Chapter 10

The markedness of coincidence in Russian

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This paper presents a novel analysis of the Russian Infl domain. Specifically, it is argued in this paper that in Russian, the past tense, as opposed to the non-past, is the default, unmarked tense. Consequently, non-past in Russian is marked by the specification of a privative feature on T^0, which associates the event/state expressed by vP to some anchoring time. This analysis stems from observations of how subjunctive matrix and complement clauses are interpreted. The analysis captures how, unlike other languages with the subjunctive mood, Russian allows main independent clauses to appear in the subjunctive. It additionally furthers work on features and properties of the Infl domain, showing how languages use different features, from what appears to be a limited set, to express time and realis contrasts.

Keywords: Russian, tense, subjunctive, Infl, realis and irrealis moods

1 Introduction

This study examines the morphosyntactic features of the Russian inflectional domain by focusing on the selectional properties of the Russian subjunctive. Traditionally, the subjunctive is held to be a mood (whether or not there is overt morphology) that expresses an eventuality as hypothetical, advisable, desirable, or obligatory with respect to the sentential subject (Harrison & Le Fleming 2000: 142). In Russian, the subjunctive mood is expressed with the particle *by* and typically with the past-tense form of the predicate.

(1) Ty uš-**l**-a **by** domoj.
you leave-PST-SG.F BY home.
'You would {go / have gone} home.' (Mezhevich 2006: 152)

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Despite co-occurring almost exclusively with the past-tense verb form, however, constructions containing *by* show no semantic tense contrasts whatsoever (Spencer 2001: 298). This is illustrated in (2), where past, present, and future-oriented temporal adverbs are shown to licitly co-occur with the past tense verb form when *by* is present.

(2) Ja **by** uexa-**l**-a {včera / sejčas / zavtra}.
I BY leave-PST-SG.F yesterday now tomorrow
'I would {have left yesterday / leave now / leave tomorrow}.'
(Mezhevich 2006: 136)

By can also co-occur with the infinitive form of the verb in an independent matrix clause.

(3) Oj s"es**t'** **by** Pete {včera / zavtra} jabloko!
oh eat.INF BY Peter.DAT yesterday tomorrow apple
'If only Peter would eat an/the apple tomorrow!' or
'If only Peter would have eaten an/the apple yesterday!'
(Asarina 2006: 10)

Non-past finite forms of the predicate, on the other hand, are completely illicit with *by*.

(4) a. * Ja propuskaj-**u** **by** ėtot doklad.
I miss.IPFV/PRS-1SG BY this talk
Intended: 'I would skip this talk.'
b. * Ja ujd-**u** **by** domoj.
I leave.PFV/FUT-1SG BY home
Intended: 'I would go home.' (adapted from Mezhevich 2006: 133)

This study stems from these observations. It asks: What can these co-occurrence patterns tell us about the interpretable features of the Russian inflectional system? I argue that *by* is the phonological spell-out of an irrealis head in the Russian inflectional domain, whose projection is semantically incompatible with the specification of any feature that situates a clause at the utterance context. Specifically, I will claim that this feature is [Coin(cidence)] (cf. Ritter & Wiltschko 2005, Ritter & Wiltschko 2009), which is hosted in T. A consequence, and perhaps the main take-away of this proposal is that the contrast between past and non-past in Russian is distinguished by the specification of [Coin], past tense being the unmarked tense. This proposal is rooted in Distributed Morphology (Halle &

Marantz 1993; Embick & Noyer 2007) and builds on the feature geometry work of Cowper (2002; 2005) and others.

The outline of this paper is as follows. In §2, I describe the data considered for the analysis to be presented. It describes the tense system in Russian along with how the subjunctive is expressed in the language. §3 provides a background sketch of the subjunctive mood cross-linguistically and in the literature. In §4, I present an analysis of the data presented in §2. §5 expands the analysis presented to account for Russian subjunctive constructions as complement clauses. Finally, I conclude in §6.

2 The Russian system

In Russian, most verbs come in aspectual pairs (Mezhevich 2008: 371) – an imperfective form and corresponding perfective form – and tense is often defined with respect to aspect (Mezhevich 2008: 373). In the indicative mood (that of "independent main assertive clause type[s]" (Wiltschko 2017: 1)), imperfective aspect allows for temporal distinctions among past, present, and a periphrastic future; perfective only allows for past and future readings (Mezhevich 2008: 371). Among non-past forms, aspect plays a role in distinguishing present from future. The examples in (5) and (6) shows the temporal-aspectual realizations for the verb 'fall', illustrating the Russian tense system.

(5) **Imperfective**

a. On padal. **PST**
he fall.IPFV.PST
'He was falling.'

b. On padaet. **PRS**
he fall.IPFV.PRS
'He is falling.'

c. On budet padat'. **FUT**
he will fall.IPFV.INF
'He will be falling.'

(6) **Perfective**

a. On upal. **PST**
he fall.PFV.PST
'He fell.'

b. N/A **PRS**

c. On upadet. **FUT**
he fall.PFV.PRS
'He will fall.'

Unlike Modern Russian, Old Russian made a distinction among four past tenses, namely, the aorist, the perfect, the pluperfect, and the imperfect (Mezhevich 2006: 38). Perfect and pluperfect constructions contained an inflected form of *byti* 'be' and a form commonly referred to as the L-participle: a verb containing the *-l*

suffix. The distinction among the four past tenses was lost over time. What has remained is the *-l* suffix as the sole marker of past tense (ibid.).

