation for the indefinite.

an A-position above the sentence-final focused subject, as in (12) below (Titov 2007).

(11) a. * [Každuju devočku]$_1$, eë$_1$ mama xočet,
every girl.ACC her mum wants

čtoby ***t*** $_1$ poceloval Iv**A**n
that kissed Ivan

b. [Každuju devočku]$_1$, dva mal'čika xotjat,
every girl.ACC two boys want

čtoby ***t*** $_1$ poceloval Iv**A**n
that kissed Ivan
*''Two boys want for every girl to be kissed by Ivan.*

∃>∀; *∀> ∃

(12) a. [Každuju devočku]$_1$, ty xočeš',
every girl.ACC you want

čtoby ***t*** $_1$ pocelovala eë$_1$ m**A**ma
that kissed her mum

b. [Každuju devočku]$_1$, Ivan xočet,
every girl.ACC Ivan wants

čtoby ***t*** $_1$ pocelovali dva m**A**l'čika
that kissed two boys
*'Ivan wants for every girl to be kissed by two boys.'*

∀> ∃; ?∃>∀

Russian A-scrambling can be analyzed either as resulting from A-movement (Bailyn 2004a, King 1995, Slioussar 2007) or from variation in the base component (Titov 2007).[8] However, to sustain the former analysis, it must be stipulated that there is no scope reconstruction in A-chains.[9] Regardless of the approach taken, base-generation or A-movement with no scope reconstruction, A-scrambled structures are marked with respect to those exhibiting neutral order (cf. the idea of movement as a Last Resort in Chomsky's version of Minimalism, Chomsky 1995). Since both structures, an unmarked and a marked one, coexist in the language, economy considerations demand that the latter is generated by the grammar only to achieve an interpretation that the former fails to convey. In other words, a marked structure must receive an interpretative license (cf. Neeleman and van de Koot 2008).

The interpretative license for Russian scrambled constructions can be provided by a mapping rule that maps a structurally flat information structure

[8] Richards' (2008) 'tucking in' analysis of A-scrambling is not discussed here due to space limitations.

[9] It must also be stipulated that this type of A-movement is not subject to locality restrictions, as it allows for A-movement of NPs/DPs across c-commanding NPs/DPs.

onto a syntactic structure in such a way that an argument in a scrambled position is interpreted as more prominent with respect to an argument in the position across which scrambling takes place:

(13) *Argument prominence mapping rule*

> Interpret a neutrally scrambled structure as reflecting the relative prominence of two arguments, where an argument in a scrambled position is construed as <+prominent> and an argument in the position across which scrambling takes place as <-prominent>

I would like to argue that in scrambling languages, like Russian, the relative prominence of arguments can be established on the basis of not only theta prominence but also discourse prominence; with the former predicting the unmarked order of arguments and the latter licensing scrambled orders. To be precise, an argument can be construed as either <+prominent> or <-prominent> on the basis of the discourse interpretation it is associated with. For instance, an argument linked to an interpretation that is already present in a discourse can be understood as made prominent through context, whereas an argument that conveys information that is not yet part of the Common Ground cannot. If so, the generalization in (6) can be understood as resulting from the mapping rule in (13), because the relative prominence of arguments must be reflected by the linear precedence of the more prominent <+presupposed> argument with respect to the less prominent <-presupposed> argument. The resulting information structure is mapped onto syntax. Furthermore, given the right-branching structure of Russian clauses, the mapping rule also determines that a more prominent argument outscopes a less prominent one (see (10)).

The rule in (13) does not only account for the relative order of a <+presupposed> argument with respect to a <-presupposed> argument; it also regulates the order of <-presupposed> arguments, if one is linked to a non-identical discourse antecedent, while the other is unlinked, as in (4). By hypothesis, the relative discourse-prominence of such arguments is established on the basis of the <±contrastive> feature. This is because contrast can be understood as a contributing factor to discourse prominence: a contrastive category has a link to a member of a set to which this category itself also belongs. If so, the <+contrastive> object in (4) can be understood as more discourse-prominent than the <-contrastive> subject: the former contains a link to a discourse that the latter lacks.

Since the mapping rule in (13) interprets A-scrambled structures as respecting argument prominence, it predicts that when the relative prominence of <-presupposed> arguments is established on the basis of the <±contrastive> feature, objects with the interpretation of CT A-scramble above subjects that belong to NIF in Topic-Focus structures as in (4).[10] At the same time, contrastive constituents undergo A'-fronting in a variety of languages, including Russian. As a result, it is impossible to determine on the basis of the surface order whether the object conveying the interpretation of CT in (4) has undergone A'-movement from its default underlying position or from an A-scrambled position above the

[10] For reasons for analyzing focus in Topic-Focus structures as NIF see section 3.

subject. This issue can be settled, however, on the basis of scope, given that A'-movement obligatorily reconstructs for scope.[11] That is, A'-movement from the default underlying position would result in the object being interpreted below the subject. Conversely, if an A-scrambled structure that is licensed by (13) serves as the input for subsequent A'-movement of the <+contrastive> object, a sentence of the type given in (4) will exhibit surface scope only. As can be seen from (14), the scopal readings support the idea that an A-scrambled structure is formed prior to A'-movement of the object whenever the latter is a CT:

(14) a. [Kto, ty xočeš', čtoby podpisal každyj konvert?]CONTEXT Russian
*Who do you want to sign every envelope?*
----------/ ----------

| | | | | | | |
|---|---|---|---|---|---|---|
| [Každuju | otkrytku]CT1, | ja | xoču, | čtoby | *t*1 | podpisali |
| every | postcard.ACC | I | want | that | | signed |

---------- \---

| | | |
|---|---|---|
| [dva | stud**E**nta]NIF | (a nasčët každogo konverta ne znaju) |
| two | students | (and about every envelope not know) |

*'Every postcard I want to be signed by two students (but I don't know about every envelope).'*

∀> ∃; ?∃>∀

b. [Kto, ty xočeš', čtoby podpisal dva konverta?]CONTEXT
*Who do you want to sign two envelopes?*
--------- -----/----------

| | | | | | | |
|---|---|---|---|---|---|---|
| [Dve | otkrytki]CT1, | ja | xoču, | čtoby | *t*1 | podpisal |
| two | postcards.ACC | I | want | that | | signed |

---------- \

| | | |
|---|---|---|
| [každyj | stud**E**nt]NIF | (a nasčët dvux konvertov ne znaju) |
| every | student | (and about two envelopes not know) |

*'Two postcards I want to be signed by every student (but I don't know about two envelopes).'*

∃>∀; *∀> ∃

The next section looks in more detail at the distribution of <+contrastive> categories with the aim to provide a coherent definition of contrast that captures

[11] That A'-moved <-presupposed> constituents obligatorily reconstruct is apparent from examples like (i) below, which are unambiguous: the indefinite cannot be dependent on the universal. For further discussion, see Neeleman & Van de Koot 2008. The same judgment holds for Russian (contra Bailyn 2001; see (ii) for A'-moved CF and (11b) in the main text for A'-moved CT).

(i) [Every b**O**y]CF1 two girls said [that Mary kissed *t*1]

∃>∀; *∀> ∃

(ii) [Každogo m**A**l'čika]CF1 dve devočki xotjat, [čtoby Maša pocelovala *t*1]
every boy.ACC two girls want that Masha kissed
*'Two girls want every boy to be kissed by Masha.'*

∃>∀; *∀> ∃

the differences in the syntactic behavior between <+contrastive> and <-contrastive> constituents in Russian.

## 3. Contrast

### 3.1 What does it mean to be contrastive?

The standard assumption in the literature on information structure is that for a constituent to be interpreted as contrastive it must be construed as belonging to a contextually salient set of alternatives (Chafe 1976, Jackendoff 1972, Halliday 1967, Rooth 1985, and Rooth 1992). I will refer to a set of alternatives that is contextually salient as a *pragmatic set of alternatives*, as opposed to a semantic set of alternatives, which is usually taken to form the basis for the interpretation of foci generally (Krifka 2008). Unlike a semantic set, a pragmatic set of alternatives is relevant specifically for the discourse under consideration. The hypothesis put forward here is that, although the semantic interpretation of focus might involve selection from a set, for a focus to be contrastive, the set of alternatives must become active in the discourse at the point the sentence containing the contrastive element is uttered. *No sooner and no later.* That is, it must be indicated either through a link to the context or within the utterance itself that the set to which the focused constituent belongs indeed contains alternative members that are relevant for the discourse at hand.

For example, the focused object NPs in (15) are **not** contrastive because no contextually salient set of alternatives is available for them.

(15) [Kogo Ivan pokormil?]CONTEXT
*Who did Ivan feed?*

a. Ivan pokormil [kota]NIF
Ivan fed cat.ACC
*'Ivan fed the cat.'*

b. [Boris]CT pokormil [kota]NIF (a nasčët Ivana ne znaju)
Ivan fed cat.ACC (but I don't know about Ivan)
*'Boris fed the cat (but I don't know about Ivan).'*

The NIF 'cat' provides a value for a variable introduced by the 'wh-phrase' in the context, but it is not indicated either through a link to the context or within the utterance itself that there are alternative members of the set to which 'cat' belongs that are relevant for the discourse at hand. That is, it is not made explicit by the utterances in (15) that for the proposition 'y fed x', more than one entity is competing for x. Importantly, the interpretation of a non-contrastive focus is not necessarily exhaustive and further members of the set to which 'cat' in (15) belongs can be added in the following discourse. What is crucial for the non-contrastive reading is merely that the utterance containing a non-presupposed element *does not* pragmatically 'activate' a set that contains the non-presupposed element along with alternative members.

Similarly, in (16), the <-presupposed> object is <-contrastive> because the set to which it belongs and which contains at least two members is made salient *before* the relevant sentence is uttered.

(16) [Ivan pokormil kota ili sobaku?]CONTEXT
*Did Ivan feed the cat or the dog?*

Ivan pokormil [kota]NIF
Ivan fed cat.ACC
*'Ivan fed the cat.'*

In (16), the reply *does not* activate the interpretation that sees the object as belonging to a pragmatic set along with alternative members, this interpretation is already activated by the contextual question.[12] Therefore, the object is interpreted as <-presupposed>, <+D-linked> and <-contrastive>.

