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Inverse scope of Russian 'ne dolžen' as neg-raising

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ABSTRACT

The inverse scope of negated deontic necessity modals is a typologically robust phenomenon. In this paper I examine Russian necessity modal *dolžen* 'must' in its deontic reading and compare two accounts of its inverse scope: the positive polarity approach and the neg-raising approach. I argue for the following points: (a) neg-raising predicates exhibit typical properties of positive polarity items; (b) the scalar implicature approach to neg-raising derives those properties; (c) *dolžen* patterns with neg-raising predicates w.r.t. the relevant properties. I conclude that the neg-raising approach perfectly accounts for *dolžen* and is very close to accounting for English *must*. I also provide criticism of the competing positive polarity approach.

KEYWORDS neg-raising · positive polarity · modals · scalar implicatures · Russian

1 INTRODUCTION

Deontic necessity markers are known to take different scope w.r.t. negation depending on a number of factors: particular verb/auxilliary, syntactic environment, discourse context. For example, English *have to* is always outscoped by negation, i.e. it takes surface scope (1). On the other hand, *must* outscopes negation in simple matrix sentences (2).[1] However, *must* takes narrow scope in downward entailing (DE) environments, e.g. conditional antecedent (3). Russian deontic *stoit* 'should' takes wide scope w.r.t. negation even in DE environments (4).[2] Finally, Russian deontic *dolžen* 'must' usually outscopes negation (5-a) and many speakers consider (5-c) a contradiction on a par with (4-b).[3,4] However, narrow scope is also possible even in upward entailing (UE) environments (5-b).

(1) John doesn't have to leave. (Iatridou & Zeijlstra 2013: p. 530, (2a))
'It is not necessary that John leaves.' (¬ > □)

(2) John mustn't jog, #but he is allowed to. (Homer 2015: p. 13, (30b))
'#John isn't supposed to jog, but he is allowed to jog.' (□ > ¬)

(3) If he must not work tonight, he is allowed to go out with his girlfriend.
(Iatridou & Zeijlstra 2013: p. 543, (48a)))
'If he doesn't have to work tonight, he is allowed to go out with his gf.' (¬ > □)

(4) Esli tebe ne stoit begat' po utram
if you.DAT NEG should run.INF in mornings
'If you shouldn't jog in the mornings' (□ > ¬)

[1] I assume that in (1) through (5) modals are structurally dominated by negation regardless of the linear order. This issue is discussed in §2.

[2] Data collection and reported judgements are discussed in §6.1.

[3] Morphologically *dolžen* is an adjective in the "short form" (see e.g. Grashchenkov (2008) for a discussion of Russian adjectives). It belongs to a tiny class of predicative adjectives whose argument structure is similar to that of infinitive-embedding verbs. *Dolžen* also has non-deontic readings which are not discussed in this paper.

[4] Homer (2015: fn. 14) notes that the contracted form *mustn't* has to be used to exclude embedded or constituent negations. On the other hand, Catherine Rudin pointed out to me that *mustn't* is very marginal or even unacceptable in some varieties of English, at least as a deontic modal. For this reason the uncontracted form is used in the interpretation/translation line of the examples.

a. ... to začem ty pošel s nami na probežku?
then what.for you went with us on jog
'... then why did you join us a for a jog?'
b. #... ty vse ravno možeš inogda begat' s nami.
you still may sometimes run.INF with us
'... you still may join us for a jog sometimes.'

(5) a. Kofe ne dolžen byt' gor'kim.
coffee NEG must be.INF bitter
'Coffee must not be bitter.' (□ > ¬)
(following context: if it is bitter, it is either of a low quality or overroasted)
b. Kandidaty ne dolžny otčityvatsja o doxodax svoix
candidates NEG must.PL report.INF.REFL about incomes self.ADJ.GEN
suprugov.
spouses.GEN
'The candidates don't have to report the income of their spouses.' (¬ > □)
c. %Esli ty ne dolžen begat' po utram, ty vse ravno možeš
if you NEG must run.INF in mornings you still may
inogda begat' s nami.
sometimes run.INF with us
'If you must not jog in the mornings you still may join us for a jog sometimes.'

In this paper I will focus on *dolžen* (5). I will argue that its inverse scope with negation is the result of neg-raising (NR). The rest of the paper is structured as follows. In §2 I outline the possible accounts of the inverse scope of deontic necessity modals and negation and discuss relevant assumptions about the clause structure. In §3 I briefly recap an influential account due to Iatridou & Zeijlstra (2013) and Homer (2015) which regards some inverse scope deontics (e.g. *must*) as positive polarity items (PPIs) that have to escape the scope of negation by movement. In §4 I provide case-specific and general criticism of this account. In §5 I introduce the analysis of NR as a scalar implicature (Romoli 2013) and propose a minor extension to it which is necessary to account for some examples and generalizations concerning NR. In §6 I apply the NR-account of inverse scope to Russian *ne dolžen* and show that it fares better than the PPI-account without suffering from the drawbacks of the latter. §7 concludes.

2 THE LANDSCAPE OF ACCOUNTS OF THE INVERSE SCOPE

At least four accounts of the inverse scope are possible (6).[5] The labels for them are mine.

(6) a. Variable structure account: (grammaticalized) deontics may occupy different (base-generated) positions in the clause structure, hence have different scope (Cinque 1999, Butler 2003).
b. PPI-account: deontics are base-generated in the scope of clausal negation yet some of them are PPIs and have to escape the scope of negation via overt or covert movement (Iatridou & Zeijlstra 2013, Homer 2015).
c. NR-account: deontics are base-generated in the scope of negation, yet some of them are NR predicates, i.e. they are interpreted with the wide scope due to the NR effect (Horn 1989, De Haan 1997, Homer 2015, Jeretič 2021).
d. Conventionalization account: the scope of a modal w.r.t. negation may become fixed due to semantic convention. The conventionalized scope is determined by diachronic factors and does not necessarily correspond to the linear order (Horn 1989, Yanovich 2013: p. 201–202).

[5] The accounts in (6) are mutually non-exclusive. It can be simultaneously the case that there are different positions for deontics in the clause structure (6-a), there are PPI-deontics (6-b), there are NR-deontics (6-c) and some deontics have conventionalized scope w.r.t. negation (6-d).

