JOURNAL of SLAVIC LINGUISTICS

VOLUME 30 · ISSUE NO. FASL 29 EXTRA ISSUE

Structural Ambiguities of Russian Dative Infinitival Constructions

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ABSTRACT

This paper addresses the issue of control and raising properties in Russian dative modal constructions with the overt modal element of obligation/necessity *nužno* 'need'. Using traditional syntactic tests to distinguish raising from control (Davies and Dubinsky 2008), I show that the subject of the lower clause under *nužno* can be either an overt DP (raising) or PRO controlled by the matrix subject, confirming the correlation between structural selection and interpretive possibilities. Similar to English ambiguous verbs (e.g., *begin*, *threaten*), the modal element *nužno* can participate in different syntactic structures. I ague that syntactic differences are attributed to the unspecified semantics of *nužno*, resulting in two possible interpretations of the same modal construction.

KEYWORDS raising · control · selectional properties · dative case

1 INTRODUCTION

The primary focus of this paper is on Russian dative modal constructions (DMCs). The basic form of DMCs can be represented by the following frame:

(1) DP.DAT + *nužno* + non-finite verbal form

(2) Borisu nužno zakončit' rabotu
Boris.DAT need[-AGR] finish.INF work.ACC
'Boris needs to finish work.'

Note that (2) has two possible interpretations. One interpretation is where Boris is an explicit bearer of an obligation, as in (3-a), and another one is where no explicit entity is responsible for obeying the laws (3-b).

(3) a. There is some necessity on Boris' part to finish work.
b. It needs to be the case that Boris finishes work.

Similar constructions were discussed in Moore & Perlmutter (1999) and explored further by Burukina (2019, 2020). Moore & Perlmutter (1999) point out that in such constructions, the dative DP can be either a matrix controller or an embedded subject. Therefore, (2) can have two possible representations:[1]

(4) a. Borisu_i nužno [PRO_i zakončit' rabotu].
Boris.DAT need[-AGR] finish.INF work.ACC
'Boris needs to finish work.'
b. Borisu_i nužno [t_i zakončit' rabotu].
Boris.DAT need[-AGR] finish.INF work.ACC
'Boris needs to finish work.'

[1]Note that in (4-b), *Borisu* can stay in its base-generated position (e.g., Spec,TP of the lower clause). However, the most natural order is where *Borisu* raises to the matrix clause.

Burukina (2019, 2020) explores similar constructions, arguing for the existence of the matrix Applicative Phrase (ApplP), which is occupied by either an overt or an implicit bearer of an obligation (Holder). The DP/PRO alternation in the embedded clause is attributed to (un)availability of case assigners. If there is an overt Holder in the matrix clause, is it assigned [DAT] by Appl. This, in turn, requires PRO in the embedded clause, since no other case is available for the lower DP. The availability of the lower DP, on the other hand, is attributed to an implicit matrix Holder without case features. Consequently, Appl is able to assign [DAT] to the lower DP across a CP boundary, which is the case of long-distance case licensing.

Although I agree that there are cases when an explicit Holder is present, as in (4-a), there is no need to postulate the implicit Holder in (4-b), since (4-b) can be interpreted as an existential construction (e.g., there exists an importance for Boris to finish work). Therefore, there is no evidence for the ApplP layer in (4-b). This, in turn, challenges the analysis described above, which fully relies on the presence of Appl.

In what follows, I offer an alternative analysis and propose that *nužno* is the primary modal predicate. It is structurally located in Mod and assigns [DAT] to the closest available DP. Crucially, in my system, [DAT] is locally assigned. Therefore, there is no reason to assume long-distance case licensing across a CP boundary. The availability of the case assigner is determined by the type of the complement clause. The paper is structured as follows. §2 describes the basic structure of DMCs. §3 presents arguments for raising and control properties of DMCs. In §4, I propose an analysis for the DP/PRO variation in DMCs. §5 concludes the paper.