Although historically it was the case that the *-l* suffix of the L-participle did not mark past tense itself, it has been argued that the suffix has been reanalyzed as the past tense morpheme in Modern Russian (see Mezhevich 2006 for a discussion and references). The form's distribution and interpretation in Modern Russian contrast with what are considered to be non-past predicate forms. I therefore treat the *-l* suffix that attaches to verbs as the past tense form here. In no way, however, do I assume that it exclusively expresses past tense. As shown in (2) and to be seen in later examples, when *-l* co-occurs with *by*, one interpretation the clause may receive is a past interpretation but in no way is such a construction restricted to that interpretation. A clause containing both these morphemes may also receive non-past readings.

Apart from the indicative, Modern Russian has only two formal moods: the imperative and the subjunctive/conditional (Cubberley 2002: 157). Russian does not have specific subjunctive verb forms (Mezhevich 2006: 118). Rather, subjunctive clauses are generally formed with the particle *by* and the L-participle, as in (7), repeated from (1), and (8).

(7) Ty uš-l-a by domoj.
you leave-PST-SG.F BY home
'You would go / have gone home.' (Mezhevich 2006: 152)

(8) Liza xote-l-a, [čtoby Philemon uše-l].
Liza want-PST-SG.F ČTOBY Philemon leave-PST.SG.M
'Liza wanted Philemon to leave.' (Mezhevich 2006: 148)

Traditionally, the subjunctive is held to be a mood (whether or not there is overt morphology) that expresses an eventuality as hypothetical, advisable, desirable, or obligatory (Harrison & Le Fleming 2000: 142), as in (9), with respect to the sentential subject.

(9) a. They would like [to go]. **desirability**
b. I should [write to my mother]. **obligation**
(Harrison & Le Fleming 2000: 142)

In Russian, the subjunctive pattern described above is used to express these semantic notions, for example, in (10) and (11).

(10) a. Vy čita-l-i by gazetu. **advisability**
you read-PST-PL BY paper
b. Vy pro-čita-l-i by gazetu.
you PFV-read-PST-PL BY paper
'You should (have) read the paper.' (Harrison & Le Fleming 2000: 142)

(11) Zavtra ja s udovol'stviem poše-l by v teatr **desirability**
tomorrow I from pleasure go-PST BY at theatre
'I would very much like to go to the theatre tomorrow.'

That is, in (10), the subjunctive is used to express advisability with respect to the subject and in (11), desirability. (10a) and (10b) illustrate that the imperfective-perfective distinction is maintained in the subjunctive mood.

Although *by* derives from the aorist of the Old Russian auxiliary *byti* 'be', it has been reanalyzed as a marker of the subjunctive/conditional separate from the Modern Russian form *byt'* 'be'. The main distinguishing property between *by* and *byt'* is that the latter has a paradigm of inflected forms while the former does not; rather, it is a frozen morpheme (see Spencer 2001; Mezhevich 2006).

In matrix clauses, *by* most naturally appears following the main verb (Cubberley 2002: 200). However, it can also follow a focused element, appearing in the second sentential position (Spencer 2001: 298), as in (12). In theory, though, *by* can occur in any position except clause-initially (Hacking 1998, cited in Mezhevich 2006: 152; Spencer 2001: 298); see (13).

(12) a. Ja uš-l-a by.
I leave-PST-SG.F BY
b. Ja by uš-l-a.
I BY leave-PST-SG.F
'I would {leave / have left}.' (Spencer 2001: 298)

(13) a. Ty **by** uš-l-a domoj.
you BY leave-PST-SG.F home
b. Ty uš-l-a **by** domoj.
you leave-PST-SG.F BY home
c. Ty uš-l-a domoj **by**.
you leave-PST-SG.F home BY
d. * **By** ty uš-l-a domoj.
BY you leave-PST-SG.F home
(Intended:) 'You would go / have gone home.' (Mezhevich 2006: 152)

It was noted in §1 that *by* cannot co-occur with a non-past-tense predicate. This is shown again in (14), repeated from (4).

(14) a. * Ja propuskaj-u by ėtot doklad.
I miss.IPFV/PRS-1SG BY this talk
Intended: 'I would skip this talk.'

b. * Ja ujd-u by domoj.
I leave.PFV/FUT-1SG BY home
Intended: 'I would go home.' (adapted from Mezhevich 2006: 133)

Embedded under predicates that license subjunctive clauses, *by* surfaces clause-initially with the indicative complementizer *čto* as a fused form (Brecht 1977).

(15) Liza xote-l-a, [čtoby Philemon uše-l].
Liza want-PST-SG.F ČTOBY Philemon leave-PST
'Liza wanted Philemon to leave.' (Mezhevich 2006: 148)

Like *by* in matrix clauses, *čtoby* never appears with present or future morphology on the predicate.

(16) a. Maša xočet čtoby Petja s"e-l jabloko.
Maša wants ČTOBY Peter eat.-PFV.PST apple
'Mary wants for Peter to eat an apple.'

b. * Maša xočet čtoby Petja {est / s"est} jabloko.
Maša wants ČTOBY Peter eat.IPFV.PRS eat.PFV.PRS(=FUT) apple
Intended: 'Mary wants for Peter to eat an apple.' (Asarina 2006: 7)

Unlike matrix subjunctive clauses, a past-tense reading is unavailable for a subjunctive complement clause, as shown in (17c); while present and future interpretations are possible, as shown in (17a) and (17b).

