

CHAPTER 5

Strong modality and negation in Russian

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1. Introduction

One of the purposes of corpus-based research is the testing of theoretical claims made in the literature. When the claims concern a highly complex and heterogeneous area like modality, it becomes all the more important to test claims against a corpus of naturally occurring data in order to provide a distinction between what is claimed by theory and what is actually occurs in natural language.

This paper examines the interaction of strong modality in Russian with a particular emphasis on the relation between strong modality and negation. Strong modality refers to the modality of necessity and obligation, as opposed to weak modality, which is concerned with possibility and permission (cf. Palmer 1986).

While much work has been done on modality in English, including some very fine corpus-based studies (e.g., Tottie 1985 on negation and epistemic modality; Collins 1991 on strong modality in Australian English and various papers by Merja Kytö 1987, 1991), corpus investigations of modality in other languages is lagging behind. This is not doubt due to of the higher degree of availability of English corpora as opposed to corpora of other languages. This situation, however, is now changing as many more corpora of different languages have become available, either on CD-ROM or on-line. For this study I have made use of the Uppsala corpus of contemporary Russian texts. This corpus was developed at the University of Uppsala and is available free of charge on-line through the University of Tübingen.¹ The corpus contains one million words and consists of a collection of journalistic prose from various sources (both political and scientific) from the period 1985–1988 and of literary works from the 1960s–1980s. The recentness of the material ensures that any study deriving from the

corpus is based on a current description of the language. All too often people make use of 19th and early 20th century texts in Russian studies.

The study of modality and negation in Russian is important because there are a number of areas in which Russian potentially differs from English. First, the modal system of Russian is not as grammaticalized as the English system (see Section 2), and this may lead to duplications and ambiguities. Second, the Russian sentence structure differs from the English one. In English, scope of negation and modal is expressed by means of different modal verbs, while in Russian it can depend on the position of the negation which scope interpretation is meant (see De Haan 1997 for a typological discussion of the interaction of modality and negation). A better understanding of the relationship between syntactic and semantic scope is needed. This paper is a start in that direction.

One note on terminology. In this paper I will use the traditional terms *epistemic* and *deontic* modality, for ease of reference. The two meanings are shown in (1) below, using the English strong modal verb *must* as example:

- (1) a. John must go to New York tomorrow.
- b. John must be at home: the light is on.

Sentence (1a) shows the deontic use: there is an obligation for John to perform an action. Deontic modality deals with obligation and permission. Sentence (1b) is epistemic: the speaker assigns a likelihood to the statement that John is home. The relative degree of likelihood, or confidence on the part of the speaker in what he or she is saying is the domain of epistemic modality (see Palmer 1986 for an introduction to these terms). These terms are the traditional terms, but in recent years other terms have been coined. Instead of deontic modality, quite often the term *root* modality is used (e.g., in Coates 1983) and terms like *agent-oriented* modality (Bybee, Perkins and Pagliuca 1994) or *participant-oriented* modality (Van der Auwera and Plungian 1998) have been used. While all these terms are supposed to have slight differences in meaning, in practice these terms tend to be used interchangeably. There is no consensus on terminology and the traditional terms are used in this paper, if only for the reason that these terms are the most familiar.

The rest of this paper is structured as follows: Section 2 discusses the basic modal elements in Russian and its relation with negation. Section 3 is an introduction to indeterminacy as defined in Coates 1983. Sections 4 through 7 discuss the modals most commonly used in the literature when discussing strong modality and negation. Section 8 summarizes the implications of NEG-raising while Section 9 draws some conclusions.

2. Modality in Russian

Unlike the English system of modal verbs, modality in Russian is not as grammaticalized. Russian modals do not form a separate syntactic category as the English modals do for the most part. In Russian, modality is very much a semantic category rather than a syntactic one. It is the meaning rather than the syntactic characteristics that define a modal in Russian. Unlike in English, Russian modals form a diverse morphological and syntactic lot. Some modals are adverbs, some are verbs, some modals are personal, some are impersonal. Some can be used across the board, some can only be used in restricted environments. What they have in common is that they can all be combined with a main verb, the verb serving as the object of modality. In (2) below, a partial list of Russian modals is shown with a rough English gloss:

(2) *Partial list of Russian modals*

| | | |
|---------------------|---------------------|------------------------|
| Modal verbs: | <i>moč'</i> | 'may, can' |
| Impersonal verbs: | <i>sledovat'</i> | 'have to' ² |
| | <i>prixodit'sja</i> | 'have to' |
| Modal adverbs: | <i>dolžen</i> | 'must' |
| Impersonal adverbs: | <i>nado</i> | 'have to' |
| | <i>nužno</i> | 'have to' |
| | <i>dólžno</i> | 'must' |
| | <i>možno</i> | 'possible' |
| Negative modals: | <i>nel'zja</i> | 'impossible' |

Some of these modals (namely the verb *moč'* and the adverb *dolžen*) require a subject in the Nominative (if there is one), while the impersonal modals require that the subject is in the Dative (*nado*, *nužno*, *nel'zja*, for instance). Some modals have an inherent past and future tense (e.g., the verbs *moč'*, past tense *mog*; *prixodit'sja*, past tense *prišlos'*), others (the adverbs) need the auxiliary verb *byt'* 'to be' to form past and future tenses (e.g., *dolžen*, past tense *dolžen byl*).³

Simple negation in Russian is expressed with the particle *ne*, placed before the verb. In case of a modal word in the sentence, *ne* can be placed before the modal (as in sentence (3a) below), before the main verb (3b), or before both (3c). all examples come from the scholarly literature.