Although the first option (6-a) is compatible with the other ones it is usually excluded by the proponents of (6-b)-(6-d) for the following reasons. Firstly (i), even if one posits two base-generation positions for deontic necessity modals, additional assumptions are still needed to account for the interplay between the scopal properties and the syntactic environment, cf. (2) vs (3). In particular, one will have to ban the narrow scope of *must* in UE environments (2) by positing positive polarity or obligatory neg-raising, i.e. (6-a) must be coupled with either (6-b) or (6-c) and it will be parsimonious to get rid of (6-a) altogether. Moreover (ii), the putative position above negation is available for necessity, but not for possibility deontics (see below in this section). That is, this apparent high position pops up exactly in the case of those items which have a prerequisite of being neg-raisers which makes the redundancy of (6-a) even more suggestive.[6]

Next (iii), for some items (e.g. *must*) the higher position may become unavailable depending on the monotonicity of the environment below negation (Homer 2015: p. 27) which is unexpected (and seems to be unexplainable) if this position is base-generated rather than derived. Finally (iv), it is not clear how the purely syntactic (6-a) can account for the patterns with preference which we observe in the case of *dolžen* (5). The analysis which I will eventually adopt has ways to tackle this issue, see §7.

To sum up, while the aforementioned arguments do not exclude (6-a) in principle, they expose its overgeneration problems and a flavor of redundancy pertinent to it. I side with Iatridou & Zeijlstra (2013), Homer (2015) in rejecting (6-a).

As for (6-d), it can be the right analysis for modals with fixed scope (either direct or inverse), e.g. *have to* (1) and *stoit* (4), but it cannot be extended to those with variable scope, e.g. *must* and *dolžen*, which are the subject of this paper.

Thus, in what follows I will focus on options (6-b) and (6-c). I will stick to the following restrictive assumptions:

(7) a. clausal negation occupies a fixed position in the clause structure (say, Neg) and cannot move;
b. deontic modals are either lexical (V/Pred) or, if grammaticalized, functional heads (Mod);
c. Mod is below Neg.

I will regard English modal auxiliaries as functional heads in light of the vast evidence for their grammaticalization (lack of agreement, lack of *do*-support, etc.). In fact, it does not matter for our purposes whether a modal is analyzed as lexical or functional as long as both V and Mod are assumed to be below Neg.

As far as the relative structural position of Neg and Mod is concerned, it may seem that English modals are base-generated above negation as witnessed by the linear order (*may not*, etc.). However, the linear order is not really instructive in this case. Iatridou & Zeijlstra (2013) and Homer (2015) argue that *must* is base-generated below negation, as confirmed by its ability to be interpreted with narrow scope. The same is true for existential deontics and other root modals in general which are always outscoped by negation in English (8). I will thus assume the clause structure in (9).[7] The linear order is the result of V-to-T or Mod-to-T movement of the modal.[8] A more detailed discussion of the relevant aspects of the clause structure can be found in Rossyaykin (2020), see also Hacquard (2010).

(8) a. John [$_{T}$ may [$_{NegP}$ not [$_{Mod}$ ~~may~~ [$_{VP}$ come tomorrow]]]]. ($\neg > \Diamond_{root}$)
b. John [$_{T}$ can't$_{j,k}$ [$_{Neg}$ ~~n't~~$_{j}$ [$_{Mod}$ ~~can~~$_{k}$ [$_{VP}$ come tomorrow]]]]. ($\neg > \Diamond_{root}$)

[6]NR predicates are always those predicates which are standardly analyzed as universal quantifiers over possible worlds, see Gajewski (2005, 2007), Romoli (2013) and §5–6. As for positive polarity, Zeijlstra (2017) proposes that universal quantifiers may be PPIs.
[7]I believe that epistemic modals are located not in Mod but higher in the structure. This issue is irrelevant.
[8]It follows from (8) that the head movement in question is either uninterpretable or obligatorily reconstructs. I address this issue in the following sections.

(9) $[_{TP}\ [_{NegP}$ not $[_{AspP}\ [_{ModP}$ can/may/must $[_{VP}$ have to]]]]]

In Russian the negative marker *ne* is standardly analysed as a head, hence even if *dolžen* head-moves, it cannot move past the negative marker due to the Head Movement Constraint (Travis 1984). Thus, the linear order (*ne dolžen*) corresponds to the order of Merge. Therefore, despite the linear order differences the underlying structure is similar in English and Russian (Neg > Mod > V).

An interesting issue raised by an anonymous reviewer is whether I am justified in assuming that modals are heads. This assumption is actually orthogonal for the semantic account I pursue, but is relevant for some parts of the criticism of Iatridou & Zeijlstra (2013) (§4). Notably, the latter authors make this assumption themselves and it seems to be fairly justified. As far as English modals are concerned, it is confirmed at least by their V/Mod-to-T (8) and V/Mod-to-C movements.

As for Russian *dolžen*, (10) is a useful example. Shushurin (2023) argues that the pivot of the polar question particle *li* head-moves and left-adjoins to *li*. The major argument for this view is the ban on branching constituents being followed by *li*. Thus, *ne dolžen* (*li*) is a (complex) head in (10). For more details see Shushurin (2023).

(10) Ne dolžen li ja otdat' Serëge čast' summy?
NEG must Q I give.INF Serëga.DAT part sum.GEN
'Shouldn't I give a part of the sum to Serëga?'

The assumptions about the clause structure introduced in this section are either shared by Iatridou & Zeijlstra (2013) and Homer (2015) or compatible with their analyses. In the next section I discuss the PPI-account of the inverse scope endorsed by these authors.

3 PPI-ACCOUNT OF THE INVERSE SCOPE

Iatridou & Zeijlstra (2013), Homer (2015) show that deontic *must* (as well as *should* and some other necessity deontics in other languages) exhibits typical properties of PPIs such as English *some* (discussed in Szabolcsi 2004). Those properties are enumerated in (11).

(11) a. *must* obligatory outscopes clausemate negation (2), unless
b. negation is contrastive/metalinguistic, or
c. *mustn't* is embedded in an additional DE environment (3) (rescuing), or
d. a universal quantifier intervenes between negation and *must* (shielding).

The basic property (11-a) was already illustrated in (2). (12) shows that *some* cannot stay in the scope of negation as well.

(12) John didn't understand something. (Homer 2011: p. 13)
1. *'John didn't understand anything.' (¬ > ∃)
2. 'There is something that John didn't understand.' (∃ > ¬)

When negation is contrastive/metalinguistic with the emphasis on either the PPI or the negative marker itself (or the negated verb) PPIs stay in its scope.[9] This is true for both *some* (13) and *must* (14). Note that in both cases the wide scope w.r.t. negation would have resulted in a contradiction as shown in the interpretations.

(13) You didn't do SOMETHING wrong, you did everything wrong!
(Iatridou & Zeijlstra 2013: p. 534)
*'#There is something you didn't do wrong and you did everything wrong.'