2 THE BASIC STRUCTURE OF DMCS

In the literature, the lexical items *nužno* 'need', *možno* 'may', and *nado* 'must' constitute the core of the autonomous class of modal predicates (Shcherba 1957, Schoorlemmer 1994, inter alia). In what follows, I give evidence that, similar to verbs, the modal element *nužno* 'need' is a lexical head that is structurally located in the ModP and takes a complement clause. The minimal size of the embedded clause is at least a TP, as in (5).

(5) $[_{TP}$ T $[_{ModP}$ NEED $[_{TP}$ T $[_{vP}$ ...]]]]

First, *nužno* shows a number of properties that are typical for lexical heads (Marušič & Žaucer 2005 [henceforth M&Ž]): a) the ability to introduce an event (a that-complement with a lower subject DP), as in (6); b) the ability to take a DP complement, as in (7).

(6) Ivanu nužno, čtoby Boris zakončil rabotu zavtra.
Ivan.DAT need[-AGR] that Boris finish.INF work.ACC tomorrow
'It is necessary for Ivan that Boris finishes work tomorrow.'

(7) Ivanu nužno bokal vina.
Ivan.DAT.3.SG need[-AGR] glass.ACC wine
'Ivan needs a glass of wine.'

Second, I use the co-occurrence of adverb(ial)s that represent two distinctive points of time as argument for the bi-clausality of DMCs Larson et al. (1997), Marušič & Žaucer (2005). In (8), *segodnja* 'today' modifies the matrix event of necessity, whereas *čerez dva dnja* 'in two days' modifies the embedded event of 'flying'.

(8) Segodnja Ivanu nužno uletať čerez dva dnja.
today Ivan.DAT need[-AGR] finish.INF in two days
'Today, Ivan needs to fly in two days.'

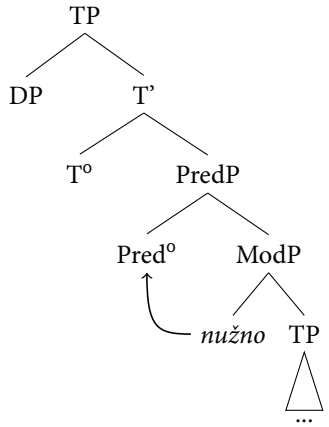
Moreover, the future adverbial *zavtra* 'tomorrow' can modify either the event of having necessity or the lower event of 'getting paid', which proves the existence of two temporal domains in DMCs, as in (9).

(9) Borisu nužno budet zavtra kupiť podarok.
Boris.DAT need[-AGR] will tomorrow buy.INF present.ACC
'Boris will need to buy a present tomorrow.'

In sum, I conclude that DMCs are bi-clausal constructions with the matrix predicate *nužno*. The primary predicate is base-generated in ModP - the event introducing projection (similar to VP) that takes a complement clause. Crucially, (8) and (9) show that events introduced by the modal element and the infinitival embedded verb are temporally independent. Therefore, I conclude that the embedded clause has a TP layer.[2]

In the spirit of Bowers (1993), I assume that DMCs involve a functional category Pred. In such an approach, Pred plays the role of v in verbal constructions but allows non-verbal complements as well. In DMCs, the complement of Pred is ModP. I further assume that Mod moves to Pred (similar to V to *v* movement). The structural position of *nužno* and the minimal size of the complement clause are exemplified below.

(10) Basic structure of DMCs



In the next section, I will turn to structural ambiguities of DMCs and show that they have properties of both control and raising. Note that in my analysis, the term 'raising' is not used in its traditional understanding (e.g., movement for case), but rather describes EPP-driven movement.

3 THE 'DUAL' NATURE OF nužno

3.1 'OUGHT-TO-BE' AND 'OUGHT-TO-DO'

Davies & Dubinsky (2004) point out that raising or control structures are governed by lexical selections of particular verbs. In raising, a DP is associated with the lower verb and it raises to the matrix TP for case and the EPP reasons. In control, it can be semantically linked to both the matrix and the embedded predicates. There are well-known cases, however, when the same verb occurs in both raising and control structures. For instance, in English sentences with verbs *begin*, *threaten*, *promise*, and with modals, the subject DP can either be base-generated in the embedded clause, or it can control the embedded PRO (Perlmutter 1970, Landau 2003, Davies & Dubinsky 2004, inter alia).