- (3) a. Ne **nado** vyzvat'¹ ego, on priedet sam.⁴
 'There is no **need** to summon him, he'll come himself.'
- b. **Nado** ne tol'ko vsestoronne podgotovit'sja^P k igre, **nado** tak že osno-
 vatel'no gotovit'sja k každoj trenirovke.

‘It is **necessary** not only to prepare fully for a game, it is necessary to prepare just as thoroughly for each practise.’

(Rappaport 1985:210)

- c. Govorja o jazyke žestov, **nel’zja** ne videt¹ tex izmenenij.

‘In speaking of sign language, it is **impossible** not to see those changes.’

(Grenoble 1992:740)

The placement of *ne* in principle determines the relative scope of the negation and the modal. If the negation precedes the modal, the modal is in the scope of the negation. If the negation immediately precedes the main verb, it is in the scope of the modal. When the modal is in the scope of the negation we speak of *wide scope* of the negation, when the negation is in the scope of the modal, it is called *narrow scope*.

However, when the negation immediately precedes the modal, the modal can still have scope over the negation. This is a process related to the well-known phenomenon of NEG-raising, also known as negative transport or transferred negation (see e.g., Horn 1989 for a discussion). This leads to sentences in which the negation precedes the modal in linear order to have a narrow scope interpretation. An example is shown in (4):

- (4) On očen’ punktual’nyj čelovek, *on* ne **dolžen** opazdat^P.

‘He is a very punctual person, *he* shouldn’t be late.’

(Rappaport 1985:212)

Even though the linear order would lead us to expect a wide scope interpretation (i.e., a translation with *need not* or its equivalent), we have instead a narrow scope interpretation, translated by *should not*.

This is the theory, but as the examples from the corpus will illustrate, in practise the situation is more complicated. It is not quite clear, for instance, why sentence (4) above is not translated with *need not* (and the interpretation of the sentence then becomes *He is a very punctual person so there is no need for him to be late*). In other words, can we always distinguish between both scope interpretations? This leads us to the problem of *indeterminacy* which is addressed in the next section

It has been claimed in the literature (e.g., Forsyth 1970, Rappaport 1985) that there is a relation in Russian between modality, negation, and the choice of aspect of the main verb.⁵ An example will illustrate this (example and discussion from Rappaport 1985:206). The modal *nel’zja* (see Section 6 for details) is ambiguous between a negated possibility and a negated obligation. When the interpretation of *nel’zja* is ‘impossible’ the main verb must be in the perfective

aspect form (as illustrated in sentence (5a)), but if the sense is ‘must not’, the main verb has to be in the imperfective aspect form (sentence (5b)).

- (5) a. Zdes’ net telefona, otsjuda nel’zja pozvoniť^P.
 ‘There is no telephone here; it is **impossible** to call from here.’
 b. Otsjuda nel’zja zvonit’^I, my pomešaem ljudjam rabotat’.
 ‘One **mustn’t** call from here; we will disturb people working.’

In other words, the choice of aspect is completely determined by the interpretation of the modal. The negated epistemic interpretation of *nel’zja* requires the perfective aspect, but negated deontic modality requires the imperfective aspect. The aspectual choice of the main verb is *opaque* in Rappaport’s terminology. The aspect of the main verb is not determined by the normal rules that govern aspectual choice in Russian but is wholly determined by the interpretation of *nel’zja*. The modal “blocks” the normal rules of aspectual choice. Not all modals are opaque, most do allow the normal rules of aspectual choice and these modals are said to be *transparent*.

3. Indeterminacy

In her corpus study of modality in English, Coates (1983) showed that it is often difficult to determine the precise status of a given modal. This problem is known as indeterminacy. Coates (1983:14–7) distinguishes three types of indeterminacy:

- *Gradience*, or the continuum of meaning of a given modal.
- *Ambiguity*, when it is not possible to determine which meaning is intended and when the interpretation makes a difference.
- *Merger*, similar to ambiguity but with the difference that the two meanings are not mutually exclusive.

Especially the last two types of indeterminacy are of importance in this study. In (6), an example of *ambiguity* is shown (Coates 1983: 16):

- (6) He must understand that we mean business.

This sentence can be interpreted either epistemically (*Surely he understands that we mean business*) or deontically (*It is essential that he understand that we mean business*). In order to disambiguate the sentence we need context but if the correct interpretation cannot be determined from the context, then either one

must be chosen. Given that the two meanings are distinct, this proves, according to Coates, the existence of the epistemic-deontic distinction.⁶

Sometimes, in the case of *merger*, the two meanings are not mutually exclusive. In such a case, given the context, both interpretations can make sense and it is not necessary to determine the correct interpretation. The classic example is the exchange of (7), from Coates (1983: 17):

- (7) A: Newcastle Brown is a jolly good beer.
 B: Is it?
 A: Well it ought to be at that price.

In this exchange, the modal *ought* in the third sentence can be interpreted as either a deontic modal (the brewers of Newcastle Brown have an obligation to put out a good beer given the high price) or an epistemic modal (“It costs a lot, therefore it is good”). In English, merger occurs often with the modals *should* and *ought*. Indeterminacy occurs in Russian as well as will be demonstrated in the next sections.

4. The modal *dolžen*

We now turn to a discussion of the Russian modals that exemplify strong modality, starting with the prototypical modal *dolžen*.⁷ The modal form *dolžen* combines a number of different meanings (cf. Chvany 1974: 78–9). It can have both epistemic and deontic interpretations.