(14) No student MUST read 5 articles on the topic but one student is encouraged to do so. (Iatridou & Zeijlstra 2013: p. 535)
1. 'There is no student who has to read 5 articles on the topic...' (¬ > ∃ > □)

[9]Small capitals in examples and interpretations indicate emphasis.

2. *'#It must be the case that no student reads 5 articles on the topic but one student is encouraged to do so.' (□ > ¬ > ∃)

The next property is rescuing. When a PPI is embedded in a double DE environment (negation plus something else) it takes the narrowest scope. In (15-b) the scope of *only* serves as an additional DE environment.

(15) rescuing (Homer 2015: p. 14, 22)
   a. When Fred speaks French, Jean-Paul doesn't understand something.
      1. 'When F. speaks French, there is something that J.-P. doesn't understand.'
      2. *'When F. speaks French, J.-P. doesn't understand anything.'
   b. When Fred speaks French, only Marie doesn't understand something.
      'When Fred speaks French only Marie doesn't understand anything.'

Rescuing is also observed with *mustn't*/*must not* as shown in (3) with a conditional antecedent and in (16) with the scope of *only*.

(16) Only John mustn't read this very long book. (Homer 2015: p. 23)
'Only John doesn't have to read this very long book.' (only > ¬ > □)

Intervening universal quantifiers are known to disrupt the licensing of negative polarity items (NPIs), see Linebarger (1987) *inter alia*. In the case of PPIs there is "the mirror image" of this effect: an intervening universal quantifier (*always*, *necessarily*, etc.) allows a PPI to stay in the scope of negation (17).

(17) shielding
   a. John doesn't always call someone. (Iatridou & Zeijlstra 2013: p. 536)
      (¬ > always > ∃)
   b. When Fred speaks French, Jean-Paul doesn't necessarily/#possibly understand something. (Homer 2015: p. 24)
      (¬ > □ > ∃)

As predicted by the PPI-account, *must* is also subject to shielding (18).

(18) Homer (2015: p. 25)
   a. One mustn't always go with "new" to get "good". (¬ > always > □)
   b. The show mustn't necessarily go well, but it must go on. (¬ > □ > □)

As was just shown, *must* respects the typical properties of PPIs like *some* (11). On the basis of this, Iatridou & Zeijlstra (2013) and Homer (2015) conclude that *must* is indeed a PPI. However, this account faces a number of problems which are discussed below.

4 THE PROBLEMS FOR THE PPI-ACCOUNT

The movement of modals can be implemented in at least three ways, enumerated in (19).

(19) a. Interpretable head movement (Iatridou & Zeijlstra 2013)
   b. Quantifier raising (Iatridou & Zeijlstra 2013)
   c. "Escape" (Homer 2015)

Each option is problematic.

To begin with, the possibility of interpretable head movement is controversial.[10] For example, the narrow scope of moved existential root modals (8) provides evidence against the interpretability of head movement. In order to account for narrow scope deontics Iatridou & Zeijlstra (2013) propose that head movement obligatorily reconstructs unless reconstruction leads to ungrammaticality (as in the case of PPIs in negative sentences). As far as I can see this obligatory reconstruction is an *ad hoc* stipulation. Next, Homer (2015:

[10]And, as pointed out by a reviewer, head movement in itself is highly debated, see Dékány 2018 i.a.

p. 32) notes that interpretable head movement poses a compositionality problem.[11] Provided that e.g. *must* can be interpreted both *in-situ* (3) and in the position derived by head movement (2) (depending on the syntactic environment) it must have a semantic type which would allow it to combine with either VP (*in-situ* interpretation) or T (wide scope interpretation). Moreover, the T head must have a type which would allow it to combine with either the Mod head or NegP/AspP (in the absence of movement of the former). I suspect that this is unimplementable. Finally, head movement is not necessary to account for the inverse scope because there are inverse scope deontics (in particular, *supposed to*) which do not undergo V-to-T movement and still behave like PPIs (Homer 2015: p. 50–53). In light of the aforementioned problems it seems preferable to abandon (19-a) as an analytical option.

Even if interpretable head movement is possible after all, it will not work for languages in which the negative marker is a head, e.g. Russian. A modal will not be able to outscope negation via head movement due to the Head Movement Constraint. Iatridou & Zeijlstra (2013) have something to say about such languages as well. They suggest an alternative route for the wide scope: quantifier raising (QR). Under the standard analysis of modals as quantifiers over world variables, it seems natural to assume that they should be able to QR. However, all other movable quantifiers are phrasal and only modals are heads (see the discussion at the end of §2), so (19-b) also has some *ad hoc* flavor to it (e.g. aspectual operators can be analyzed as quantificational yet they do not QR).

Further problems for this option are empirical. Firstly, it is unclear why some deontic necessity modals (e.g. *have to*) are not able to QR (1). Secondly, it is unclear why no deontic possibility modals are able to QR (8). Moreover, regardless of the chosen analysis ((19-a) or (19-b)) the putative movements of modals are not attested anywhere outside of the contexts discussed in this paper. For example, inverse scope is never attested with two modals (20). (20-b) can only have an anomalous interpretation which results from the direct scope; it cannot be rescued by movement. Likewise, (21) cannot have a more natural interpretation with the inverse scope of *often* and *must*.

(20) Von Fintel & Heim (2020: p. 86)

a. I have to be allowed to graduate. ($\Box > \Diamond$, $^*\Diamond > \Box$)

b. #I am allowed to have to graduate. ($\Diamond > \Box$, $^*\Box > \Diamond$)

(21) #John often must stir this pot, otherwise the risotto will scorch. (Homer 2015)
'It is often the case that John must stir this pot.' (often > $\Box$, $^*\Box$ > often)

Note that the aforementioned problems are not inherent to the PPI-account *per se*. They arise when this account is applied to modals and in particular to *must*. For example, *some* does not face any of these problems. Firstly, being a phrasal constituent, *some NP* is able to QR. Secondly, QR with *some NP* is not restricted to negative sentences, see e.g. Reinhart (1997: p. 342).

In order to explain the restricted movement possibilities of putative PPI modals, Homer (2015) proposes a new type of movement dubbed "escape". "Escape" can only be applied in order to remove a modal PPI from the scope of negation. This new operation, however, does not resolve the problems discussed in this section. Firstly, its formal implementation remains unclear (essentially, it has to be a head movement with the properties of phrasal movement). Secondly, it is stipulated *ad hoc* to account for the data in question.