Conversely, in (17) and (18a), the <-presupposed> constituents must be construed as contrastive: In (17), the proposition 'Ivan fed x' has two contextually salient members of a set that compete for x, 'dog' and 'cat'. This set is not activated until the mention of 'cat' in the answer.

(17) [Ivan pokormil sobaku?]CONTEXT
*Did Ivan feed the dog?*

a. [Kota]CT1 Ivan [pokorm**I**l]NIF *t*1 (a nasčët sobaki ne znaju)
cat.ACC Ivan fed (but about dog not know)
*'Ivan fed the cat (but I don't know about the dog).'*

b. (Net,) Ivan [kota]CF1 pokormil *t*1 (a ne sobaku)
(no) Ivan cat.ACC fed (and not dog)
*'Ivan fed the cat (not the dog).'*

In (18), the question in the context contains a plural noun. The reply in (18a) treats this noun as generalizing over a set of animals to which 'cat' belongs along with alternative members. Importantly, the construal of the noun 'animals' in the context as generalizing over a set of alternatives is activated by the sentence that contains 'cat' and not by the contextual question itself. As demonstrated in (18b)

[12] Notably, if the contextual question in (16) introduced other members of the set of alternatives but not 'cat', whereas the reply conveyed that 'cat' also belongs to this set, the object would be construed as <+contrastive> because in that case, the interpretation that the object belongs to a set of alternatives would be activated by the reply despite the set being introduced by the context:

(i) [Ivan pokormil xomjaka ili sobaku?]CONTEXT
*Did Ivan feed the hamster or the dog?*

Ivan [kota]CF pokormil (a ne xomjaka i ne sobaku)
Ivan cat.ACC fed (and not hamster and not dog)
*'Ivan fed the cat (not a hamster or a dog).'*

and (18c), the following discourse can treat this noun as a member of a set of alternatives (see (18b)), or refer back to it without invoking contrast, as in (18c).

(18) [Ivan pokormil životnyx?]$_{\text{CONTEXT}}$
*Did Ivan feed the animals?*

a. [Kota]$_{\text{CT1}}$ Ivan [pokorm**I**l]$_{\text{NIF}}$ $t_1$ (a nasčët ostal'nyx životnyx ne znaju)
cat.ACC Ivan fed (but about remaining animals not know)
*'Ivan fed the cat (but I don't know about the rest of the animals).'*

b. Net, Ivan [ljud**E**j]$_{\text{CF1}}$ pokormil $t_1$
no Ivan humans.ACC fed
*'No, Ivan fed the humans.'*

c. Da, Ivan [pokorm**I**l]$_{\text{NIF}}$ životnyx
yes Ivan fed animals.ACC
*'Yes, Ivan fed the animals.'*

Crucially, the set of alternatives to which the object 'cat' belongs in (17) and (18a) becomes active at the point the utterances containing it are produced, *no sooner and no later*. The interpretation of contrastive constituents in (17) and (18a) is not exhaustive, as more members of the set they belong to can potentially be added in the following discourse, suggesting that the set for a CT and CF is *not* closed (contra Kiss 1998, Halliday 1967, Chafe 1976 and Rooth 1992). What distinguishes the contrastive constituents in (17) and (18a) from NIF in (15) and (16) is not the nature of the semantic set they belong to, or whether the number of members is limited in this set, but the fact that the utterance that hosts the former activates the interpretation that the set they belong to contains alternative members relevant for the discourse at hand, whereas the utterance hosting the latter either refers back to an already introduced set, as in (16), or treats the NIF as the only member of its pragmatic set (see (15)).

As already mentioned, in Russian <+contrastive> constituents are allowed to undergo A'-fronting. Notably, the focused objects in (15) and (16) have to remain in situ (in their thematic postverbal positions), strongly suggesting that they are not contrastive. Conversely, in (17) and (18a), the <+contrastive> constituents are allowed to move (although not demonstrated here, they can also undergo long-distance movement).

Membership of a pragmatic set of alternatives can be indicated not only through a link to an alternative member of a set in the context, as in (17) or a superset, as in (18a); it can also be specified with the help of a special marker attached to a constituent that signals that this constituent belongs to a set along with alternative members (see (19)). Here, attachment of either a prosodic marker (see (19a)) or a morphological marker (see (19b)) to a discourse-anaphoric constituent activates the interpretation that there is at least one more member of the set it belongs to that is significant for the exchange at hand.

(19) a. [What did the teachers drink at the party?]CONTEXT
\ / \
[The teachers]CT drank [w**A**ter]FOC, (but I am wondering what the students drank)

b. [Čto učitelja pili na večerinke?]CONTEXT Russian
*What did teachers drink at the party?*
/ \
[Učitelja-to]CT pili [v**O**du]FOC, (a vot interesno, čto studenty pili)
teachers - TO drank water.ACC (but interesting what students drank).
*'The teachers drank water (but I wonder what the students drank).*

In (19), membership of a pragmatic set of alternatives is signalled not through a link to the preceding context but by a property of the utterance itself. Similarly, sentences containing a so-called *Emphatic Focus* (henceforth **EF**) also activate the interpretation that this type of focus belongs to a pragmatic set of alternatives but this time it is done not with the help of a special marker on the focused constituent but via its marked structural position (see (20)).

(20) a. [Kogo ty tol'ko čto videl?]CONTEXT Russian
*Who did you just see?*

(Predstavljaeš',)
(Imagine)

ja tol'ko čto [čeloveka s ruž'**Ë**m]FOC1 videl $t_1$ !
I just man.ACC with gun saw
*'(Can you imagine?) I just saw a man with the a gun!'*

b. [Čto ty loviš'?]CONTEXT
*What are you fishing for?*

Ja [r**Y**bu]FOC1 lovlju $t_1$ (čto že eščë) !
I fish.ACC catch (what else)
*'I'm fishing for fish (what else can I be fishing for)!'*

Here, a <-presupposed> constituent cannot be interpreted as NIF because, unlike non-contrastive focus, it surfaces in a preverbal position. Yet, the contrastive interpretation is not achieved through a link to the context. Crucially, the focus in (20) must be construed as occupying a certain scalar position with respect to all other members of the set it belongs to, each of which could potentially fulfil the background. Logically, only two such positions can be indicated when the alternative members stay implicit, the lowest and the highest. According to the first reading, the <-presupposed> constituent is interpreted as the weakest member of a set with respect to all other potential members (see (20a)); the second reading, in contrast, interprets the focused object as the strongest member of its set (see (20b)).

The lowest scalar position of the non-presupposed constituent in a set of alternatives in (20a) conveys surprise as to the fact that out of a set of individuals the speaker expected to see, it was the least expected 'a man with the gun' that was seen. The interpretation of the non-presupposed object in (20b), on the other hand, is the directly opposite one. This time the focused constituent is perceived as the strongest member as regards all other potential members of the set of alternatives. That is, out of the set of objects that one can be expected to be fishing for, 'fish' is the most obvious choice. It can therefore be said that in (20b) the interpretation is not that of surprise but rather of annoyance as to the fact that one is asked a question that has a rather obvious answer.

Since EF often occurs out of the blue or in a context that does not force a contrastive interpretation (see (20)), it has traditionally not been grouped together with contrastive categories. However, EF must be interpreted as belonging to a pragmatic set of alternatives. This reference is achieved by appealing to the shared knowledge of interlocutors about the scalar position of the focused constituent with respect to other potential members of the relevant set.[13] Plausibly, no item can be perceived as occupying either the highest or the lowest position in a set if this set does not contain alternative members. Since alternative members must become active in the discourse for such an interpretation to be available, our definition of contrast suggests that such foci must be analysed as <+contrastive> and grouped together with CFs.

The analysis of contrast as membership of a pragmatic set of alternatives activated by the utterance containing the relevant non-presupposed element groups CT, CF and EF together as contrastive, whereas simple NIF must be analysed as associated with a non-contrastive reading. At the same time, all these categories are interpreted as <-presupposed>. In the majority of cases, they consist of discourse-new material, and can therefore not be construed as belonging to the background of a sentence. Moreover, in the rare instances where they are <+D-linked>, they still convey non-presupposed information. Thus, a <+D-linked> NIF consistently fulfils the background by providing a value for the variable introduced by a wh-phrase (see also footnotes 3 and 5), whereas contrastive categories are <-presupposed> simply in virtue of being contrastive. That is, even when a contrastive interpretation is assigned to a discourse-anaphoric constituent, as in (19), it provides this constituent with the non-presupposed information that it must be construed as belonging to a pragmatic set of alternatives. As this information is not known or taken for granted before the utterance hosting a contrastive constituent is uttered, the contrastive interpretation must itself be non-presupposed.

### 3.2 The Distribution of Contrastive Categories[14]

Since the above discussed IS categories are <-presupposed>, they are, arguably, subject to the generalization in (6) in Russian. However, as already mentioned,

[13] The fact that the knowledge about the scalar position of EF must be shared by the interlocutors is confirmed by the observation that whenever the hearer is unaware of it, a sentence with a moved focus is perceived as odd in contexts that do not license contrast and requires clarification (i.e. the speaker is perceived as being either surprised or annoyed for no apparent reason).

[14] This subsection is partially based on Titov (2007) and Neeleman and Titov (2009).

this generalization does not hold on the surface, as CF (including EF) and CT are typically fronted.[15]

What the hypothesis put forward here amounts to, then, is that the launching site for the movement of CF and CT is the position in which NIF must surface (Titov 2007, Neeleman and Titov 2009). This follows if CF and CT are a composite of the features <-presupposed> and <+contrastive>. Movement of CF and CT would then be licensed by the positive value of the <±contrastive> feature, but the launching site of that movement would be dictated by (13):[16]

(21) Distribution of focused constituents in Russian (to be revised)

i. [(...) [<-presupposed; -contrastive>]NIF]
ii. [(...) [<-presupposed; +contrastive>]CF/EF1 …… ***t***1 ]
iii. [[(...)<-presupposed; +contrastive>]CT1 (...) ***t***1 [<-presupposed; -contrastive>]NIF]

Note that the focus in Topic-Focus structures, as in (21iii), is analyzed as <-contrastive>. To recall, for a <-presupposed> constituent to be interpreted as contrastive, the set of alternatives must become active for it at the point the sentence that contains it is uttered. However, nothing in a Topic-Focus utterance indicates that the focused constituent belongs to a pragmatic set of alternatives (see (1)-(4)). That is, such an utterance contains neither a link to a member of a set of alternatives to which the focused constituent also belongs or to a superset it is a member of, nor any overt markers of contrast. Moreover, as demonstrated in (22) and (23), an alternative member does not have to be mentioned in the following context either.

