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**MODALITY, ASPECT, AND NEGATION IN RUSSIAN:
A MINIMALIST SYNTACTIC ANALYSIS**

SUBMITTED TO

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FOR

SENIOR THESIS

SPRING 2010

APRIL 26, 2010

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I. Introduction

1. An Introduction to the Paper

In this paper, I endeavor to account for certain linguistic phenomena in Russian using both semantic and syntactic perspectives on language. The concepts of modality, negation and verbal aspect present difficult issues for a universal explanation of these three linguistic components within a modern, syntactic analysis. The determination of verbal aspect in Russian is normally considered fairly transparent in contexts without a modal phrase, such as *can*, *must*, *should* or *need*, in the presence of the negative particle [ne] ‘not’. When such a negated modal phrase (~ModP) is present, however, the temporality of the event encompassed by the predicate becomes rather opaque and intuitions as to the most grammatically correct aspect on the verb are ambiguous.

The aspect of the verbal constituent in Russian sentences is a morphological component of the verb itself, either an affix or a whole irregular form. Furthermore, inflectional morphology, like gender and number agreement, are usually captured syntactically via semantic features. Aspect may be considered an inflectional morphological component of the predicate, and thus its presence, whether it is represented with a feature or something else, within the syntax of the Russian verb phrase (VP) is undeniable. With this in mind, it is not only appropriate but necessary to give a syntactic account of the interactions between verbal aspect and ~ModPs in Russian. Before this will be accessible, though, I will provide some preliminary data on ~ModPs in Russian as well as a discussion of one past account in particular for ~ModPs and verbal aspect choice in Russian in part II below. In part III of this paper, I provide my own syntactic analysis of aspect and ~ModPs and a discussion of the syntax of aspect generally. Finally, in part IV, I

will provide a discussion of my overall findings and generalizations, as well as some ideas for further research.

II. Modals, Aspect and Negation in Russian

1. An Introduction to Modality and Aspect

The concepts of modality, negation, and verbal aspect are three widely researched and analyzed components of human language. Three previous studies, Rappaport (1985), Hudin (1994), and de Haan (2002), discuss Russian modal phrases in contexts of negation, and their possible influences on overt verbal aspect, which is spelled out morphologically on the verb in Russian. Negated modals in Russian also exhibit ambiguities in scope interpretations for negation and modality, which could have implications for verbal aspect on a syntactic level.

None of these studies has provided a complete syntactic account of the issues presented by ~ModPs and the grammatical determination of aspect, and I will do so using version of Chomsky's Minimalist Program (Chomsky 1995). It is important for a universal theory of these linguistic inquiries to have ties not only to the semantic-pragmatic interfaces, but also to the realm of syntax, and as I stated above, Russian aspect is an overt morphological component of the verbal predicate. Considering other morphological components of not only verbs, but also of adjectives, nouns and pronouns, such as tense, gender and number agreement, tend to be considered syntactic elements overtly present in the syntax, aspect should be also.

In recent work on the syntactic nature of verbal aspect, MacDonald (2008) focuses on the English aspect system and its divergences from the Russian aspect system. However, this account for aspect in Russian and English MacDonald does not consider modals in either language. As will become obvious in the following sections, negated modals in Russian, at least, present a puzzle for the choice of verbal aspect in this language. In other words, the choice of

aspect between the perfective or imperfective is not transparent in the presence of Russian ~ModPs, while it generally is in non-modal contexts.

In section 2, I begin by briefly discussing the aspect system in non-modal contexts in Russian and its differences from that in English. Then in the subsections under 2.2, I move onto to the specific modals I focus on in my study and present examples of each incorporating different aspects on the verbal predicates. I then discuss one specific account of negated Russian modals, Hudin (1994), in subsection 2.3, whose semantic-pragmatic arguments are important for a syntactic analysis of negative modality and aspect in Russian. Finally in section 3, I reiterate the reasons and strong need for a syntactic analysis of Russian modals in reference to aspect choice for various reasons. Though I mention it briefly throughout this introductory section, I will save a more complete discussion of the arguments in MacDonald (2008) for the analysis chapter, section 2, as his claims are far more technical in nature and would only be appropriate with reference to my own technical/theoretical analysis of ~ModPs in Russian. I do, however, use a few examples from MacDonald (2008) in the next section where they are relevant, as in 2.1 below.

2. Aspect and Modals in Russian

Aspect in English and Russian works very differently from several linguistic perspectives. English is often called a morphologically “poor” language in that it shows little deviation in form and articulation of a word no matter the context in which the word is used. In fact, modern English only shows a difference in morphology in pronouns, as in the difference between the nominative pronoun ‘I’ and its accusative form ‘me’. Russian, on the other hand, is a morphologically “rich” language and shows variations in the morphological renderings of its words, and, more importantly for our discussion of aspect, of its verbs. Before I begin my more

specific discussion of aspect in Russian ~ModPs, I will give a couple simple examples of the perfective and imperfective aspects in Russian, with English paraphrases, which will mark the overt differences in aspectual morphology in both languages.

2.1 The Perfective and Imperfective Aspects in Russian

Consider the following examples.^{1,2}

- (1) a. *Ja čital(I) knigu.*
 I read_{-past, sg, imp} book
 'I was reading a/the book.'
- b. *Ja pročital(P)* *knigu.*
 I read_{-past, sg, perf} book
 'I read a/the book.'

The main differences between these two structurally equivalent sentences have to do with the temporal nature of the event which has taken place. For MacDonald (2008), as well as for Borik (2006) and Schoorlemmer (1995), the Russian aspect system relies heavily on the notion of telicity, which is a linguistic property of verbs that denotes the completion of an event or action. In the perfective example (1)b, the interpretation in Russian is that the book has been read completely, a telic interpretation. The imperfective in (1)a does not connote such completion, as the past progressive English paraphrase reveals. Therefore, perfective Russian verbs may be termed telic verbs, while imperfective verbs are atelic.

The imperfective example above shows one of the biggest differences between English and Russian aspect, namely that verbal auxiliaries in Russian are semantically understood in the morphology of the verb. The Russian imperfective always implies an atelic reading of the event,

¹ The example Russian sentences I present, for which I do not specify a particular source, are taken from data I have compiled from conversations with native informants.

² To denote the imperfective and perfective aspects on the verbs I use the symbols 'I' for the imperfective and 'P' for the perfective, and place them immediately after the corresponding verb for the most clarity.

where the action was started but was never completed, with no helping auxiliary verb necessary.

The English paraphrase of the Russian imperfective in (1)a, however, must incorporate a progressive auxiliary verb *was* to give any sort of atelic reading, whether it is a progress/durative or incomplete interpretation.

The below examples³, the first of which is taken from MacDonald (2008:146), show grammaticality judgments for imperfective and perfective verbs in the presence of different kinds of temporal prepositional phrases within both non-modal and modal contexts.

- (2) a. *Ja pil(I) butylku vina/vino* *za čas/ v tečeniji časa.

I drank bottle wine/wine *in hour/ in course hour
 ‘I drank a bottle of wine/wine *in an hour/for an hour.’

- b. *Ja vypil(P) butylku vina/vino* za čas/ *v tečeniji časa.

I drank bottle wine/wine in hour/*in course hour
 ‘I drank a bottle of wine/wine in an hour/*for an hour.’

- (3) a. *Nel'zja pit'(I) butylku vina/vino* *za čas/ v tečeniji časa.

impossible drink bottle wine/wine *in hour/ in course hour
 ‘It is impossible to drink a bottle of wine *in an hour/for an hour.’

- b. *Nel'zja vypit'(P) butylku vina/vino* za čas/ *v tečeniji časa.

impossible drink bottle wine/wine in hour/ in course hour
 ‘It is impossible to drink a bottle of wine in an hour/*for an hour.’

The time span adverbial [za čas] ‘in an hour’ is only grammatical with perfective aspect in Russian because it implies a telic/completed reading of the event. The durative [v tečeniji časa] ‘for an hour’ does not imply such completion, and thus is only grammatical with the imperfective in Russian. These judgments about these temporal phrases (TimePs) also hold in ~ModPs, as in the examples in (3),⁴ showing their strong temporal indications However, there is still a curious

³ To help the reader understand the structure I give to my example sentences, when I use (a), (b), (c), and so on, under a single numerical label, as in (1)a-b above, it is because these sentences are replicas of one another, whose only difference is in the aspect of the verb. Several of the examples I provide below in 2.2 show different number labels for separate examples using the same modal phrase. This is because, though the examples show different aspects on the verb, the sentences present different propositions about different events.

⁴ More examples of negated modals in the presence of such TimePs will be presented in part III, section 4.

puzzle that negated modals provide in Russian regarding aspect choice when such TimePs are not present.

2.2 The Modal Puzzle in Russian

As developed in Cormack and Smith (2002) for English, and discussed in Rappaport (1985), among others, for Russian, there are two readily available interpretations of modals depending upon the context in which the utterance is used. These modal distinctions are usually described as the deontic and epistemic readings. The deontic reading generally pertains to one about obligation, necessity or permissibility. The epistemic reading concerns possibility or validity.

In this paper, I examine several negated modals in Russian which display discernible properties, both in their morphology, semantics and subsequently their syntax. In 2.2.1 below, I will give examples of certain modals which seem to fit into one classification with respect to aspect choice in Russian and discuss the connections between these modal phrases and aspect choice in Russian. Then in 2.2.2, I show and discuss two other modals which I also consider in my analysis, but which show differing properties and connections to aspect from other modals in Russian.

2.2.1 Modal Interpretation Affects Aspect

As had been noted in past linguistic research, Rappaport (1985) and de Haan (2002), there seems to be a connection between verbal aspect choice in Russian and the interpretation of the particular negated modal phrase. This has been most strongly argued in Rappaport (1985), for the inherently negative modal [nel'zja] ‘impossible/impermissible’. The former translation of impossibility corresponds to its epistemic interpretation, and the latter of impermissibility to its deontic interpretation. Compare the examples of this modal with different aspects below.

(4) *Zdes' net telefona, otsjuda nel'zja pozvonit'*(P).

here no telephone hence impossible call

'There is no telephone; it is impossible to call from here.'

(5) *Otsjuda nel'zja zvonit'*(I), *my pomeščajem ljudjam rabotat'*.

hence impermissible call we help people work

'We mustn't call from here; we will disturb people working.'

(6) a. *Etu vstreču nel'zja otkladyvat'*(I).

this meeting impermissible be postponed

'This meeting must not be postponed.'

b. *Etu vstreču nel'zja otlozhit'*(P).

this meeting impossible be postponed

'This meeting cannot be postponed.'

(Rappaport 1985:206)

(7) *Bez etix apparatov nel'zja izučat'*(I)/*izučit'*(P) *dejatel'nost'*.

without these instruments impossible/impermissible study activity

mozga.

brain

'It's impossible/forbidden to study the activity of the brain without these instruments.'

(Rassudova 1968; Rappaport 1985; Hudin 1994:36)

The examples in (4) and (6b) incorporate a perfective verb and a specific use or reading of the modal, namely one of physical impossibility. This reading corresponds to the epistemic use of a modal. In other words, in example (4), it is rather clear that because no phone is present at the moment of the utterance, it is physically impossible for one to phone out at that particular moment. The same goes for (6)b; the meeting cannot be postponed for reasons that connect to real-world possibilities. The examples in (5) and (6a) show this modal with a deontic interpretation and the imperfective aspect on the verbs. That the phoning in (5) would disturb the surrounding workers indicates the use of [nel'zja] here has to do with an obligation not to do something. A similar intuition is held for (6a), where the meeting is forbidden to be postponed. I provided the example in (7) which shows the modal reading is truly a determining component of verbal aspect in such Russian phrases.

This argument for the modal interpretation in connection to aspect choice is strongly argued against in Hudin (1994). I will discuss Hudin's arguments more explicitly below in 2.3. However, as purported in de Haan (2002:104) and Rappaport (1985:212-3), the modal [nado] is an inherently deontic modal which can only have a deontic reading of obligation or duty. Furthermore, as shown in the below examples, from the Russian National Corpus,⁵ when this deontic modal is negated, it is always used with the imperfective.

- (8) *Ja vam v glaz tyknula? Ne nado mne glaza vykalyvat'(I)! Ja pobedila!*
 I you in eye poked not need me eyes gouge I won
 'I poked you in the eye? I don't need my eyes gouged out! I won!'

- (9) *Nu konečno // Znaeš' / ne nado vot tak govorit'(I).*
 well of course know-_{3rd, pres, sg} not need here so speak
 'Well of course you know that (we) don't need to speak so here.'

This was true of all the occurrences of [nado] with negation in the Uppsala Corpus of Contemporary Russian Texts⁶, used in de Haan (2002), as well as in the Russian National Corpus. This is why I have not provided any examples with perfective verbs, as they were not evidenced in the corpora and thus are taken to always be ungrammatical. It is rather curious that this inherently deontic modal only appears with the imperfective aspect in Russian when it is negated. Without negation, however, the distinction does not hold, as de Haan (2002:104) maintains. The next examples involve the modal [nužno], which is also an inherently deontic modal and was only evidenced with imperfective verbs in contexts of negation in the Russian National Corpus.

⁵ This corpus is a very extensive collection of contemporary and historical/literary Russian texts, including newspaper and magazine interviews and other recorded conversations in the spoken corpus category, which I mainly used to find examples of spoken speech. The corpus is available online at <http://ruscorpora.ru/en/index.html>.

⁶ This corpus was originally available online at <http://www.sfb441.uni-tuebingen.de/b1/en/korpora.html>, but unfortunately since de Haan's publication, the site is down. Therefore, I could not verify de Haan's arguments on the Uppsala corpus, though they did correlate with data I found in the Russian National Corpus.

- (10) *Eto vam poka tože ne nužno znat’(I).*
 this you presently also not need know
 ‘For the present, this is also not necessary for you to know.’
- (11) *No i ne nužno zabyvat’(I) eščjo i o tom/čto zavtra*
 but and not need forget still and about that what tomorrow
vperedi...
 ahead
 ‘But still it is not necessary to forget about what’s ahead tomorrow.’