(17) a. Ja xoču, čtoby Maša zavtra s"e-l-a jabloko.
I want ČTOBY Mary tomorrow eat-PST-SG.F apple
'I want for Mary to eat an apple tomorrow.'

b. Ja xoču, čtoby Maša sejčas e-l-a jabloko.
I want ČTOBY Mary now ate-PST-SG.F apple
'I want for Mary to be eating an apple right now.'

c. * Ja xoču, čtoby Maša včera s"e-l-a jabloko.
I want ČTOBY Mary yesterday eat-PST-SG.F apple
Intended: 'I want for Mary to have been eating an apple yesterday.'
(Asarina 2006: 8)

In the case that the subjects of the complement and matrix clauses are coreferential, however, the subordinate predicate appears in its infinitival form (Cubberley 2002: 160, 236), as shown in (18). When the subjects of the complement and matrix clauses have disjoint reference, the subordinate clause appears with the complementizer *čtoby* and the past tense form of the embedded verb, as in (19). The disjoint reference requirement for the subject of the embedded subjunctive clause with respect to the subject of the matrix clause is called "subject obviation" (cf. Antonenko 2010: 1).

(18) a. Ja xoču poj-ti domoj.
I want.PRS.1SG go-INF home
'I want to go home.'

b. My xote-l-i ėto sdelat' zavtra.
we want-PST-PL this do.INF tomorrow
'We wanted to do that tomorrow.' (Harrison & Le Fleming 2000: 143)

(19) a. Ja xoču, čtoby on poše-l domoj.
I want.PRS.1SG ČTOBY he go-PST home
'I want him to go home.'

b. My xote-l-i čtoby vy ėto sdela-l-i zavtra.
we want-PST-PL ČTOBY you this do-PST-PL tomorrow
'We wanted you to do this tomorrow.'

Matrix subjunctives, though, do not differ semantically regardless of whether the predicate appears with past morphology or in the infinitive (Asarina 2006: 10). Note, however, that the subject of the clause appears in its nominative form when the verb appears with *-l* but in its dative form when the verb is infinitival.

(20) a. Oj s"e-l by Petja {včera / zavtra} jabloko!
oh ate-PST BY Peter.NOM yesterday tomorrow apple
'If only Peter would eat an/the apple tomorrow!' or
'If only Peter would have eaten an/the apple yesterday!'

b. Oj s"est' by Pete {včera / zavtra} jabloko!
oh eat.INF BY Peter.DAT yesterday tomorrow apple
'If only Peter would eat an/the apple tomorrow!' or
'If only Peter would have eaten an/the apple yesterday!'
(Asarina 2006: 10)

The following section outlines properties of the subjunctive mood from a cross-linguistic perspective.

3 The subjunctive mood

The subjunctive mood contrasts minimally with the indicative (Quer 2006: 660; Wiltschko 2017: 218). However, neither cross- nor intra-linguistically does the subjunctive mood constitute a uniform category (Quer 2006: 661). Some subjunctive-related phenomena are present in some languages but absent in others that have the mood (ibid.). For example, Icelandic subjunctive clauses allow long-distance anaphors while Upper Austrian German subjunctive clauses do not (ibid.). Further, within a single language that has the subjunctive mood, there are subjunctive-related phenomena that are evident in some subjunctive clauses but not all (ibid.).

The subjunctive has frequently been considered a defective tense (e.g. Picallo 1984 and Giannakidou 2009) or at least impoverished semantically with respect to the indicative (see Cowper 2002; Cowper 2005; Schlenker 2003). As a completely defective tense, the subjunctive is claimed to be dependent on some higher structure for its temporal interpretation (Wiltschko 2017: 2). Proposals of this sort stem from the fact that in some languages (e.g. Spanish and Catalan), subjunctives cannot be used in matrix clauses; in these same languages, where the subjunctive appears in a complement clause, the time of the embedded clause is interpreted relative to that of the matrix clause (Wiltschko 2017).

A problem that has been noted concerning the idea that the subjunctive is a defective tense/impoverished morphosyntactically is that there are languages that have been argued to lack tense but have an active indicative-subjunctive distinction (Wiltschko 2017). For example, Wiltschko (2017) demonstrates that in Upper Austrian German, there is no dedicated form for the simple past tense and the bare verb in the indicative is compatible with a past, present, or future interpretation.

(21) a. I **koch** grod. **present**
I cook now
'I am cooking right now'

b. I **koch** gestan. **past**
I cook yesterday
'I was cooking yesterday.'

c. I **koch** moagn. **future**
I cook tomorrow
'I will cook tomorrow.' (Wiltschko 2017: 13–14)

Wiltschko (2017) argues that in Upper Austrian German there is a subjunctive–indicative contrast active where a tensed language, for example Standard German, would employ the past-non-past distinction. For example, as shown in (22), subjunctive morphology appears on the verb, closer than agreement marking.

(22) a. Nua du kumm-**at**-st.
only you come-SBJ-2SG
'Only you would come.'

b. Nua es kumm-**at**-ts.
only you.PL come-SBJ-2PL
'Only you guys would come.' (Wiltschko 2017: 17)

Wiltschko claims that the subjunctive-indicative contrast is how the language anchors its clauses. This is evident from the fact that the subjunctive may be used in main independent clauses in Upper Austrian German, and therefore: a) subjunctive clauses are temporally independent, and b) the subjunctive does not create a transparent clause. The proposal, following Ritter & Wiltschko (2005; 2009), is that Infl, the locus of clausal anchoring, contains a [Coin(cidence)] feature which establishes a relation of either overlap or coincidence between Infl's two arguments (in the case of [+Coin]) or disjointness (as in the case of [−Coin]). It is the substantive (a.k.a. semantic) content of the morphology that determines the relation between Infl arguments, for example, time. In the case of Upper Austrian German, subjunctive marking values the [*u*Coin] feature in Infl as [−Coin], while indicative marking values it as [+Coin].