In the literature, a distinction between raising and control constructions with deontic modality is linked to the 'ought-to-be' and 'ought-to-do' interpretations respectively (Feldman 1986, Perlmutter 1970, Brennan 1993).[3] In DMCs with the 'ought-to-do' reading, the dative DP is the explicit bearer of an obligation. The 'ought-to-be' constructions, on the other hand, describe 'what the world needs

[2]I will argue later that *nužno* can select a TP or a CP complement clause.

[3]The ought-to-be interpretation is also associated with epistemic modality. However, only deontic modality is relevant for the purpose of the current paper. As stated by Bhatt (1998), deontic modality can be associated with two possible readings:

to be like according to someone's desires/laws' Bhatt (1998), but no explicit entity is responsible for obeying such laws.

DMCs with an embedded [+animate] DP can receive both the 'ought-to-be' and 'ought-to-do' interpretations.

(11) Borisu nužno duxovno rasti.
boris.DAT need[-AGR] spiritually grow.INF
'Boris needs to grow spiritually.'
a. It needs to be the case that Boris grows spiritually. ✓ought-to-be
b. There is some necessity on Boris' part to grow spiritually. ✓ought-to-do

The example in (11) allows two interpretations: a) There is the bare event of necessity without an explicit bearer of an obligation ('ought-to-be'); b) Boris is the bearer of an obligation to make the world such that it obeys the laws/desires ('ought-to-do'). This suggests that the subject DP can possibly start out in the lower clause or it can be a syntactic argument of the matrix predicate.

When it comes to DMCs with the dative DP [-animate], the bearer of an obligation is not present, and only the 'ought-to-be' reading is available, as in (12).

(12) Etomu gorodu nužno rasti.
this.DAT city.DAT need.[-AGR] grow.INF
'This city needs to grow.'
a. It needs to be the case that this city grows. ✓ought-to-be
b. *There is some necessity on the city's part to grow. *ought-to-do

Such distribution of the 'ought-to-be' and 'ought-to-do' readings in DMCs is not unusual. Cross-linguistically, in sentences with ambiguous (raising/control) verbs, structures with [-animate] (non-sentient) subject DPs are always analyzed as raising (Landau 2003).

In what follows, I give syntactic arguments that DMCs are represented by both raising and control structures.

3.2 SYNTACTIC EVIDENCE FOR RAISING AND CONTROL

The argument that the dative DP originates in the embedded clause comes from DMCs with an empty subject position in the matrix clause under the 'ought-to-be' interpretation.

(13) Ivanu nužno zakončit' rabotu.
Ivan.DAT need[-AGR] finish.INF work.ACC
a. There is some necessity on Ivan's part to finish work. ought-to-do
b. It needs to be the case that Ivan finishes work. ought-to-be

(14) Nužno, čtoby Ivan zakončil rabotu.
need[-AGR] that Ivan.NOM finish.PST work.ACC
'It is necessary that Ivan finishes work'
It needs to be the case that Ivan finishes work. (= (13-b))

In (13), both the 'ought-to-do' and 'ought-to-be' readings are possible. The fact that (13) allows the 'ought-to be' interpretation and that it is parallel to (14) shows that the dative DP is not necessarily linked to the matrix predicate *nužno*.

Although the parallelism between (13-b) and (14) strongly suggests that the dative DP is base-generated in the lower clause, there is evidence that the subject DP can also originate as an argument of the matrix clause, controlling the embedded PRO. Burukina (2019, 2020) points out that the

(i) a. OUGHT-TO-DO — an explicit bearer of an obligation
'There is some necessity on the part of an x to do y.'
b. OUGHT-TO-BE (raising) — no explicit entity is responsible for obeying the laws
'It needs to be the case that x does y.'

availability of partial co-reference is in favor of a control analysis for Russian infinitival constructions with a predicate *važno* 'important' (Landau 2015). The same argument can be applied to DMCs.