(22) [What did John eat at the bbq party?]CONTEXT

[Fred]CT ate [b**EE**f burgers]NIF, and John is actually a vegetarian, so he didn't eat at all

(23) [What did John eat at the bbq party?]CONTEXT

[Fred]CT ate [b**EE**f burgers]NIF, and John might have actually eaten beef burgers as well

The hypothesis that the primary focus in Topic-Focus structures is a NIF is further supported by two observations. First, in Russian, this focus is assigned IK1 - the accent reserved for NIF, rather than IK2, which is used to mark CF. Second, in Russian, this focus remains in clause final position, whereas CF optionally undergoes A'-fronting.

[15] The judgments in the main text presuppose that the constituents marked as CF bear IK2, while the rest of the sentence is destressed. In Topic-Focus structures, constituents conveying the interpretation of CT bear IK3, whereas NIF is marked with IK1. For further discussion, see Bryzgunova 1971, 1981, Yokoyama 1986, Pereltsvaig 2000, and Krylova and Khavronina 1988.

[16] Movement is said to be licensed rather than triggered by the <+contrastive> feature, since the relevant type of A'-scrambling is optional in many languages including Russian. For further discussion of the issue see Neeleman and Van de Koot 2008 and Neeleman et al. 2008.

Indeed, it is the fact that the focus in Topic-Focus structures is a NIF that accounts for the interpretation of a set of sets of propositions they are associated with. To be exact, a NIF can provide a focus value only for the proposition in the reply but not the one in the context. The contextual proposition is therefore left without a focus value, which subsequently triggers the interpretation of incompleteness and a set of sets of propositions. If the focus in Topic-Focus structures were contrastive, the discourse would contain a salient set of at least two focus values: one for the proposition in the reply and one for the contextual proposition. In such a case, the interpretation of a set of sets of propositions associated with Topic-Focus structures would be inaccessible, as the question in the context would receive a fixed answer. As will be demonstrated in section 4 this is exactly what happens in sentences that are traditionally taken to contain a CF, as in (5).[17]

The proposal advanced in this section contradicts the analysis advocated in Bolinger (1961) and Dretske (1972) that sees all foci as contrastive. Contrast is seen here as an extra interpretative property that can be added to a non-presupposed constituent and that licenses its A'-fronting. At the same time, it follows from the theory proposed here that only non-presupposed constituents can be contrastive, as contrastive interpretation is itself non-presupposed.

In section 2, it was demonstrated that an A-scrambled structure can serve as input to subsequent A'-movement of <+contrastive> constituents as long as A-scrambling is licensed by the rule in (13). To recall, the rule in (13) accounts for constructions where a <+presupposed> object A-scrambles across a <-presupposed> subject, with the consequence that the former linearly precedes and outscopes the latter. Logically, such a scrambled structure is expected to be able to serve as input to subsequent A'-movement as long as the <-presupposed> subject is <+contrastive>. That is, if CF is analyzed as a composite of the features <-presupposed> and <+contrastive>, it is expected that the former feature will determine its underlying position below a <+presupposed> argument in accordance with (13), whereas the latter feature will license its A'-movement. This hypothesis is indeed supported by the scopal properties of CFs, and in particular by the observation that they take scope in the same position as NIFs. The data fall out from (13), if A'-scrambling obligatorily reconstructs for scope.

Recall that Russian exhibits surface scope in sentences with non-contrastive focus, as, in line with the rule in (13), quantifiers that constitute NIF scope under quantifiers that belong to the background (see (10)).

The pattern of surface scope breaks down in the case of contrastive foci (see (24)). Even though these are fronted, they systematically take lowest scope. That is, they reconstruct obligatorily to a position below backgrounded quantifiers. Thus, the fronted CF in (24b) takes scope in exactly the same position as the in situ new information focus in (10b).[18]

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[17] Admittedly, focus in TOP-FOC structures can be interpreted as emphatic, as this type of contrast makes reference to a scalar position in an implicit set of alternatives and does not have an effect on the availability of an alternative focus value in the discourse.

[18] The object in (24b) is in a scrambled preverbal position due to its interpretation of belonging to the background. Keeping the object in a postverbal position gives the sentence a somewhat degrading status, presumably due to distinctness (Richards 2001). However, it is possible for the object to remain postverbal without affecting the scopal judgments as long as the moved subject is marked with IK2 and the rest of the sentence is left stressless.

(24) a. [Každuju otkr**Y**tku]$_{CF1,}$ ja xoču, čtoby
every postcard.ACC I want that

dva studenta podpisali $t_1$, (a ne každuju knigu)
two students signed (and not every book)
*'I want two students to sign every postcard (not every book).'*

∃>∀; *∀> ∃

b. [Každyj stud**E**nt]$_{CF1,}$ ja xoču, čtoby
every student I want that

dve otkrytki podpisal $t_1$, (a ne každyj docent)
two postcards.ACC signed (and not every lecturer)
*'I want every student to sign two postcards (not every lecturer).'*

∃>∀; *∀> ∃

It is not surprising that Russian contrastive foci can move. In a wide range of languages, contrastive elements undergo A'-movement. What is surprising is that the position into which contrastive foci reconstruct should be as low as it seems to be. That is, in an all-focus sentence, a subject outscopes an object in Russian because its position c-commands (and precedes) the object position.[19] However, when subjects are fronted as contrastive foci, they scope under the object, suggesting that the fronting operation is launched from a position below the object. On the other hand, if the rule in (13) is taken into consideration, then a <+presupposed> object in Russian is expected to A-scramble across a <-presupposed> subject, explaining the scopal properties of fronted foci. In other words, an A-scrambled structure, as in (10b), where a <+presupposed> object is interpreted as more prominent than a <-presupposed> subject in line with (13), serves as input to A'-movement of the <-presupposed> subject when the latter is <+contrastive> (see (24b)).

Contrastive Topics, conversely, have been shown to reconstruct above NIFs (see (14)), as this time the relative prominence of arguments is established on the basis of the <±contrastive> feature. At the same time, the generalization in (6) predicts that *all* <-presupposed> constituents, including CTs, must be interpreted in a clause final position, and must therefore take scope below <+presupposed> elements. This prediction is indeed borne out:

(25) a. [Kuda Ivan xočet, čtoby dva učitelja otpravili každogo docenta?]$_{CONTEXT}$
Where does Ivan want two teachers to send every lecturer?
----------/----------
[Každogo studenta]$_{CT\ 1,}$ Ivan xočet, čtoby dva učitelja
every student.ACC Ivan wants that two teachers

[19] Due to space limitations, I am ignoring all-focus constructions where the relative prominence of arguments is established on the basis of interpretations not discussed in the present paper and where A-scrambling is licensed by these interpretations.

---------- \
otpravili $t_1$ [dom**O**j]FOC (a nasčët každogo docenta ne znaju)
sent home (and about every lecturer not know)
*'As for every student, Ivan wants two teachers to send him home (but I don't know about every lecturer).'*

∃>∀; *∀> ∃

b. [Kuda Ivan xočet, čtoby každyj docent otpravil dvux učiteljej?]CONTEXT
Where does Ivan want every lecturer to send two teachers?
----------/----------
[Každyj student]CT 1 Ivan xočet, čtoby otpravil
every student Ivan wants that sent
---------- \
dvux učitelej $t_1$ [dom**O**j]FOC (a nasčët každogo docenta ne znaju)
two teachers.ACC home (and about every lecturer not know)
*'As for every student, Ivan wants him to send two teachers home (but I don't know about every lecturer).'*

∃>∀; *∀> ∃

The observation that CTs reconstruct below backgrounded arguments but above NIFs is captured by (13), which interprets a <+presupposed> argument as more prominent than a <-presupposed> argument and a <-presupposed; +contrastive> argument as more prominent than a <-presupposed; -contrastive> argument.

The above data have been presented in terms of the features <±presupposed> and <±contrastive>. This is because the Russian data support a decompositional view of CF and CT. In order to explain why CF, CT and NIF share an underlying position, we must assume that they share some attribute, namely the negative value with respect to the <±presupposed> feature. In order to explain why only CF and CT move, we must assume that they have an additional property that new information foci lack, i.e. the positive value as regards the <±contrastive> feature.

## 4. Contrastive Topic versus Contrastive Focus

So far we have established that both CF and CT are associated with the features <-presupposed> and <+contrastive>, with the former feature accounting for their underlying clause-final position, and the latter licensing their A'-fronting in Russian. The fact that CTs and CFs are characterized by identical interpretative features and exhibit identical syntactic behavior strongly suggests that they represent one and the same IS notion. On the other hand, the sentences that host them have quite distinct interpretations. Recall that sentences with a CF have the interpretation of counter-assertion to a proposition in the context, whereas sentences that host a CT have the interpretation of a set of sets of propositions. Consequently, the latter can occur in a context that is incompatible with the former, namely, when the non-identical discourse antecedent is not a member of a set of alternatives but rather generalizes over the set to which the <-presupposed> constituent belongs (see (26) versus (27)).

(26) [What do your students work on?]CONTEXT
\ / \
Well, [Mary]CT works on [Icel**A**ndic]NIF, (and John on Russian)…

(27) [Did you feed the animals?]CONTEXT
\
# No, I fed [the c**A**t]CF (not the animals)

In (27), the proposition 'I fed the cat' fails to stand in opposition to 'I fed the animals' as the latter entails the former as long as 'the cat' is construed as belonging to the set of animals.[20]

A further difference between the structures that contain CF and CT is that in the former the CF seems to be the only <-presupposed> constituent in the sentence, whereas in the latter there is always an additional <-presupposed> element present in the sentence, namely a NIF.