The negatively valued [Coin] feature of Ritter & Wiltschko (2005; 2014) roughly corresponds to Iatridou's (2000) exclusion feature: ExclF. ExclF can range over times or worlds and has the basic meaning presented in (23).

(23) ExclF: $\textsc{t}(x)$ excludes $\textsc{c}(x)$,
where $\textsc{t}(x)$ means $\textsc{topic}(x)$ ("the x that we are talking about") and $\textsc{c}(x)$ means $\textsc{context}(x)$ ("that x that for all we know is the x of the speaker")

a. Ranging over times, $\textsc{t}(t)$ is the set of times under discussion and $\textsc{c}(t)$ is the set of times that for all we know are the times of the speaker (i.e. the utterance time). What this yields is the interpretation: The topic time excludes the utterance time.

b. Ranging over worlds, the interpretation the ExclF yields is: The topic worlds exclude the actual world.

(Iatridou 2000: 246)

Essentially, ExclF and the negatively valued [Coin] feature share the property of establishing that two elements are disjoint.

The analysis to be presented in this paper adopts the feature proposed by Ritter & Wiltschko (2005; 2009), however as a privative interpretable feature of Infl. It also employs Cowper's (2002; 2005) feature geometry of interpretable Infl features. It will also be explained how ExclF, bearing basically the opposite semantics of [Coin], would be less parsimonious in accounting for the behaviour exhibited by the Russian subjunctive. To give away the punch-line, what surfaces is the claim that in Russian, the past tense is morphosyntactically unmarked (non-past being the marked tense) and the Russian subjunctive involves the spell-out of an irrealis head in Infl that is incompatible with the morphosyntactic specification of [Coin].

4 The proposal

I argue in this section that *by* is an irrealis particle that spells out the head of a functional projection IrrP, which merges with TP in a fully articulated Infl structure. Despite proposing IrrP as a modified version of Cowper's (2010) MP, I make no claims here about modal operators in Russian subjunctive clauses or subjunctive clauses in general.

4.1 Theoretical framework

The analysis to be presented adopts the inflectional system proposed by Cowper (2010), based on the feature geometry of the inflectional domain proposed in Cowper (2005). Her framework and the one presented here are rooted in Distributed Morphology (DM) (Halle & Marantz 1993; Embick & Noyer 2007; Bobaljik 2017), a theoretical approach according to which the syntax operates on feature bundles (i.e. lexical items or LIs) taken from the lexicon, combined in terminal nodes. Vocabulary items (or VIs) spell these features out at the phonological interface.

The interpretable, privative features of the Infl domain proposed by Cowper (2005) are divided according to mood, narrow tense, and viewpoint aspect, as shown in (24), where α and β are features in a dependency structure, in $\alpha > \beta$, β is a dependent of α.

(24) Mood: [Proposition] > [Finite/Deixis] > [Modality]
Narrow tense: [Precedence]
Viewpoint aspect: [Event] > [Interval] (Cowper 2010: 1)

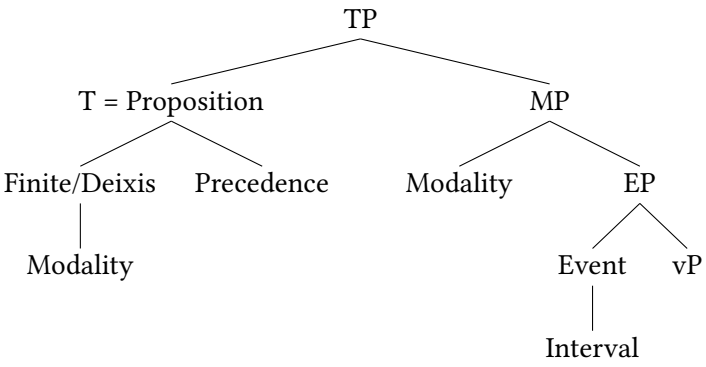

Figure 1: English Infl domain (Cowper 2010: 2)

The proposed dependency structure from Cowper (2010) for the English Infl domain is provided in Figure 1.[1]

The specification of [Proposition] contrasts propositions from bare events or states. [Finite] is a syntactic feature that licenses nominative case and verbal agreement. [Deixis] anchors a clause to the moment of speech. [Modality] carries the semantics of necessity or possibility. [Precedence] encodes the meaning of past versus non-past. [Event] encodes the eventive (as opposed to stative) property of a predicate. Finally, the specification of [Interval] derives imperfectivity versus perfectivity. These features are realized on multiple functional heads which together constitute the inflectional domain of the clause.

Under Cowper's proposal, English modals merge in M(od) and subsequently move to T. TP, accordingly, is the projection of the feature [Proposition] given that only in propositions may the past/non-past distinction be realized. The viewpoint aspect features are realized in EP, which is not projected in stative clauses (Cowper 2010: 2). Moreover, the EPP is a property of the domain as a whole and is instantiated by the highest Infl head projected.