(15) Ivanu$_i$ nužno PRO$_{i+}$ vtretits'a v bare vmeste.
Ivan.DAT need[-AGR] meet.INF in bar together
'Ivan needs to meet in the bar together (i.e. with someone).'

Additional arguments that DMCs have neither 'exclusively control' nor 'exclusively raising' properties come from embedded passive.

Passivization of an object under the modal element is possible, as opposed to passivation under a 'true' control verb (Wurmbrand 1999, Warner 2000, Davies & Dubinsky 2004, inter alia). The contrast between typical control structures (16) and DMCs (17) suggests that *nužno* is raising predicate.

(16) *Kniga staraetsja byt' opublikovannoj k srede.
book.NOM try be.INF publish.PTCP by Wednesday
*'The book tries to be published by Wednesday.'

(17) Knige nužno byt' opublikovannoj k srede.
book.DAT need[-AGR] be.INF publish.PTCP by Wednesday
'The book needs to be published by Wednesday.'

In sum, the above facts suggest that DMCs with overt modals have neither 'exclusively control' nor 'exclusively raising' properties.

4 THE ANALYSIS

4.1 DMCS: TWO INTERPRETATIONS

The control analysis for deontic modals has been challenged by Wurmbrand (1999) who claims that all modals are raising verbs. According to Wurmbrand, modals are not θ-assigners, and the interpretation where the bearer of an obligation is present ('ought-to-do') can be contextually derived. Wurmbrand's analysis seems to be plausible for traditional modals that are syntactic heads of a functional category T. However, the situation is different for the modal element *nužno*. As stated in Adger (2003, 165), 'functional categories clearly have semantics, but their semantics is quite different from the θ-related semantics of items which bear the category features of V, N, A, and P.'

Unlike traditional modals, *nužno* has properties of a lexical head. Moreover, the partial control in DMCs strongly suggests that the matrix DP is assigned its θ-role not by the lower verb but rather by the matrix predicate (e.g., *nužno*). Given the properties of *nužno*, I continue to assume that both raising and control analyses are applicable to DMCs.

The following questions arise: how can we account for two possible readings in DMCs, as in (18) and (19)? And what determines the DP/PRO distribution in the embedded clause?

(18) Ivanu$_i$ nužno [PRO$_i$ uxodit'].
Ivan.DAT need.[-AGR] leave.INF
'There is some necessity on Ivan's part to leave.' controlled PRO

(19) Ivanu$_i$ nužno [t$_i$ uxodit'].
Ivan.DAT need.[-AGR] leave.INF
'It needs to be the case that Ivan leaves.' base-generated DP

If two syntactic structures are possible, does it mean that there are two 'thematically distinct' modal predicates *nužno* – raising and control? Or is this variation encoded in selectional requirements of *nužno*? In what follows, I propose that instead of two separate lexical types of *nužno* (e.g., raising vs. control), there is a single modal predicate with unspecified semantics (Wurmbrand & Lohninger 2020). The flexibility of the meaning ('ought-to-do' vs. 'ought-to-be') is attributed to: a) flexibility in selection of the primary matrix predicate *nužno*; b) the availability of the case assigner. In particular,

when Mod selects a TP, it becomes a case assigner for the embedded DP. When a CP is selected, the [DAT] case assignment is blocked by the intervening C. The difference in interpretation of the DMC follows from differences of syntactic structure.

4.2 THE STRUCTURE OF DMCS AND CASE ASSIGNMENT

The standard assumption is that overt DPs must occur in some structural position where they can get case (Chomsky 1981, Chomsky & Lasnik 1993). Crucially, there is a correlation between case assignment and the structure of the embedded clause. In particular, assuming that null C is the [null] case assigner, only PRO is possible in a CP complement clause (Chomsky & Lasnik 1993, Adger 2003). In traditional ECM and raising constructions, on the other hand, PRO is not available due to structural properties of the embedded clause. Specifically, it has been argued that embedded clauses in ECM constructions are TPs. Thus, the closest c-commanding case assigner for the embedded subject is the matrix little *v* (ECM). The overt embedded DP is possible since the matrix *v* can assign case across a clausal boundary (Adger 2003).