If this deontic-imperfective distinction holds for the modals [nel’zja], in the correct context, and [nado] and [nužno] in negated circumstances, then it would seem that an inherently epistemic modal would only select for a perfective verb in the presence of negation. In the below examples, the inherently epistemic modal [vozmožno] ‘(physically) possible’ appears only with perfective verb.

- (12) *No ja tak real’no dumaiju/čto bol’šego sdelat’(P) ne vozmožno.*
 but I so really think that more do not possible
 ‘But I think in reality that it is impossible to do more.’
- (13) *Rezul’tat voiny pokazal /čto Ameriku ostanovit’(P) praktičeski ne*
 result war showed that America stop practices not
vozmožno.
 possible
 ‘The result of the war showed that it is impossible to stop America.’

These general connections between the modal reading and aspect choice seem to be fairly universal for these specific modals when they are negated. There are, however, other modals in Russian which certainly do not show these distinctions, but which show defining properties of their own which seem to set them apart from the above modals. Consider the following examples.

2.2.2 Certain Modals Do Not Affect Aspect

For both [ne moč] ‘cannot’ and [ne dolžen] ‘should/must not’, the modal interpretation does not seem to influence aspect at all. Consider the below examples of both modals used in different contexts with different verbal aspects.

- (14) *Ja ne mogu pročitat’(P) etu knigu: ona na kitaiskom jazyke...*
 I not can read this book; it in Chinese language
 ‘I cannot read this book; it is in Chinese...’
 (Hudin 1994:34; Rappaport 1985:205)
- (15) a. *Ja ne mogu pisat’(I) knigu.*
 I not can-1st, pres write book.
 ‘I cannot write (a) book.’
 b. *Ja ne mogu napisat’(P) knigu.*
 I not can write book
- (16) *On očen’ punktyal’nyj čelovek, on ne dolžen opazdat’(P).*
 he very punctual man he not must be late
 ‘He is a very punctual person, he shouldn’t be late.’
 (De Haan 2002:94; Rappaport 1985:212)
- (17) a. *Ja ne dolžen stroit’(I) dom.*
 I not should build house
 ‘I should not build a house.’
 b. *Ja ne dolžen postroit’(P) (etot) dom.*
 I should not build (this) house.

The imperfective and perfective equivalents in (15)a-b and (17)a-b show that the same sentence may incorporate both aspects regardless of modal interpretation. In (15), both sentences are about physical impossibility, an epistemic circumstance. In sentence (17), the modal interpretation is ambiguous, though both aspects are perfectly grammatical. The same goes for (14), which is also grammatical with an imperfective form of the verb, depending upon the context. The perfective generally implies more emphasis and immediacy to the situation.⁷

⁷ These last two distinctions will be discussed further in my analysis in part III, section 3.2, though it will suffice now for the reader to understand that the perfective in Russian generally implies an added force to the sentence, where it is understood that the event needs to be completed, or discontinued, at once.

2.3 One Account of Russian ~ModPs and Aspect (Hudin 1994)

I will now discuss in more detail Hudin (1994) and its arguments against the connection between modal interpretation and aspect choice in Russian. Consider her arguments in reference to the above examples (4)-(13), and their dissimilarities with the examples in (14)-(17). Hudin (1994) relies on semantic-pragmatic intuitions rather than a syntactic account. Hudin (1994) cites three main issues involved with the interpretation of negative modal phrases and their relation to Russian verbal aspect. I will discuss the most relevant ones with examples and a short discussion of any ambiguities.

2.3.1 Modal Type and Aspect

The first question posed in Hudin (1994) is whether Russian verbal aspect choice is determined by the type of modal, either an inability, deontic or epistemic modal. Hudin concludes that modal type does not affect aspect in Russian negative modal phrases and then presents several examples to support her claim. I have reproduced one of her examples below to demonstrate this point, from Hudin (1994:25).

- (18) *Ne mogu že polučat’(I) eti pis’ma.*
 not can-1st, sg pt. receive these letters
 ‘I cannot/must not receive these letters.’

(Dostoevsky, *The Idiot*, 1957)

Hudin maintains that it does not matter whether one interprets the negated modal verb [ne moč’] ‘cannot’ as a negated ability (epistemic) or negated permission (deontic) because the imperfective is still used in either case. Evidence against this claim is provided in Rappaport (1985) and de Haan (2002) for [nel’zja], and I will generally reject this claim also for those modals under 2.2.1 above.⁸ Though the interpretation of the modal is certainly not the only thing

⁸ It is also important to note here, as it will figure into my own analysis, that Hudin (1994) only uses this modal verb to counter this claim. She does give two debatable examples involving [nel’zja], but these interpretations are certainly arguable considering the analysis I gave to the examples in 2.2.1-4 above.

directing aspect in appropriate Russian contexts, it does play a major role. To account for the interpretational distinction overtly found in cases with [nel'zja] and to escape the reading distinction from Rappaport and de Haan, Hudin (1994) claims that the illocutionary force of the proposition in [nel'zja] statements is what is directing aspect.

2.3.2 Illocutionary Force and Aspect in [nel'zja]-phrases

As for her second proposal, Hudin finds that the illocutionary force, or the underlying tone, of the sentence directs verbal aspect in Russian ~ModPs and cites the below examples.

Hudin finds that in the above examples the illocutionary force of the statement directs aspect choice. If the statement is used as a directive, as in (20), (example (5) repeated), the imperfective is selected. If the statement is about inability then the perfective is selected, as in (19), (example (4) repeated). This distinction, again, is most overtly evidenced on the inherently negative modal [nel'zja], as shown by Hudin (1994), Rappaport (1985) and de Haan (2002). However, considering the evidence in the examples in the 2.2.1-4 above, this connection between modal interpretation and aspect does seem to apply to more modals than just this one in Russian.

Furthermore, illocutionary force, as Hudin constructs it, seems as if it could be reduced to modal interpretation. A directive statement with [nel'zja] could appropriately be characterized as a statement about a possible world in which the individual to whom the statement is directed has some obligation not to do some action. This would connect to a deontic reading. The same goes for an illocutionary force reading about possibility, which more directly connects to an epistemic

interpretation. While this interpretational ambiguity is certainly available on [nel'zja], Hudin does not consider [nado], [nužno] and [vozmožno]. These modals present inherent deontic and epistemic interpretations, respectively, and generally seem to connect to different aspects in Russian. I will discuss all of these modals more technically in my theoretical analysis, though it is sufficient for now to understand that there does appear to be a connection, at least, between certain Russian negated modals, their interpretations and a preferred choice of verbal aspect. Hudin's third claim about aspect in ~ModPs has to do with the direct object (DO) in connection to one aspect or another, and I will briefly explain now.

2.3.3 Direct Object (DO) Type and Aspect in Russian

The third and final strong claim in Hudin (1994) has to do with aspect choice and direct object (DO) type. Hudin claims that the type and interpretation of the DO in negated Russian modal phrases directs aspectual choice. This rule only applies, however, in what Hudin (1994:28) calls “theoretical uses” of ~ModPs, where the tone or interpretation of the modal is not transparent. She makes the distinction between ‘dependent-object’ and ‘independent-object’ propositions and places a causal role on the DO in determining aspect. Object-dependent DOs include proper names, pronouns, demonstratives and indexical expressions, or basically any nominal element which selects a specific object in the world. Object-independent DOs refer to no entity in particular, as in descriptions, mass nouns, general terms, types, kinds and quantities (Hudin 1994:28). I already presented two of Hudin's examples for this claim above in (7) and (14). I will repeat them again below for clarity.

- (21) *Bez etix apparatov nel'zja izučat'(I)/izučit'(P) dejatel'nost' mozga.*
 without these instruments impossible study activity brain
 ‘It's impossible to study the activity of the brain without these instruments.’

(Rassudova 1968; Rappaport 1985; Hudin 1994:36)

- (22) *Ja ne mogu pročitat' (P) etu knigu: ona na kitaiskom jazyke...*
 I not can read this book; it in Chinese language
 'I cannot read this book; it is in Chinese...'
 (Hudin 1994:34; Rappaport 1985:205)

With the example in (22), Hudin maintains the perfective aspect is appropriate because of the referential nature of the demonstrative pronoun [eto] 'this' in the DP [eta kniga] 'this book', expressed in the accusative case above. However, as I stated above in 2.2.2, this example is perfectly grammatical with the imperfective, given the right context. If the speaker knows that he cannot even begin to read the book because it is in Chinese, he may say the imperfective [čitat'] 'read' with no grammatical error.

The example in (21) is a bit ambiguous out of context, which is why Hudin included both the perfective and imperfective in the same example sentence. If the phrase [dejatel'noct' mozga] 'activity of the brain' is to be understood as the general processes of the brain, an object-independent reading, then the imperfective is selected. If it refers to a specific brain process, an object-dependent reading, the perfective is selected.

These negated modal phrases seem to shroud the verb phrase in a hypothetical realm of interpretation. There is great ambiguity in these types of statements that stray away from normal, temporal aspect rules for Russian, which one reason why it is imperative to give an appropriate syntactic account of modal phrases with respect to aspect choice.

3. A Minimalist Approach to ~ModPs in Russian

To the best of my knowledge, a minimalist syntactic analysis, within the confines of Chomsky (1995), has not been given to negated Russian modals in reference to aspect choice. A structural analysis of this sort would allow for a better understanding of the interaction between modals, negation and verbal aspect choice. Since the intuitions and motivations for verbal aspect

choice in these contexts are not clear, a syntactic evaluation, though it may not be universal to all Russian modals, would go a long way to disambiguating these classic linguistic issues.

To summarize my various discussions and remarks on negative modality and aspect in Russian, I initially discussed the aspectual system in Russian and its connections to morphological deviations on the verbal predicate in 2.1. Then, in the subsections under 2.2, I presented pertinent data of ~ModPs in correspondence to modal interpretation and verbal aspect choice. The examples in 2.2.1 showed a strong interaction between modal interpretation and aspect choice for the particular modals in those examples. In 2.2.2, I provided examples of two modals which did not display this interpretation and aspect connection. Subsequently, in 2.3, I discussed Hudin's arguments against the connection between aspect and modal interpretation in Russian, and their possible deficiencies. Taking those modals in 2.2 above into account, it seems that some modals show this reading-aspect distinction, while others do not. This all can be accounted for on a syntactic level, though some more about the syntax of aspect across languages must be understood before a more technical discussion would be appropriate.

III. Theoretical Analysis

1. An Introduction to the Syntax of Aspect

In this third part, I will delve into a more theoretical discussion of ~ModPs in Russian and their connections, or lack thereof, between aspect choice and interpretation. For a better understanding of the syntactic nature of verbal aspect, a discussion of the relevant arguments in MacDonald (2008) is needed. I only mentioned MacDonald (2008) a couple times in the introductory chapter, though his arguments will prove important for my discussion of the syntax of ~ModPs in reference to aspect choice in Russian. There are several conceptual arguments for

the syntax of aspect made in MacDonald (2008), which must be discussed initially before a discussion of the syntax of aspect in either Russian or English would be accessible.

In section 2 of this part of the paper, I begin with a discussion of MacDonald's notions of Event Structure (ES) and Inner Aspect for English and Russian. Then in section 3, I move onto my own discussion of the modal aspect system in Russian. In 3.1, I identify the specific predicate types I target in my analysis. Then, starting in 3.2, I begin my discussion of different modals and their respective interactions with aspect. These will be divided, similarly to the divisions I gave to the same modals in part II, section 2.2, between those which show the interpretation-aspect distinction and those which do not. Then, in 4, I will present corresponding structural analyses of the modal cases I discuss, as well as structural analyses of other elements which can affect aspect, like TimePs.

2. Inner Aspect in English and Russian (MacDonald 2008)

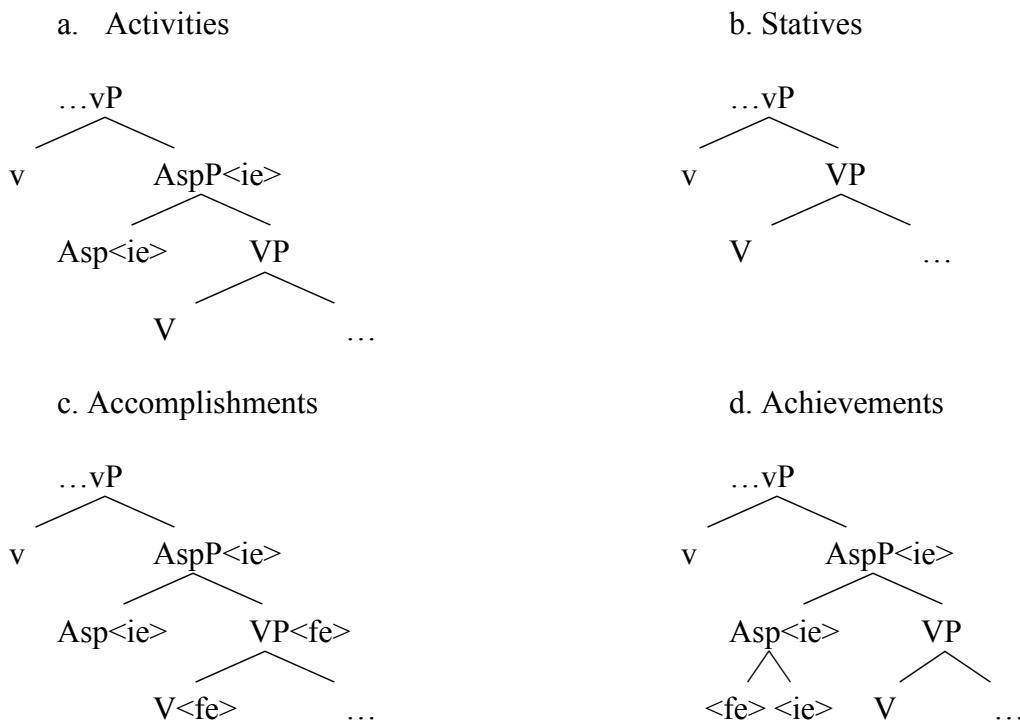
For English, MacDonald (2008:27) makes several distinctions between verbal predicate types and the ways we can interpret these predicate types at a syntactic level. There are four types of predicates that MacDonald focuses on in his analysis of English, each of which elicit different interpretations: statives (e.g., *love* or *own*), activities (e.g., *drag* or *run*), accomplishments (e.g., *drink* or *write*) and achievements (e.g., *catch* or *win*). The labels for these different predicate types make their interpretations rather obvious, but it is the interaction between these interpretations and aspect that concerns MacDonald. These distinctions prove to have little import for Russian predicates in ~ModPs, as will become obvious later in section 3. MacDonald uses the label Event Structure (ES) for the realm of syntactic interpretation of verbal aspect. More specifically, MacDonald (2008) is concerned with the sub-event structure of the predicate, which involves the interrelations between aspect and the verbal predicate at a deeper level of the

syntax, within the vP-shell. The different predicate types I listed above behave differently within their respective sub-event structures, according to MacDonald. To help clarify these distinctions, I will proceed by giving a few schematic trees from MacDonald (2008), as well as corresponding derivations of specific sentences which incorporate these different predicate types, to clarify these distinctions further. Then it will be appropriate to discuss MacDonald's diverging analyses of Russian and English.