I assume here the TP, MP, and EP projections from Cowper (2010) along with the features [Finite], [Modality], and [Event]. [Modality] in my proposal is semantically impoverished in relation to its original proposal: (i) to avoid making any claims about subjunctivity and some relation with modality and (ii) because the semantics of *by* allows for modal interpretations within a superset of additional irrealis readings. I therefore refer to it simply as IrrP, projected by the instantiation of [Irrealis]. Another difference between the feature geometry pro-

[1]While Cowper (2010) proposes heads higher than TP, only the projections relevant to the present proposal are provided here.

posed here and that of Cowper's is that I follow Ramchand & Svenonius (2014), assuming that propositional content is encoded higher in the clause, namely in the CP domain, rather than within Infl. For Ramchand & Svenonius, clauses are comprised of event (VP), situation (TP), and proposition (CP) domains, with transitional projections establishing relations among the domains. Specifically, AspP – essentially Cowper's (2010) EP – establishes a relation between the v/VP and TP, where an event is converted to a situation, while FinP (the lowest projection in Rizzi's (1997) split CP) establishes a relation between TP and CP, where a situation is converted to a proposition. It is in the CP that the propositional content of the clause becomes anchored to the utterance context, since that is the domain where speaker-oriented parameters reside. The diagram in Figure 2 shows these domain associations.

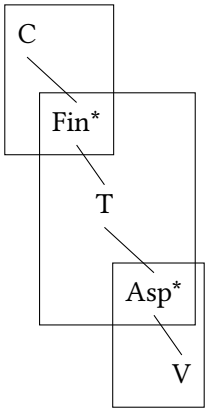

Figure 2: Domains & transitional projections
(Ramchand & Svenonius 2014: 164)

I will claim that whereas past is marked relative to non-past in English, the opposite holds in Russian. That is, whereas past in English is the spellout of (minimally) [Precedence], Russian does not have [Precedence] in its Infl feature inventory. Rather, Russian has the feature [Coin] (Ritter & Wiltschko 2005; Wiltschko 2017; 2014) as a dependent of [Finite], and does not have [Deixis].[2, 3] Unlike in

[2] The difference between [Deixis] and [Coin] lies in [Deixis] having been proposed as a feature that in English links temporal and speaker properties to the utterance context, whereas what [Coin] associates to the utterance context depends on where in the syntactic spine it is specified à la Ramchand & Svenonius (2014).

[3] [Interval], I claim, is also absent in Russian. Instead, the feature [Atomic] is a dependent of [Event], as I have argued based on the fact that stative predicates in Russian cannot bear non-derivational perfective morphology. See Melara (2014) for further discussion.

Wiltschko (2017), as was previously described, however, [Coin] is a privative feature. Moreover, while [Deixis] establishes an anchor to the utterance time relative to which [Precedence] situates the event, I claim that [Coin] anchors a proposition to the utterance context temporally within the Infl domain and personally (to the speaker) within the C domain. As a feature in Force, the head that hosts complementizers like English *that* and provides information about clause type, [Coin] associates the clausal content to the speaker's perspective.

4.2 The Infl system in Russian

Adopting the tools from Cowper (2005; 2010), I propose the fully articulated dependency structure in Figure 3 for the Russian Infl system. Note that here, as mentioned above, [Irr] heads its own projection rather than being part of T, unlike in Cowper (2010) (note that my Irr corresponds to Cowper's Mod). I assume that a functional head cannot be projected in the absence of any specified features. Thus, while for Cowper, the lexical properties of modals also reside in Mod, I take Irr to be a purely functional head, merged only when [Irr] is specified. This is where a modal particle such as *by* in Russian is merged. Similarly, T is the projection of the feature [Fin(ite)].

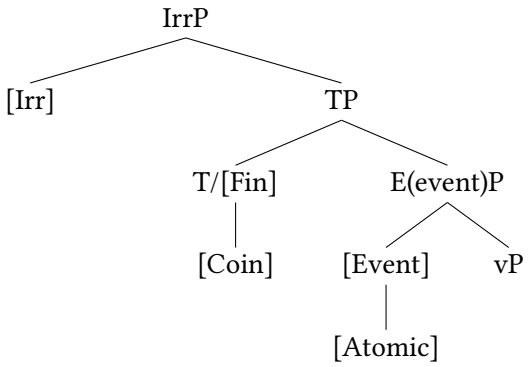

Figure 3: Russian Infl dependency structure

The fact that the Russian subjunctive is compatible only with the past marker *-l* or the infinitive results from the selectional requirements of the functional heads in the Infl system. As stated earlier, I assume, based on Ramchand & Svenonius (2014), that the Infl domain temporally situates an event, while the C domain anchors the situation personally, both with respect to the utterance context.

As in Cowper (2010), EP is projected in non-stative clauses, selecting the vP. It is in E that non-derivational aspectual affixes reside. TP hosts the features

[Fin] and [Coin]. [Fin] is the locus of nominative case and agreement. [Coin] establishes coincidence between the event described by the vP and the temporal properties of the utterance context. Russian, I claim, lacks any tense features. Instead, the past/non-past distinction is attributable to the presence or absence of [Coin]. Specified in Infl – the temporal domain – [Coin] semantically situates the event described by the clause to a non-past time and is spelled out by non-past morphology. Both T and E bear a strong uninterpretable V feature [*u*V], requiring that v, containing V, move up at least to T to satisfy and check the [*u*V] of each head locally. I propose that in Russian, when [Coin] is absent, the past suffix *-l* is spelled out on the verb. That is, *-l* spells out a T specified only for [Fin], hence the past tense morpheme being unmarked relative to the non-past.