In the corpus the most common use of *dolžen* is deontic, and examples are shown in (8):

- (8) a. Konečno, *komandirovannyj čelovek dolžen polučat*¹ kakuju-tokompensaciju za dorožnye neudobstva.
 ‘Of course, *the person in charge must receive* some form of compensation for travel expenses.’ (Izvestija, 1988)
- b. Po každomu ugovnomu delu *sud dolžen liš’ otvetit*^P na vopros, ..., soveršil li ego podsudimyj.
 ‘For every criminal case *the court must only decide* ... whether the accused committed the crime.’ (Literaturnaja Gazeta, 1987)

The modal *dolžen* is the prototypical modal to express strong deontic modality, or obligation in Russian. In sentence (8a) above, the obligation is an opinion expressed by the writer of the article and is more subjective in nature. Typically,

the obligation stems from an unspecified source rather than from the discourse participants. For this reason, subjects with *dolžen* are quite often inanimate. In the examples under (9) below, the obligation is more objective in nature. Sentence (9a), from an article on new equipment for ambulances, shows an obligation in the form of a rule or law, while sentence (9b), from a text on equipment for a new rocket ship, shows an obligation imposed by the laws of physics (the discussion revolves around weight in space).

- (9) a. V každoj takoj mašine **dolžen** byt¹ i defibrilljator.
 ‘In every such car must also be a defibrillator.’
 (Izvestija, 1987)
- b. Sama *radioantenna* **dolžna** vesit¹ 700 kilogrammov.
 ‘The *radio antenna* alone **must weigh** 700 kilograms.’
 (Izvestija, 1988)

The aspect of the main verb following *dolžen* is *transparent*. The presence of the modal has no effect on the choice of aspect of the main verb. As can be seen from the examples in (8) above, both aspects are possible, because the normal rules for determining the aspectual choice of the main verb apply.⁸

Tense of the modal is expressed by means of adding the auxiliary verb *byt* ‘to be’ as is shown in (10) below. The function of the auxiliary is to show that the obligation existed in the past (but not in the present) as in sentence (10a), or will exist in the future, as in (10b). In sentence (10a) the obligation existed in the past but is no longer relevant for the present, hence the use of the past tense *byla*. Sentence (10b) shows that there will exist an obligation in the future, but this obligation does not yet exist in the present.

- (10) a. A dal’š e reč’ ...**dolžna byla** pojti^P o preémnike.
 ‘And further *the speech* (FEM) ...**had to be** (lit. go) about the successor.’
 (Izvestija, 1987)
- b. Esli že narodnye zasedateli ... budut ob”edineny v samostojatel’nuju organizaciju, *oni* **dolžny budut** prinjat¹ rešenje sami, bez učastija sud’i-professionala.
 ‘If then the people’s assessors ... will be united in an independent organization, *they* will **have to take** decisions by themselves, without participation of a professional judge.’
 (Izvestija, 1987)

Most of the time the obligation is a present obligation (in the corpus this occurs in 86.5% of all cases, as opposed to 12.8% of cases with a past tense and only 0.7% of *dolžen* with a future tense), or includes the present in its obligation.

While *dolžen* does occur with an epistemic interpretation, this is much rarer. In only about 7.5% of the time, *dolžen* is epistemic. Most of the time, moreover, epistemic *dolžen* occurs as the fixed combination *dolžno byt'* 'must be', usually as an interjection:

- (11) Pet'ka očen' ljubil čitat'; **dolžno byt'**, poètomu on i byl takoj umnyj. On povadilsja čitat', kogda drugie rebjata ešč e spali.
 'Pet'ka really loved to read; that **must** have been, because he was so smart. He had the habit of reading, while the other children were still asleep.'
 (Kaverin, V., *Pesočnyje časy*, 1971)

We now turn to the combination of *dolžen* and negation. As mentioned in Section 2 above, the negation *ne* can both precede and follow the modal. Ideally, the relative position of modal and negation determines its scope, as in (12) below. Sentence (12a) shows a wide scope negation (*ne dolžen*) and the interpretation is also one of wide scope, translated in English by *need not* (i.e., *there is no obligation to*). In sentence (12b) the negation has wide scope as well. Sentence (12c) shows a narrow scope negation and the interpretation is that there is an obligation not to, translated in English with *must not*.

- (12) a. On ne **dolžen opravdyvat'sja**^I pered vami.
 'He does not **have to justify** himself to you.
 (Rappaport 1985:210)
- b. Zatmenie ne **dolžno proizojtj**^P v pjat' časov.
 'The eclipse **need not** take place at five o' clock.
 (Chvany 1974:97)
- c. My gluboko ubeždeny, čto *novyj komitet* **dolžen** ne kontrolirovat^I prirodospol'zovanie , a upravljat' im.
 'We are strongly of the opinion that *the new committee* **must not control** the use of nature, but guide it.' (Ogonek, 1988)

However, it is quite often the case that the linear order does not reflect the relative scope of the modal. The linear order is that of a wide scope negation (i.e., *ne dolžen*), but the interpretation is narrow scope (i.e., *dolžen ne*, translated as *must not*), and examples are shown in (13) below.

- (13) a. Zapomni ešč e raz : *nikto* pro menja ne **dolžen daže dogadyvat'sja**^I.
 'Remember once again: *nobody* **must** even guess about my existence.'
 (Rasputin, V., *Zhivi i pomni*)
- b. Samo po sebe èto položenie edva li možet vyzvat' vozraženija. No pri opredelenii statusa ètorskogo jazyka ne **dolžny ušč emljat'sja**^I

prava graždan drugix nacional'nostej, kotoryx v respublikе dovol'no mnogo.