2.1 The Syntax of English Predicates

MacDonald provides four rudimentary schematic trees to disambiguate his syntactic assessments of the different predicate types in English, from MacDonald (2008:28). I present these schematics in (1), and show actual derivations in (2). These trees show the most relevant area for the syntactic evaluation of verbal aspect, below the vP, as I mentioned directly above.

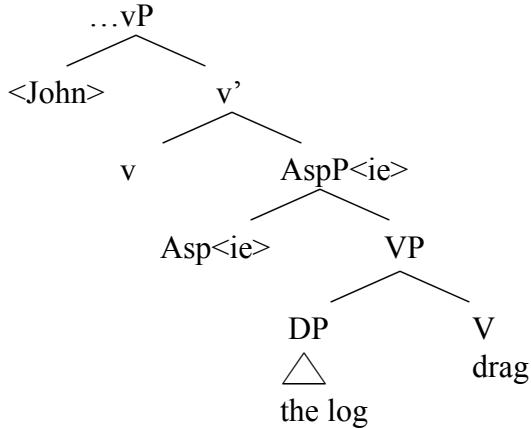
(1) Schematics for English ES



(2) English Derivations of the Above Schematics

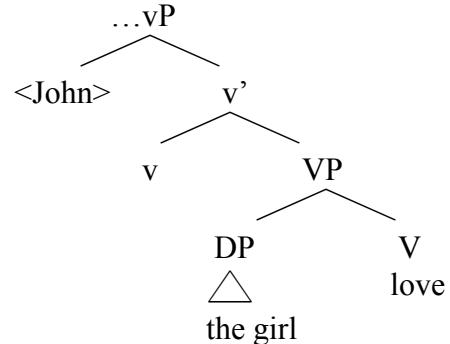
a. Activities

John dragged the log.



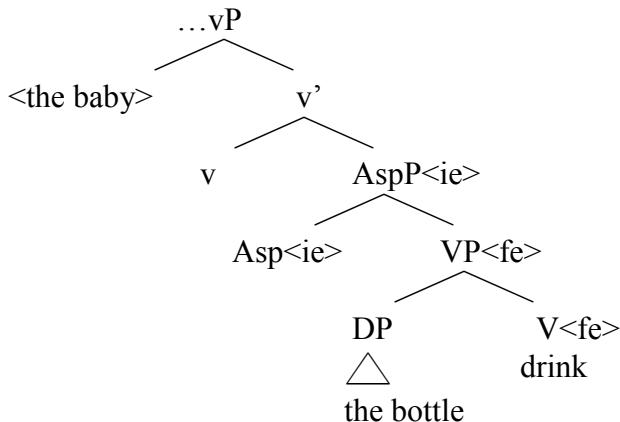
b. Statives

John loved the girl.



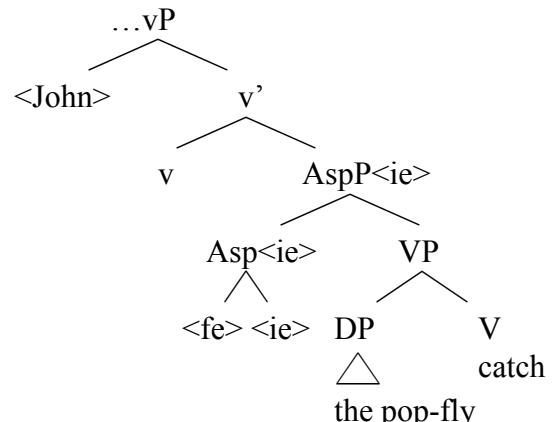
c. Accomplishments

The baby drank the bottle.



d. Achievements

John caught the pop-fly.



In the English activity sentence in (2)a, only the beginning of the event is understood to have taken place; there is no indication that the dragging of the log has come to an end, which is an atelic interpretation. Therefore, only the initial event feature <ie>⁹ is available for interpretation in the tree for (2)a. The stative derivation, however, in (2)b shows no event features. This is because, according to MacDonald (2008:28), there is no subevent structure in

⁹ I discuss event features more explicitly below in section 2.3.

stative predicates. In other words, statives do not express an event, but, as their label implies, only a state of affairs with no temporal limitations. The derivations in (2)c-d show telic English predicates and their respective event features. If a predicate is indeed telic, then a final event feature <fe> is always available somewhere in the derivation.

The difference between accomplishments and achievements in English, as shown in their respective trees, is where these event features merge. That the event features in accomplishment derivations are only available on separate head positions indicates time has elapsed between the beginning and end of the event, which MacDonald (2008:28) explains via the c-command relation between the respective <ie> and <fe> in accomplishment ES. This makes sense if one thinks about the timeline of the event expressed in (2)c. To finish drinking the bottle, the baby must first begin drinking the bottle, expressed in the <ie> feature on the Asp-head, then the baby must complete drinking the bottle, expressed in the <fe> feature on the V-head. In achievements, there is no such interpretation of time elapsing between the beginning and end of the event. In (2)d, John has not successfully completed the action until the pop-fly has reached his baseball glove, though this action is still not understood as having either begun or ended until the ball is in the glove. This is why the initial and final event features are only available on the same head, Asp. The initial event feature is the one to project in English, while this is not the case in the Russian equivalent, as shown in MacDonald's Russian ES schematics in 2.3 below.

As is clear in the above schematics and tree derivations I provide for them, MacDonald (2008) argues for the existence of an overt AspP in the inner aspect realm of deep syntax, below vP, in English. MacDonald subsequently makes several strong claims for the absence of AspP in Russian, at which point he purports a strict event-features approach to analyzing the ES of

Russian predicates. I will now briefly summarize MacDonald's arguments for the ES of English and Russian.

2.2 AspP in English; No AspP in Russian

MacDonald (2008) claims there is a projection AspP in English eventive statements, or those which incorporate overt event features to express the temporality of the event. This is a claim based on three properties of eventive predicates in English: 1) Object-to-event [OTE] mapping; 2) a multiple-events interpretation elicited by bare plurals [BPS]; and 3) the ability of a GoalP to turn an atelic predicate into a telic predicate. The first two properties are of the most import for my discussion here, and I will only focus on them in my discussion of MacDonald (2008). I will attempt to explain the relevant properties for both English and Russian in tandem so that the differences between the two languages on these issues may become more pronounced.

2.2.1 OTE-mapping in English

The OTE-mapping property of eventive predicates in English has to do with the type of internal argument and how it interacts with verbal aspect. MacDonald (2008:38-42) discusses the interaction between the telicity of the predicate and nature of the internal argument, or, namely, whether or not it represents a quantified object, syntactically represented as a feature [+/-q]. Mass nouns [MNS], such as *wood*, have a [-q] feature since they do not reference a particular entity in the world. A DP set off by a definite article in English, like 'the city', would be [+q] since it does reference some particular entity in the world.

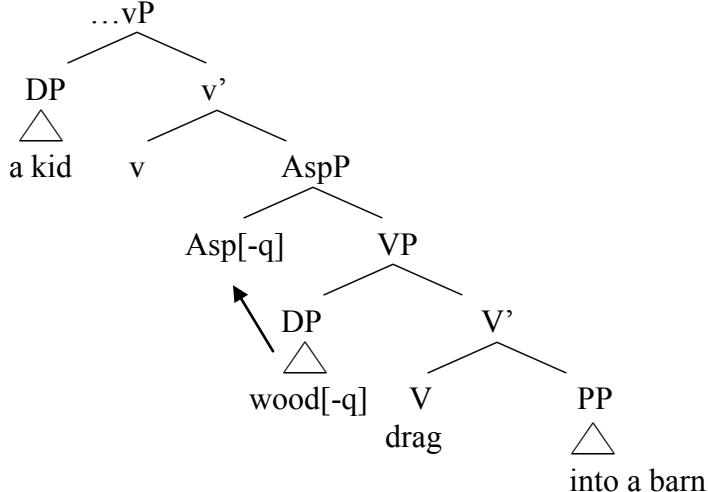
2.2.1.1 Agree and Asp: a syntactic account for OTE-mapping

MacDonald claims that to account for the syntactic distribution of MNS there must be an aspectual projection, AspP, between vP and VP and that MNS must Agree with the Asp head to

give an atelic interpretation of the predicate. An example from MacDonald (2008:43) with a tree diagram follows.

- (3) a. A kid dragged wood[-q] into a barn.

b.



The MN ‘wood’ Agrees with the Asp head and values it as [-q]; the arrow indicates this valuing relation. This Agree relation between Asp and the internal argument is, for MacDonald, the syntactic instantiation for the OTE-mapping property.¹⁰ If a MN values Asp, the predicate is atelic. If a [+q] NP values Asp, the predicate is telic. From a minimalist perspective on the nature of Agree, only the closest NP can value it, which explains why MN external arguments do not affect the telicity of the predicate.

2.2.1.2 No OTE-mapping in Russian

Consider the below sentences involving Russian imperfective and perfective verbs and durative phrases, ‘for an hour’, and time span adverbials, ‘in an hour’, from MacDonald (2008:146). I also used these sentences in the previous section of this paper, subsection 2.1, to show the basic differences between the perfective and imperfective aspects in non-modal Russian contexts.

¹⁰ The notion of Agree within the ES of a predicate will become important for my own syntactic account of aspect in negated Russian ModPs in section 3.2 below.

- (4) *Ja pil(I) butylku vina/vino* *za čas/ v tečeniji časa.
 I drank bottle of wine/wine *in hour/ in course hour
 'I drank a bottle of wine/wine *in an hour/for an hour.'

- (5) *Ja vypil(P) butylku vina/vino* za čas/ *v tečeniji časa.
 I drank bottle of wine/wine in hour/*in course hour
 'I drank a bottle of wine/wine in an hour/*for an hour.'

The imperfective in (4) does not allow for a time span adverbial phrase, while it does for a durative one. Conversely, in the perfective example in (5), the durative adverbial is not grammatical, while the time span adverbial is. These data subsequently show that the internal argument does not affect aspect, and, therefore, MacDonald (2008:147) concludes that there is no OTE-mapping in Russian. He does not, however, explicitly discuss the different natures of NPs in Russian and English. Since Russian does not have articles, it cannot express the [q] feature with a definite determiner, like 'the'. It does make sense that Russian internal arguments cannot affect aspect in general because of this fact, but in ~ModPs this is not always the case, as we saw in my discussion of Hudin's DO arguments for ~ModPs in 2.3.3 in part II. I will now discuss MacDonald's notion of Sequence of Similar Events [SSE] in English and its interaction with aspect.

2.2.2 Sequence of Similar Events [SSE] and Bare Plurals [BPS]

Consider the below sentences, from MacDonald (2008:46).

- (6) a. The guy drank shots for an hour.
 b. The girl ate cookies for an hour.

MacDonald finds that in these sentences there is an iteration of sub-events in which the internal object that undergoes each iterated sub-event is distinct, though belonging to the same class as the previous object. This encompasses the concept of SSE in English.

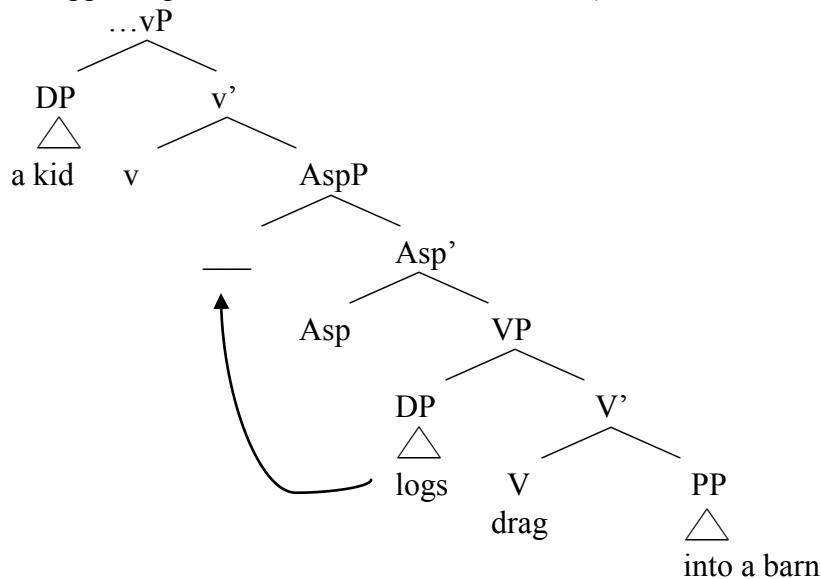
2.2.2.1 A Syntactic Account of SSE

MacDonald goes on to argue that BPS internal arguments move to *spec*, AspP to elicit their SSE interpretations. This indicates the necessity of AspP in English, which must be present for BPS to move into this position. Below is a tree derivation of an SSE interpretation of an English accomplishment.¹¹

- (7) a. A kid dragged *logs* into a barn.

(MacDonald 2008:52)

b.



As long as a BP is c-commanded by Asp, it can move into *spec*, AspP unless it is blocked, by such things as island-constraints. MacDonald (2008) finds that there is no such SSE interpretation elicited by BPS in Russian, as will be clear in the below subsection.

2.2.2.2 No SSE in Russian

Consider the sentences below that incorporate both perfective and imperfective verbs and BPS, from MacDonald (2008:147).