Moreover, constituents interpreted as CT and those conveying the interpretation of CF receive distinct intonational contours. That is, a CF is marked with a falling contour, whereas a CT receives a (fall)-rise intonation.

However, Molnár (2001) argues on the basis of examples like (28) that NIF (Molnár's *Information Focus*) can also be marked with a (fall)-rise intonation, suggesting that this intonational contour is not exclusive to CTs.

(28) [Did you feed the animals?]CONTEXT
/
I fed [the cat] Molnár (2001)

However, three observations undermine the analysis of the object in (28) as NIF. First, this object is <+contrastive>, as it is the introduction of 'the cat' into the discourse that activates the construal of 'the animals' as generalizing over a set of animals, of which 'the cat' is a member.[21]

Second, the object in (28) cannot be analyzed as what is traditionally referred to as focus. Even if the <+contrastive> interpretation is taken into consideration, an analysis of the object as a CF fails because the sentence in (28) occurs in a context that is incompatible with the interpretation conveyed by sentences containing a CF. To be precise, the antecedent for the object in (28) is not a member of the same set but generalizes over the set that the object belongs to. As demonstrated in (27), such a context is not compatible with the interpretation conveyed by sentences hosting a CF, strongly suggesting that the <-presupposed> object in (28) is not a CF but in fact a CT.

Therefore, the only apparent obstacle to analyzing the object in (28) as a CT that remains is the fact that this object seems to be the only <-presupposed> element in the sentence, whereas Topic-Focus structures have been shown to additionally contain a NIF. However, a careful examination of the IS of the

[20] To make the opposition possible, a delimiting focus sensitive operator 'only' can be used in (27). In that case, feeding only the cat can stand in opposition to feeding all the animals. The conversational strategies that make use of focus sensitive operators are discussed in detail in section 5.

[21] Incidentally, for the object in (28) to be interpreted as NIF, it would have to occur in the context of a question like 'Who did you feed?'.

sentence in (28) reveals that it does indeed contain an additional <-presupposed> element. To be exact, the question in the context in (28) is a yes/no-question, which by default requests information about the truth-value of a proposition. Consequently, any answer to such a question must contain focus on the truth-value of the proposition, or in other words, *Verum Focus* (henceforth **VF**). This type of focus is, as a rule, marked on the inflection:

(29) [Did you feed the animals?]CONTEXT

Yes, I [d**I**d]NIF (feed the animals)

The sentence in (29) occurs in the same context of a yes/no-question as the one in (28) but here the VF is the only <-presupposed> element in the sentence and therefore the only element that can carry the main sentential stress. In (28), on the other hand, there is an additional <-presupposed> element that can be prosodically marked. It would seem, then, that English has an option of not marking VF prosodically in sentences of the latter type. It is, however, possible to keep the prosodic marker on the inflection in (28), as shown in (30).

(30) [Did you feed the animals?]CONTEXT
\ /
I [d**I**d]NIF feed [the cat]CT

Interestingly, the option of not marking VF in such sentences appears to be an example of parametric variation, as other languages, like, for instance, Russian, must contain a prosodic marker on the inflection even in the presence of an additional prosodically marked <-presupposed> element (see (31)).

(31) [Ty pokormil životnyx?]CONTEXT Russian
'Did you feed the animals?'
----- / ----------
\
[Kota]CT ja [pokorm**I**l]NIF
cat.ACC I fed.PAST.MASC.Sg
'*As for the cat, I fed it...*'

Introduction of the concept of VF into the theory opens up new possibilities for the analysis of sentences hosting CF because these most naturally occur in the context of a yes/no-question and must therefore also contain focus on the truth-value, that is, VF. In fact, structures hosting CF and those containing CT quite naturally occur in the same context:

(32) [Did John buy a Volkswagen?]CONTEXT

a. (No), John bought [a Toy**O**ta]CF, (not a Volkswagen)

b. John bought [a Toyota]CT, (but I don't know about a Volkswagen)

(33) [Ivan kupil Volkswagen?]CONTEXT Russian
*Did Ivan buy a Volkswagen?*

a. (Net), Ivan [Toy**O**tu]$_{CF}$ kupil, (a ne Volkswagen)
(No) Ivan Toyota.ACC bought (and not Volkswagen)
*'No Ivan bought a Toyota (not a Volkswagen).'*

b. [Toyotu]$_{CT}$ Ivan [kup**I**l]$_{NIF}$, (a nasčët Volkswagena ja ne znaju)
Toyota.ACC Ivan bought (and about Volkswagen I not know)
*'Ivan bought a Toyota, (but I don't know about a Volkswagen).'*

It is not surprising that a sentence hosting a CF and that containing a CT occur in the same context in (32) and (33), as sentences with distinct information structures are often compatible with identical contexts.[22] Then again, the (a) and the (b)-sentences in (32) and (33) both contain a <-presupposed; +contrastive> object and a VF. So, what exactly is distinct in the IS of the (a) vs. (b)-sentences in (32) and (33)? What is it that is responsible for the difference in their interpretation (i.e. opposition vs. incompleteness)?

The hypothesis put forward here is that the main interpretative difference between the (a)-sentences and the (b)-sentences in (32) and (33) is due to a distinct value as regards the <±contrastive> feature carried by the VF. To be precise, the sentences hosting a CT as in (32b) and (33b) contain a <-contrastive> VF, whereas in (32a) and (33a) the VF is <+contrastive>.

The fact that VF is non-contrastive in the (b)-sentences is expected, as we have already established that in sentences hosting a CT the additional <-presupposed> element is a NIF. To recall, a non-contrastive focus can only provide a focus-value to one proposition and, in accordance with this observation, the VF in the (b)-sentences in (32) and (33) only provides a truth-value for the proposition in the reply but not for the one introduced in the context. The contextual proposition is left without a focus-value, which results in the interpretation of incompleteness or a set of sets of propositions typical of Topic-Focus structures.

The VF in the (a)-sentences, conversely, does not only provide the truth-value 'true' for the proposition in the reply but also treats the proposition in the context as having an alternative truth-value. As a result, the interpretation of belonging to a set of alternatives becomes active for the VF in the (a)-sentences at the point these sentences are produced, strongly suggesting that this focus is indeed contrastive. As the set of truth-values is a rather closed set that contains only two members, whenever VF is <+contrastive>, the alternative truth-value to

[22] All the sentences in (i) below have distinct IS despite occurring in the same context:

(i) [What's wrong?]$_{CONTEXT}$

a. John only showed my book to MARY (and I wanted him to show it to Sue as well)

b. John only showed my BOOK to Mary (and I wanted him to show my articles as well)

c. John only showed MY book to Mary (and I wanted him to show your book as well)

d. John only SHOWED my book to Mary (and I wanted him read it to her as well)

the one given to the proposition in the reply is always the opposite one, which accounts for the interpretation of opposition, or counter-assertion, conveyed by sentences hosting a contrastive VF.

As is the case with non-contrastive VF, contrastive VF must be prosodically marked on an inflection whenever the truth-value of a proposition is the only <-presupposed> element in the sentence:

(34) [John bought a Volkswagen]$_{\text{CONTEXT}}$
\
(No), he d**I**dn't (buy a Volkswagen).

However, in sentences that contain an additional non-presupposed constituent, as in (32a) and (33a), a contrastive VF cannot be overtly marked. It appears that the availability of prosodic marking of VF in sentences with an additional <-presupposed> constituent is reserved for *non-contrastive* VF found in Topic-Focus structures. The selective nature of prosodic marking of VF might be a result of a blocking effect at the interface between LF and PF. Assuming that structures with distinct interpretations must be either distinguished prosodically or/and disambiguated through context, assigning a particular prosodic pattern to a structure with a particular interpretation is expected to block the association of this pattern with a distinct interpretation within the same context. Consequently, in an ambiguous context that can license either a Topic-Focus structure or a construction with a CF, as in (32) and (33), a prosodically marked VF is interpreted as <-contrastive> and never as <+contrastive>, whereas for the latter interpretation, VF is not allowed to be prosodically realized.[23]

Conversely, whenever the opposite truth-value for a contrastive VF is not merely implied but overtly present in the context, this focus can no longer be interpreted as non-contrastive. In such a case, the interpretation reserved for Topic-Focus structures is unattainable and therefore can no longer block the one conveyed by sentences hosting a CF. As expected, a <+contrastive> VF can be prosodically marked in such a context:

(35) A: [Did John buy a Volkswagen?]$_{\text{CONTEXT}}$
B: No, John DIDN'T buy a Volkswagen but …

… John **DID** buy [a Toy**O**ta]$_{\text{CF}}$

The discourse in (35) is interpretatively identical to the one in (32a). However, the former contains an overt realization of both truth-values: the value 'true' for the proposition 'John bough a Toyota' and the value 'false' for the contextual proposition 'John bought a Volkswagen'. As can be seen from (35), as soon as both truth-values are overtly present and the VF cannot avoid being construed as contrastive, a <+contrastive> VF can be prosodically marked.

[23] A Topic-Focus sentence with a prosodically unrealized VF, as in (32b), is distinguished from a sentence containing a CF by the virtue of CT carrying a B-accent. However, in Topic-Focus sentences with an overt NIF, it is possible for at least some speakers to mark a CT with a falling intonational contour (Alanah McKillen p.c.), leaving the burden of the interpretative disambiguation to the presence/absence of prosodic marking of VF.

The blocking effect related to prosodic marking of VF can be captured by the elsewhere condition (cf. Anderson 1969, Kiparsky 1973), which states that application of a general rule is blocked where a more specific rule can be applied. By hypothesis, the relevant rules apply at the interface between LF and PF, with two-way interaction between these components.[24] Assuming that the general rule states that VF is prosodically realized on an inflection, while the more specific rule maintains that a prosodically marked VF is interpreted as <-contrastive>, it is expected that whenever the specific rule can apply, it will block the application of the general rule. Therefore, whenever the <-contrastive> interpretation is achievable for a VF, it blocks the <+contrastive> reading. Conversely, when the non-contrastive interpretation cannot be attained due to the presence of an alternative truth-value in the context, a <+contrastive> VF can be prosodically marked.