In the following sections I will show that the inverse scope of deontics and negation can be accounted for without movement, via the NR effect. Using Russian data I will show that NR predicates exhibit the properties of PPIs listed in (11). Moreover, those properties are predicted by the scalar implicature approach to NR (Romoli 2013). I will also show that the arguments against the NR-approach to the inverse scope of modals

[11] Unless Matushansky's 2006 theory is adopted, whereby phrasal and head movement do not differ essentially with regard to their landing site.

put forward by Homer (2015) do not go through in the case of Russian *dolžen*. I will conclude that the NR-approach perfectly predicts the properties of Russian *dolžen* and is very close to accounting for *must*. I will start with a brief recap of Romoli's 2013 approach to NR.

5 NEG-RAISING AS A SCALAR IMPLICATURE

On the basis of earlier work by Bartsch (1973), Gajewski (2005, 2007) developed a prominent presuppositional analysis of NR according to which NR predicates are lexically specified for the excluded middle presupposition and the NR effect results from projection of this presupposition.[12] Romoli (2013) showed that this putative presupposition does not actually behave like a presupposition, not even a "soft" one. Instead, he proposed to analyse the NR effect as a scalar implicature (SI). In this section I will introduce this account without discussing the arguments in its favor (but see the end of this section).

Romoli (2013) proposes that NR predicates introduce an alternative which is similar to Gajewski's 2005 presupposition of the excluded middle. For example, *think/believe p* has an alternative *have an opinion as to p*. "To have an opinion as to p" essentially means "to think that p or to think that ¬p". A formalization of the semantics of *think* and its alternative is presented in (22) and (23).

(22) $[\![\text{think } p]\!] = \lambda x.\lambda w.\forall w'[w' \text{ is compatible with x's beliefs in w} \Rightarrow p(w')] = \Box_x p$

(23) $\text{Alt}(\text{think}(p)(x)) = \{ \text{think}(p)(x), \text{have an opinion as to whether}(p)(x) \}$
$= \{ \Box_x p, \quad \Box_x p \vee \Box_x \neg p \}$

The alternatives are operated on by an exhaustivity operator Exh (24-a). The contribution of this operator is similar to standard (pragmatic) scalar implicatures, i.e. it negates excludable scalar alternatives (alternatives are excludable if they are not entailed by the assertion). The difference is that Exh is assumed to be present in the syntactic structure.[13]

(24) Exh (simplified, non-intensional variant)

a. $\text{Exh}(p) = [\![p]\!] \wedge \forall q \in \text{Excl}(p): \neg q$

b. $\text{Excl}(p) = \{ q \mid q \in \text{Alt}(p) \wedge [\![p]\!] \not\Rightarrow q \}$ (excludable alternatives of *p*)

(25) shows how the NR effect arises under this account (Exh is a silent element present in the syntactic structure). Negation scopes above the matrix predicate and is present in both the assertion (25-a) and the alternatives (25-b).[14] Exh strengthens $\neg\Box_{\text{John}} p$ to $\Box_{\text{John}} \neg p$ (*John thinks ¬p*) (25-c). Constraints on Exh insertion are discussed in §7.

(25) Exh [$_q$ John doesn't think that p].

a. $[\![q]\!] = \neg\Box_{\text{John}} p$

b. $\text{Alt}(q) = \{ \neg\Box_{\text{John}} p, \neg(\Box_{\text{John}} p \vee \Box_{\text{John}} \neg p) \}$

c. $[\![(25)]\!] = \text{Exh}(q) = \neg\Box_{\text{John}} p \wedge \neg\neg(\Box_{\text{John}} p \vee \Box_{\text{John}} \neg p)$
$= \neg\Box_{\text{John}} p \wedge (\Box_{\text{John}} p \vee \Box_{\text{John}} \neg p) = \Box_{\text{John}} \neg p$

I would like to propose a minor extension to this analysis. Horn (1989) observes that an NR predicate should be just above the midpoint on its scale (Mid-Scalar Hypothesis or Mid-Scalar Generalization). This generalization is illustrated in (26) with three examples from Gajewski (2005: p. 90). The predicates in the middle column are all NR predicates.

[12] E.g. *x thinks p* presupposes that x thinks either p or ¬p, i.e. x has an opinion as to p. This presupposition and at-issue negation of *x thinks p* together entail that x thinks ¬p.

[13] The grammatical theory of scalar implicatures which assumes Exh is admittedly controversial but is well-established by now, see the arguments in its favor in Magri (2009), Chierchia et al. (2012), Fox (2014), Fox & Spector (2018). The opposing view is endorsed in Russell (2006, 2012), Geurts (2010). I believe that Romoli's 2013 approach to NR and my applications of it can be recast along the lines of the pragmatic theory of SIs.

[14] Alternatives are derived compositionally in parallel derivations, see Romoli (2013) for a more explicit discussion.

The weaker alternatives are different from those assumed in Romoli (2013) but this is immaterial (under Romoli's 2013 account *have an opinion as to* will have to take the place of *be able* in the first row, etc.). Crucially, there is also a stronger alternative in each case.

	be able	believe, think	know, realize
(26)	be possible	be likely	be clear, be obvious
	allow, permit	be desirable	require

Thus, I propose to enrich the set of alternatives of NR predicates with a stronger alternative (27). This move is warranted for two reasons. Firstly, it makes the analysis comply with the Mid-Scalar Generalization (Horn 1989, Gajewski 2005). Secondly, it is needed to account for the examples with contrastive/metalinguistic negation where the stronger alternative surfaces. It seems to be irrelevant in all other cases and I will simply assume that by default the scale is truncated so that the stronger alternative is ignored.[15]

(27) Alt(think) = { have an opinion as to whether, think, know }

Now, moving on to modals, the set of alternatives I propose for Russian *dolžen* 'must' is in (28). "Have an obligation" is an abstract predicate with a disjunctive meaning akin to "have an opinion", i.e. $\Box_x p \vee \Box_x \neg p$. *objazan* is a necessity modal which has only deontic readings. At the empirical level, it can be perceived as a stronger alternative of *dolžen* as will be shown in the next section. I will not try to provide a formal account for this difference between *objazan* and *dolžen*.[16]

(28) Alt(dolžen) = { have an obligation, *dolžen* 'must', *objazan* 'obliged to' }

To sum it up, I propose that *dolžen* introduces the alternatives in (28) which are exhaustified by Exh (24). In the next section I will argue for the main points of this paper which are summarized in (29).

(29) a. The properties of PPIs (11) are actually exhibited by the NR predicates.
b. Those properties are predicted by the SI approach to NR without any additional stipulations.
c. *dolžen* and NR predicates behave in the same way w.r.t. to (11), hence *dolžen* is a NR predicate.

