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Russian and the EPP requirement in the Tense domain

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ABSTRACT

This paper analyzes movement to the Tense domain in Russian. It demonstrates that Russian verb does not normally leave the *vP*, and that only internal Nominative arguments can remain *in situ*, while external ones obligatorily raise to [Spec; TP], as in English. Unlike in English, external subjects can be sentence-final, but this results from additional Information Structure related movement when they are in narrow focus. The paper shows that various Russian constructions have no overt material in the left periphery ('V O', 'V S' with internal Nominative arguments, etc.). Obligatory external subject raising proves that the EPP requirement in the Tense domain is definitely operative in Russian, so covert expletives are introduced in these cases. Turning to sentences with non-Nominative XPs in the left periphery, the paper demonstrates, contrary to several recent models, that such XPs never exhibit subject properties and hence cannot pass through [Spec; TP]. The paper concludes that these constructions also contain covert expletives (i.e. Russian has them wherever English has overt ones) and that only Nominative DPs can satisfy the EPP requirement in Russian. These results are interesting for the EPP typology and for the more general question of whether EPP-driven movement depends on agreement.

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1. Introduction

Many languages exhibit movement to the Tense domain, which is standardly captured by the EPP requirement on the T or Agr_S head (henceforth the EPP in T). In the majority of cases, this head shares features with the moved element (a Nominative DP or a finite verb), so most EPP theories rely on agreement. However, a number of apparent exceptions have been identified in various languages (e.g. Collins, 1997; Holmberg, 2000; Miyagawa, 2001; Nevins and Anand, 2003; Ura, 2000). In particular, several authors claim that the EPP requirement is regularly satisfied by non-agreeing XPs in Russian (e.g. Babyonyshev, 1996; Bailyn, 2003a,b, 2004; Lavine, 1998; Lavine and Freidin, 2002).

These cases are interesting from a typological perspective and also play a principal role in a more general debate: what is the relation between two basic grammatical operations, Agree and Move (or internal Merge)? For example, in Chomsky (1995) Move is parasitic on Agree, while Chomsky (2008) suggests dissociating them and mentions Lavine and Freidin's Russian EPP model as an important argument. Therefore, every potential exception calls for a careful analysis. In this paper, I focus on Russian data, concluding that they have been misanalyzed: only Nominative DPs can satisfy the EPP in T in Russian. Section 1.1 provides some background on the EPP in T; section 1.2 presents the Russian examples in question and their previous analyses, and then sketches my proposal and the structure of the paper.

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1.1. Background

Historically, the EPP was an extension of the Projection Principle (hence the term) stating that clauses must have subjects. In Chomsky (1995), this requirement was related to the categorial D feature with the EPP property present on T. This feature could be checked either by moving an XP (a subject) or by merging an XP (an expletive). Later, the feature responsible for these operations was assumed to sit on Agr_S, while in many recent works, it is again ascribed to T. The nature of this feature is also debated: for example, Pesetsky and Torrego (2007) claim that it is a T(ense) feature.

Languages that allow for low subjects without an overt expletive, such as Italian, Spanish, Greek etc., were always problematic for the EPP theory. Many authors introduced covert expletives for such languages (e.g. Chomsky, 1982, 1995; Holmberg, 2005; Rizzi, 1982, 1986; Rizzi and Shlonsky, 2007). Another solution was proposed by Alexiadou and Anagnostopoulou (1998) and developed in subsequent work (e.g. Manzini and Savoia, 2002; Platzack, 2004): crosslinguistically, the EPP requirement can be satisfied *either* by an XP (a Nominative subject or an expletive) *or* by an X⁰ (a raised verb). In the latter case, rich verbal agreement morphology is claimed to have the requisite nominal feature, as was suggested in (Taraldsen, 1978).¹

This is used to explain why, for example, in Greek, the finite verb obligatorily moves up, while the position of the subject depends on other, IS (Information Structure) related factors. Greek subjects raise if they are topical and remain *in situ* if they are not. Consider (1a–b) from (Alexiadou and Anagnostopoulou, 1998:497, n. 9a, ia):

- (1) a. An ehi idhi diavasi kala o Petros to mathima.
if has already read well Peter the lesson
'If Peter has already read the lesson well.'
- b. An diavaze sinithos kala o Petros to mathima.
if read usually well Peter the lesson
'If Peter usually read the lesson well.'