¹¹ The example in (7) shows an SSE interpretation with a BP and a GoalP. The predicate here, *drag*, is normally classified as an atelic activity predicate. However, as MacDonald argues for English, the presence of a GoalP can effectively turn an atelic predicate into a telic one, as the PP ‘into a barn’ does in (7). I leave this discussion for another time as this distinction holds little water for my own account of ~ModPs and aspect in Russian. See MacDonald (2008:148–50) for a more detailed discussion of GoalPs in Russian ES.

- (8) a. *Mary jela(I) jabloki.*
Mary ate apples
'Mary was eating apples.'

b. *Mary sjela(P) jabloki.*
Mary ate apples
'Mary ate apples.'

For an SSE interpretation, the predicate must be telic, and the example (8)a shows an imperfective verb and has an iterative meaning, showing it to be atelic. Therefore, there may be no SSE reading for Russian simplex imperfective verbs. If a bare plural in Russian is to elicit an SSE interpretation, then it would be expected to do so with perfective verbs, which are telic. However, the interpretation of the example in (8)b shows that the internal argument can only give a mass noun interpretation suggesting there is no SSE reading on BPS in Russian ever. This is more clearly shown with the ungrammaticality of the perfective in Russian with a durative.

- (9) *Mary sjela(P) jabloki* *v tečeniji časa.
 Mary ate apples *in course hour
 ‘Mary ate apples’ *for an hour.’

If the plural internal argument in (9) were to give an SSE reading, then it should be grammatical with a telic-perfective verb and a durative, with a reading where Mary finished eating one apple, then ate another, and another, and so on for an hour. However, this is never a grammatical construction in Russian. Therefore the DOs in the grammatical examples in (8) can only be interpreted as MNS, not BPS. Considering these arguments for the lack of OTE-mapping and SSE readings in Russian, MacDonald (2008:148) concludes that there is no AspP in Russian ES. At this point, the question arises over what in fact drives aspect choice in such constructions in Russian.

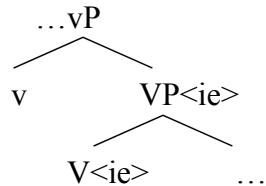
2.3 Russian ES and Event Features

According to MacDonald, event features represent the ES of a predicate. As I alluded to above in 2.1, an initial event feature <ie> must be present for the event to have a beginning, and

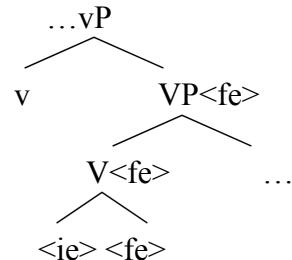
a final event feature <fe> must be present for the event to have an end. This is true in both Russian and English ES. Furthermore, event features are interpretable features, like person or number, and thus contribute semantic content and are visible in narrow syntax. The semantic component of these features comes with their respective interpretations of the beginning and end of an event (MacDonald 2008:76-7). The <ie> feature in English is always available on the Asp head, while the <fe> feature may be introduced either on the Asp or verb head. These distinctions for event features are quite different in Russian, however, which lacks AspP altogether.

If AspP is not present in Russian, then there must be some other element driving aspect in the non-modal contexts discussed in MacDonald (2008). MacDonald claims that there exist in the Russian syntactic system event-features literally introduced by the predicates or prefixes themselves when they are merged in the derivation. The initial event feature <ie> is introduced by the simplex imperfective verb, and the final event feature <fe> is introduced by the perfective prefix. Schematic trees are given below, from MacDonald (2008:149). I provide some simple derivations in (11) of the sentences from (8) above to show how these trees diagrams work with aspect.

(10) a. Imperfective

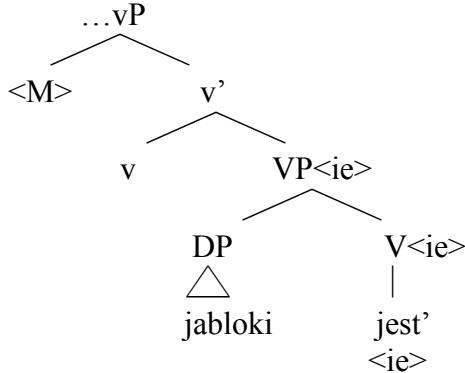


b. Perfective



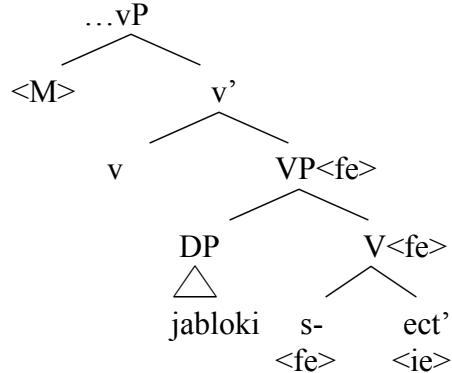
(11) a. Imperfective

*Mary jel*a*(I) jabloki.*
Mary ate apples



b. Perfective

*Mary sjel*a*(P) jabloki.*
Mary ate apples



The schematic and derivation in (10)-(11)a show the simplex imperfective structure for Russian vPs, which is similar to the structure of English activity sentences. The schematic and derivation in (10)-(11)b show the perfective prefix structure for Russian vPs, which resembles that for English achievements, differing only in that the <fe> feature projects instead of the <ie> feature. The simplex imperfective does not describe the end of an event, but rather the beginning of an ongoing occurrence, so no <fe> feature may be present and the <ie> feature is left to project up to VP from the verb head. In the perfective prefix schematic and derivation, the <ie> feature is still present as it is introduced by the simplex imperfective before it is merged with the perfective prefix, which again has a strong <fe> feature that projects up to VP to indicate perfectivity.

2.3.1 Different Properties of Russian Perfectives and Imperfectives

MacDonald (2008) finds that there are distinct distributional differences between these two verbal aspect components, which lead to the conclusion that, in non-modalized sentences, imperfective and perfective verbs in Russian have different properties and thus different syntactic structures. The first difference MacDonald explains is that only imperfective verbs may

embed under so-called ‘phase’ verbs, such as *stop*, while perfective verbs cannot, as shown in the below example, from MacDonald (2008:150).

- (12) a. *Mary perestala jest'(I) jabloko.*
 Mary stopped eat apple
 ‘Mary stopped eating the apple.’
 b. **Mary perestala sjest'(P) jabloko.*
 Mary stopped eat apple
 ‘Mary stopped eating the apple.’

Also, only imperfective verbs are licensed in periphrastic future constructions, while perfective verbs do not yield a grammatical interpretation with these,¹² as in the below example, from MacDonald (2008:150).

- (13) a. *Vasja budet čitat'(I) trudnuju knigu*
 V will read difficult book
 ‘Vasja will read a difficult book.’
 b. **Vasja budet pročitat'(P) trudnuju knigu*
 V will read difficult book

MacDonald also looks at entailments in imperfective and perfective constructions involving [počti] ‘almost’ and other Russian temporal elements; though I will not include examples of these latter claims here as they do not provide any productive intuitions for ~ModPs. The examples in (12) and (13) go to show that imperfective and perfective verbs in Russian have different properties that license them in different situations. These different properties may be attributed to the different event features <ie> and <fe> available for the simplex imperfectives and perfective prefixes, respectively.

While MacDonald’s above schematics, and the specific derivations I provide for them, help explain verbal aspect in Russian in a temporally linear fashion, aspect choice is not as transparent in negated Russian modal contexts. These aspectual constraints do not always hold in negated

¹² This will become a very important point in my analysis of inner aspect in Russian ~ModPs later in subsection 3 of this part of the paper. But for now, it is sufficient to know that intuitions along these lines differ in combination with negated modals.

Russian modal phrases, leading one to assume that the differences between the imperfective and perfective aspects of Russian predicates are not as disparate in negated modal contexts. Now that I have discussed MacDonald's notions of ES, inner aspect and event features for Russian and English, it would be appropriate to dive into my own analysis of ~ModPs and their respective ES configurations.

3. Predicate and Modal Classes in Russian

In Russian there are many different kinds of predicates and modals that have different properties and interpretations when it comes to aspect and ES. In section 3.1, I will begin by discussing the most pertinent types of predicates for my study of ~ModPs and verbal aspect choice in Russian. After this background, my own analysis in section 3.2 of negated Russian modals and verbal aspect will be more accessible.

3.1 Predicate Classes in Russian

As discussed in Borik (2006) and Schoorlemmer (1995), there appear to be two pervasive classes of predicates in Russian with respect to aspectual variation, the *Aktionsart* verbs and the *paired* verbs. Aktionsart verbs express some inherent quality of the event in question, and within this class of verbs there are two subclasses. Phase Aktionsart verbs express some particular part of an event, such as its beginning, end, or somewhere in between, as in [dožit'] 'to live out' or [otdat'] 'to give back'. Though they can have both perfective and imperfective forms, Schoorlemmer (1995) claims they are always telic, since they are incompatible with a durative phrase which tends to force an atelic reading. Consider the examples below which incorporate an Aktionsart verb in different positions.

Schoorlemmer refers to the second subclass of these verbs temporal Aktionsart verbs. These types of predicates express some durative aspect of the event, such as in [popisat'] ‘to write (for a while)’, and they are always atelic, since they are only grammatical with a durative, and not a time-span adverbial, as in the below example.

- (15) a. *Ona popisala*(I) *pis'mo v tečeniji čas/ *za čas.*
she wrote letter in course hour/*in hour
‘She was writing a letter for an hour/*in an hour.’

Aktionsart verbs, considering their inherent semantic component added to the root meaning of the simplex imperfective predicate, thus have a feature [inh] ‘inherent’, which does not permit normal aspect rules at LF to value the aspect on the predicate (Schoorlemmer 1995:99-102).

Paired verbs are a more straightforward class of predicates in Russian, and as they were the focus of MacDonald’s discussion, they will be my focus as well. Predicates in this class fall either into the perfective or imperfective categories, where the former indicates a telic reading and the latter an atelic reading, as in [stroit’(I)]/[postroit’(P)] ‘to build’. There is thus no [inh] feature on these types of verbs because they do not inherently represent telic events. See the below examples where the imperfective and perfective are ungrammatical with the time-span adverbial and durative, respectively.

- (16) a. *Ja stroil(I) stol* *v tečeniji časa/ *za čas.*
 I built table in course hour/ *for hour
 'I was building a table for an hour/*in an hour.
 b. *Ja postroil(P) stol* **v tečeniji časa/ za čas.*
 I built table *in course hour/ for hour
 'I built a table *for an hour/ in an hour.'

The examples in (14)-(16) show the various verb types in Russian and their interactions with certain TimePs, which indicate one temporal reading over another. As should be expected, only imperfective verbs are grammatical with duratives, while only perfective verbs are grammatical with time-span adverbials.

3.1.1 Perfective Affixed Predicates in Russian

I will generally discuss and treat only the imperfective in Russian as the simplex imperfective and the perfective as the perfective-affixed, not simply the perfective-prefix as discussed in MacDonald (2008). This is because I used corpus data in my analysis, which evidenced different kinds of paired verbs in Russian. The perfective forms of the paired verbs I will deal with in my analysis can be shown either through the addition of a prefix, the replacement of a suffix, or through the deletion of an infix from the imperfective form. There are some cases of predicates in Russian whose perfective forms are classified as irregular, as they do not correspond morphologically to their imperfective counterparts at all. I generally do not consider irregular forms here, as they are much rarer than the simple paired verbs I show typologically in below in (17). Furthermore, since this class of paired verbs has no [inh] feature to inherently denote telicity, they are the best examples to use in the negated modal contexts I consider in this paper. I provide a few examples of such paired verbs below, with the relevant affixes highlighted.

(17)	Prefixed:	čitat'(I)— proč itat'(P)	‘read’
		pisat'(I)— n apisat'(P)	‘write’
		delat'(I)— s delat'(P)	‘do/make’
	Infixed:	zarabat yvat '(I)—zarabotat'(P)	‘earn’
	Suffixed:	nosit'(I)—nest i (P)	‘bring’
		predlagat'(I)—predlož i '(P)	‘offer/assume’

Now that the particular predicates I include in my analysis below have been discussed, I may begin to discuss different modal phrases in Russian and their specific connections to ES and inner aspect.

3.2 Modal Classes in Russian

Now that I have established the predicate types I intend to deal with in this chapter, as well as the need for a syntactic examination of ~ModPs and aspect in general¹³, I can present my own analysis of specific modal phrases and their behavior with negation and aspect. There will be evidenced distinct differences between different kinds of negated modal phrases in connection to aspect choice in Russian.¹⁴ As you may recall from the first section of this paper, section 2.2, in certain cases of ‘bare’ negated modality, or negated modals not in the presence of ES modifiers, such as TimePs, there is a relationship between the modal reading and aspect, which is a semantic distinction. The spillover into the realm of syntax and inner aspect comes with the notion of modal and aspect features, which are interpretable features that express a semantic content.¹⁵

Starting in 3.2.1, I will begin my analysis of negated modals in Russian which show the connection between aspect and modal interpretation. In 3.2.2, I discuss the two modals, which do not show these distinctions and provide an analysis explaining this. It is important to note here that in these sections I draw distinctions between the modals on morphological and semantic bases, which allows me to place them into 2 separate classes, the modal adverbials and the modal verb/participle. I will then give syntactic analyses under section 4.1 and derivations of these disparate modals classes, which will help to classify them under separate syntactic

¹³ One of the major obstacles to overcome in a generative account of the semantic component of human language is the bridge between the Conceptual-Intentional (CI) interfaces, the research of which aims to connect the syntactic-semantic components of our language. See Chomsky (2007) for further theoretical discussion of CI and generative syntax.

¹⁴ I will continue to discuss what I mean by different *kinds* of Russian modal phrases, but the most obvious differences lie in their morphology and thus, syntactic classifications.