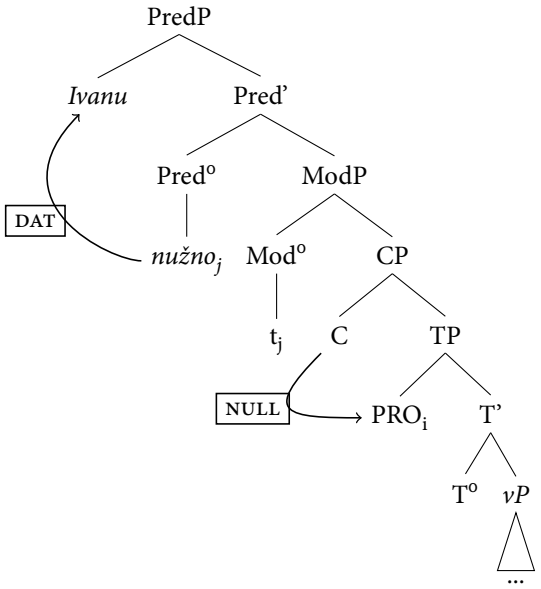
Following the view that control clauses are CPs and ECM (and raising) clauses are TPs, I propose that in DMCs, the primary predicate *nužno* optionally selects either a TP or a CP complement clause. I also assume that if an Experiencer (an explicit bearer of an obligation) is present in the structure, it is structurally located in the Spec of PredP, and it is the highest argument.

Given the selectional 'freedom' of *nužno*, I propose that there are two types of dative case in DMCs: inherent and ECM. Inherent case is associated with control and ECM is related to raising. The type of dative case assignment is driven by the selection of *nužno*. First consider a scenario when *nužno* selects a CP complement clause:

(20) Ivanu$_i$ nužno [$_{CP}$ PRO$_i$ uxodit']. controlled PRO
Ivan.DAT need.[-AGR] leave.INF
There is some necessity on Ivan's part to leave.

First, the lexical *nužno* is merged with the embedded CP. The non-finite T does not have a case feature but has the EPP feature (Adger 2003). Mod cannot be a case assigner for the embedded DP because case on the embedded subject is checked by the non-finite C (e.g.,[null]). Mod raises to Pred in the same manner V raises to *v* in a regular vP. [DAT] is still available, and Mod can successfully value case on any closest DP via the Spec-Head configuration. In particular, Experiencer DP is possible in the matrix clause because its case feature can be valued by the raised Mod. Finally, the overt DP raises to Spec of the matrix T via the EPP-driven movement which is typical for SV languages. Crucially, the interpretation where an explicit bearer of an obligation is present ('ought-to-do') is triggered by the co-occurrence of PRO and the overt DP.

(21) Case assignment in (20)

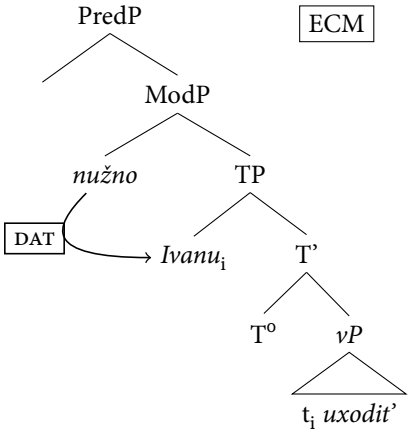


Now, let's consider an example where *nužno* selects a TP.

(22) Ivanu_i nužno $[_{TP}\ t_i$ uxodit'].
Ivan.DAT need.[-AGR] leave.INF
'It needs to be the case that Ivan leaves.'