Before I move on to the Russian data, a comment on (27), (28) is needed. The postulation of an abstract excluded middle alternative is both a cornerstone and a major pitfall of Romoli's 2013 account which I inherit in my treatment of modals. The problem is not the lack of phonological form for this alternative but the fact that it is otherwise absent from the lexicon. While acknowledging this problem, I have to admit that there seem to be no alternative approaches which are free of stipulations. Gajewski (2005, 2007) assumes a presupposition with non-presuppositional properties (see a detailed discussion in Romoli 2013). Jeretič (2021) proposes an exhaustification-based account which assumes subdomain alternatives for modals. Mirrazi & Zeijlstra (2021: p. 305), however, point out a problem with such an account and propose a more sophisticated version which relies on non-lexicalized alternatives, thus sharing the questionable assumption of Romoli (2013).[17] After all, it may be the case that there is no problem with this and computation

[15] This assumption seems justified to me. In all the examples I can think of the scale is truncated so that the focused element is regarded as the endpoint. For example, in *John can run even 10 kilometers* the scale is truncated at 10 and other numerals are not taken into account so that 10 is regarded as the strongest alternative.

[16] An anonymous reviewer of FASL suggests that *dolžen* may be a weak necessity modal, supporting this suggestion with an observation that *should* is sometimes used as a translation of *dolžen*. Although this suggestion provides a solution for the *dolžen* vs *objazan* puzzle my intuition is that *dolžen* is closer to *must* than to *should*.

[17] Subdomain alternatives require universal quantification over singleton sets to yield the NR reading. Universal quantification over singletons is arguably infelicitous.

of SIs is indeed based on non-lexicalized, conceptual alternatives (Buccola et al. 2022).

The major point of this paper is to argue for the NR approach to inverse scope and against the PPI approach to it. In principle, any of the aforementioned semantic accounts of NR can be applied to the Russian data. At the moment Romoli's 2013 analysis seems to me to be superior (for example, it can be naturally extended to account for the Mid Scalar Generalization which is also important for the data in §6.2) but the detailed comparison of semantic approaches is beyond the scope of this paper.

6 RUSSIAN *dolžen* AS A NR PREDICATE

6.1 A NOTE ON DATA AND JUDGEMENTS

Examples (5-a), (5-b), (32), (33-a), (35)-(37-a), (48) are taken from the Russian National Corpus. (33-b), (49), (50) are from the Internet. Other Russian examples are constructed.

Constructed examples with rescuing and shielding (§6.3 and §6.4, plus (4-b) and (5-c) from §1) were evaluated on a 1 to 7 scale by three non-overlapping groups of 10 native speakers (A, B, C). The examples were distributed between A–C as shown in Table 1. The minimal pairs are in adjacent rows of the table except for the last row without a pair. As shown in the table, the speakers in groups A and B saw only "isolated" examples, not minimal pairs. The judgements on rescuing (40) coming from A (presented with (40-b)) and B (40-a) turned out to be very diverse and the average marks for this pair of examples suggested the absence of any effect. Thus, group C was explicitly presented with the minimal pairs on rescuing (40) as well as shielding (37).

item	example type	setup	group A	group B	group C
stoit 'should'	rescuing	[if ¬should p] & ◇p	??(4-b)		
dolžen 'must'	rescuing	[if ¬must p] & ◇p		%(5-c)	
dolžen	rescuing	[only ¬must p] & ◇p	?(40-b)		?(40-b)
dolžen	no rescuing	[¬must p] & ◇p		?(40-a)	?(40-a)
dolžen	shielding	¬must necessarily p			(37-a)
dolžen	no shielding	¬must p	?(37-b)		?(37-b)
dumat' 'think'	rescuing	[only ¬think p] & do.not.know		?(39)	

Table 1: Rescuing and shielding: data collection and judgements

It turned out that while the rescuing effect is real for some speakers, there is no contrast for most them (at least, my consultants). The effect of shielding is more pronounced. I discuss these data in more detail in §6.3 and §6.4.

All three questionnaires also contained irrelevant examples with 7-8 examples per questionnaire in total. The questionnaires can be found in the Appendix.

Russian examples from §6.5 and §6.6 are less subtle. Their acceptability marks reflect my own intuitions checked with three native speakers (linguists) per example. Their judgements coincided with mine in each case.

6.2 CONTRASTIVE/METALINGUISTIC NEGATION

So-called metalinguistic negation can negate implicatures rather than at-issue content (Horn 1989). E.g., (13) can be analyzed as the negation of an embedded implicature (30).

(30) You didn't [do SOMETHING (but not everything) wrong], you did everything wrong!

Provided that NR predicates are mid-scalar and have a stronger alternative they should create a scalar implicature when negated (31). Such an implicature is indeed present as far as I can judge.

(31) John thinks that p ⇝ John doesn't know that p

This implicature can be negated by metalinguistic negation. I use a simplified corpus example from Russian (32). Note that in this case an NR predicate stays in the scope of negation, otherwise (32) would be a contradiction: '#I think that ¬p and I know that p'.

(32) Ja ne DUMAJU, ja znaju.
I NEG think I know
'I don't (just) THINK so (but don't know), I actually know.'

The same reading with the assertion of a stronger alternative is possible with *dolžen*. As I mentioned earlier, *objazan* 'obliged to' serves as a stronger alternative of *dolžen*:

(33) a. Irina dolžna, vernee ne dolžna, a objazana pojexat' v
Irina must more.accurate NEG must but obliged.to go.INF to
Inangu.
Inanga
'Irina must, or rather not (just) must but is obliged to go to Inanga.'

b. Ženščina ne dolžna, a po faktu objazana soderžat' svoego
woman NOT must but on fact obliged.to provide.for self.ADJ
mužčinu.
man
'A woman not just must but is obliged to provide for her man, as a matter of fact.'

The reading in question can be derived without resorting to a dedicated kind of negation ("metalinguistic negation"). As shown by Fox & Spector (2018) such readings arise when Exh is embedded in the scope of negation giving rise to an embedded implicature (note that the embedded Exh is overtly reflected as *just* in the interpretations of (32)–(33)).[18] Another Exh is merged at the sentence level. Following Bade & Sachs (2019) and contra Fox & Spector (2018) I will assume that Exh passes on the alternatives. The analysis of (32) along these lines is presented in (34). The same analysis derives (30) and (33).