The [Irr] feature that *by* spells out encodes irrealisness. The irrealis meaning of [Irr] is semantically at odds with the binding established by [Coin]. When IrrP is projected, [Irr] scopes over the entire Infl domain (but cf. Cowper 2010 for discussion on how NegP is the highest projection in Infl) and essentially has the semantics of ExclF scoping over times, proposed by Iatridou (2000). As described in §3, ExclF is equivalent to [−Coin] from Ritter & Wiltschko's (2005; 2014) proposals. Thus, under an analysis according to which [Coin] is a privative feature, its specification coincides with the [+Coin] valuation and the anchoring of the proposition described by the clause to the utterance context. In case [Irr] and [Coin] were to be specified together, the Infl domain would be specified, in essence, for both [−Coin] and [+Coin]. If the Infl domain is what indicates whether an eventuality is anchored to the utterance context (temporally) as a whole, it cannot be both necessarily associated with and not associated with the utterance context, which is what specifying both + and – values for [Coin] would entail. Overall, there must be agreement within the domain with respect to the clause's association to the utterance context. Therefore, while Irr must check its [*u*V] feature, it cannot do so if [Coin] is specified on T. On the other hand, Irr may freely merge with a TP lacking [Coin]. In this case, *by* is spelled out with past morphology on the verb.

The well-formedness of *by* with the infinitive form of the verb is predicted in a similar fashion. In the absence of TP, Irr may merge directly with EP, satisfying its requirements for [*u*V]-checking in the same way as it would have in being merged with TP. As long as [Coin] is absent, Irr can freely merge with EP (or vP for that matter). Observe that the absence of [Fin] – whose specification licenses nominative case assignment and agreement – would predict that the subject not appear in its nominative form and the infinitive form of the verb would arise without subject agreement marking. This prediction is borne out, at least with respect to case assignment. Note again in the following example, repeated from

(20), that the matrix clause containing *by* and the *-l* suffix contains a subject in the nominative case. Conversely, the construction with *by* and the infinitive form of the verb contains a dative subject.

(25) a. Oj s"e-l by Petja {včera / zavtra} jabloko!
oh ate-PST BY Peter.NOM yesterday tomorrow apple
'If only Peter would eat an/the apple tomorrow!' or
'If only Peter would have eaten an/the apple yesterday!'

b. Oj s"est' by Pete {včera / zavtra} jabloko!
oh eat.INF BY Peter.DAT yesterday tomorrow apple
'If only Peter would eat an/the apple tomorrow!' or
'If only Peter would have eaten an/the apple yesterday!'

(Asarina 2006: 10)

Recall that the subject surfaces in a position higher than *by*. I assume that the EPP property holds of the highest head in the Infl domain. I make no commitment to any particular version of the EPP; for our purposes, it simply requires that the external argument appear in the specifier of the highest Infl head. I conjecture that the external argument may move to the specifier of T, where it receives case and values the uninterpretable phi-features of T. It may then move on further to the specifier of Irr, where it satisfies the EPP. In BY+infinitive constructions, TP is absent, hence the lack of agreement on the verb.

I speculate that Irr, when [Irr] is specified, bears some sort of feature that is optionally strong, allowing for the various available positions of *by* within the clause. It is unclear what exactly this feature is and why it optionally takes the verb or the VP more locally. An alternative explanation would be that *by* is phonologically a clitic, which would capture why the form cannot appear clause-initially. In fact, there is no generally accepted theory of Russian word order as of yet (see Kallestinova & Slabakova 2008 and Bailyn 2011 for discussion), with subjunctive data muddying the waters even more. What the reader, I hope, has been convinced of is that *by* spells out a head in the Infl domain. The form interacts directly with Infl categories/properties, namely tense and finiteness, both in terms of distribution and interpretation. If *by* were to spell-out a feature in the CP domain, one would expect it to licitly appear clause-initially, which it can't. While I have discussed only SVO-ordered clauses, work on *by* in other word orders would shed light on *by*'s position variability.

In summary, *by* is incompatible with the non-past tense because the non-past morphology spells out the feature [Coin], which itself is semantically at odds with the lack of connection to the utterance context encoded by [Irr], which *by*

spells out. It is the lack of [Coin] in infinitival constructions that allows them to appear with *by*. Table 1 lists the featural specifications of the indicative and subjunctive possibilities that have been discussed.[4]

Table 1: Indicative and subjunctive morphology in Russian

	Infl heads	**Morphological spell-out**
1	T: [Fin], (E)	Past tense
2	T: [Fin]>[Coin], (E)	Present tense
3	Irr: [Irr], T: [Fin], (E)	*By* + Past tense
4	Irr: [Irr], (E)	*By* + Infinitive

Overall, *by* requires that the event not be bound by the utterance situation, therefore it cannot be anchored with respect to person or time. This conforms to Jespersen's (1924: 319), cited in Cowper (2002: 10) claim that the subjunctive expresses a perspective other than the speaker's. Moreover, the semantics expressed by *by*, such as obligation, desirability, advisability, hypothesis, are captured by this analysis in treating *by* as an irrealis particle.