'By itself this situation can hardly be objectionable. But in the determination of the status of the Estonian language one **must not** curtail the *rights* of citizens from other nationalities, of which there are quite a few in the republic. (Izvestija, 1989)

In fact, raising of the negation in contexts of strong modality is very common and the order *dolžen ne* is very rare (less than 10% of all occurrences of *dolžen* and a negation and less than 1% of all occurrences of *dolžen* in total). all occurrences of *dolžen ne* were in contrastive contexts, such as the one shown in (12c) above; in effect, sentences with *dolžen* and a narrow scope negation are positive sentences, because there is an obligation to do something.⁹ What is negated is not the obligation but rather the action to be performed, which is contrasted with the action that is under obligation. For instance, in sentence (12c) the verb *kontrolirovat'* 'control' is negated, and the verb *upravljat'* 'guide' is contrasted with it to show what is under obligation.

Sentence (12a) and (b) are not from the corpus, but from the literature on scope of modality. In the corpus, no clear examples of a wide scope interpretation of *ne dolžen* (i.e., translated as *need not*) are found. Sometimes it was unclear from the context whether a wide scope or a narrow scope interpretation of *ne dolžen* was meant (the *ambiguity* problem, see Section 3), but in those instances where the interpretation was clear, the combination *ne dolžen* had to be interpreted as a narrow scope negation.

5. The impersonal verb *prixodit'sja* and negation

Unlike *dolžen*, the impersonal verb *prixodit'sja* 'have to' is a relatively straightforward modal.¹⁰ It is in the corpus often used to denote multiple events, as in sentence (14) below whereas *dolžen* rarely is used for multiple events.

- (14) *Mne prixodilos'* ne raz slyšat'¹ slova kolleg.
'I (DAT) **had to** listen more than once to the words of my colleagues.'
(Nauka i Zhizn', 1988)

This confirms Nichols' (1985:99) observation that *prixodit'sja* often occurs with explicit expressions of multiplicity, such as *ne raz* 'more than once', *často* 'often' whereas *dolžen* occurs rarely in such contexts. There is no 100% correlation between *prixodit'sja* and its use to denote strong modality in multiple events,

however (see, e.g., sentence (15) below). Because of this occurrence with multiple events, the main verb accompanying *prixodit'sja* is almost always in the imperfective. In the corpus, only one occurrence had a main verb in the perfective. Sentence (15) uses the main verb *priznat* 'admit' in the perfective due to the fact that we are dealing with a singular event with an inherent end.

- (15) No teper' **prixoditsja priznat**^P, čto èto uže ne čisto biologičeskaja nauka, a kompleksnaja, v kotoruju vovlečeny praktičeski vsestorony žizni i dejatel'nosti čeloveka.
 'But now one **must admit** that this is no longer a pure biological science, but a complex one, which involves practically every aspect of life and human endeavor.'
 (Nauka i Žhizn', 1987)

The verb *prixodit'sja* is a deontic modal. No examples of epistemic modality were attested in the corpus.

As far as the interaction of negation and *prixodit'sja* is concerned, in almost all examples the negation precedes the modal. Examples are shown in (16) below:

- (16) a. ...ne **prixodilos**' li *nam* polučat¹ vot takie netrudovye doxody?
 'Shouldn't *we* (DAT) receive such non-work related income?'
 (Socialističeskaja Industrija, 1988)
- b. Nemcy byli uže tret'ju nedelju okruženy v Stalingrade, kazalos', blizok konec, i xotelos' dovoevat' do nego, komanduja svoim batal'onom. Xotelos', no ne **prišlos**'.
 'The Germans were already in the third week of the siege of Stalingrad and it appeared the end was near. And (I) wanted to fight on till the end, commanding the battalion. I wanted to, but **couldn't**'
 (Simonov, K., *Soldatami ne roždajutsja*, 1965)
- c. *Mne* nikogda v žizni ne **prixodilos**' byvat¹ v bjuro poxoronnogo obsluživanija. Pri vide magazina s vyveskoj "Poxoronnyje prinadležnosti" ja perexožu na druguju storonu ulicy.
 'Never in my life did *I* **have to go** (lit. be) to a funeral parlor. Whenever I see a store with a sign "services for the dead" I cross to the other side of the street.'
 (Solouxin, V., *Poxorony Stepanidy Ivanovny*, 1987)

The modal *prišlos*' in (16b) occurs without explicit main verb, but the intended verb is *dovoevat* ('to fight on').

As is the case with *dolžen*, NEG-raising also occurs with *prixodit'sja*. In sentence (16c) the interpretation is one of wide scope (there is clearly a

negative obligation), while sentence (16a) conveys an obligation not to do something. Again, as is the case with *dolžen*, the negation most often comes before the modal, regardless of the scope interpretation. In only one instance of modal *prihodit'sja* and negation, the negation occurs before the main verb and after the modal:

- (17) Esli by *mne* kogda-nibud' prišlos' ne trenirovat'sja^I, ne znaju, čto slučilos' by.
 'If I had to not train at some point, I don't know what would happen.'
 (Fizkul'tura i Sport, 1987)

Sentence (17) is clearly an instance of a narrow scope negation: the reference is to an obligation not to do something. When the negation follows the modal, the interpretation is therefore unambiguously narrow scope, as expected.