(34) Exh [$_s$ Ja ne Exh [$_q$ DUMAJU]] (ja znaju).
'I don't (just) THINK so (I actually know).'

a. Alt(q) = { I think, I know }
b. Alt(s) = { ¬Exh(think), ¬Exh(know) }
c. ¬Exh(think) = ¬(think ∧ ¬know)
d. ¬Exh(know) = ¬know (no stronger alternatives to exhaustify)
e. ⟦(34)⟧ = Exh(s) = ¬(think ∧ ¬know) ∧ ¬¬know
= (¬think ∨ know) ∧ know = know

That is, *dolžen* and NR predicates behave similarly and this behavior is predicted by the SI approach to NR and an independently motivated possibility of Exh embedding.[19]

6.3 SHIELDING

Both NR predicates and *dolžen* are subject to shielding (35), (36). In the presented corpus examples a modal adverb *nepremenno* 'necessarily' serves as a shielder.

[18] The existence of embedded implicatures was actually used as one of the major arguments in favor of the grammatical theory of scalar implicatures.

[19] Even if we abandon embedded exhaustification or exhaustification altogether, Horn's 1989 empricial observation of the ability of "metalinguistic" negation to negate scalar implicatures still holds.

(35) Požilaja ženščina, nazyvaja vas dočen'koj, ne xotela nepremenno
old woman calling you.ACC little.daughter NEG wanted necessarily
skazat', čto vy ee doč.
say.INF that you her daughter
'By calling you a little daughter, the old woman didn't necessarily want/intend to say that you are her daughter.' (¬ > □ > want)

(36) Segodnja on ne dolžen nepremenno opredeljatsja s partijnoj
today he NEG must necessarily decide.on with party.ADJ
prinadležnostju.
affiliation
'Nowadays he (the president) doesn't necessarily have to decide on his party affiliation.' (¬ > □ > □)

It may seem that the shielding context is irrelevant since both *dolžen* (5-b) and NR predicates (44) can stay in the scope of negation even without shielding. However, both *dolžen* and NR predicates strongly tend to have wide scope (see more on this in the next section). Shielding indeed facilitates narrow scope as confirmed by the contrast in (37). (37-a) is a corpus example with two potential shielders: *objazatel'no* 'necessarily' and *každyj raz* 'every time'. (37-b) is a modification of this example without shielders. My consultants (group C, see §6.1) judged (37-b) to be worse (despite it being easier to process), presumably because of a strong preference for the wide scope of the modal which results in an anomalous interpretation 'it must be the case that an artist's ideas do not form the desired construction' (i.e. an artist must never achieve the intended goals).[20]

(37) a. Idei xudožnika ne dolžny objazatel'no skladyvatsja každyj raz v
ideas artist.GEN NEG must necessarily form.INF.REFL every time in
želajemuju konstruktsiju.
desired construction
'An artist's ideas don't necessarily always have to end up forming the desired construction.' (¬ > □ > ∀ > □)

b. #Idei xudožnika ne dolžny skladyvatsja v želajemuju konstruktsiju.
ideas artist.GEN NEG must form.INF.REFL in desired construction
'An artist's ideas must not end up forming the desired construction.'
(□ > ¬)

Romoli's 2013 account of NR correctly predicts the existence of shielding. An intervening universal quantifier introduces its own existential alternative (38-b-ii).[21] Exhaustification brings about the actual interpretation (38-c).

(38) Exh [$_s$ Ženščina$_x$ ne xotela nepremenno p].
woman NEG wanted necessarilly
'The woman$_x$ didn't necessarily want p.'

a. $[\![s]\!]$ = ¬(∀w: MB(w) ⇒ want$_x$(p)(w)) (MB for modal base)

b. Alt(s) =
(i) ¬(∀w: MB(w) ⇒ have a desire as to$_x$(p)(w)) (the alt. of 'want')
(ii) ¬(∃w: MB(w) & want$_x$(p)(w)) (the alt. of 'necessarily')

c. Exh(s) = (38-a) & ¬(38-b-i) & ¬(38-b-ii) =
(i) ¬(∀w: MB(w) ⇒ want$_x$(p)(w))
(ii) ∧ ∀w: MB(w) ⇒ have a desire as to$_x$(p)(w)

[20] The reported contrast is not absolutely sharp and persistent and for some speakers both sentences in (37) are roughly equally (un)acceptable. Still, (37-a) is better on average and much better for some speakers.

[21] The members of the sets of alternatives introduced by a NR predicate and by a modal adverb combine pointwise. Thus, there should be one more alternative in (38-b): ¬(∃w: MB(w) & have a desire as to$_x$(p)(w)). The negation of this alternative is entailed by (38-c-ii) so I ignored it in (38) for simplicity.

(iii) $\wedge \exists w$: MB(w) & $want_x(p)(w)$
= 'The woman necessarily had a desire as to p (38-c-ii) & the woman possibly wanted p (38-c-iii) & the woman possibly wanted not p (38-c-i).'

Thus, shielding is also empirically attested with *dolžen* and NR predicates and is predicted by the SI approach to NR.[22]

6.4 RESCUING

Rescuing is also predicted by the SI approach to NR because SIs simply do not arise in DE environments due to reversed entailment. For example, (39) explicitly denies opinionatedness of Petya w.r.t. torsion fields, i.e. *dumat'* 'think' has to take narrow scope in the first sentence. For most of my consultants (group B, see §6.1), although not for all of them, this example is acceptable.

(39) Tol'ko Petja ne dumaet, čto suščestvujut torsionnye polja. On voobšče ne
only Petya NEG think that exist torsion fields he at.all NEG
znaet, čto eto.
know what this
'Only P. doesn't think that torsion fields exist. He doesn't know what they are at all.'

However, rescuing seems to be very subtle with *dolžen* (and possibly with NR predicates too). As I already reported in (5-c) for some speakers only the wide scope reading is possible even in DE environments. In order to check for the existence of the beneficial effect of rescuing, a test similar to (37) was used. The sentences in (40) differ only w.r.t. the presence of *tol'ko* 'only,' which provides a rescuing context in (40-b). Some of my (group C) consultants reported a clear contrast between (40-a) and (40-b) which is reflected in the acceptability marks, but for the vast majority of them the addition of *tol'ko* did not make a significant difference. The average marks for (40) based on all 30 judgements (groups B, C for (40-a) and groups A, C for (40-b)) were both around 4 out of 7.

(40) context: latte, raf coffee and mochaccino must be sweet
a. #Kapučino ne dolžen byt' sladkim. Dopuskaetsja kak sladkij, tak i
cappuccino NEG must be sweet allowed as sweet so and
gor'kovatyj kapučino.
bitterish cappuccino
'Cappuccino must not be sweet. #It is allowed to be either sweet or bitterish.'
b. Tol'ko kapučino ne dolžen byt' sladkim. Dopuskaetsja kak sladkij,
only cappuccino NEG must be sweet allowed as sweet
tak i gor'kovatyj kapučino.
so and bitterish cappuccino
'Only CAPPUCCINO must not be sweet. It is allowed to be either ...'