5 *By* in complement clauses

Work on *by* typically makes note of the particle's tendency to move to second position in a clause when some sort of complementizer appears in C (Hacking 1998: 29). For instance, there is a strong tendency for *esli* 'if' and *by* to appear adjacent to one another in the antecedent of a conditional, as in (26a). An antecedent with *esli* in which *by* appears farther from the complementizer, as in (26b), is degraded for many speakers.

(26) a. **Esli by** my zna-l-i ob ėtom, my by vam skaza-l-i.
if BY we know-PST-PL about this we BY you tell-PST-PL

b. ? **Esli** my zna-l-i **by** ob ėtom, my by vam skaza-l-i.
if we know-PST-PL BY about this we BY you tell-PST-PL

'If we had known about this, we would have told you.' (Hacking 1998: 29)

[4] Concerning line 3 in Table 1, one could think of *by* as requiring that the clause within which it appears is specified for [−Coin] (in both the Infl and C domains). The postulation of binary features in this analysis, however, would lead to overgeneration.

Čto 'that' also bears a tight relation to *by*. It has been noted, however, that there are speakers for which (27a) is interpreted as equivalent to (27b). For those who do not get the same interpretation, (27a) merely sounds like an incomplete embedded conditional (Brecht 1977: 40).

(27) a. Ja nikogda ne duma-l, **čto** Jura **by** ėto sdela-l.
I never NEG think-PST that Jura BY this do-PST
b. Ja nikogda ne duma-l, **čtoby** Jura ėto sdela-l.
I never NEG think-PST ČTOBY Jura this do-PST
'I never thought that Jura would do that.' (Brecht 1977: 40, fn. 10)

Given the high markedness for speakers, it might be that *esli by* and *čtoby* are separate lexical items from the independent *esli*, *čto*, and *by*. Brecht (1977) shows, though, that when the embedded clause is comprised of two (and presumably more) conjuncts, *čtoby* appears in the first clause and the second conjunct contains only an instance of *by*, as in (28) (see similar discussion on *esli by* in Hacking 1998: 29-32).

(28) Ty vele-l, **čtoby** ja uexa-l v Minsk odin, a Vasja **by** ostalsja
you order-PST ČTOBY I leave-PST at Minsk alone and Vasja BY remain
s toboj?
with you
'Did you order that I leave for Minsk alone and Vasja remain with you?'
(Brecht 1977: 36)

Furthermore, Barnetová et al. (1979), cited in Hacking (1998), suggest that an element that appears between *esli* and *by* receives a focused reading. In fact, according to a consultant of my own, the following receives a reading according to which *Nikol'* has contrastive focus.

(29) Esli Nikol' by mne skaza-l-a ja by vstreti-l ee v škole.
if Nicole BY me.DAT tell-PST-SG.F I.NOM BY meet-PST her.ACC at school
'If Nicole had told me, I would have met her at school.'

Suppose *čto* and *esli* and other related complementizers appear in Force, assuming Rizzi's (1997) split CP analysis. The structure of the C domain is shown in (30), where ">" simply expresses dominance. Suppose that this full-fledged structure may also be projected in Russian.

(30) ForceP > TopP > FocP > TopP > FinP (Rizzi 1997: 297)

As previously mentioned, Force encodes information about clause type and FinP works in tandem with ForceP to select either finite or non-finite IPs (Rizzi 1997). I have argued in Melara (2014) that complement clauses selected by propositional attitude verbs lack a feature that links a clause to the perspective of the speaker, accounting for cross-linguistic differences in what has traditionally been referred to as sequence of tense phenomena. For example, in English, a past tense in a complement clause embedded under a matrix past tense will be interpreted either at or before the time of the matrix clause event (thus, exhibiting sequence of tense). This is shown in (31). In Russian, the embedded clause in the same tense configuration can instead only be interpreted as prior to the time of the matrix event, not coinciding with it (i.e. it does not exhibit sequence of tense with complement clauses). This is shown in (32). Crucially for both languages, the forward-shifted reading in complement clauses is impossible.

(31) John **said** that Mary **was** pregnant.

a. *Embedded situation coincides with matrix situation*
John said: "Mary is pregnant." **available**

b. *Embedded situation precedes matrix situation*
John said: "Mary was pregnant." **available**

(32) Maša **skazala**, [čto Petja **byl** bolen].
Masha said.PRF.PST that Petya was sick
'Masha said that Petya was sick (i.e., Petya had been sick).'

a. *Embedded situation does not coincide with matrix situation*
Masha said: "Petya is sick." **unavailable**

b. *Embedded situation precedes matrix situation*
Masha said: "Petya was sick." **available**
(Kondrashova 1999: 183, as cited in Mezhevich 2006: 174)

In line with what I am arguing for here, I proposed that indicative clauses must be both personally and temporally anchored. In matrix clauses, this is accomplished by a temporal deixis feature in Infl, a personal deixis feature in C/Force, both, or by default when there is no feature specified to express otherwise. In the absence of these anchoring features in T or C, perhaps because a language lacks them altogether, the clause is anchored by default to the utterance time and speaker in matrix clauses. Embedded clauses lacking these features are temporally and personally anchored to the time and viewpoint of the (Agent/Experiencer) subject of the embedding clause. Accordingly, in both of the English and Russian

sentences above, the embedded clause lacks the personal anchoring feature in Force and the embedded clauses are interpreted relative to the perspective of the matrix subject. What makes the temporal interpretations different between the two languages, though, is that English has an anchoring feature in Infl (Cowper's 2005 [T-deixis]), while Russian does not, hence the English complement clause is thus temporally independent while the Russian one depends on the temporal interpretation of the higher clause.