6. The modal *nel'zja*

The modal *nel'zja* is an inherently negative form with a fairly broad set of meanings. In textbooks, it is usually stated that *nel'zja* can denote negated ability (*impossible*), negated possibility (*cannot*), and negated permission (*must not*). It is frequently seen as the negative counterpart to the adverb *možno* 'possible, allowed' which cannot be combined with a negation.¹¹

In addition, it is usually mentioned that *nel'zja* quite often occurs without overt subject. In the corpus, *nel'zja* most often occurs without overt subject. Of the 301 occurrences of *nel'zja* in the corpus, 280 were without overt subject (93.0%), 15 occurrences were with a third person subject (5.0%), 4 with a first person subject (1.3%), and two occurrences were with a second person subject (0.7%). While most modals can not occur with an overt subject, none has such a high correlation with the absence of the subject.

There is also an idiomatic expression with *nel'zja*, namely *kak nel'zja lučš e* 'better than ever' (or a variation of this idiom) of which there are ten occurrences in the corpus. This use of *nel'zja* has been disregarded in this study.

In the corpus, the range of *nel'zja* is restricted. The epistemic interpretation of *nel'zja* is by far the most common interpretation (170 out of 301 examples). This epistemic reading is in all cases the *cannot*, or, *impossible* one. Typical examples are:

- (18) a. Odnako mnogie iz nix naxodjatsja seičas kak by na pereput'e-ponimajut, čto dejstvovat'¹ po-staromu *nel'zja*, a po-novomu ne

mogut, ne umejut.

‘However, many of them find themselves at a crossroads as it were. They understand that they can’t act as in the old days, but they cannot, are not capable, of doing thing the new way.’

(Pravda, 1988)

- b. Slovami ètot zapax opisat’ nevozmožno. Pripomnit^P ego usilijem misli tože nel’zja. Kakoj on byl?

‘This smell could not be described in words. It was also **impossible** to remember it with all (my) might. What was it?’

(Grekova, I., *Kafedra*, 1980)

In sentence (18a), the modal *nel’zja* describes an epistemic impossibility, the impossibility to continue as before. This is an external impossibility. Note the juxtaposition of *nel’zja* with the modals *ne mogut* ‘cannot’ and *ne umejut* ‘physically cannot’ in the continuation of the sentence; the latter two modals show the internal impossibility. Sentence (18b) juxtaposes *nel’zja* with *nevozmožno* ‘impossible’.

In the corpus, 19 occurrences have a double negation construction; *nel’zja* is comined with a negation occurring before the main verb. This construction is interpreted in the same way as the English double negation construction *can’t not V_ must V*. An example is (19):

- (19) V ètoj svjazi nel’zja ne zametit^P, što “vojna nervov”, kotoruju SŠA zatejali protiv Livii, vstrečena v Tel’-Avive kak podarok sud’by.
‘In this respect we can’t not (= must) mention that the “war of nerves” that the USA is engaged in with Libya is treated in Tel-Aviv as a gift from heaven.’

(Izvestija, 1989)

In 17 cases, the interpretation is one of denied permission (*may not*):

- (20) Medsestra podošla k Margo i skazala, što plakat¹ nel’zja ni v koem slučae, potomu što ej vredno rasstraivat’sja.

‘The nurse went up to Margo and said that she wasn’t **allowed to cry** under any circumstance, because it was bad for her concentration.’

(Tokareva, V., *Ničego osobennogo*, 1987)

We now turn to the role of the aspect of the main verb. It has been often observed in the literature (e.g., Forsyth 1970, Rappaport 1985) that the choice of aspect has an influence on the interpretation of *nel’zja*. Example sentences were shown in (5) above. These sentences were all unambiguous because of

context. The claim that is frequently made is that the choice of aspect without context points to the interpretation of the modal, as evidenced by the following example from Rappaport (1985:206):

- (21) Ètu vstreču **nel'zja otložit'**^P / **otkladyvat'**^I.
 'This meeting cannot [P] / must not [I] be postponed.

If the main verb is perfective, the interpretation is negated ability, if it is imperfective, it denotes negated permission. Of course, the difference in modal interpretation is not all that great. The difference between the impossible (*cannot*) and the prohibitive (*must not*) interpretation. There is an area of indeterminacy and sometimes aspect is not the predictor of modality, as in the case of (22), also from Rappaport (1985:207):

- (22) a. V ètom kinoteatre **nel'zja pokazyvat'**^I širokoèkrannye fil'my.
 'In this movie theater it is **not possible** to show widescreen films.'
 b. **Nel'zja razrušit'**^P Pariž, èto sdelat nevozmožnym soglašenie.
 'Paris **must not** be destroyed, it will make an agreement impossible.'

Even though the inability reading is present in sentence (22a), and therefore the main verb should be in the perfective aspect, the imperfective form is used to show that the action described (the showing of movies) is an ongoing activity, which is expressed by the imperfective aspect in Russian. Conversely, because the act of destroying a city is an action with an inherent endpoint, the perfective aspect is appropriate in sentence (22b). In both cases, the normal rules that govern aspectual choice override the alleged opacity of the modal.

This is certainly also the case in the corpus. In many cases there was no clear relationship between the choice of aspect and the choice of modal interpretation. In many cases the precise modality was not clear (as in sentence (23a) below), and in other cases a different aspect than predicted was obtained.