The fact that the alternative truth-value in (32a) is implied but not overtly present can be accounted for in two ways. First, it can be stipulated that the part containing the alternative value undergoes a deletion operation, as in (36), where the part in angled brackets is not pronounced. Alternatively, the discourse in (32a) might contain an implicit question, as in (37).

(36) [Did John buy a Volkswagen?]CONTEXT
No, <John didn't buy a Volkswagen>, John bought [a Toy**O**ta]CF

The analysis in (36) implies that the <+contrastive> VF fails to be prosodically marked because the alternative truth-value is not pronounced, hence, the more specific rule applies and blocks the application of the general rule.

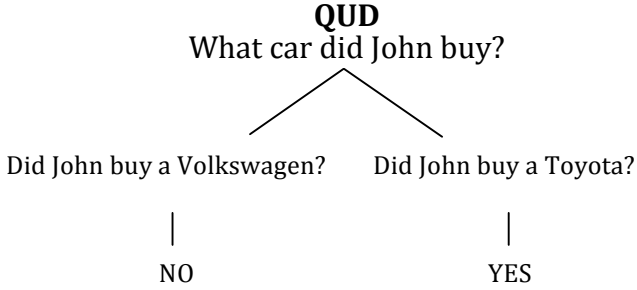
The analysis in (37), on the other hand, suggests that the reply contains an answer to an implicit question. As the question requesting the truth-value for the proposition 'John bought a Toyota' remains implicit, a reply to such a question cannot contain an overtly realized VF.

[24] The two-way correspondence between LF and PF is supported by the data in (i) below, on the one hand, and those given in footnote 22, on the other. In (i) below, the context forces focus interpretation on the object in (ia), and on the subject in (ib). Assuming, that IS is part of LF, the sentences in (ia) and (ib) have different LF representations, which results in their distinct PF representations. In the data given in footnote 22, in contrast, the all-focus context does not force any particular IS in the reply but distinct PFs result in distinct LFs.

(i) a. [What did John eat?]CONTEXT
\
John ate the b**EA**ns.

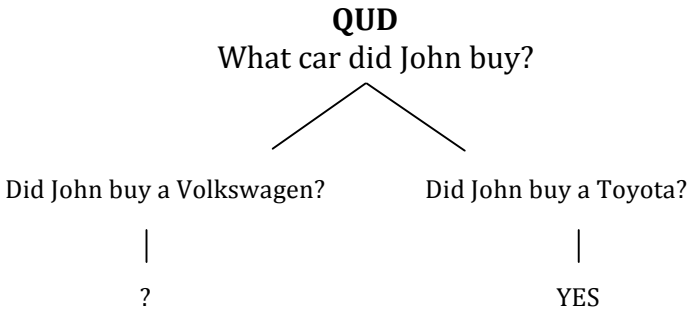
b. [Who ate the beans?]CONTEXT
\
J**O**hn ate the beans.

(37) Sentence containing CF and <+contrastive> VF




The hypothesis that sentences hosting a CF contain an answer to an implicit question goes hand in hand with the analysis of Topic-Focus structures proposed in (Büring 2003). Following Büring's theory of *Discourse-Trees* (D-trees), the Topic-Focus structure in (32b) can be analyzed as occurring in a context where a *Question Under Discussion* (henceforth **QUD**) dominates two subquestions: an explicit question given in the context and an implicit question that is provided with a direct answer by the reply (see (38)). As the VF in (32b) is <-contrastive>, it fails to provide the explicit subquestion with an answer, which results in the interpretation of a set of sets of propositions.

(38) Sentence containing CT and <-contrastive> VF

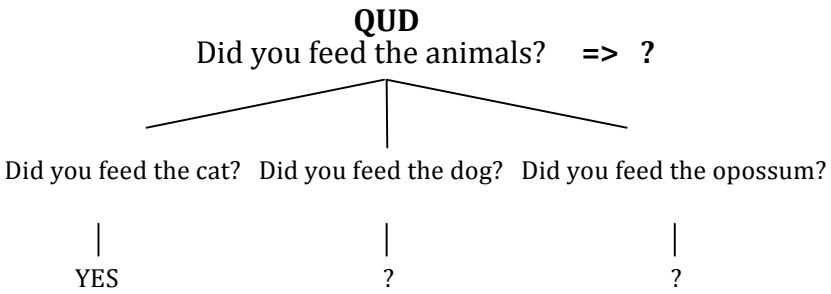



Since the sentence in (32a) occurs in the same context as the one in (32b), it is reasonable to assume that the QUD for it is the same. However, as the VF is contrastive in (32a), both subquestions dominated by the QUD, including the explicit question in the context, receive an answer (see (37)). No questions are left unanswered; hence, no interpretation of a set of sets of propositions arises. Instead, the interpretation of opposition, or counter-assertion, results from the fact that the proposition in the context and the one in the reply have opposite truth-values.

Importantly, the interpretative difference between the sentence hosting a CF in (32a) and the one containing a CT in (32b) comes down to the nature of the VF, or more precisely, to its value with respect to the <±contrastive> feature, and not to any particular difference between the CF and CT per se. This outcome quite naturally captures the observation that a sentence hosting a CF cannot occur in a context where the focus is linked to a superset, as in (27). In (27), the reply provides a positive answer to one of the subquestions but fails at offering a negative answer to the superquestion in the context, as some subquestions

remain unanswered (see (39)).[25] Since the alternative truth-value cannot be given to the proposition in the context, VF fails to be construed as contrastive.[26]

(39)




The above analysis implies that Topic-Focus structures are in fact CF-NIF structures, where the interpretation of NIF can be expressed either on an inflection (VF) or on an XP; whereas sentences hosting what is traditionally referred to as CF always contain a *Contrastive Verum Focus* (henceforth **CVF**):

(40) *Constructions hosting <-presupposed; +contrastive> XPs*

a. CT - FOC **=>** CF - NIF
b. … CF … **=>** CF - CVF

As suggested in (40a) and (40b), CT and CF represent one and the same IS category that can occur in two different types of constructions. The fact that the structures in (40a) and (40b) have distinct interpretation accounts for the difference in intonational contours assigned to the CFs in them. However, English and Russian have different reasons for the distinct prosodic marking.

In English, the blocking effect at the interface between LF and PF ensures that the interpretation assigned to a prosodically marked VF in an ambiguous context is <-contrastive>, with the consequence that the relevant sentence has the CF-NIF and not CF-CVF structure. However, the prosodic marking of the <-contrastive> VF is optional in this language and is often omitted. As a result, a structure containing a CF and a prosodically unrealized VF is ambiguous in interpretation and can be disambiguated only by assigning distinct contours to the CFs, i.e. the B-accent to achieve the interpretation in (40a) and the A-accent for the reading in (40b), as in (32b) and (32a) respectively.[27]

[25] As already mentioned, it is possible to achieve <+contrastive> reading for the VF in (27) and (39) by applying a delimiting focus sensitive operator 'only' to the CF. This operator provides the interpretation according to which 'the cat' in one of the subquestions is the only entity for which the property of being fed applies. Consequently, all the rest of subjections receive fixed negative answers and the superquestion in the context obtains a negative truth-value (see section 5 for a detailed discussion of the function of focus sensitive operators in the discourse).

[26] I am assuming that a superset in the superquestion can be represented by either a wh-phrase that opens a semantic set, as in (37) and (38), or by a plural noun that generalizes over a set of entities/individuals, as in (39).

[27] As already mentioned in Footnote 21, some native speakers of English allow A-accent on CT in unambiguous contexts, suggesting that when the IS of a sentence is disambiguated as a TOP-FOC structure by context, prosodic disambiguation becomes redundant. The fact that CT can carry the same prosodic marker as CF further supports the view that CT and CF is one and the same IS notion.

In Russian, on the other hand, the reason for marking CF in a structure of the type given in (40a) with a rising contour IK3 is of a much simpler nature. Russian is a language that does not permit more than one falling intonational contour in one clause. At the same time, the <-contrastive> focus must always be marked with IK1 in this language, even a <-contrastive> VF (see (31)). Consequently, whenever CF occurs in a sentence that additionally contains a NIF, it can no longer be marked with a falling contour. At the same time, CF is <-presupposed> and must therefore carry a prominent prosodic marker. As a result, a rising contour is the only available option.

As summarized in (41) below, the notion of CT is not needed to account for the distribution of <-presupposed> constituents in Russian and can be easily reduced to that of CF.

(41) **Distribution of <-presupposed> elements in Russian**

i. NIF
[**CP** (…) <-presupposed; -contrastive>][28]

ii. CF CVF
[**CP** [**XP**<-presupposed; +contrastive>]$_1$ …… [**I** <-presupposed; +contrast>] $t_1$]

iii. CF NIF
[**CP** [**XP** <-presupposed; +contrast>]$_1$…….$t_1$ [**XP** <-presupposed; -contrast>]]

iii'. CF VF
[**CP** [**XP** <-presupposed; +contrast>]$_1$……. [**I** <-presupposed; -contrast>] $t_1$]

A CF can be then said to have the following properties:

1. It is associated with the <+contrastive> feature, which licenses its A'-fronting;
2. It is associated with the <-presupposed> feature, which forces its reconstruction to the position where non-contrastive focus surfaces;
3. It can co-occur with a <-presupposed; -contrastive> element, which results in the interpretation of a set of sets of propositions conveyed by the sentence that hosts the CF and a (fall)-rise intonation assigned to the CF;
4. It can co-occur with a <-presupposed; +contrastive> VF, which results in the interpretation of counter-assertion conveyed by the sentence that hosts the CF and a falling intonation assigned to the CF.

The next section looks at the interaction of focus sensitive operators with CF with the aim to explain why certain operators are incompatible with the interpretation of a set of sets of propositions.

[28] From clause final position NIF can spread onto the entire CP if the sentence contains no background.