¹⁵ This correlates to the notion of ES in MacDonald (2008:27), namely, that it can be explained by interpretable features, such as the event features <ie> and <fe> as well as the [q] feature on DOs. As I will discuss further later, I do not include event features in my analysis of ~ModPs as MacDonald construes them precisely because of the altered ES brought out by modality and negation.

classifications. After this examination of verbal aspect choice within bare ~ModPs, I will discuss a few of the most relevant ES modifiers for my discussion of negated modality in 4.2.¹⁶

3.2.1 Modal Adverbials and Negation

When a modal adverbial shows morphological variation at all, it will agree with an internal object in gender or number, singular or plural. Yet this only occurs when no embedded predicate is present. Normally modals of this class either only select for a dative subject or no overt subject at all and appear in a neuter form when accompanied by an embedded predicate. Furthermore, to express the past or future, one must add a periphrastic tensed variation of [byt'] 'to be'.¹⁷ This is an interesting point to consider in reference to MacDonald's second claim in 2.3.1 above about the inherent differences between Russian imperfectives and perfectives in non-modal occurrences, namely that only the imperfective may embed under a periphrastic future construction.

3.2.1.1 Russian Periphrastic Constructions and the Perfective

The following are several examples of corpus data showing various modal adverbials in periphrastic constructions and accompanied by perfective verbs.

- (18) *Etu frazu ne vozmožno budet perevesti(P) na angliski: točno.*
this phrase not possible will translate in English exactly
'It is impossible to translate this phrase exactly into English.'
- (19) *Značit / bez moego vedoma ničego nel'zja budet sdelat '(P).*
Mean without my lead nothing impossible will do
'It means that it will be impossible to do anything without my lead.'
- (20) *A ved' ran'sje ničego nel'zja bylo kupit '(P).*
or (you know) earlier nothing impossible was-_{3rd, past, sg} buy
'Well you know, it was impossible to buy anything earlier.'

¹⁶ It is extremely important to note here that I am most concerned with aspectual *triggers*, as they are discussed in Schoorlemmer (1995). ~ModPs act as aspectual triggers only as a last resort. Temporal indicators and other aspect triggers, when present within ~ModPs, may override the modal interpretation aspect trigger.

¹⁷ Though this is also the case with [dolžen], there is no further evidence in such constructions that this modal behaves like the present modal adverbials with respect to aspect, and the issue seems rather moot because of this.

- (21) *Voobše nevozmožno bylo predložit’(P) / čto Bitlzi nam kogdanibud’ priedut.*
 ‘In general, it was impossible to assume that the Beetles would ever come to us.’

These examples show that it is both completely grammatical and common to embed perfective verbs underneath a periphrastic future construction within ~ModPs, as was prohibited in MacDonald’s analysis of such occurrences in non-modal contexts. The interpretation with such examples is that the event in question has an added emphasis on immediacy and represents a singular event in time. The past or future phrases do not exclude one aspect or another. This notion may be more obvious in the periphrastic past constructions in (20) and (21), considering the past inflection can lead to a singular event reading itself. All this goes to show that in such negated modal phrases, the imperfective and perfective aspects do not represent the same distinctive features that they normally assume in typical, linear-temporal speech. That ambiguities rise in the choice of verbal aspect in ~ModPs is no wonder.

Again, as I have suggested throughout this chapter, and will reiterate here, I am concerned with aspectual triggers within a ~ModP. An aspect trigger appears to be needed in such temporally ambiguous phrases, and can take the form of TimePs or adverbials and even the proposition represented in the DO, as I discussed for Hudin (1994) in 2.3.3 of part II. These last aspect triggers are much stronger than bare modal interpretations, which I am discussing now. The interpretation of negated modals should only be understood as a last resort aspect trigger, which is only used when other aspect triggers are not present. I will continue by giving separate analyses of the relevant modals that display this interpretational distinction with aspect choice, at which point I will discuss the analytical differences for the modals [moč] ‘can/able to’ and [dolžen] ‘must/should’.

3.2.1.2 The Modal Adverbial [nel'zja] ‘impossible/ impermissible’

As previously argued in Rappaport (1985) and de Haan (2002), this inherently negative modal clearly displays a distinction between the modal interpretation and the verbal aspect. This distinction between the modal reading and aspect choice is fairly regular and accepted in previous linguistic literature on [nel'zja], except of course in Hudin (1994). Where this modal is interpreted in an epistemic framework, as in the ‘b’ sentences below, the perfective is selected. When it is understood with a deontic reading, as in the ‘a’ sentences below, the imperfective is selected.

- (22) a. *Nel'zja čitat'/pisat'(I) knigu (segodnja).*
 impossible read/write book (today)
 ‘It is forbidden to read/write a book (today).’
- b. *Nel'zja pročitat'/napisat'(P) knigu.*
 ‘It is impossible to read/write a book.’

- (23) a. *Mne zdec' nel'zja stroit'(I) zdanie*
 me here impossible build building
 ‘It is forbidden for me to construct a building here.’
- b. *Mne zdec' nel'zja postroit' zdanie.*
 ‘It is impossible for me to construct a building here.’

I use the term *forbidden* to overtly mark the deontic reading, though the translation for [nel'zja] in such cases could also be *must not*. The extension of this principle to other negated modals has been argued against in Hudin (1994). However, the vast majority of examples she uses to construct this argument only included the negated modal verb [ne moč].¹⁸ As I argued in 2.2.2 of part II of this paper, the modal verb [moč] and the modal participle [dolžen] show dissimilarities both in morphology and interpretation from the modal adverbials I am discussing now. These differences, as they are borne out in the data, allow me to categorize the different modals into distinct groups. This should then allow for diverging syntactic analyses of the interactions

¹⁸ Hudin (1994:25-6) also presents two cases with [nel'zja] to back her claim, though these are certainly debatable, as I find her argument for the illocutionary force of the statement as reducible to the modal interpretation of [nel'zja], which I discussed in part II, subsection 2.3.2.

between [moč] and [dolžen], other modals and verbal aspect. I will now discuss two of what I call inherently strong deontic negated modal adverbials which normally appear with imperfective verbs in Russian.

3.2.1.3 The Modal Adverbials [nado] and [nužno] ‘need/have to’

The following two modals display a much stricter semantic interpretation than that for [nel'zja]. I call them strong deontic modals because their interpretations are in fact limited to a deontic reading, as is the case for their English counterparts. The modals [nado] and [nužno] ‘need/necessary/have to’ correspond to the modal interpretation distinction I, and other linguists, have drawn for [nel'zja] and aspect choice. When negated, these inherently deontic modals are almost always used with the imperfective in temporally bare contexts.¹⁹ Below are examples of these modals in appropriate contexts.

- (24) *Ja vam v glaz tyknula? Ne nado mne glaza vykalyvat'(I)! Ja pobelila!*
I you in eye poked not need me eyes gouge I won
'I poked you in the eye? I don't need my eyes gouged out! I won!'
- (25) *Nu konečno//Znaeš' / ne nado vot tak govorit'(I).*
well of course know-3rd, pres, sg not need here so speak
'Well of course you know that (we) don't need to speak so here.'
- (26) *Eto vampoka tože ne nužno znat'(I).*
this you presently also not need know
'For the present, this is also not necessary for you to know.'
- (27) *No i ne nužno zabyvat'(I) eščjo i o tom/čto zavtra*
but and not need forget still and about that what tomorrow
vperedi...
ahead
'But still it is not necessary to forget about what's ahead tomorrow.'

These examples, repeated from part II, 2.2.2-3, show the pattern well, namely, that these two modals, when combined with negation, no matter the scope, lead to the selection of the

¹⁹ I show examples later in section 4.2 of these negated deontic modals used with the perfective in highly contextualized cases involving ES modifiers. These cases, however, should not hurt the theory at hand.

imperfective aspect. The intuitions behind this have to do with the notion of a negated deontic reading of a modal. If a necessity, duty, obligation or permission were negated, in such instances as above, then it seems appropriate to assume that the event expressed in the ~ModP is understood as never having begun. The simplex imperfective is the only verbal form available in Russian that can express this concept, since the perfective is strongly tied to the completion of an event or action. Now I will discuss an inherently strong epistemic modal in Russian and its interaction with aspect.

3.2.1.4 The Modal Adverbial [vozmožno] ‘(physically) possible’

As has been evidenced in the Russian National Corpus data I have reviewed, as well as in my conversations with native Russian informants, this modal when not used in a negative framework normally stands alone as its own adverbial clause without an embedded predicate. This construction, simply [vozmožno], would translate to ‘It is possible’, with the referring event in another clause, as in the below examples.

- (28) a. *Vozmožno čto on stroil(I) mašinu.*
 possible that he built car
 ‘It is possible that he was building the car.’
- b. *Vozmožno čto on pročital(P) knigu (vpolne).*
 possible that he read book (completely)
 ‘It is possible that he read the book (all the way through).’

Native speakers tend to call this a simple *adverbial* use of this modal, and considering it normally stands alone without negation, it would seem to be a sentential adverbial phrase in such contexts. With negation, however, this modal is much more common with embedded predicates in the corpus data. Furthermore, it is readily used with the perfective form of its corresponding predicate. In cases where the imperfective is selected, it is either because there is no corresponding perfective form of the predicate in question or because other temporal limitations

are in effect. These distinctions will become clearer later when I discuss modal ES modifiers in 4.2.

Note that to this point, I have mainly presented examples where the linear order is NEG>ModP>VP. However, several examples display a VP>NEG>ModP surface order. Though this sort of word-order variation is common within almost all of the Russian modals I have reviewed thus far, there is no effect on verbal aspect. For this reason, I will not try to account for dislocation processes in Russian and will generally assume a NEG>ModP>VP underlying order at the inner aspect level, which is similar to the way MacDonald (2008) deals with inner aspect in Russian. Consider the following examples from the National Russian Corpus.

- (29) *Rezul'tat voiny pokazal / čto Ameriku ostanovit' (P) praktičeski ne vozmožno.*
‘The result of the war showed that it is impossible to stop America.’
- (30) *No ja tak real'no dumaju / čto bol'se ego sdelat' (P) ne vozmožno.*
‘But I think in reality that it is impossible to do more.’
- (31) *Tebe svojo slovo narušit' (P) nikak ne vozmožno.*
‘It is impossible for you to break your word in any way.’
- (32) *... Ego ne vozmožno otritsat' (I)...*
‘It is impossible to deny it.’

These examples, the first two of which I showed in 2.2.1 in part II of this paper, clearly show how readily this modal in a negative context selects a perfective as opposed to an imperfective verb. Examples like (32) show this negated modal with an imperfective verb form. The verb [otrītsat'] ‘to deny’, however, lacks a perfective form altogether, as is the case with some Russian predicates. Those examples of [ne vozmožno] and an imperfective in the corpus resembled the type presented in (32). When there is no perfective form of the verb available in the lexicon, no [PERF] feature is ever available in the syntax and thus the [IMP] feature may be the only one selected.

Again this only occurs in instances where the predicate used does not have a corresponding perfective form. I will discuss this modal later in instances where other temporal elements allow for the imperfective. But suffice it to say that in contexts where a perfective verb is available and there are no other ES modifiers present, the perfective is indeed the more popular choice in [ne vozmožno]-phrases.

The next and final modal adverbial, [možno],²⁰ to discuss may be considered the less *forceful* version of the previous one, in that it does not inherently imply physical possibility, or a strict epistemic use. It is often used with a notion of ‘non-physical’ possibility, such as permission, which corresponds to a deontic interpretation, as in the below example.

- (33) *Zdes' možno kurit'(I).*
 here may smoke
 'May/can I smoke here?'

It is very difficult to elicit a strictly epistemic reading of this modal since its semantic content does not generally allow for it. Though this modal does show the same morphological variations as those modal adverbials I have previously discussed, it may be freely used with either the perfective or imperfective aspects regardless of the modal interpretation. However, this should not hurt the theory because [možno] displays several other properties which seem to segregate it syntactically from those adverbials with a strong connection between interpretation and aspect.

3.2.1.5 The Modal Adverbial [možno] ‘may/can’

The first issue with [možno] is that it has a rather strict distribution when it comes to the scope of negation and modality. In other words, in present day conversational speech in Russian, this modal almost always appears with a narrow scope of negation at surface order. While there

²⁰ I did not include examples of [možno] in part II of this paper because it does not show the interpretation-aspect distinction, and is often used in rather idiomatic circumstances, though a discussion of it here seems appropriate for a more complete syntactic analysis of ~ModPs in Russian.

were numerous examples from the corpus of a surface order NEG>ModP, nearly all of them were from 19th century literary sources, or from religious texts. One of my informants reported for this modal in the presence of negation that since the beginning of the 20th century, it has been considered either improper or simply uneducated to use this particular hierarchical order, though it remains grammatical in “countryside” colloquial speech. Consequently, the more contemporary sources I used, which seem to be the most relevant for a modern syntactic basis of analysis, the more the linear order ModP>NEG was evidenced.

As the following examples will attest, this negated modal relies on contextual cues rather than simple modal interpretation to determine grammatical aspect. Therefore, this modal displays some different properties from the other modal adverbials I have discussed in relation to aspect choice and modal interpretation.²¹ Consider the following sentences.

- (34) *Možno ne govorit'(I) ob etom segodnja, potomu čto u menja net golosa.*
may not speak about this today because at me no voice
'(I) cannot speak about this today because I've lost my voice.'
- (35) *Kak možno ne pogovorit'(P) o svoix detjax?*
how may not speak about own children
'How may (I) not speak about my own children?'
- (36) *Možno ne stroit'(I) etot gom, potomu čto on nikomu ne nužen.*
may not build this house because it nobogy not needs
'This house does not have to be built because no one needs it.'
- (37) *Kak možno ne postroйт'(P) takoi klub?*
how may not build such klub
'How can such a club not be built?'

²¹ Since this interpretational connection between modal adverbial reading and aspect choice is strongest with those modals that display a favored NEG>ModP order, I find that the c-command relation here between negation and modality is rather important. The negation should be higher than the modal so that it can effectively negate its interpretation feature, either [DEO] or [EPI], which then may help to guide aspect in bare temporal contexts. This process will be shown in tree format later in my syntactic analysis.