- (23) a. Slovno by zabyvaetsja i o tom, što est' vozrast, fiziologičeski naibolee blagoprijatnyj dlja obučenija, kotoryj **nel'zja upustit'**^P.
 'It is as though one forgets as well that it is the age which is physically best suited for education, and which we **can't (mustn't)** let go to waste.' (Izvestija, 1987)
 b. **Upravljat'**^I, kak prežde, uže **nel'zja**.
 'Govern, like before, is now impossible.' (Izvestija, 1988)

Since the main verb is perfective in sentence (23a) we would expect the negated ability (*impossible*) interpretation. While this is certainly possible, the *must not*

interpretation is also possible, and we are dealing with indeterminacy. Since both interpretations are possible, we are dealing with a case of *merger*. Sentence (23b), on the other hand, is clearly a case of negated ability and the perfective would have been appropriate. The imperfective is used, however, because the action expressed (*upravljat* ‘to govern’) is durative in nature, and durative verbs in Russian require the imperfective aspect.

7. *Nado* and negation

The adverb *nado* ‘necessary’ in its modal sense can only be used as a strong deontic modal.¹² Thus, a sentence such as (24) below can only be interpreted as an obligation, not as an epistemic necessity (Forsyth 1970:264).

- (24) *Knigi nado sdavat¹ v biblioteki vseгда vovremja.*
 ‘Books must always be returned to the library on time.’

The aspect of the main verb in positive sentences is not influenced by *nado*, but rather by the general rules that govern aspectual choice. Thus, the main verb is in the imperfective in sentence (24) because we are dealing with a general truth. When a negation is present, the situation changes.

The modal *nado* can be combined with *ne* ‘not’ by placing it either before *nado* or before the main verb (it is also in principle possible to have two negations, but this was not attested in the corpus). Examples from the corpus are:

- (25) a. *Ne nado zabyvat¹, čto reč’ idet ne tol’ko o rybe.*
 ‘One **must not** forget that we are not just talking about fish.’
 (Nauka i žizn’, 1989)
- b. ... , mnogie trudnosti, odolevajušč ie naše narodnoe xozjajstvo, kak, estestvenno, i puti ix preodolenija, iskat¹ **nado** ne v samoj èkonomike.
 ‘(the cause of the) many problems that plague our economy, and of course the way to their solution **must not be found** just if (Forsyth, 1988)

It has been in the literature (e.g., Forsyth 1970:246; Rappaport 1985:212–3) that the aspect of the main verb after *ne nado* is always imperfective. This is also true in the corpus. Of the 68 (out of 78) examples of the corpus with *ne nado* and a main verb, all main verbs were in the imperfective aspect. Sentence (25a) above is an example of the imperfective aspect of the main verb. The aspectual choice of the main verb combined with *ne nado* is therefore opaque: it always has to be in the imperfective and this is due to the presence of *ne nado*.

Similarly, the statement that *ne nado* (and *nado ne*) are always deontic in nature is also borne out by the corpus. Examples with *nado* and a negation always refer to either a lack of obligation (which can be translated with *need not*) or to an obligation not to do something (in which case it can be translated with *must not*).

The problems surrounding *nado* and negation are similar to those that occur with *dolžen* and negation. Scope relations are not always straightforward. In principle the linear order should determine the scope of the negation. In sentence (25b) the negation follows the modal, so that the *must not* translation is appropriate, while in (26) below the negation precedes the modal and the *need not* translation is appropriate.

- (26) Ne **nado** dolgo naprjagat¹ pamjat', čtoby vspomnit' lučš ie kinoroli Eleny Proklovoj.
 'One **need not think** long and hard in order to remember the best movieroles of Elena Proklovaja.' (Socialističeskaja industrija, 1988)

However, in many cases the linear order is not indicative of the scope relation between the modal and the negation. In sentence (25a) above, the surface order suggest a wide scope interpretation, yet it is clear that the intended interpretation is narrow scope. This occurs quite often in the corpus. Of the 72 cases of *ne nado*, 34 have a wide scope interpretation, 24 a narrow scope interpretation, and a further 14 cases in which the intended scope interpretation is ambiguous. The narrow scope linear order is unambiguous: the interpretation always follows the linear order and *nado ne* is always interpreted as narrow scope.

The interesting fact about the narrow scope interpretation is not that it can occur with a wide scope linear order (i.e., *ne nado*), but that it rarely occurs with a narrow scope order (i.e., with the order *nado ne*). This order only occurs 6 times in the corpus. Of those 6 times, only 2 times a true narrow scope situation occurred and sentence (25b) is an example. In 4 instances, *nado ne* occurred in a contrastive situation (*one must not do X, but Y*), and an example is shown in (27) below.

- (27) Oni ponjali, čto iskat¹ **nado** ne točnye kopii izučaemogo gena, a vsex egorodstvennikov, to est' geny, blizkie emu po strukture .
 'They understood, that they **had to find** not exact copies of the gene under investigation, but of all of its relatives, that is to say, genes that resembled it in structure.' (Sputnik, 1986)

Examples such as (27) show that *nado ne* in these cases is actually a positive sentence. The negation is not sentential but only refers to the constituent (see De Haan 1997 for a discussion and tests of sentence versus constituent negation), since the action expressed is not denied but the object of the verb. In the concrete case of sentence (27) the negation has only the object of the verb *to find* in its scope (*the exact copies of the gene under investigation*), not the verb itself or the modal so that the sentence expresses a positive obligation to perform a certain action.