## 5. Conversational strategies

### 5.1 Interpretation of CF-NIF (TOP-FOC) sentences

It has been observed by various linguists that certain focus sensitive operators are incompatible with the interpretation of what is traditionally called contrastive topic (see (42)). At the same time, it has been claimed that contrastive foci can be associated with these quantifiers (see (43)). This appears to undermine the analysis proposed in the present paper that sees CTs as identical to CFs.

(42) [Ty pokormil kota?]$_{\text{CONTEXT}}$ Russian
*'Did you feed the cat?'*
---------- / ----------\
\# [Tol'ko sobaku]$_{\text{CT}}$ ja [pokorm**I**l]$_{\text{NIF}}$
only dog.ACC I fed
'*As for only the dog, I fed it.'*

(43) [Ty pokormil kota?]$_{\text{CONTEXT}}$ Russian
*'Did you feed the cat?'*
----------\
---------- ------\
(Net,) ja tol'ko sob**A**ku pokormil
no I only dog.ACC fed
*'No I only fed the dog.'*

However, I will demonstrate on the basis of a variety of conversational strategies that it is not the CT that is incompatible with focus operators but rather the interpretation of a set of sets of propositions conveyed by Topic-Focus structures that cannot be achieved when the operators are applied to the structure. Moreover, as will be shown below, the interpretation of counter-assertion conveyed by structures hosting CF also often clashes with the semantics of focus sensitive operators.

To recall, the focus in Topic-Focus structures is NIF and can therefore only provide a focus value for one (newly introduced) proposition. As a consequence, the proposition that is already present in the context is not given any focus value and can therefore be understood as either having the same focus value as the newly introduced proposition (see (23)) or a different focus value (see (22)). Crucially, as soon as a fixed focus value is given to a contextual proposition, the interpretation of a set of sets of propositions associated with CTs becomes unavailable.[29]

The discourse interpretation conveyed by Topic-Focus sentences is illustrated in (44).

[29] As pointed out by Hans van de Koot (p.c.), it is possible to have a sentence with a CT even when a contextual proposition receives a fixed focus value as long as there is another proposition in the discourse that is left without a fixed focus value. In other words, what is crucial for the interpretation of a set of sets of propositions is the presence of a proposition in the discourse with no fixed focus value.

(44) Interpretation of TOPIC-FOCUS (or CF-NIF) structures:

Let's say there is a set of entities <*a*, *b*> and a set of properties <p1, p2>:

| [What property holds of *a*?]CONTEXT | | *Interpretations that are compatible with the speaker's beliefs:* |
|---|---|---|
| [p1]NIF holds of [*b*]CT | => | 1. p1 holds of *a* (see (23))<br>2. p2 holds of *a* (see (22)) |

The context introduces the entity *a*, and requests information about the property that holds of *a*. The Topic-Focus sentence in the reply, however, fails to provide this information. Instead, it provides information about the property that holds of a newly introduced entity *b*. As a result, the entity *a* can be interpreted as either having the same property as *b* or as having a different property than *b*. Crucially, the discourse does not establish what property holds of *a*, leaving the question in the context without a fixed answer.

To formally represent the interpretation conveyed by a sentence hosting a CT, it is necessary to capture the intuition that the proposition in the context does not have a fixed focus value *only* within the speaker's beliefs. Plausibly, discourse-related categories such as CT and CF can only be nested in a discourse where interlocutors exchange their (possibly contradicting) beliefs. Therefore, a sentence containing either a CT or a CF conveys interpretation relevant for the epistemic state of the speaker rather than the facts about the world.[30] Thus, a sentence hosting a CT conveys that the speaker does not know whether the contextual proposition has the same or a different focus value as the newly introduced proposition, whereas a sentence with a CF, in contrast, expresses the speaker's belief that the contextual proposition has an alternative focus value to the newly introduced proposition.

One way of representing the interpretation of sentences containing a CT or a CF is to define belief as a kind of quantification over worlds.[31] Following Heim (1992), I adopt the notion of doxastically accessible worlds. If we assume a function "dox" which takes an individual as an argument and returns the set of all possible worlds which are compatible with that individual's beliefs, then we get the following interpretative possibilities for sentences with VF:

i. If the speaker *s* believes a proposition introduced in the context is true, then for all worlds *w* in Dox(*s*), this proposition is true in *w*.
ii. If the speaker believes a proposition introduced in the context is false, then for all worlds *w* in Dox(*s*), the negation of this proposition is true in *w*.
iii. If the speaker doesn't know whether or not the proposition introduced in the context is true, then there is a world *w* in Dox(*s*) such that this proposition is true in *w*, and another world *w'* in Dox(*s*) such that the negation of this proposition is true in *w'*.

[30] Unlike CT and CF, EF might in fact be better analyzed as making a reference to the facts about the world.
[31] I am very grateful to Rob Truswell for pointing this out to me.

The sentences in (45) illustrate these interpretative possibilities.

(45) [Did John buy a Volkswagen?]CONTEXT

a. (Yes), John d**I**d (buy a Volkswagen)

b. (No), John bought [a Toy**O**ta]CF, (not a Volkswagen)

c. John bought [a Toyota]CT, (but I don't know about a Volkswagen)

The interpretation of a sentence that hosts a CF, as in (45b), is such that it includes a negation of the proposition introduced in the context for all worlds *w* in Dox(*s*), whereas the interpretation of a sentence containing a CT, as in (45c), implies that there is a world *w* in Dox(*s*) such that this proposition is true in *w*, and another world *w'* in Dox(*s*) such that the negation of this proposition is true in *w'*.

Since CT and CF are claimed by the present paper to be one and the same IS notion, it is expected that both have focus semantics. I will adopt a notational variant of focus representation introduced by Neeleman and Vermeulen (forthcoming), which represents the focus, as well as the set of alternatives to the focus found in the alternative propositions (see (46)). Here, the ordinary value of the sentence is generated by applying the function (corresponding to the background in (45b) and (45c))) to the focus, while the focus value is generated by applying it to members of the set of alternatives:

(46) <λ*x*[John bought *x*], Toyota, {Toyota, Volkswagen, Bentley, ...}>

As claimed in the previous section, focus can be additionally supplemented with contrastive interpretation, which is the case with CF, CT and EF. The definition of contrast proposed in the present paper suggests that contrast involves quantification over a set of discourse relevant entities {*a*, *b*, *c*,…}. After all, for an element to be construed as contrastive, the interpretation of belonging to a pragmatic set of alternatives must be activated by the sentence that contains this element. Thus, in a sentence hosting either a CT or a CF, as in (45b) and (45c), contrast expresses to what extent the set of (contextually relevant) cars is contained in the set of things that John bought. The interpretation of both sentences entails that, according to the speaker's beliefs, one element of the set of cars is also an element of the set of things that John bought. A sentence containing a CF, as in (45b), additionally expresses the speaker's belief that the other contextually relevant member of the set of cars is not contained in the set of things that John bought. In the case at hand this other member is a Volkswagen. A sentence with a CT, as in (45c), in contrast, additionally expresses that the speaker does not know whether the other contextually relevant member of the set of cars is contained in the set of things that John bought or not.

Therefore, the interpretation of sentences hosting CF or CT additionally requires quantification over the sets of worlds within the speaker's beliefs. In other words, such sentences involve two types of quantification: quantification over a set of contextually salient entities {*a*, *b*} that can provide a focus-value for a proposition 'John bought *x*'; and quantification over doxastically accessible

worlds {*w*, *w'*} that allow for 'John bought *a*' and/or for 'John bought *b*'. Assuming that the discourse in which sentences with a CF or a CT occur is compatible with the interpretation according to which the speaker is given an instruction to express their beliefs as to to what extent the set of (contextually relevant) cars is contained in the set of things that John bought, the following discourse representation arises:

(47) Instructions compatible with the context:

Out of the contextually salient alternative entities {*a*, *b*},

(i) in how many doxastically accessible worlds (Dox(*s*)) can *a* fulfill the proposition P?
(ii) in how many doxastically accessible worlds (Dox(*s*)) can *b* fulfill the proposition P?

(48) Interpretation of a sentence with a CF:

*a* can fulfill P in all worlds in (Dox(*s*)), *b* cannot fulfill P in all worlds in (Dox(*s*)).

(49) Interpretation of a sentence with a CT:

*a* can fulfill P in all worlds in (Dox(*s*)), *b* can fulfill P in *w* and b cannot fulfill P in *w'*.

The fact that *a* can fulfill P is already part of the simple focus representation given in (46). What is specific for the semantics of sentences hosting a CF or a CT is that there is another contextually relevant entity that can fulfill P in some doxastically accessible worlds but not in others:

(50) Semantics of sentences hosting a CF:

a. <λ*x*[John bought *x*], Toyota, {Toyota, Volkswagen, Bentley, ...}>
b. ∃*x*[*x* ∈ {Toyota, Volkswagen, Bentley, …} & *x*≠Toyota & ∀*w*[*w* ∈ Dox(*s*) ¬[John bought *x*]]].

(51) Semantics of sentences hosting a CT:

a. [<λ*x*[John bought *x*], Toyota, {Toyota, Volkswagen, Bentley, ...}>
b. ∃*x*[*x* ∈ {Toyota, Volkswagen, Bentley, …} & *x*≠Toyota & ∃*w*[*w* ∈ Dox(*s*) & [John bought *x*]] & ∃*w'* [*w'* ∈ Dox(*s*) & ¬[John bought *x*]]].

The notation in (50b) must be read as follows: 'exists an entity that is an element of the same set that includes the focus but is not the same entity as the focus and for every world that is an element of a set of doxastically accessible worlds it is not true that John bought this entity. The notation in (51b), in contrast, states that 'exists an entity that is an element of the same set that includes the focus but is not the same entity as the focus and there exists a world *w* that is an element of a

set of doxastically accessible worlds in which it is true that John bought this entity and there exists a world *w*' that is an element of a set of doxastically accessible worlds in which it is not true that John bought this entity. In other words, both the positive and the negative truth-value of the proposition 'John bought a Volkswagen' are compatible with an agent's beliefs in (45c), (49) and (51b). [32]

The next subsection argues that focus sensitive operators alter the semantics of sentences in that they involve a specific quantification over sets that is often incompatible with the quantification involved in the semantics of sentences hosting a CT or a CF.