These examples show that [možno], when combined with negation, does not show a pattern with modal interpretation and aspect choice. The example in (34) is obviously about epistemic circumstances, where the silent subject, omitted from the matrix clause, physically cannot speak because he has lost his ability to produce sound vocally. While such a reading with other modal adverbials like [nel'zja] and [vozmožno] would tend to indicate the perfective aspect in bare temporal contexts, [možno] may appear with the imperfective. Example (35) displays a deontic reading of the modal with a perfective verb in a question format. This is never the case with the other modal adverbials with deontic interpretations. Example (36) incorporates a deontic reading with an imperfective verb, though the presence of [ne nužen], in a masculine participial form, in the second clause may be shrouding the ES in a semantic way.²² Finally, in (37) this modal appears with a perfective verb and an ambiguous modal interpretation. Since this example is in question format and a relative pronoun is included in the embedded DP, the possibility of building the club is not transparently understood as physical or non-physical. Either way, the perfective is used to indicate the singular act of building a club.

The above examples (34)-(37) hopefully show that with [možno] and negation the modal interpretation does not act as a last resort aspect trigger as do those of the other modal adverbials. Though [možno] belongs to the same morphological class as the other modal adverbials, its distribution with negation and interaction with ES is not the same. I will now discuss the other two modals I included in 2.2.2 of part II, which do not show an aspect-interpretation pattern.

²² This could be similar to the way in which the strong deontic negated modals [ne nado] and [ne nužno] direct aspect with their negated deontic interpretations, as I discussed above in 3.2.1.3.

3.2.2 Other Russian Modals and Negation

The two modals I consider in this section display morphological and syntactic differences from those above. These differences, as with those for [možno], place these modals into different categories, which should allow for diverging syntactic analyses of each modal type, which I will show later in section 4.

3.2.2.1 The Modal Verb [moč] ‘can/able’

This modal verb, as it has been called in past literature, (de Haan 2002:93), displays some very concrete differences from the other modals I have discussed. First of all, being an overt verbal predicate, [moč] is used with either an overt or ‘silent’ subject²³ in the nominative case, which will prove an important distinction. This morphological deviation not only applies to number and gender (only in the past) agreement with the subject, but also to aspect and tense. The infinitive form [moč] is in the imperfective; one may add the prefix /s-/ to introduce the perfective aspect on this predicate. The perfective form may also be used in the future construction typically associated with the perfective aspect on Russian predicates not in the past tense. Consider the following examples.

- (38) a. *Ja ne mogu pisat’(I) knigu.*
 I not can-_{1st, pres} write book.
 ‘I cannot write (a) book.’
- b. *Ja ne mogu napisat’(P) knigu.*
 I not can write book

- (39) a. *Ja ne mogu pisat’(I) knigi.*
 I not can write books
 ‘I cannot write books.’
- b. *Ja ne mogu napisat’(P) (eti) knigi.*
 I not can write (these) books

²³ A silent subject is one that has been deleted but is still covertly present in the syntax as it is spelled out morphologically on the verb.

- (40) a. *Ja (nikogda) ne smogu pisat' (I) knigu.*
 I (never) not will be able write book
 'I'll never be able to write a book.'
 b. *Ja (nikogda) ne smogu napisat' (P) knigu.*
 I (never) not will be able write book

In all the above sentences, the modal verb agrees in number with its nominative agent.

Furthermore, the imperfective and perfective aspects are grammatical, regardless of the deontic or epistemic reading on the modal. These are distinct counterexamples to the modal adverbials I showed above under 3.2.1, which showed a direct connection to the interpretation of the modal and the preferred aspect.

There are, however, several differences between these sentences. The imperfectives in the (a) sentences connote a process reading, while the perfectives in the (b) sentences imply both an achievement reading and an added immediacy to the timeframe of the negated event. To reiterate, the immediacy of the event introduced by the perfective may be understood as an emphasis on the necessity for the event to be completed, or not completed in negative contexts, as soon as possible. Also, the bare plurals in (39) tend to help elicit an atelic-imperfective reading of the event. The fact that the perfective aspect in (39b) is selected has to do with context-dependent properties, such as object-reference and, again, immediacy of the event. The demonstrative [eto] 'this', in the plural in (39b), is not necessary for the perfective aspect to be used if the emphasis on immediacy is strong enough. Finally, the examples in (40) show the perfective-future construction of this modal, which is grammatical with both aspects on the embedded predicate depending on the context. These examples show wide scope of negation; below are examples of a reversed linear scope.

- (41) a. *Ja mogu ne pisat'(I) knigu.*
 I can not write book
 'I cannot write a book.'
 b. *Ja mogu ne napisat'(P) knigu.*
 I can not write book
- (42) a. *Ja mogu ne zapabatyvat'(I)....*
 I can not earn...
 'I cannot earn...'
 b. *Ja mogu ne zarabotat'(P)...*
 I can not earn

In these scope reversal examples, the main difference from a semantic/pragmatic standpoint has to do with an added volitional voice to the meaning of the sentence. In other words, there is a decision making process embedded within the meaning of the event. A paraphrase of these examples would include a qualifying clause, such as 'If I want' or 'I may not have a chance if'. A tonal implicature in English is equivalent, as in the utterance 'I can... *not earn*' which seems to imply this volitional aspect of the event. This may have to do with verbal constituent negation, as opposed to modal negation normally inferred from an order of NEG>ModP.

Otherwise, the aspects in the above examples (41)-(42) behave similarly to those in the first set of examples, (38)-(40). The above data lead me to conclude that the interpretation of the modal verb [moč] when combined with negation, and most probably without it, does not interact with ES. Considering that a nominative agent subject is always overtly or covertly present with this modal, and that the temporality and nature of the event is always considered in determining aspect, it seems appropriate to claim that the ES in negated [moč]-phrases can only rely on such temporal indicators for aspect choice. I will now discuss another modal which does not show a strong connection between its interpretation and aspect, but which also displays properties that effectively distinguish it from the first class of modals I discussed above in 3.2.1.

3.2.2.2 The Modal Participle [dolžen] ‘should/must’

This modal, as was discussed in de Haan (2002:97), almost always appears with a deontic interpretation. In fact, it is very difficult to elicit an epistemic reading of this modal without shrouding the utterance in contextual complexity. Furthermore, since this modal is nearly always used with a deontic interpretation, and it may appear with either the imperfective or perfective aspect on the verb no matter the interpretation, then it would seem that aspect choice within negated [dolžen]-phrases must be determined by other factors. That there is no strong connection between the interpretation of [dolžen] and aspect choice does not hurt the theory for the same reasons displayed by [moč]. The modal participle²⁴ [dolžen] displays some unique properties of its own that dissociate it from the modal adverbial class. The following examples will show this modal’s distinguishing properties along the lines of morphology, semantics and interactions with aspect.

- (43) a. *Ja ne dolžen zvonit’(I) otsjuda.*
 I not should call from here
 ‘I should not call from here.’
 b. *Ja ne dolžen pozvonit’(P) otsjuda.*
 I not should call from here

- (44) a. *Ja ne dolžen stroit’(I) dom.*
 I not should build house
 ‘I should not build a house.’
 b. *Ja ne dolžen postroit’(P) (etot) dom.*
 I not should build (this) house

- (45) a. *My ne dolzhny stroit’(I)/postroit’(P) (etot) dom.*
 ‘We should not build (this) house.’
 b. *Ona ne dolzhna stroit’(I)/postroit’(P) (etot) dom.*
 ‘She should not build (this) house.’

²⁴ Though this modal may appear in an impersonal adverbial form, [dolzhno], this form is not very productive for our discussion of inner aspect and negated modality in Russian for several reasons; in the Russian National Corpus I have used for data collection it is only used with a dative experiencer subject in 19th century literary and religious contexts, and in contemporary data it is only used in either simple impersonal adverbial expressions or in an idiomatic construction with the infinitive verb [byt’] ‘to be’, translatable to ‘it should not be...’.

This modal almost always appears in constructions like those above, where there is a direct connection between the overt subject and the event in question. This is evidenced in the fact that the subject, when it is present, is in the nominative case, which is reserved for active agents. The other modals I discuss can only select for dative experiencer agents, which semantically and syntactically isolates the subject from the action. In other words, a dative experiencer subject is not, as the title implies, the agent of an action.

Therefore, I do not call [dolžen] a modal adverbial but rather a modal participle that does not block normal aspect rules in Russian. Like the modal verb [moč], negated [dolžen] phrases must rely on other temporal cues than modal interpretation in bare aspect contexts to direct aspect choice. The imperfective examples in (43a) and (44a) are understood to be general statements about the events in question, while the perfective examples can have both an added immediacy and specificity to the event. These intuitions correlate nicely with those for [moč], which shows the similarities of these two modals with respect to ES. Though these modals may not belong to the same morphological classes themselves, they both agree in number and gender with their subjects, as I show in the examples in (43) for [dolžen], and display similar aspectual interpretations.²⁵ Now, after this rather extensive discussion and initial analysis of the different modal phrases I include in this paper, I will present some structural analyses of the various modals in the proceeding sections.

4. Structural Analyses of Russian ~ModPs

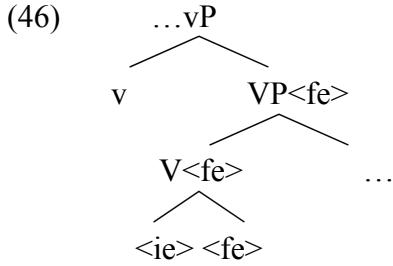
Considering all the data I presented for modal adverbials in 3.2.1 above, and their various differences with [moč], [dolžen] and [možno], it seems feasible to conclude that the interpretation on a negated modal adverbial affects verbal aspect choice in temporally bare

²⁵ I will present more examples of both [dolžen] and [moč] in negative constructions later when I discuss _{ES} modifiers in ~ModPs and verbal aspect choice, which will help clarify the temporal cues these, and other, modals may use to determine the most appropriate aspect.

contexts. The inherently negative modal [nel'zja] has a very strong connection between the imperfective and perfective and its deontic and epistemic readings, respectively. The inherently strong deontic modals [nado] and [nužno], when negated, select the imperfective. The inherently strong epistemic modal [vozmožno] selects for a perfective verb. There are, of course, extenuating circumstances which could allow different verbal aspects from those which the above rules would indicate. The following conditions will allow for differing aspects in negated modal adverbial phrases in Russian: there is no perfective form available; there are ES modifiers present, or the durative semantics of the predicate do not permit a telic-perfective reading in any case, such as with verbs like [žit'] ‘to live’ or [pravit'] ‘to govern’. ES modifiers will be examined after I discuss modal ES and those particular modal adverbials whose interpretations act as last resort aspect triggers.

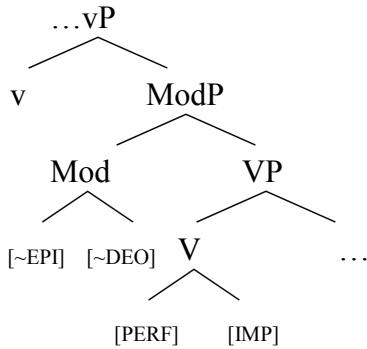
4.1 Modal ES in Russian

With all the modal adverbial cases I have discussed in mind, there certainly does seem to be a pattern between the modal interpretation and verbal aspect choice in bare contexts of negated modality in Russian, those without the above modifying conditions. Since there is a direct distinction between the modal interpretation and verbal aspect within the ambiguous modal [nel'zja], and there is a similar connection to the more concrete deontic/epistemic modal adverbials I have discussed with respect to verbal aspect, I find that in such cases both the perfective and imperfective begin as possible verbal aspect choices. Once the modal reading is recognized syntactically, the deontic/epistemic feature will project and consequently pull the imperfective/perfective aspect feature up to be visible on a syntactic level. For this construction, I adapt MacDonald’s version of the Russian perfective inner aspect model, which I included above under 2.3, but repeat below for clarity.



There are two important differences between the above schematic and the one I will provide for negated modal adverbials below. First, since the predicate in Russian has lost its ability to introduce its own event features, and that the temporality of the event in question has been altered/modalized, I will stick with [PERF] ‘perfective’ and [IMP] ‘imperfective’ aspect features, as opposed to *<ie>* and *<fe>* event features. This distinction takes the focus of our discussion away from the nature of the event, and more appropriately to the nature of the modality of the event. Second, I place the modal, similar to MacDonald’s AspP in English, between vP and VP so that it may project its respective features to direct aspect at the most pertinent level of inner aspect. The schematic for this construction resembles the following.

(47) Schematic for Modal ES in Russian



To this point, I have not connected the modal interpretation, verbal aspect *and* negation as the three most important components going into verbal aspect choice in bare modal contexts in Russian. The negation is certainly important, both for semantic and syntactic reasons. Though the scope position of negation in the sentence does not seem to affect aspect itself, it does affect

modality on a syntactic level. The modal adverbials I have discussed always have their respective [EPI] and [DEO] features present, and it is when these features are negated that aspect choice becomes more ambiguous. This is why I have applied the negative marker ‘~’ to the [DEO] and [EPI] features on the Mod-head above.

4.1.1 Syntactic Analyses of Adverbial Modal ES

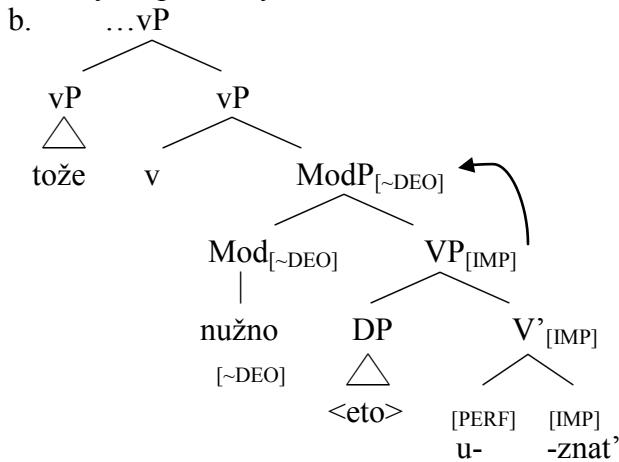
On a syntactic level, if the modal adverbial is understood with a [~DEO] ‘negated deontic’ feature, then the imperfective is selected and projects to VP where it may become syntactically visible. The same rule applies for a [~EPI] ‘negated epistemic’ feature on the modal, for which the perfective projects to VP to be syntactically visible.²⁶ This is a fairly straightforward and unambiguous way to deal with these types of modal adverbials which have been clearly evidenced to display a connection between modal interpretation and verbal aspect choice. I will now apply the above schematic to syntactic derivational analyses of a few of those particular modal adverbials which fit this distinction.