A wide scope linear structure with a narrow scope interpretation, i.e., situations in which the form *ne nado* has the interpretation *must not*, is very common. As mentioned above, this occurred 24 times in the corpus. Thus, the form *ne nado* is potentially ambiguous between a wide and a narrow scope interpretation of the negation. This difference in interpretation has no impact on the choice of the aspect of the main verb (it is still imperfective), showing that the scope interpretation of *nado* and the negation is not a factor but that *ne nado* inherently requires its main verb to be in the imperfective.¹³

In a number of cases it is not possible to decide without a doubt from the context whether we are dealing with narrow or wide scope negation. An example is shown in (28).

- (28) Ne **nado vygonjat**¹ iz školy Sašu Stameskina ... Pered licom svoix tovarišč ej po Leninskomu komsomolu ja toržestvenno obešč aju, što Stameskin stanet xorošim učnikom, graždanimom i daže komsomol'cem.

‘(We) **mustn’t/needn’t expel** Sasha Stameskin from school. Before the faces of his comrades of the Lenin Komsomol I swear that Stameskin will become a good student, citizen, and even a (good) Komsomol member.’

(Vasil’ev, B., *Zavtra byla vojna*, 1984)

From the context it is not possible to determine whether we are dealing with a wide or a narrow scope. Either interpretation is possible in this situation. However, since both interpretations are mutually compatible, we are dealing here with a case of *merger*. With *merger*, it is not necessary to decide which of the two meanings is intended, and this is clearly going on in example (28). Since 14 out of 72 cases, or 19.4%, are indeterminate in this way, the correct scope interpretation cannot be determined in a sizeable portion of all occurrences of *ne nado*. But given that the two scope interpretations are not far apart in meaning, this rarely creates any problem. Compare the findings of *ne nado* with the analogous German combination *nicht müssen* ‘must / need not’ which is

similarly ambiguous. Scope ambiguity also occurs when there is no main verb that accompanies *ne nado*, as in (29)

- (29) A prinimat' snotvornoe ne privykla . — I ne nado, — podderžal ee Gil'e.
 'But I didn't get used to taking something to help me sleep. — "And you
mustn't / needn't," insisted Gil'e." (Lidin, V., *Fedra*, 1962)

Sentence (29) shows indeterminacy in the form of *ambiguity*. It can be interpreted as either a warning to not get addicted, or as a statement that there is no need to take painkillers. This is an either/or indeterminacy, hence the ambiguity. It is necessary to disambiguate the discourse fragment in order for it to be understood.

8. The implications of NEG-Raising

The main function of NEG-raising in examples such as (13) and (16) is to show that we are dealing with a negative sentence. The best way of ensuring that the listener is aware that we are dealing with a negative sentence is to place the negative element as early as possible, i.e., right before the modal. This view is well attested in many languages (see De Haan 1997 and the references there for discussion). Compare this with the English situation: the constructions *must not* and *need not* have syntactically identical structures; in both cases, the negation is sentential.¹⁴ Not so with the constructions *modal + ne* and *ne + modal* in Russian. Only in the second case is the negation sentential. In the case of *modal + ne*, we are actually dealing with a positive sentence, but with a negated constituent (the VP). Apparently it is felt that in the construction *modal + ne* the negation in its narrow scope interpretation is still somehow sentential in nature (as it is in English) and since the negation in the *modal + ne* construction is not syntactically sentential, the modal is shifted to the beginning, creating the construction *ne + modal*. This frees up the construction *modal + ne* and it can be used for contrastive situations which is one of the natural functions of constituent negations crosslinguistically. This situation is found almost without exception in the corpus. Cases in which the combination *modal + ne* is not contrastive may involve an implicit contrast.

The process of NEG-raising does entail that the construction *ne + modal* is now ambiguous between a wide and a narrow scope interpretation. This creation of ambiguity is clearly not considered to be a big problem. However, there is some indication that the modal *dolžen* combined with *ne* is now mainly

used to denote the narrow scope, i.e., it must be translated by *must not* rather than *need not*. Most of the clear-cut cases in the corpus (those not involving indeterminacy) have the narrow scope interpretation. This could mean that *dolžen* is moving in the direction of a verb with only one possible scope interpretation when it is combined with a negation. If this is the case, it will have the same status as English *must* and *need*, namely verbs which have only one scope interpretation when they are combined with a negation.

9. Conclusions

As far as the interaction of negation and strong modality is concerned, Russian paints a complex picture. Several different processes (indeterminacy, aspectual choice of main verb, NEG-raising) go on simultaneously. These processes create problems of interpretation and speakers of Russian must find ways to get around ambiguity problems. One such strategy, reserving a certain verb for just one scope representation (as demonstrated by the verb *dolžen*), could be an important clue to the direction of change languages take when they decide on how to encode ambiguities of scope. Based on the Russian data presented here, it would appear that languages go from a syntactic approach (where the placement of the negation in the sentence determines its scope) to a semantic approach (where the scope of the negation is determined by the modal verb). Possibly the process of NEG-raising is a determining factor in the change from one state to the other.

Finally it must be mentioned that there was little difference between the behavior of modality and negation in the two registers used here. I take this to mean that the processes described in the previous sections hold for most, if not all, registers of the language and that we are therefore dealing with a phenomenon which represents a true shift in Russian as a whole. This in turn may mean that we are dealing with a universal mechanism of scope disambiguation.

Notes

1. The corpus can be consulted at <http://www.sfb441.uni-tuebingen.de/b1/korpora.html>.
2. This verb comes from a full verb with the meaning 'to follow.'
3. The present tense of *byť* 'to be' is zero.

4. In citing the Russian examples, I make use of the following conventions. First, the modal is printed in bold and the main verb is underlined>. If a subject is present, it is italicized. Finally, according to standard practise, the aspect of the main verb (if present) is indicated by means of either a superscript I (for imperfective aspect) or P (for perfective aspect).