First, *nužno*, which is in Mod, is merged with non-finite TP. Similar to control structures, the non-finite T does not have case, but has the EPP feature. The embedded DP raises to Spec of the non-finite T. There is no C that could potentially block the [DAT] valuation on the embedded DP. This configuration is similar to ECM clauses. PRO is ruled out because the case feature on the embedded DP is checked by Mod as [DAT], and not as [null]. Next, I assume that the overt DP raises to Spec of the matrix T via an EPP-driven movement. The 'ought-to-be' interpretation follows from the syntactic structure of (23).

(23) Case assignment in (22)



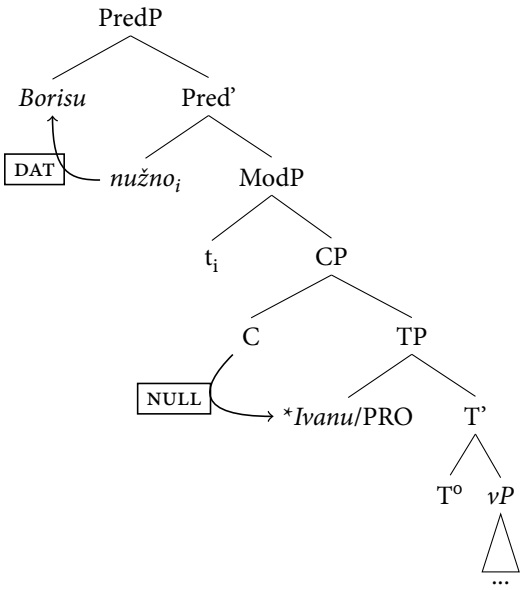
Note that in both (21) and (23), Mod and a DP end up in an immediate spec-head relation. In both structures, [DAT] is assigned by the modal head to the closest DP by Locality of Matching (Adger 2003).

This approach can also successfully explain the unavailability of two dative DPs in DMCs. Consider the following ungrammatical example:

(24) *Borisu nužno [Ivanu uxodit'].
Boris.DAT need.[-AGR] Ivan.DAT leave.INF
'For Boris, it is important for Ivan to leave.'

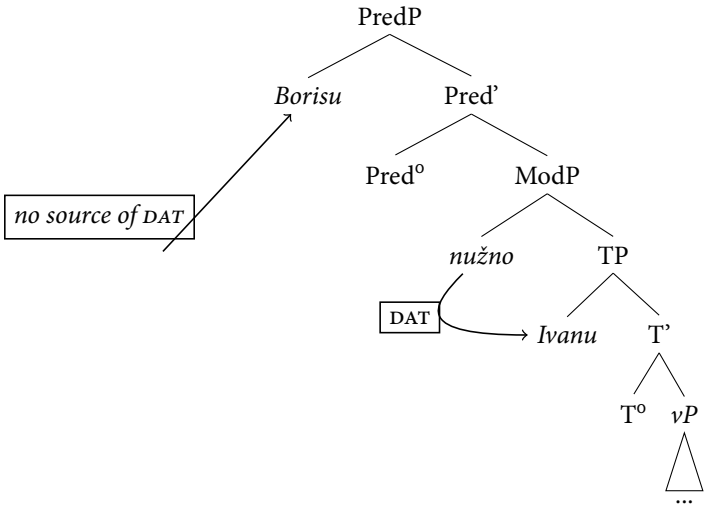
Similar to grammatical examples, *nužno* selects either a TP or a CP complement clause in (24). If *nužno* selects a CP, the intervening C with the [null] case feature blocks the [DAT] case assignment, forcing PRO to occur in the embedded clause. Although the matrix Experiencer is possible because it can receive [DAT] from Mod (which is raised to Pred), the configuration is ruled out by having a case mismatch between the non-finite C and the overt DP in the lower clause.