4.1.1.1 Strong Deontic Modal Adverbials and Inner Aspect

Below is a syntactic derivation of a strong deontic negated modal adverbial, which shows the aspectual interactions at the inner aspect level. I provide a tree of the inner aspect level of example (26) under 3.2.1.3 above, which incorporates the inherently strong deontic modal [nužno] ‘need/have to’. (I assume the surface head [eto] ‘this’ begins as a VP complement, before it moves to the maximal head position for focus/dislocation purposes.)

²⁶ This general rule, as I discussed in 3.2.1.5 above, does not apply to the modal adverbial [možno] for the syntactic reason that negation always takes narrow scope in relation to this modal. If the negation always appears below ModP with this particular modal, the interpretation feature [DEO/EPI] is not negated via a c-command relation and thus does not interact with aspect in the inner aspect realm of deep syntax.

- (48) a. *Eto vam poka tože ne nužno znat' (I).*
 this you presently also not need know



Since the modal adverbial [nužno] is inherently deontic, only the [DEO] feature is available for a syntactic evaluation of this modal. Thus, the simplex imperfective is selected and its [IMP] feature projects up to VP to Agree with the [~DEO] feature projected onto ModP. The arrow shows this Agree relationship. I provide the perfective prefix, in MacDonald's language, under the perfective feature of the V-head, assuming that when it is selected to project up, its morphology simply merges with the simplex imperfective to create a whole perfective form. This encompasses my own analysis of negated modal adverbials in the inner aspect realm of syntax.

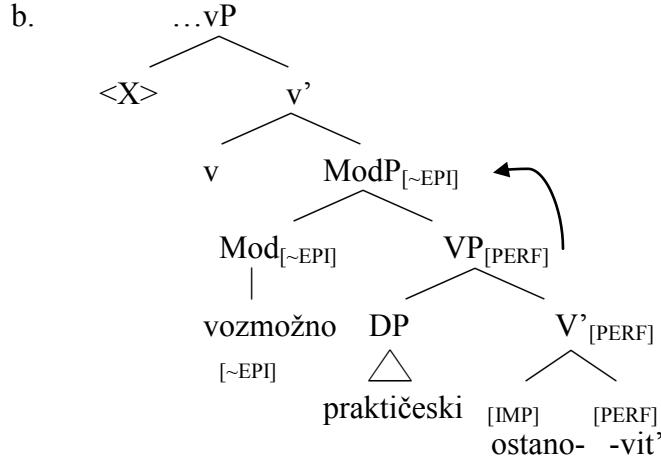
Now that I have given a syntactic derivation of a strong deontic negated modal, it would be appropriate to show the process with a strong epistemic.

4.1.1.2 The Strong Epistemic Modal Adverbial [vozmožno] and Inner Aspect

The interaction between modal interpretation and aspect for this modal will work exactly the same as that for [nužno] above, though only the [EPI] feature is available and the [PERF] feature projects. Consider the following derivation of example (29) from 3.2.1.4 above.²⁷

²⁷ Though this sentence shows a rather scrambled surface order of the relevant constituents, I will show in the derivation what I consider to be the underlying order of NEG>ModP>VP, which I also discuss in 3.2.1.4 above.

- (49) a. ... *Ameriku ostanovit'*(P) *praktičeski ne vozmožno*.
 America stop practices not possible

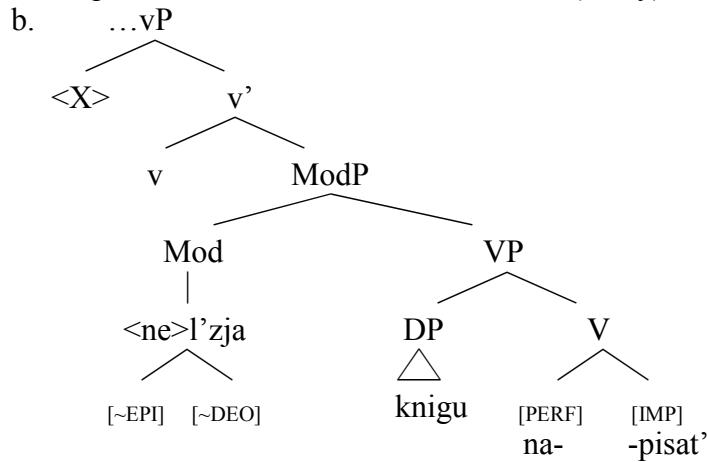


The [~EPI] feature projects up to ModP where it can pull the perfective, shown here as a suffix attachment, feature up to be syntactically visible, at which point the perfective form is selected. The above two derivations are shown with straightforward modal adverbials whose readings are relatively fixed as either deontic or epistemic. I present one more derivation below with the strong but ambiguous modal [nel'zja].

4.1.1.3 The Strong Modal Adverbial [nel'zja] and Inner Aspect

The strong modal adverbial [nel'zja] can show variation within its interpretation, though it still shows a strong connection between its modal reading and aspect choice. This connection is explicated syntactically in the below derivation for the perfective and imperfective examples in (22), under 3.2.1.2 above.

- (50) a. *Nel'zja pisat'(I)/napisat'(P) knigu (cegodnja).*
impossible write book (today)



This tree schematic can be used for both the imperfective and perfective cases. In the epistemic reading of (50a), the negated epistemic feature of the modal will project up to ModP at which point it can pull the perfective verb feature up to the syntactically visible position on the VP projection via an Agree relationship. The same goes for the deontic reading, except that the negated deontic feature and the imperfective verb feature are the ones to project up to visibly syntactic positions. I place arrow brackets around the [ne] negative prefix on this modal, since this particle usually stands alone in the Russian syntax system in its own NegP projection.²⁸

These tree diagrams and schematics help to differentiate the apparent connection between one modal reading and a particular aspect in negative contexts where there are no other semantic-syntactic elements that can block such modal-aspect interactions. I will provide some syntactic derivations of the modals [moč] and [dolžen], which do not show the interpretation-aspect connections that the above three modals do.

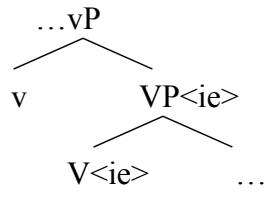
²⁸ Sue Brown gives a very interesting and impactful assessment of the syntax system for negation in Russian in her book *The Syntax of Negation in Russian* (Brown 1999), though I will not diverge into a discussion of it here for she does not discuss interactions between modals and negation.

4.1.2 A Structural Analysis of [ne moč] and [ne dolžen]

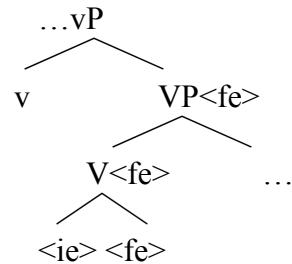
Considering the data I presented above for these two modals, and my subsequent arguments for inner aspect and ES within these ~ModPs, it seems plausible to ascribe more normal aspect rules or indications in the determination of grammatical aspect in these cases. To this end, I will use MacDonald's schematics for Russian perfective and imperfective inner aspect as I presented them earlier in example (10) in 2.3 above, and repeat them below.

(51)

Imperfective



Perfective

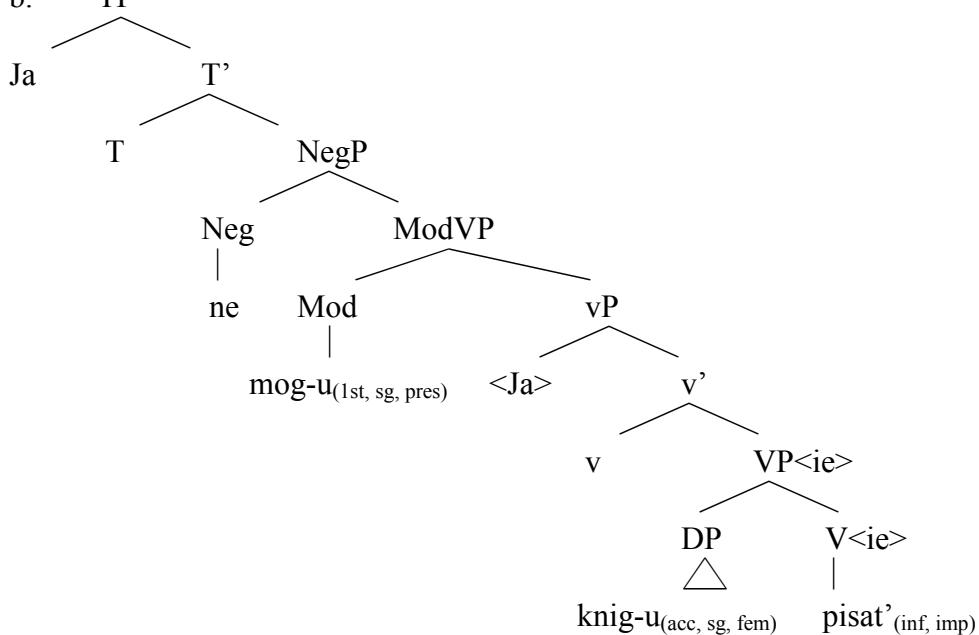


The event features present in these schematics are appropriate to use in derivations of [ne moč] and [ne dolžen] phrases because they indicate a temporal framework for ES, which correlates to the notion of ‘normal’ temporal aspect rules in Russian. I will now give two tree derivations of sentences from the data in 3.2.2 to show the aspect interactions.

- (52) a. *Ja ne mogu pisat' (I) knigu.*

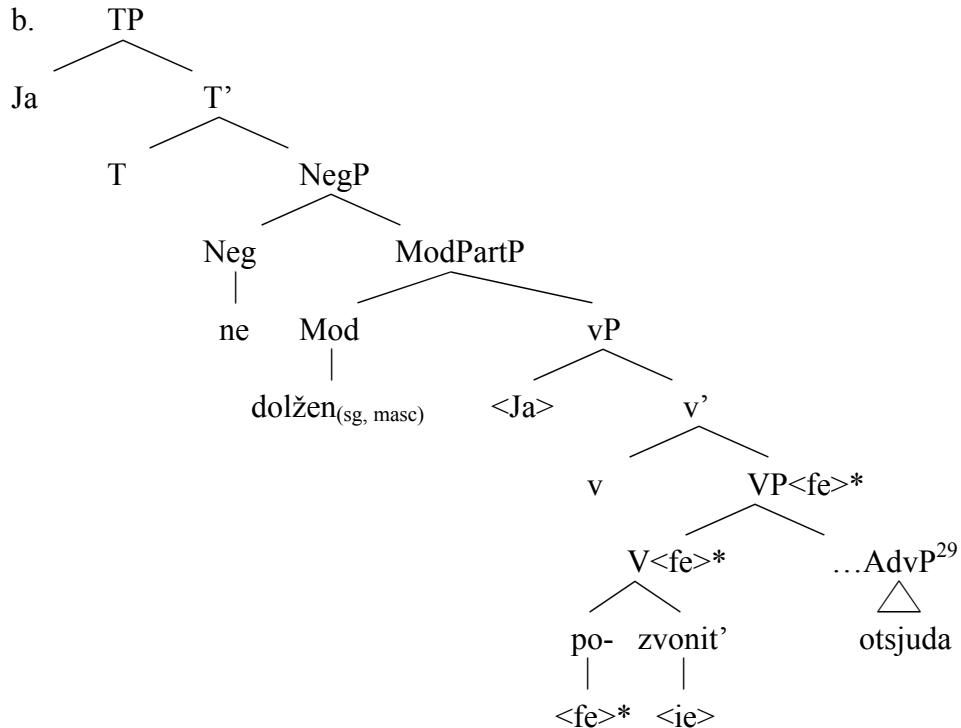
I not can write book

b.



Here, the modal sits outside of the vP, and is therefore not affecting aspect in the inner aspect realm of deep syntax. I label the syntactic category of [moč] ModVP ‘modal verb phrase’ in order to delineate it from the adverbial classes I showed derivations for in (48)-(50) above. The initial event <ie> feature in this simplex imperfective structure projects from the verb up to the VP level to become syntactically visible. In (53) we see a perfective with the negated modal participle [ne dolžen].

- (53) a. *Ja ne dolžen pozvonit'(P) otsjuda.*
 I not should call from here



In this derivation, the final event feature <fe>, introduced by the perfective prefix [po-], projects up to the VP level to become syntactically visible. I place the asterisk '*' beside the <fe> feature here to indicate its strength over the <ie>, which precipitates its projection over this initial event feature. This feature strength may be attributed to the added emphasis on immediacy of the event indicated by the perfective aspect. I label the syntactic category of [dolžen] a ModPartP, which is a little verbose but clearly delineates this modal type from the previous modal verb and modal adverbials. These trees correspond well to the conclusions I came to at the end of 3.2.2 above; these two particular modals themselves do not affect inner aspect and thus do not sit in a projection that could do so, one inside the vP.

²⁹ Though this AdvP may be an adjunct off of the vP, it does not play into my analysis of ES in this particular example, so its exact syntactic position is not of import here.

Now that I have thoroughly discussed modal ES not in the presence of temporal elements which could lead to either telic or atelic interpretations themselves, I can briefly discuss a few ES modifiers.

4.2 Modals and ES Modifiers

I will now discuss two overt ES modifiers that may be used as aspect triggers in ~ModPs.³⁰ These two modifiers are discussed at length in MacDonald (2008): the durative phrase and the time-span adverbial. As will become clear, these phrases direct aspect in instances where, otherwise, the aspect choice may be governed by the modal interpretation. It is for this reason, similar to the analysis MacDonald gives to the durative, that I find these types of phrases scope over ES, and do so by sitting in the same position as MacDonald's AspP for English and my own ~ModP in Russian. These modifiers effectively block the modal itself from directing aspect as a last resort. Russian speakers must use aspectual cues to determine the most grammatical verbal aspect for the situation, and TimePs are strong indicators of aspect in general in Russian, as they are in English.