5. In Russian, most verbs have two morphological forms, depending on the choice of aspect. For instance, the Russian translation of the verb 'to write' is either *pisat'* for situations requiring the imperfective aspect (broadly speaking, actions in progress), or *napisat'* when a perfective interpretation is required (when an action is viewed in its totality). Both *pisat'* and *napisat'* are infinitives and can be inflected for tense and person. The relationship between imperfective and perfective verb forms is for the most part idiosyncratic and for almost every verb, both forms must be memorized.

6. Coates uses the term root modality instead of deontic modality.

7. The form of the modal *dolžen* depends on the gender of the subject. The forms are *dolžen* (for masculine singular nouns), *dolžna* (feminine singular), *dolžno* (neuter singular) and *dolžny* (plural). The subject is in the nominative.

8. In the corpus, *dolžen* is very often accompanied by a main verb. Only in 1.7% of all cases was there no main verb present. With other modals it is more common to omit a main verb when it can be recovered from the context.

9. Syntactically, *dolžen ne* does not behave like *ne dolžen*, as explained in De Haan 1997. Narrow scope negation fails the tests for sentence negation and must be considered instances of constituent negation. The combination *dolžen ne* is not the only combination with this behavior, see Section 7 below on *nado ne*.

10. The impersonal verb *prixodit'sja* is the imperfective member of an aspectual pair, of which the verb *prijtis'* is the perfective member. It is one of a very few aspectual modal pairs in Russian and the existence of the two verbs is due to the fact that their origin lies in motion verbs. In fact, the pair *prixodit'sja/prijtis'* can still be used as full verbs, with the meaning of 'end up'. The distribution of *prixodit'sja* and *prijtis'* is unclear and no attempt is made in this paper to explain the reasons underlying the choice of *prixodit'sja* and *prijtis'*.

11. In the corpus, the combination *ne možno* does not occur, although *možno ne* does sporadically.

12.

In addition, *nado* can also serve as an adverb meaning 'need', as in the following sentence:

(i) *Odna iz naših ženšč in zajavila , što ne **nado** nam nikakix plat'ev iz-za granicy.*
'One of our females explained that we don't **need** any dresses from abroad.'

(Literaturnaja gazeta, 1989)

This use of *ne nado* occurred 21 times in the corpus. Because this is not a modal usage, these 21 cases are disregarded in the rest of the paper.

13. Rappaport (1985:212–3) explains this by stating that *ne nado* in its narrow scope interpretation can be looked at as a negated deontic possibility by applying the elementary modal logic conversion rule *necessary not* == *not possible*, or *must not* == *can't*. In contexts of negated possibility in Russian, the imperfective is also required. This explanation entails

that the modal *nado* can be viewed as either a strong modal (*need*) and a weak modal (*can*) but the latter only in negative contexts. This seems strained.

14. This can be demonstrated with syntactic tests, such as the addition of tag questions or tags with *not even* (or its equivalent in the language under discussion). See De Haan (1997) for discussion.

References

- Bybee, J., Perkins, R. and Pagliuca, B. 1994. *The Evolution of Grammar: Tense, Aspect, and Modality in the Languages of the World*. Chicago: University of Chicago Press.
- Chvany, C. V. 1974. The grammar of Dolžen: Lexical entries as a function of theory. In *Slavic Transformational Syntax. Michigan Slavic materials 10*, D. Richard D. Brecht and C. V. Chvany (eds), 78–122. Ann Arbor: University of Michigan.
- Coates, J. 1983. *The Semantics of the Modal Auxiliaries*. London: Croom Helm.
- Collins, P. 1991. The modals of obligation and necessity in Australian English. In *English Corpus Linguistics*, Karin Aijmer and Bengt Altenberg (eds), 145–65. London and New York: Longman.
- De Haan, F. 1997. *The Interaction of Modality and Negation: A Typological Study*. New York: Garland.
- Flier, M. S. and A. Timberlake (eds). 1985. *The Scope of Slavic Aspect*. Columbus, OH: Slavica Publishers, Inc.
- Forsyth, J. 1970. *A Grammar of Aspect: Usage and Meaning in the Russian Verb*. Cambridge: Cambridge University Press.
- Grenoble, L. A. 1992. Double negation in Russian. *Linguistics* 30, 731–52.
- Horn, L. R. 1989. *A Natural History of Negation*. Chicago: University of Chicago Press.
- Kyto, Merja (1987). On the use of the modal auxiliaries indicating “possibility” in Early American English. In Martin Harris and Paolo Ramat (eds.). *Historical development of auxiliaries*. Berlin: Mouton de Gruyter, 145–70.
- Kyto, Merja (1991). *Variation and diachrony, with Early American English in focus: studies on can/may and shall/will*. Frankfurt a.M.: Peter Lang Verlag.
- Nichols, J. 1985. Aspect and Inversion in Russian. In Flier and Timberlake (eds) 94–117.
- Palmer, F. R. 1986. *Mood and Modality*. Cambridge: Cambridge University Press.
- Rappaport, G. C. 1985. Aspect and Modality in Contexts of Negation. In Flier and Timberlake (eds) 194–223.
- Tottie, G. 1985. The negation of epistemic necessity in Present-day British and American English. *English World-Wide* 6, 87–116.
- Van der Auwera, J. and Plungian, V. A. . 1998. Modality’s semantic map. *Linguistic Typology* 2.79–123.