The finite form—the auxiliary or the main verb—raises to T (or to Agr_S, depending on the model) and therefore surfaces before aspectual adverbs. The subject remains *in situ*, in [Spec; vP], and is therefore below the light manner adverb. Other constituents that do not move out of the vP, like the object in (1a–b), follow such subjects, as expected. The participle in (1a) precedes the light manner adverb and, according to Alexiadou and Anagnostopoulou, is in Asp.

Let us compare this pattern to English. In English the main verb normally remains inside vP, surfacing below most adverbs, and auxiliaries are interspersed with adverbs, presumably in the order of merger. External Nominative arguments, generated in [Spec; vP], raise to [Spec; TP] to satisfy the EPP, and thus precede all verb forms and at least low adverbs. Internal Nominative arguments can remain *in situ*, in the complement of VP, following most adverbs and all verb forms. In this case, an overt expletive satisfies the EPP, as in (2).

- (2) There always appeared two bright lines in the spectrum in the place of the two dark lines D.

Apparent exceptions to Alexiadou and Anagnostopoulou's generalization have been found in various languages, but the analysis of these cases remains controversial. To give an example, English Locative Inversion (LI), as in (ia), is the most widely discussed case (e.g. Coopmans, 1989; den Dikken, 2006; Levine and Culicover, 2001). The locative PP is often assumed to occupy [Spec; TP] in LI constructions. Some authors use this as an argument against agreement-based EPP theories, while others try to incorporate LI in them—for example, Pesetsky and Torrego (2007) suggest that such PPs bear an uninterpretable T feature. In any case, putting these PPs in [Spec; TP] is controversial—for example, it is unclear why V-to-C movement and embedding in (3b–c) are impossible.

- (3) a. Down the hill was rolling the ball.
b. *Was down the hill rolling the ball?
c. *Did he say that down the hill was rolling the ball?

Since this and other potential exceptions are often used to dissociate the EPP in T and even movement in general from agreement, every such case deserves close scrutiny. This paper focuses on Russian data.

1.2. Russian data: previous analyses and the present proposal

Several authors claim that the EPP in T can be satisfied by non-Nominative XPs in Russian (e.g. Babyonyshev, 1996; Bailyn, 2003a,b, 2004; Lavine, 1998; Lavine and Freidin, 2002), but the cases they discuss do not always overlap. The constructions suggested by Babyonyshev, Lavine and Freidin can be analyzed together because they share an important property: all

¹ The authors who opt for a silent expletive also assume that verbal agreement morphology plays a role in licensing it.

arguments in them are internal.² Consider the examples in (4)–(7). In my translations, I have tried to reflect their Information Structure.

- (4) a. Sinjak pojavilsja na kolene.
bruise.NOM appeared on knee
'The bruise appeared on the knee (rather than somewhere else on the leg).'
- b. Na kolene pojavilsja sinjak.
on knee appeared bruise.NOM
'On the knee, a bruise appeared.'
- c. Na kolene sinjak pojavilsja.
on knee bruise.NOM appeared
'On the knee, a bruise appeared (while on the elbow, there was none).'
- (5) a. Deti nravjatsja Maše.
children.NOM appeal Masha.DAT
'Children are liked by Masha.'
- b. Maše nravjatsja deti.
Masha.DAT appeal children.NOM
'Masha likes children.'
- c. Maše deti nravjatsja.
Masha.DAT children.NOM appeal
'As for Masha, children are liked by her.'
- (6) a. Mašu ubilo pulej.
Masha.ACC killed.IMPERS bullet.INSTR
'Masha was killed by a bullet.'
- b. Pulej ubilo Mašu.
bullet.INSTR killed.IMPERS Masha.ACC
'The bullet killed Masha.'
- (7) Uši založilo.
ears.ACC clogged.IMPERS
'(My) ears got clogged.'