(25) Scenario 1



The second scenario is when *nužno* selects a TP complement clause. In this configuration, nothing prevents Mod from assigning [DAT] to the embedded subject, since the embedded clause lacks an intervening C. Once Mod values case on the embedded subject as [DAT], only overt DP is possible, because PRO requires [null] case. Crucially, no other source of case is available, which rules out the overt DP in the matrix clause.

(26) Scenario 2



Note that in DMCs, the matrix T is not a case assigner. Assuming that the case feature on T is a

'by-product' of subject-verb agreement Chomsky (2000), no such case is available on the finite T in DMCs since they lack matrix verbs, and the modal predicate does not involve any ϕ-features.

4.3 THE SIZE OF THE EMBEDDED CLAUSE

Having established that the case assignment and interpretation in DMCs ('ought-to-be' vs. 'ought-to-do') depend on whether *nužno* takes a TP or a CP complement clause, it is yet to be explained why in raising (ECM-type) DMCs, the size of the complement clause is a TP, whereas in control structures, it is a CP.

Lyutikova (2021) claims that Russian subject control clauses lack a CP layer, using clitic climbing as evidence. In particular, according to Lyutikova, the fact that the pronoun *je* 'her' can raise out of the embedded clause shows that the embedded clause does not have an A-bar domain.

(27) On (je) xotel (je) otvetit'.
he.NOM her.DAT want.PST.M.SG her.DAT answer.INF
'He wanted to answer her.'

The argument of clitic climbing is not tenable since Russian personal pronouns in oblique cases have properties of independent lexical items. For instance, they can appear in isolation, they don't need to occur in specific positions in a sentence, and they can be stressed. Therefore, they are not clitics.

Since there is no decisive evidence for the TP-size of subject-controlled infinitives in Russian, I assume that raising complements are TPs and control complements are CPs, following Adger (2003). This assumption is supported by cross-linguistic observations that in sentences with ambiguous (raising/control) verbs, complementizers are only found in control structures and never in raising constructions (e.g., French, Italian, Swedish, Icelandic, and many others); (Landau 2003). For instance, data from Hebrew shows that control structures with [+animate] matrix subjects can occur with complementizers, supporting the claim that in such constructions, the size of the clausal complement is a CP (Landau 2003). Structures with [-animate] subject DPs are always analyzed as raising. Crucially, they never appear with complementizers, which confirms that the raising complement is a TP.

5 CONCLUSION

In this paper, I have presented data from Russian and argued that the modal element *nužno* has characteristics of both raising and control in the sense that it can be associated with either one or two argument chains. First, I gave evidence that DMCs are bi-clausal constructions with a ModP projection in the matrix clause and a clausal complement. Second, I have shown that similar to English ambiguous verbs (e.g., promise, begin), the modal element *nužno* can be analyzed as either a raising or a control predicate. I have proposed that there is no need to assume two types of *nužno* with different semantics. Instead, I proposed to treat *nužno* as one lexical item that can freely select either a CP or a TP complement. I further showed that the DP/PRO distribution correlates with the size of the embedded clause and the [DAT] case assignment. Finally, I proposed that two possible interpretations of the same DMC can be attributed to two possible syntactic structures.

Note that such optionality in selectional properties is not unusual. As mentioned earlier, verbs of types *begin, promise, need*, etc., show both control and raising properties. Another example of selectional optionality is verbs that can be either transitive or intransitive. For instance, the verb *eat* can but is not required to take a direct object (e.g., *John ate.* vs. *John ate an apple.*)

In general, this approach contributes to discussion of the control/raising verb doublets phenomenon (e.g., structures with *begin, promise*, modals).

ABBREVIATIONS

ACC	accusative	NOM	nominative
AGR	agreement	M	masculine
DAT	dative	SG	singular
DMC	dative modal construction	PTCP	participle
ECM	exceptional case marking	PST	past
INF	infinitive		

ACKNOWLEGMENTS

I would like to thank John F. Bailyn, Suzi Wurmbrand, and Daniel Finer for informative discussions and helpful comments. I would also like to express my gratitude to anonymous reviewers and the audience at the FASL 29 annual meeting for their insightful feedback and questions.

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