The absence of rescuing is problematic for both the PPI- and the NR-approach to inverse scope, because it is expected to be attested by both. Interestingly, Homer (2015: fn. 16) reports that for some English speakers rescuing is also very hard if not impossible with deontic *must*, *should* and *supposed to*.

I conclude that the properties in (11) are characteristic of both PPIs and NR predicates. Moreover, those properties follow from the SI approach to NR without any additional assumptions. Thus, the properties in (11) do not favor the PPI-approach against the NR-approach. In light of the problems for the PPI-approach discussed in §4 the NR-approach appears to be preferable.

[22] This is not my finding. Romoli (2013) discusses similar examples with intervening subject universal quantifier.

Nevertheless it is not yet fully justified. Homer (2015) suggests a number of diagnostics aimed specifically at debunking the NR-account of the inverse scope of *mustn't*/*must not*. In the next section I discuss those diagnostics and show that they either lead to the opposite results with *ne dolžen* or are dubious on their own.

6.5 POSSIBLE ARGUMENTS AGAINST THE NR-ACCOUNT

The first test is the "pin" test illustrated in (41). *Exactly one pin* has a non-specific reading which Homer (2015) attributes to the wide scope of *must* w.r.t. the subject. The wide scope can only be obtained by movement and not by NR because NR only affects the relative scope of the NR predicate and negation.

(41) Exactly one pin mustn't be knocked down. (Homer 2015: p. 20)
'It is necessary that there is exactly one pin standing.' (□ > exactly 1 > ¬)

However, this test appears to be uninformative. Homer (2015: p. 68) himself reports that the non-specific reading is possible in non-negative sentences. Given that *must* can only move in negative sentences (§4) the non-specific reading in (42) cannot be attributed to movement.

(42) Exactly one of those 6 people must come. (□ > exactly 1)

In Russian *rovno odin* 'exactly one' can have the non-specific reading in non-negative sentences with possibility and necessity modals (43). Thus, neither negation nor an overt necessity modal is needed for the non-specific reading of the subject. Hence, the existence of this reading is not an argument in favor of the PPI/movement analysis.

(43) Rovno odna keglja dolžna/možet ostat'sja stojat'.
exactly one pin must/may stay.INF stand.INF
'It { must/is allowed to } be the case that exactly one pin remains standing.'

The next two tests reveal differences between *must* and *dolžen*. The first one is the possibility of the narrow scope reading in an unembedded environment. It is possible to provide a context in which the NR effect would not arise, e.g. (44) (from Bartsch 1973, discussed in Gajewski 2005, Romoli 2013). *Dolžen* can preserve the narrow scope too (5-b). On the other hand, *must* obligatory outscopes the clausemate negation (Homer 2015: p. 17–19).

(44) a. situation: Bill doesn't know who killed Caesar. Furthermore, Bill isn't sure whether or not Brutus and Caesar lived at the same time, so naturally
b. Bill doesn't think Brutus killed Caesar (↛ Bill thinks Brutus didn't kill Caesar)

The final test is cyclic NR. When both the matrix and the embedded predicate are neg-raisers matrix negation can take the narrowest scope (45). However, *must* cannot outscope the superordinate negation but stays in its scope (46) which is a property of (weak) PPIs. *Dolžen* patterns with NR predicates in allowing cyclic NR (47).

(45) The doctor doesn't think that John wants to jog. (Homer 2015: p. 18)
'The doctor thinks that John wants not to jog.' (think > want > ¬)

(46) The doctor doesn't think that John must jog. (Homer 2015: p. 18)
1. 'The doctor thinks that John doesn't have to jog.' (think > ¬ > □)
2. *'The doctor thinks that John is required not to jog.' (think > □ > ¬)

(47) Ja ne dumaju, čto Petja dolžen idti s nami.
I NEG think that Petya must go.INF with us
1. 'I think that Petya doesn't have to go with us.' (think > ¬ > □)
2. 'I think that Petya must not go with us.' (think > □ > ¬)

Notably, cyclic NR is impossible with matrix *want* and embedded *think* (Gajewski 2005: p. 52–53). An anonymous reviewer raised an issue of whether the same is true for [*dolžen* [*dumat'*]] configuration. I have not collected the judgements on this type of examples and find it difficult to tell apart the partial NR and the cyclic NR interpretation in naturally occurring examples. (48) is a corpus example with the latter but I failed to see a clear cyclic NR reading or possibility of it in many other examples I looked through. The issue is also aggravated by compatibility of the two interpretations in question.

(48) Naši učeniki ne dolžny dumat', čto oni imejut pravo na nedostatki.
our students NEG must think.INF that they have right on flaws
'Our students must not think that they have a right to have any flaws.'

The predictions of NR approaches for this type of examples depend on the assumptions about the presuppositions of the matrix NR predicate, see Gajewski (2007), Romoli (2013), Homer (2015). Thus, (48) is not an out of the box diagnostic for the PPI vs NR debate (unlike (46)-(47)) and I leave a more detailed consideration of it for a future occasion.

6.6 NPI LICENSING

Another issue raised by an anonymous reviewer is whether strong/strict NPIs are licensed under *ne dolžen*. In English, negated NR predicates license strong NPIs in the embedded clause (Lakoff 1969, Gajewski 2007). However, in Russian strong NPIs differ in this respect. *Až do* 'even until' is not licensed in finite embedded clauses even when the matrix predicate is a neg-raiser (Bošković & Gajewski 2011), but additive *i* + a minimizer is possible although sometimes not perfect (Bondarenko 2022: p. 466–470; Rossyaykin 2022).

As for *ne dolžen*, both *až do* (49) and *i* + a minimizer (50) are licensed under it. The difference between (49) and an ungrammatical example reported in Bošković & Gajewski (2011: Appendix 1) may be due to non-finiteness of the clause under *dolžen*. Thus, the NPI data does not contradict the NR-account of *ne dolžen*.

(49) Sklep ne dolžen vskryvat'sja až do 8113 goda.
tomb NEG must open.INF.REFL even until 8113 year
'The tomb must not be opened until the year 8113.'

(50) Komitet ne dolžen dopuskat' i mysli ob etom.
committee NEG must allow ADD thought about this
'The committee must not allow even a thought about this.'

To sum up, the arguments put forward by Homer (2015) against the NR-approach to *mustn't*/*must not* do not go through in the case of *ne dolžen*.