Babyonyshev, Lavine and Freidin argue that non-Nominative XPs satisfy the EPP in cases like (4b), (5b), (6a–b) and (7). Bailyn extends this analysis to 'O V S' sentences like (8b), postulating two-step *Generalized Inversion* (GI) in them. First, a non-Nominative XP A-moves to [Spec, IP] and satisfies the EPP. Second, the verb raises to I over the subject, while in (8a) it moves no further than *v*. The subject in (8b) remains *in situ*. (8c) has the same derivation as (8a), only the object undergoes discourse-driven *Dislocation* to an unspecified *A'* position. Babyonyshev, Lavine and Freidin make no claims about such cases.

- (8) a. Maša s"ela kašu.
Masha.NOM ate porridge.ACC
'Masha ate the porridge.'
- b. Kašu s"ela Maša.
porridge.ACC ate Masha.NOM
'The porridge was eaten by Masha.'
- c. Kašu Maša s"ela.
porridge.ACC Masha.NOM ate
'As for the porridge, Masha ate it.'

² In this paper, Nominative DPs generated in [Spec; vP] are called external arguments, and all other arguments merged in lower positions (both Nominative and non-Nominative) are called internal. The term *subject* is applied only to Nominative DPs. Many problems concerning Russian argument structure are still unresolved, but there is little disagreement on how to divide arguments into internal and external. I will not need any further details in this paper and therefore can rely on this general consensus.

In subsequent sections, I examine the positions of various elements to formulate a novel view on the Russian EPP requirement in general, and on these constructions in particular. Section 2 presents adverb placement facts indicating that the verb does not normally raise further than *v* in Russian.³ Section 3 focuses on the positions of Nominative DPs following the verb. Internal Nominative arguments, as in (4b) or (5b), are shown to be *in situ*. But external arguments, as in (8b), do not pattern with *in situ* subjects in other languages.

For example, in Greek, all Nominative DPs remain *in situ* when they are not topical, and in this case they can be followed by other *vP*-internal material, as in (1a–b). In Russian, external arguments surface after the verb only when they are in narrow focus (or contrasted inside a wide focus), and in this case no other material follows them.⁴ I argue that external subjects always raise to [Spec; TP], but if they are in narrow focus, subsequent IS-related movement occurs. This can be described either as right-dislocating the subject or as moving the constituent below the subject (including the verb, adverbs, etc.) around it.

Choosing between these approaches is outside the scope of this paper. I merely show that such subjects either are in or reconstruct to [Spec; TP] for the purposes of scope and binding.⁵ Thus, despite notorious differences in word order, Russian turns out to be similar to English with respect to the EPP in T: internal Nominative arguments do not always raise to satisfy it, while external ones obligatorily do so.

This conclusion is incompatible with Bailyn's analysis of 'O V S' sentences, which presupposes that external subjects can remain *in situ*. But what about cases where internal Nominative arguments are absent or do not raise? First of all, section 4 shows that Russian allows for various constructions with no overt material in the left periphery, like (9)–(11).

- (9) Založilo uši.
clogged.IMPERS ears.ACC
'(My) ears got clogged.'
- (10) Pojavilis' pervye cvety.
appeared [first flowers].NOM
'There appeared first flowers.'
- (11) Temneet.
[gets darker].IMPERS
'It is getting darker.'

Obligatory raising of external Nominative arguments clearly indicates that the EPP in T is operative in Russian. Therefore, one can either admit that this requirement works in some sentences, but not in the others, which would obviously undermine its explanatory force, or introduce covert expletives in cases like (9)–(11). Many authors view the EPP as an overtness requirement (e.g. as in Lasnik, 2001) and therefore avoid silent expletives, so section 4 presents some evidence for their existence.