## 5.2 Incompatibility with focus sensitive operators

Before starting the discussion of the semantics of sentences affected by focus sensitive operators, such as the delimiting operator 'only' or expanding operators including negative and universal quantifiers, it is vital to establish whether such operators can be included into the interpretation of narrow focus assigned to a constituent.[33] That is, for a constituent that includes such an operator to be interpreted either as a CF or a CT, it is necessary for this constituent to allow the interpretation of narrow focus.

To recall, the semantics of focus involves selection out of a set of alternatives. For non-contrastive focus, this set is not pragmatically restricted, whereas for CF and CT, alternative member(s) must be active in the discourse. It is therefore expected that whenever the semantics of a focus sensitive operator involves a particular type of quantification over a set that is incompatible with the interpretation that sees the constituent that includes this operator as belonging to a set of alternatives, this constituent cannot carry narrow focus. For instance, in (52), the constituent 'a Toyota' that is modified by the delimiting operator 'only' is assigned NIF. This constituent is chosen out of a set of cars as the one that can provide a value for the variable in 'John bought *x*' and turn it into a true proposition. The delimiting operator adds an interpretation to the sentence in (52), according to which, no other element of the set of cars is included into the set of things that John bought. Crucially, 'only a Toyota' cannot be assigned the

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[32] Whenever the NIF in a CF-NIF sentence is not a VF but is assigned to a constituent, as in (i), the semantic notation must include two variables, as in (ii), where the function (corresponding to the background in (i)) is assumed to apply to the focus and to members of the set of alternatives in the overtly specified order:

(i) [What did John buy?]CONTEXT

[Mary]CT bought a [Toyota]NIF (but I don't know about John).

(ii) a. <λ*x*λ*y*[*x* bought *y*] Mary, Toyota, {John, Mary, Sue,…}{Toyota, Volkswagen, Bentley, ...}>
b. ∃*x*[*x* ∈ {John, Mary, Sue…} & x≠Mary & ∃*w*[*w* ∈ Dox(*s*) & [*x* bought Toyota]] & ∃*w'* [*w'* ∈ Dox(*s*) & ¬[*x* bought Toyota]]].

Note that since the focus in CT-FOC structures is a NIF, (iib) has nothing to add to its interpretation. The semantics of NIF is already captured by (iia).

[33] By narrow focus, I mean focus that is assigned to a syntactic constituent and that does not involve focus spreading onto the entire clause or VF.

interpretation of narrow focus as long as the delimiting effect of the operator is active, as this constituent cannot be interpreted as a member of a set of cars (see (53)).

(52) [What car did John buy?]CONTEXT

John only bought [a Toyota]NIF.

(53) *<λ*x*[John bought *x*], only Toyota, {only Toyota, Volkswagen, Bentley, ...}>

Although in (52) the delimiting operator cannot be construed as included in the constituent that receives narrow NIF, it still adds new non-presupposed information to the sentence that for every member of the set of cars except Toyota it is not true that John bought it. In other words, it adds the interpretation about the truth-value of alternative propositions. To recall, information about a truth-value of a proposition is expressed by VF. Since the delimiting operator in (52) activates the interpretation that there are alternative propositions relevant for the discourse at hand that have an alternative truth-value to the proposition in the reply, this operator must be analyzed as adding a contrastive VF to the sentence that already has NIF on the object, i.e. it is a type of a *marker of contrast* on VF. As a result of the application of this marker of contrast, the sentence in (52) has NIF on the object and a CVF.

Similarly, a negative quantifier or a universal quantifier cannot be included in a set of cars in (54) and (55) because their semantics involves generalization over a set of alternatives, rather than selection out of such a set (see (56) and (57) respectively.[34]

(54) [What car did John buy?]CONTEXT

John bought no car.

(55) [What car did John buy?]CONTEXT

John bought every car.

(56) *<λx[John bought x], no car, {no car, Volkswagen, Bentley, ...}>

(57) *<λx[John bought x], every car, {every car, Volkswagen, Bentley, ...}>

[34] The fact that phrases including the aforementioned operators cannot be construed as belonging to a set of cars in the above examples is further confirmed by the impossibility of forming a coordinate structure with one conjunct containing one such phrase and the other containing an alternative member of the set of cars:

(58) a. *John bought a Volkswagen and only a Toyota

b. * John bought a Volkswagen and no car

c. *John bought a Volkswagen and all cars

Since the negative quantifier and the universal quantifier generalize over a set of cars in (54) and (55), it is impossible to construe the constituent that includes such a quantifier as belonging to a set of alternatives. As a result, 'no car' and 'every car' cannot be assigned narrow focus (see (56) and (57)).

Crucially, the replies in (54) and (55) do not directly answer the contextual question by selecting an entity out of a set of cars and stating that this entity belongs to the set of things hat John bought. Instead, they either challenge or confirm the validity of the proposition 'John bought a car' by either assigning the value false or the value true to it. In other words, the sentences in (54) and (55) also contain VF. In (54), the VF is contrastive, as the sentence rejects the presupposition that John bought a car. Hence, both truth-values are active in the discourse in (54). In (55), in contrast, the VF is non-contrastive, as it confirms that the contextual proposition has the value true.

However, assigning a truth-value to the contextual proposition is only part of the semantics of the sentences affected by expanding focus operators, as these additionally provide the interpretation, according to which, 'John bought *x*' is either false or true for every *x*. In other words, the sentence in (54) does not only convey that 'John bought a car' is false, it additionally expresses that no member of the set of cars exists for which it is true. Similarly, the sentence in (55) does not only convey that 'John bought a car' is true, it additionally expresses that no member of the set of cars exists for which it is false.

Therefore, the sentences affected by all the aforementioned focus sensitive operators must be analyzed as containing two types of quantification: quantification over a set of truth-values and quantification over a set of contextually relevant entities, with the latter incompatible with the semantics involving selection out of a set of alternatives. Consequently, none of these operators can be included in a constituent with the interpretation of narrow focus, unless the delimiting or the expanding effects are neutralized (see section 5.2.1). It is therefore expected that they cannot be either a CT or a CF.

On the other hand, the sentences affected by these operators are often compatible with the interpretation of counter-assertion but not with that of a set of sets of propositions, resulting in a false impression that the grammaticality of the former but not the latter is due to a difference between CT and CF. The next subsections discuss the interpretative clashes between the semantics of sentences affected by focus sensitive operators and those containing a CT, with the aim to demonstrate that these clashes are not due to a difference between CT and CF.

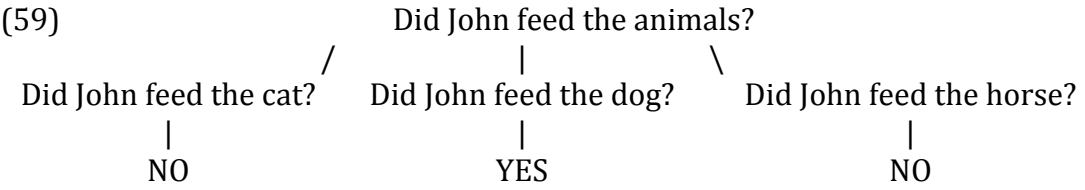
### 5.2.1 Incompatibility with the delimiting focus operator 'only'

A conversational strategy that makes use of 'only' to modify a <-presupposed; +contrastive> constituent results in a positive answer to an alternative subquestion and a negative answer to the subquestion in the context and *all* the other potential subquestions (see (58a) and (59)). No subquestions are left unanswered; hence, no interpretation of a set of sets of propositions is available (see (58b)). That is, the question in the context receives a fixed answer.

Conversely, the interpretation of counter-assertion conveyed by sentences containing a contrastive VF, as in (58a) is compatible with such a strategy

because the proposition 'John only fed the dog' does stand in opposition to 'John fed the cat'. Consequently, the proposition in the context and the one in the reply have opposite truth-values and the VF is indeed contrastive in the reply.

(58) [Did John feed the cat?]CONTEXT
\
a. No, John only fed the dog.
/
b. # John only fed the dog (but I don't know if John fed the cat).

(59)



Assuming that the interpretation added by the delimiting operator to the semantics of a sentence with a simple focus, as in (60a), is the one given in (60b), it is expected to be compatible with the speaker's beliefs given in (50) but not (51), as the latter requires that there exists an entity that is an element of the set of animals but is not the same entity as the focus and that there exists a world *w* within (Dox(*s*)) where it is true that John fed this entity.[35]

(60) a. <λ*x*[John fed *x*], a dog, { a cat, a dog, a horse ...}>
b. ∀*x*[*x* ∈ {a cat, a dog, a horse…} & *x*≠ a dog ¬[John fed *x*]].

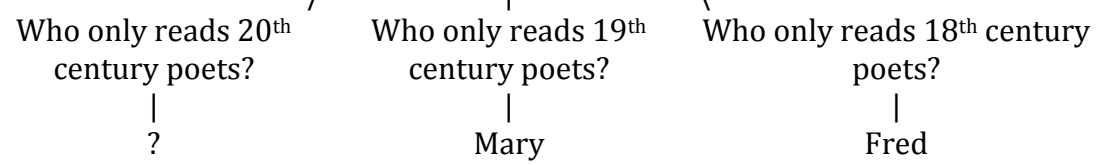
Interestingly, the delimiting effect of the focus operator 'only' can be neutralized if the operator interpretatively modifies not the entire focused constituent but only a part of it. For instance, in (61) and (62), 'only' does not refer to the poets but to a particular century they lived and worked in. As a result, it is possible to imagine a set of poets where all members are modified by 'only', as in 'only 20th century poets', 'only 19th century poets', 'only 18th century poets' etcetera. Unsurprisingly, such a strategy allows for a selection out of a set of alternatives and therefore for the interpretation of narrow focus on the object in (61), as the delimiting operator is unable to alter the semantics of the sentence. In other words, whenever all the subquestions dominated by the superquestion contain 'only', the focus operator has no effect on conversational dynamics:

(61) [Who only reads 20th century poets?]CONTEXT

Mary only reads 19th century poets (but I'm not sure who only reads 20th century poets)

[35] I am assuming that whenever 'John fed a dog' is embedded under the delimiting operator, which forces the semantics given in (60), the interpretation of a set of sets of propositions illustrated in (51) becomes unattainable for it. One of the consequences of the fact that this interpretation is absent in such a case is that the PF does not mark the sentence with the prosodic markers reserved for a CF-NIF structure.