The other ES modifiers discussed in MacDonald (2008:151), the adverb [počti] 'almost' and the 'it takes X-time' phrase, are not very productive for a discussion of inner aspect in Russian ~ModPs. The sentence, 'John should not almost catch the raccoon', sounds just as strange in Russian as it does in English. Therefore, aspectual intuitions in such constructions in Russian are not very helpful, as I am most concerned with triggering mechanisms for verbal aspect.

³⁰ There are, of course, many ES modifiers I could include in my discussion here, such as other adverbials like [často] 'often' or [inogda] 'sometimes'. Also, as discussed in Hudin (1994), the direct object can also act as an aspect trigger. Bare plurals [BPS] and mass nouns [MNS], when they are internal arguments, tend to elicit readings that involve the imperfective aspect, which I briefly note above in 3.2.2 for the modal verb [moč] in the examples in (39). I leave these last issues aside from my own discussion now, as it is enough for the reader to understand that ES modifiers exist in Russian and generally direct aspect more overtly than negated modal interpretations.

4.2.1 Modal ES and TimePs

Consider the below examples of temporal phrases in ~ModPs and their interaction with verbal aspect.

- (54) a. *Ivan ne dolžen perevesti*(P) *etu stat'ju za čas.*
 Ivan not must translate this article in hour
 ‘Ivan should not translate this article in an hour.’
- b. *Ivan ne dolžen perevodit*'(I) *etu stat'ju v tečeniji časa.*
 I. not should translate this article in course hour
 ‘Ivan should not translate this article for an hour.’
- (55) a. *Eto ne vozmožno sdelat*'(P) *za čas.*
 this not possible do in hour
 ‘It is impossible to do this in an hour.’
- b. *Eto ne vozmožno delat*'(I) *v tečeniji časa.*
 this not possible do in course hour
 ‘It is impossible to do this for an hour.’
- (56) a. *Nel'zja postroit*'(P) *dom za čas.*
 impossible build house for hour
 ‘It is impossible to build a house in an hour.’
- b. *Nel'zja stroit*'(I) *dom v tečeniji čas.*
 impossible build house in course hour
 ‘It is impossible to build a house for an hour’
- (57) a. *Ne nado/nučno zataščit*'(P) *brevno v ambar za čas.*
 not need drag log in barn for hour
 ‘I do not need to drag a log into a barn in an hour.’
- b. *Ne nado/nučno taščit*'(I) *brevno v ambar v tečeniji časa.*
 not need drag log in barn in course hour
 ‘I do not need to drag a log into a barn for an hour.’
- (58) a. *Ja ne mogu pozvonit*'(P) *za čas.*
 I not can call for hour
 ‘I cannot call (be on the phone) in an hour.’
- b. *Ja ne mogu zvonit*'(I) *v tečeniji časa.*
 I not can call in course hour
 ‘I cannot call (be on the phone) for an hour.’

- (59) a. *Ja ne dolžen sdelat' (P) igrušku za čas.*
 I not should do toy for hour
 'I should not make a toy for an hour/in an hour.'
 b. *Ja ne dolžen delat' (I) igrušku v tečeniji časa.*
 I not should do toy in course hour
 'I should not make a toy for an hour.'

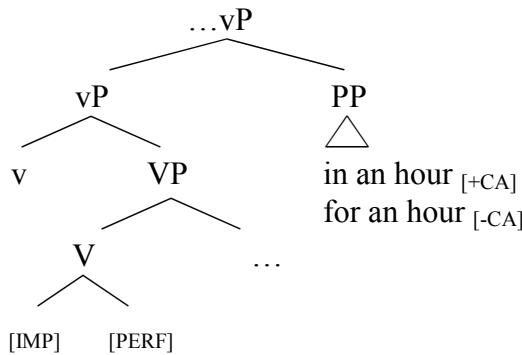
These provocative examples show the verbal aspect being directed by influences outside the ~ModP interpretation. Note that in example (57) the strong deontic modal adverbials [nado] and [nužno] may be used with a perfective when a time span adverbial is used. I also included examples (58) and (59) which incorporate these TimePs with [moč] and [dolžen], respectively, to show that these intuitions hold across modal classes. The above examples show that these TimeP triggers provide very strong aspectual intuitions. Therefore, the negated modal itself does not need to sit within the vP to locally direct aspect. These tendencies allow me to conclude that the durative and time span adverbial indeed scope over the vP as adjuncts in such instances. In keeping with the notion that predicates in negated modal adverbial phrases lose their ability to project their own aspect features based upon the nature of the event, as well as the arguments I made for the deontic/epistemic readings on certain modal adverbials in relation to verbal aspect choice, I find that these TimePs in negated modal phrases can project their own features to extract either the imperfective or perfective aspect features from the predicate. I give a syntactic derivation below of inner aspect in such cases in the presence of these ES modifiers.

4.2.1.1 A Syntactic Analysis of TimePs in ~ModPs in Russian

Following the line of argumentation in the last section, it is appropriate to claim that the durative and time-span adverbial in Russian have some semantic features that connect syntactically to one aspect or the other, just like the [~DEO] and [~EPI] features from the syntactic analyses above in 4.1.1. Such a feature could be called a ‘complete action’ [CA] feature, which is present on the time-span adverbial and is syntactically connected to the

perfective aspect in Russian. If this analysis is correct for the time-span adverbial on the inner aspect level, then the opposing durative phrase should not project such a feature and should thus be left with the imperfective. It is important to remember, though, that the ES in sentences like those above has still been modalized. The presence of a TimeP simply gives a stronger temporal interpretation in adverbial ~ModPs than the modal itself. I provide a schematic below, which is similar to MacDonald's diagram of the durative phrase in English, but which includes the features I have discussed as well as the aspectual features on the verb.

(60)

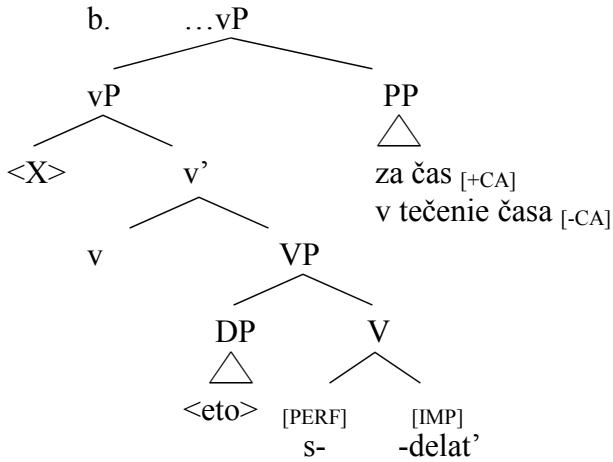


While this may seem rather transparent for cases in the Russian inner aspect domain not in the presence of a negated modal, the negated modal certainly still alters ES enough in the above case to force a Russian speaker to rely solely on the interpretation of the TimeP to direct verbal aspect choice. Where MacDonald (2008) argues that the durative elicits an atelic reading of the predicate, which corresponds to its *<ie>* feature in Russian ES, while the time-span adverbial elicits a telic reading and connects to the *<fe>* feature, it does not seem necessary to include such overt 'event' features in an analysis of negated modals and verbal aspect because the event structure has in fact still been modalized. The simple event is not what is at stake in such ~ModPs, even in the presence of TimePs; in other words, negated Russian modals shroud the ES in temporal uncertainty, inevitably leading a syntactic analysis away from verbal ES to modal ES. The aspect feature [PERF] and [IMP] are still present, but have been modalized, which is

why I do not call them ‘event features’ and do not use MacDonald’s <ie> and <fe> event features, as this would imply no affects from the modal at the inner aspect level.

The modal and TimeP interpretations I have discussed for the examples (54)-(59) above, in relation to verbal aspect choice, seem to disambiguate these aspectual triggers on a syntactic level with the help of their respective aspect features, [DEO], [EPI], or [+/-CA]. To explicate these distinctions further, I will provide a tree in (61) for the examples in (55) that shows this aspectual interaction on the inner aspect level.

- (61) a. *Eto ne vozmožno sdelat' (P)/delat' (I) za čas/ v tæenie časa.*
this not possible do for hour/ in course hour



If the time-span adverbial is used, it will project its [CA] feature, which will trigger the perfective feature [PERF] to project up to VP to be syntactically visible. The durative fails to project a complete action feature, and thus the imperfective is the only verbal form left available. Though the modal itself in these kinds of cases does not sit under vP, the modal adverbial is still the element which introduces the temporal ambiguities that make aspectual choice so opaque. The presence of the modal initially created the aspectual ambiguities, which then must be disambiguated by either ES modifiers or the modal interpretation as a last resort. In other words, a negated modal tends to introduce aspectual ambiguity inherently which then may be directed by the TimeP features I have discussed.

5. A Summary of my Analysis

This concludes my discussion of the syntax of ~ModPs, and their accompanying ES modifiers, in the Russian inner aspect system. I have taken a features-based approach to assessing and explaining the various linguistic phenomena that have been evidenced in the Russian data I have presented in this paper. As MacDonald (2008) purports overt, interpretable event features within the inner aspect realm of English and Russian, I have worked to give a structurally similar analysis to the inner aspect system within negated Russian modals using slightly different features.

I started this third section of the paper by giving a thorough review of MacDonald's arguments for the aspect systems of English and Russian in non-modal contexts in 2, which provided a structural basis for thinking about the syntax of inner aspect. Then, beginning in 3, I gave my own analyses of certain modal phrases and their connections to aspect. Under 3.2, I placed particular modals which deviated from one another on several levels, such as in their morphology, interpretation, distribution with negation, and interaction with aspect, into different categories that allow for diverging syntactic analyses of each.

In 4, I presented syntactic evaluations of aspect triggering mechanisms in ~ModPs. These triggers took several forms. In 4.1, I discussed the modal interpretation features [DEO] and [EPI] and the modal ES aspect features [IMP] and [PERF] in relation to aspect choice in temporally bare negated modal adverbial phrases. I ended my analysis in 4.2 with a short discussion of two overt ES modifying phrases that help determine aspect for all the negated modals I included in my study.

IV. Conclusion

1. Discussion and Ideas for Further Research

A much more exhaustive study on ES modifiers with and without negated modals present, as well as other interactions between aspect and negation, could and should be conducted in future research on the inner aspect systems in Russian. Such an undertaking was not my focus, however, and was not necessary for my own general analysis of aspect triggers in Russian ~ModPs. I have attempted to give a syntactic evaluation of at least some of the issues involved with the choice of grammatical verbal aspect in Russian in the presence of both ~ModPs and other aspectual-temporal indicators. Previous research, such as Hudin (1994) and Rappaport (1985), have only ascribed the direct interaction between the modal and verbal aspect in Russian to the inherently negative modal [nel'zja] ‘impossible/impermissible’. I, however, included several other modals in my analysis that had not been previously accounted for, and which fit the same pattern as [nel'zja]. The inherently deontic modals [nado] and [nužno] ‘necessary/have to’ only selected for the imperfective in contexts without ES modifiers, and the inherently epistemic modal [vozmožno] ‘(physically) possible’ only selected for the perfective in such temporally bare contexts. Though de Haan (2002) and Schoorlemmer (1995) noted for [nado] that it can act as an imperfective trigger, [vozmožno] has not been discussed in past literature to the best of my knowledge.

As MacDonald (2008) does for his discussion of ES in English and Russian non-modal contexts, I relied heavily upon semantic interpretations of negation, modality and verbal aspect choice in my own analysis. This, however, seems to be impossible to avoid in a discussion of the syntax of verbal aspect, which has very rich, underlying meaning that can only be syntactically denoted with features. Again, this is why I kept the focus of my analysis in this paper to aspect

triggers, which seem to be the most appropriate indicators of aspect in ~ModPs precisely because the temporality of the event in question has been altered in some way.

Native Russian speakers generally have little intuitions as to why the verbal aspect system works the way it does in the presence of negated modals. It is for this general linguistic issue that aspect triggers appear to be the most important features of Russian syntax that may direct aspect choice in such cases of temporal ambiguity presented by modality and negation. While these triggers may take various forms, such as the reading on the modal, the presence of TimePs, or even the nature of the event itself, they still must be present somewhere in the syntax to guide the speaker to the most grammatical aspect given the contextual and temporal constraints.

References

- Borik, O. (2006). *Aspect and Reference Time*. Oxford: Oxford University Press.
- Brown, S. (1999). *The Syntax of Negation in Russian*. Stanford, CA: CSLI Publications.
- Chomsky, N. 1995. *The Minimalist Program*. Cambridge, Massachusetts/London, England: The MIT Press.
- Chomsky, N. 2007. Approaching UG from below. In *Interfaces + recursion = language?: Chomsky's Minimalism and the view from syntax-Semantics*. U. Sauerland & M. Gartner (Eds). Berlin: Mouton de Gruyter.
- Cormack, A. and N. Smith. (2002). Modals and negation in English. In *Modality and Its Interaction with the Verbal System* S. Barbiers, F. Beukema & W. van der Wurff (Eds). Amsterdam/Philadelphia: John Benjamins Publishing Co.
- De Haan, Ferdinand. (2002). Strong Modality and Negation in Russian. In *Using Corpora to Explore Linguistic Variation*. R. Reppen, S.M. Fitzmaurice & D. Biber (Eds). Amsterdam, Netherlands: John Benjamins Publishing Co.
- Dostoevsky, F. The Idiot. Moscow: Gosudarstvenoe Izdatel'stvo, vol. 6, 1957.
- Hudin, J. (1994). Negative Modal Constructions in Russian. In *Russian Linguistics 18*. Netherlands: Kluwer Academic Publishers.
- MacDonald, Jonathan E. (2008). *The Syntactic Nature of Inner Aspect*. Amsterdam/Philadelphia: Linguistics Today 133.
- Rappaport, G. C. (1985). Aspect and Modality in Contexts of Negation. In *The Scope of Slavic Aspect*. M. Flier & A. Timberlake (Eds). Columbus: Slavica Publishers.
- Rassudova, O.P. (1982). *Upotreblenie vidov glagola v sovremenном russkom jazyke* 2nd edition. Moscow.
- Schoorlemmer, M. (1995). *Participial passives and aspect in Russian*. Ph.D. Dissertation, Utrecht University.