I claim that in Russian, the same personal anchoring feature is in complementary distribution with *čto* 'that'. Let's also call this feature [Coin], manifested in the propositional domain, where anchoring to the utterance context via point-of-view is established. As I have claimed, *by* cannot be bound by the utterance context, due to the irrealis semantics of [Irr]. If Fin is the head that establishes a transition from situation to proposition (Ramchand & Svenonius 2014), then it is possible that [Irr] moves into Fin when the CP domain is projected in order to scope upward within the C domain to ensure that it is not being bound to the utterance context, in violation of [Irr]. This correctly predicts that it is possible, though marked for many speakers, to have a focused element between the complementizer and *by*. Furthermore, it captures *by*'s preference for the second position in the clause when the C domain is overtly projected.

If indeed [Coin] in Force creates a barrier for inter-clausal operations like temporal anchoring, then we can explain why subjunctive complement clauses embedded under a non-past matrix clause cannot receive a past tense interpretation. (33), repeated from (17), shows that a past tense subjunctive clause under a non-past matrix verb can receive a present or future reading but not a past one.

(33) a. Ja xoču, čtoby Maša **zavtra** s"e-l-a jabloko.
I want ČTOBY Mary tomorrow eat-PST-SG.F apple
'I want for Mary to eat an apple tomorrow.'

b. Ja xoču, čtoby Maša **sejčas** e-l-a jabloko.
I want ČTOBY Mary now ate-PST-SG.F apple
'I want for Mary to be eating an apple right now.'

c. * Ja xoču, čtoby Maša **včera** s"e-l-a jabloko.
I want ČTOBY Mary yesterday eat-PST-SG.F apple
Intended: 'I want for Mary to have been eating an apple yesterday.'
(Asarina 2006: 8)

The presence of *čto* in Force tells us that Force is not specified for [Coin]. This means the lower clause is temporally anchored to the time of the matrix situation. Given that in a matrix non-past context, the higher clause is specified for

the temporal [Coin], the lower clause may only be compatible with readings that arise from the specification of temporal [Coin]. In order to get a past interpretation of the subjunctive complement clause, the matrix verb must appear in its past tense form, as in (34).

(34) Ja xote-l, čtoby Maša včera s"e-l-a jabloko.
I want-PST ČTOBY Mary yesterday ate-PST-SG.F apple
'I wanted for Mary to have eaten the apple yesterday.'

I claim that Russian present and future tense forms both spellout [Coin], hence their similar morphological forms. Their interpretation as present or future arises from their aspectual properties. The future reading in (33a) is therefore licit, since nothing featurally blocks the reading.

Finally and speculatively, it is possible that *čto* and *by* are over time lexicalizing as a single item, with *esli* + *by* lagging slightly in the same process. I leave this question for future research.

6 Conclusion

This paper has investigated the morphosyntactic properties of what the literature refers to as the Russian subjunctive. The particle *by*, which is used to form this type of construction in Russian, has been argued to be the spellout of an irrealis head Irr. This functional head was proposed to be the highest head of the Russian Infl system, taking a TP, EP, or vP as its complement. I have claimed that Irr encodes irrealis semantics. That is, the projection of this head – the specification of the feature [Irr] – establishes that the proposition denoted by the clause is not bound to the utterance context. Its projection is therefore incompatible with the feature [Coin] in either the Infl or C domains as [Coin]'s specification binds a clause to the utterance context temporally or personally, depending on where it is specified. This captures the lack of temporal dependency matrix subjunctive clauses exhibit and the lack of commitment on the speaker's part towards the proposition expressed by the subjunctive clause. Moreover, the fact that *by* cannot appear with non-past morphology stems from the proposal that non-past-tense morphology is the spellout of [Coin]. In essence, then, the subjunctive–indicative mood (or better yet, the irrealis–realis) distinction in Russian is one that lies in the projection or non-projection of [Irr].

The analysis presented in this paper ultimately results in the proposal that the non-past tense is marked relative to the past in Russian. Additionally, *by* spelling out a head whose semantics are inherently irrealis, the analysis presented also

captures the modal-like interpretations of the Russian clauses that contain *by*, which namely express obligation, desire, advisability, hypothesis, and so forth on the part of the subject. Also shown was the fact that *by* cannot appear in clause-initial position. This restriction was argued to be due to the fact that *by* moves to the head of FinP in the C domain, which itself is selected by one of the higher heads of an expanded CP layer.

As noted by a reviewer, clearly the analysis presented here runs *contra* the literature on the subjunctive. The subjunctive has typically been considered syntactically/semantically impoverished relative to the indicative mood. Under the analysis presented in this paper, the structure of the Russian subjunctive is structurally more marked compared to the indicative. Ultimately, this analysis supports Wiltschko's conclusion that while categories like indicative and subjunctive may be universal, the way in which they are constructed is language specific. While further work on the morphological closeness of *čto* and *by* ought to be conducted, the analysis presented in this paper has nonetheless proposed a framework of the language's Infl properties from which further work can springboard.

Abbreviations

1	first person	NEG	negative
2	second person	NEUT	neuter
3	third person	NOM	nominative
ACC	accusative	PL	plural
DAT	dative	PFV	perfective
FUT	future	PROG	progressive
F	feminine	PRS	present
GEN	genitive	PST	past
IPFV	imperfective	SBJ	subjunctive
IND	indicative	SG	singular
INF	infinitive	TOP	topic

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