7 CONCLUSION

I have shown that the properties of inverse scope deontic modals (11) which were previously attributed to positive polarity (Iatridou & Zeijlstra 2013, Homer 2015) are actually exhibited by NR predicates. A particular assumption about the alternatives associated with NR predicates (27), (28) is sufficient to derive the NR effect and the properties in (11). Unlike the variable structure account (6-a), which assumes two base-generation positions for deontic universals and the PPI-account (6-b), which invokes a movement operation of a new type ("escape"), the NR-approach to inverse scope relies on silent Exh, which has been extensively argued for on the basis of data from different empirical domains; see Fox (2007), Magri (2009), Chierchia (2013), Spector (2014) among many others. As far as the distribution of Exh is concerned, the data discussed in this paper are completely compatible with the proposals that Exh obligatorily applies

at least at matrix position (Magri 2009, Bar-Lev & Fox 2017, Bassi et al. 2021). This (independently motivated) assumption immediately accounts for the strong preference for NR readings.

The licensing of SIs in unembedded contexts is known to be sensitive to discourse conditions. In the grammatical theory of SIs the absence of implicatures is achieved by pruning of alternatives conditioned on Question Under Discussion, see Jeretič (2021: p. 32–33) and references therein. This accounts for the existence of non-NR readings and their dependence on discourse context (44). I leave a more detailed discussion of the conditions for the narrow scope reading of *dolžen* (5-b) for a future occasion. Regardless of this, I do not see how syntactic approaches which assume two base-generation positions or movement of modals can tackle the dependence between the narrow scope reading and the discourse context.

While *dolžen* was shown to perfectly fit the bill of a NR predicate, *must* exhibits some unexpected properties, in particular a lack of cyclic NR and a complete lack of the narrow scope reading when unembedded, see Homer (2015) and §6.5. Although I believe that these issues can be accounted for in the alternatives-and-exhaustification framework, they are unfortunately beyond the scope of this paper.

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ABBREVIATIONS

ACC	accusative
ADD	additive
ADJ	adjective
DE	downward entailing
DAT	dative
GEN	genitive
INF	infinitive
NEG	negation
NPI	negative polarity item
NR	neg raising
PL	plural
PPI	positive polarity item
QR	quantifier raising
REFL	reflexive
SI	scalar implicature
SG	singular
UE	upward entailing

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APPENDIX: QUESTIONNAIRES

Group A

1. Dima ne rešil počti 10 zadač. Esli byt' točnym, on ne rešil 8 zadač.
   'Dima didn't solve almost 10 problems. To be precise, he didn't solve 8 problems.'

2. Esli tebe ne stoit begat' po utram, ty vse ravno možeš inogda begat' s nami za kompaniju.
   'If you shouldn't jog in the mornings you still may join us for a jog sometimes.'

3. Artëm rešil neskol'ko zadač.
   'Artëm solved some of the problems.'

4. Kogo ja mogu pozvat'? – Zovi kogo by to ni bylo, no ne bol'še dvux čelovek
   'Whom may I invite? – Invite whoever (you want), but two persons at most.'

5. Latte, raf coffee i mocaccino dolžny byt' sladkimi. Tol'ko kapučino ne dolžen byt' sladkim. Dopuskaetsja kak sladkij, tak i gor'kovatyj kapučino.
   'Latte, raf coffee and mocaccino must be sweet. Only cappuccino must not be sweet. It is allowed to be either sweet or bitterish.'

6. Nikto ne rešil tri zadači.
   'No one solved three problems.'

7. Idei xudožnika ne dolžny skladyvatsja v želajemuju konstruktsiju.
   'An artist's ideas must not end up forming the desired construction.'

Group B

1. Dima ne rešil počti 10 zadač. Esli byt' točnym, on ne rešil 11 zadač.
   'Dima didn't solve almost 10 problems. To be precise, he didn't solve 11 problems.'

2. Každyj student rešil neskol'ko zadač.
   'Every student solved some of the problems.'

3. Tol'ko Petja ne dumaet, čto suščestvujut torsionnye polja. On voobšče ne znaet, čto eto.
   'Only Petya doesn't think that torsion fields exist. He doesn't know what they are at all.'

4. Kogo ja mogu pozvat'? – Zovi kogo ugodno, no ne bol'še dvux čelovek
   'Whom may I invite? – Invite whoever (you want), but two persons at most.'

5. Latte, raf coffee i mocaccino dolžny byt' sladkimi. Kapučino ne dolžen byt' sladkim. Dopuskaetsja kak sladkij, tak i gor'kovatyj kapučino.
   'Latte, raf coffee and mocaccino must be sweet. Cappuccino must not be sweet. It is allowed to be either sweet or bitterish.'

6. Esli Vitja rešit počti dve zadači, to ego voz'mut na mexmat.
   'If Vitya solves almost two tasks, he will be enrolled at the faculty of mechanics and mathematics.'

7. Fedja ničego ne dal každomu studentu.
   'Fedya gave nothing to every student.'

8. Esli ty ne dolžen begat' po utram, ty vse ravno možeš inogda begat' s nami za kompaniju.
   'If you must not jog in the mornings you still may join us for a jog sometimes.'

Group C

1. Kogo ja mogu pozvat'? – Zovi kogo by to ni bylo, no tol'ko odnogo čeloveka.
   'Whom may I invite? – Invite whoever (you want), but only one person.'

2. Petja rešil počti dve zadači.
   'Petya solved almost two problems.'

3. Latte, raf coffee i mocaccino dolžny byt' sladkimi. Kapučino ne dolžen byt' sladkim. Dopuskaetsja kak sladkij, tak i gor'kovatyj kapučino.
   'Latte, raf coffee and mocaccino must be sweet. Cappuccino must not be sweet. It is allowed to be either sweet or bitterish.'

4. Latte, raf coffee i mocaccino dolžny byt' sladkimi. Tol'ko kapučino ne dolžen byt' sladkim. Dopuskaetsja kak sladkij, tak i gor'kovatyj kapučino.
   'Latte, raf coffee and mocaccino must be sweet. Only cappuccino must not be sweet. It is allowed to be either sweet or bitterish.'

5. Nikto ne rešil tri zadači.
   'No one solved three problems.'

6. Idei xudožnika ne dolžny objazatel'no skladyvatsja každyj raz v želajemuju konstruktsiju.
   lt 'An artist's ideas doesn't necessarily always have to end up forming the desired construction.'

7. Idei xudožnika ne dolžny skladyvatsja v želajemuju konstruktsiju.
   'An artist's ideas must not end up forming the desired construction.'

Some of the irrelevant (i.e. not discussed in this paper) examples were provided with additional contexts which are not presented here for the sake of brevity.