(62) Who only reads poets of one particular century?




In (62), the superset in the superquestion is represented by a plural noun that is modified by the focus operator 'only'. All the subsets in the subquestions are automatically associated with this operator as well. In such a context the delimiting operator is unable to have an effect on conversational dynamics and result in a fixed answer to the proposition in the context. Consequently, it is possible for the question in the context to remain without a focus value and the interpretation of a set of sets of propositions is obtainable.

### 5.2.2 Incompatibility with expanding focus operators

In general sentences hosting a CT are incompatible with expanding operators such as universal and negative quantifiers because these have an effect on the availability of a fixed answer to the superquestion and subsequently to **all** the subquestions. Thus, *universal quantifiers* that modify a <-presupposed; +contrastive> constituent alter the sentence in such a way that it provides a **positive** answer to the superquestion and therefore to all the subquestions it dominates, including the one in the context (see (63a) and (64)). Hence, no interpretation of a set of sets of propositions is available (see (63b)), as the question in the context receives a fixed (positive) answer.

Moreover, CF is also incompatible with this strategy (see (63c)), as all the subquestions have the same truth-value 'true' on the verum focus and the latter fails to be contrastive.[36]

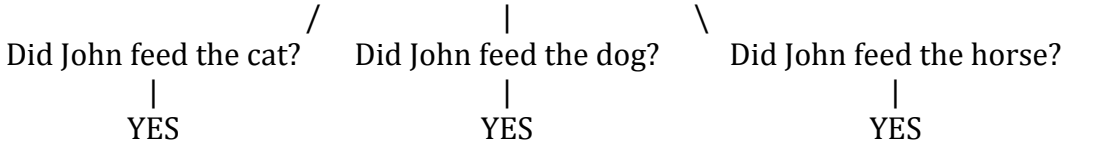
(63) [Did John feed the cat?]CONTEXT

a. Yes, John fed all the animals /everyone (including the cat).

b. # John fed all the animals (but I don't know if John fed the cat)

c. # (No), John fed all the animals (not the cat)

(64) Did John feed the animals? => **YES**




[36] The only way in which the VF in (63c) can be construed as contrastive is by interpreting the contextual proposition 'John fed the cat' as exhaustive (e.g. John only fed the cat). In such a case, the proposition 'John fed all the animals' can stand in opposition to 'John only fed the cat' as the former questions the exhaustive reading of the latter.

Assuming that a sentence containing a universal quantifier has the semantics given in (65), it is expected that neither (50) nor (51) are compatible with it, as they both require that there exists an entity that is element of the set of animals and that there exists a world within (Dox(*s*)) in which it is not true that John fed this entity, whereas (65) demands that the proposition 'John fed *x*' is true for every entity that is an element of the set of animals.

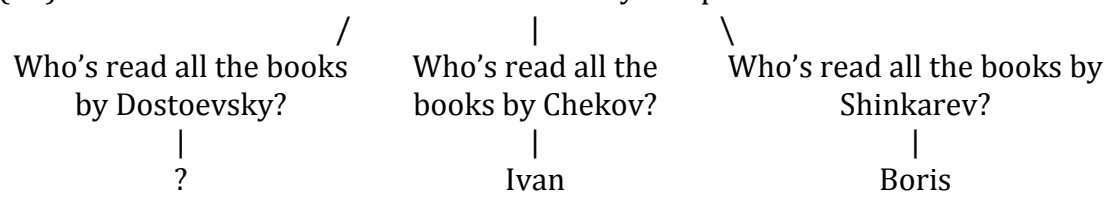
(65) ∀*x* [*x* ∈ {a cat, a dog, a horse, ...} [John fed *x*]].

However, whenever the universal quantifier modifies a superquestion, and hence is contained in every member of the set of alternatives, it fails to have an effect on conversational dynamics:

(66) [Who's read all the books by Dostoevsky?]CONTEXT

Boris has read all the books by Shinkarev (but I'm not sure who's read all the books by Dostoevsky)

(67)




In (66) and (67), 'all' does not interpretatively modify books as such but only books by a particular author. As a result, one can imagine a set of all books in general that contains subsets of all books by Shinkarev and all books by Dostoevsky etcetera. Consequently, selection out of a set of alternatives and therefore the interpretation of narrow focus becomes possible in such a context.

Unsurprisingly, CTs are compatible with such a discourse-tree because the expanding effect is neutralized here just as the delimiting effect was neutralized in the tree in (62). Moreover, CF is also compatible with such a strategy as it allows for the verum focus to be contrastive (see (68) where 'all cats' and 'all dogs' can be construed as members of the set of all animals).

(68) John fed all the dogs, not all the cats.

The conversational strategy making use of *negative quantifiers*, on the other hand, affects the reply in such a way that it provides a **negative** answer to the superquestion and therefore to all the subquestions it dominates, including the one in the context (see (69a) and (70)). Hence, no interpretation of a set of sets of propositions is available (see (69b)) because the question in the context receives a fixed answer.

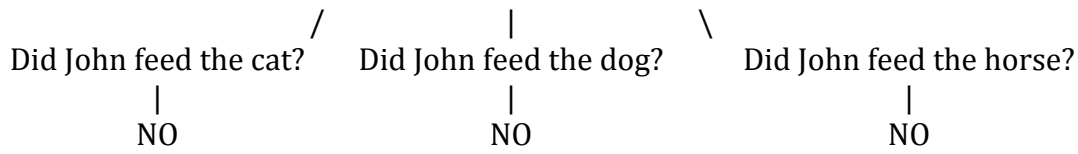
A sentence with a contrastive VF, on the other hand, is compatible with this strategy (see (69c)) because the proposition 'John fed no animals' does stand in opposition to 'John fed the cat'. Consequently, the proposition in the context and the one in the reply have opposite truth-values and the VF is indeed contrastive in the reply.

(69) [Did John feed the cat?]CONTEXT

a. No, John fed no animals/no one (including the cat).
b. # John fed no animals (but I don't know if John fed the cat)

c. (No), John fed no animals.

(70) Did John feed the animals? => **NO**




Assuming that a sentence containing a negative quantifier has the interpretation given in (71), it is expected to be compatible with the speaker's beliefs given in (50) but not (51), as the latter requires that there exists an entity that is an element of a set of animals and that there exists a world *w* within (Dox(*w*)) in which it is true that John fed this entity, whereas (71) demands that the proposition 'John fed x' is false for every entity that is an element of the set of animals.

(71) $\forall x$ [$x \in$ {a cat, a dog, a horse, …} ¬[John fed *x*]].

The strategy of contextual neutralization that can be applied to the delimiting focus operator and to universal quantifiers is unavailable for negative quantifiers because of the latter's direct association with the negative interpretation. To be precise, a question containing a negative quantifier cannot serve as a superquestion dominating a number of subquestions because a negative quantifier cannot act as a superset. A superset can be represented either by a plural noun with the interpretation that allows for subsets, or a wh-phrase that opens a semantic set. A negative quantifier, on the other hand, refers to an empty set. That is, while 'all animals' can form a superset for 'all cats' and 'all dogs'; and 'only smelly animals' can form a superset for 'only smelly cats' and 'only smelly dogs'; 'no animals' cannot form a superset for 'no cats' and 'no dogs'. In other words, negative quantifiers fail to be construed as belonging to any sort of set of alternatives. It is therefore expected that negative quantifiers can never be contained in a constituent with the interpretation of narrow CF in any type of construction.[37]

[37] Admittedly, it might be possible to interpret negative quantifiers as emphatic foci. If a set of quantifiers of the type {no x, some x, all x} is imagined, then both the negative quantifier and the universal quantifier can be understood as occupying the edge positions on a scale. For instance, feeding no animals or all animals can be construed as surprising whenever the expectations are that at least some or only some animals were fed.

## 5. Conclusion

The above analysis supports the view that the notion of contrastive topic should be reduced to that of contrastive focus. CTs and CFs are both associated with identical interpretative features, which results in their identical syntactic behavior in Russian. The interpretive difference between the structures that host CT and CF is due to the nature of an additional focused element present in the sentence. Thus, a sentence hosting what is traditionally referred to as a CT additionally contains a NIF. The latter provides a focus value for an alternative proposition but fails at providing a focus value for the proposition in the context. The fact that the proposition in the context is left without a focus value, or in other words, that the question in the context is left without an answer, results in the interpretation of a set of sets of propositions/questions characteristic of Topic-Focus sentences.

A sentence hosting what is conventionally analyzed as CF, conversely, contains a contrastive verum focus. This type of focus not only provides a truth-value for the alternative proposition but also treats the proposition in the context as having a contrasting truth-value. As both propositions receive a focus value, no questions are left unanswered and no interpretation of a set of sets of propositions/questions arises. Instead, the fact that the two propositions have opposite truth-values results in the interpretation of opposition or counter-assertion.

Therefore, both CT and CF should be collapsed under one notion of CF that can occur in two different types of construction. Depending on the nature of the additional non-presupposed element present in the sentence that hosts a CF, two different interpretations arise.

The hypothesis that both notions, CT and CF, are associated with the features <-presupposed> and <+contrastive> successfully captures the observation that only these two notions can be associated with contrastive interpretation. Rather than claiming that Topics and Foci can be enriched to yield contrastive interpretation, we can now simplify the grammar by stating that any non-presupposed constituent can be contrastive. This outcome is not as strong as stating that Focus is always contrastive – because, as above illustrated, <-presupposed> can be <-contrastive> – but it entails that contrast is always non-presupposed. Indeed, according to the definition of contrast proposed here, a contrastive constituent always conveys the non-presupposed information that it belongs to a pragmatic set of alternatives. Consequently, even when no additional non-presupposed information is communicated by this constituent, it still must be analyzed as <-presupposed>.

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