Keeping in mind that covert expletives must be introduced anyway, let us return to the examples (4b), (5b), (6a–b) and (7). Do they also require covert expletives or is the EPP in T satisfied by raised non-Nominative XPs? If it is, non-Nominative XPs should exhibit A-properties associated with movement to [Spec; TP] in such cases and A'-properties in 'XP SV' sentences like (4c) and (5c). Contrary to the claims previously made in the literature, section 5 demonstrates that this prediction is not borne out: both groups of cases behave in *the same way*.

All grammatical examples exhibit A'-properties, but some ungrammatical sentences do not, as if we were dealing with A-movement both in 'XP SV' and in 'XP V S' constructions. However, no A-position is available to XPs in 'XP SV' sentences, so I conclude that the ungrammaticality of these cases is caused by independent factors. As a result, I argue that all raised non-Nominative XPs target an A' position higher than [Spec; TP]. Since such a position is definitely available and the data analyzed in this paper have no bearing on its exact nature, I leave it unspecified.

Section 6 summarizes what can be concluded from these results. The main outcome of the paper is that only Nominative DPs and expletives can satisfy the EPP in T in Russian. The data analyzed in it are incompatible with the approaches to the Russian EPP requirement presented at the beginning of this subsection (Babyonyshev, 1996; Bailyn, 2003a,b, 2004; Lavine, 1998; Lavine and Freidin, 2002), as well as with a different model developed by Williams (2006).

Williams (2006) argues that raised XPs occupy the specifier of LP, or Logical Phrase, in Russian. LP is above TP and, roughly speaking, hosts topic-like elements. The EPP requirement is associated with LP, but not with TP in Russian, while English has

³ Cases with V-to-C movement are exceptions to this. They include some yes-no questions (the others differ from affirmative sentences only in intonation), conditionals with inversion, like in English, etc.

⁴ Exceptions include V-to-C movement constructions and marginal cases with paired foci.

⁵ In face of the crosslinguistic evidence that subjects become immovable having reached [Spec; TP] (e.g. Rizzi and Shlonsky, 2007), the second approach appears more attractive.

the opposite pattern. Relying on Representation Theory (Williams, 2003), he abandons the division into A and A' positions, claiming that some projections, including LP, have intermediate properties. He notes that this can explain the mixture of A- and A'-properties of raised non-Nominative XPs, but does not go into details.

However, this approach cannot account for sentences like (9)–(11). Moreover, obligatory external subject raising becomes mysterious. In section 3, I present various tests showing that external subjects are in or pass through [Spec; TP] in 'OVS', 'PPVS' and similar constructions. Subjects are in focus in these cases, so, if Russian had an EPP requirement higher than T (in Williams' L, or in the broadly conceived C domain) and it could be satisfied by various topical XPs, subjects would be expected to stay *in situ*.

Finally, let me make a remark on the materials used in the paper. Rather than constructing examples, I drew them from corpora wherever possible. I used the National Corpus of Russian Language (all information can be found at www.ruscorpora.ru) and the corpus *Bokrjonok* created at the Department of Computational Linguistics at St. Petersburg State University. It contains over 21 million words and includes texts written between 1985 and 2004, mainly from magazines and newspapers. The source of examples is indicated when it is relevant (e.g. when frequencies of various constructions are estimated). I have also analyzed data presented in other papers and constructed examples for binding and scope tests. Binding judgments are subject to variation in Russian. To obtain a more comprehensive picture, I included a large number of sentences in a questionnaire presented to 20 speakers. All details are given in Appendix A. Several examples were introduced at later stages, so I collected judgments informally, consulting about 10 speakers from Moscow and St. Petersburg.

2. Verb movement

In this section, I discuss adverb placement tests for verb movement. According to major Russian corpus studies (e.g. Kovtunova, 1976; Shvedova, 1980; Sirotinina, 1965), Russian adverbs are normally preverbal. As (12a–b) show, this is true both for 'SVO' and for 'OVS' orders. The main exceptions are focused adverbs at the end of the sentence, as in (12c), and rare cases of focus fronting, as in (12d). Manner adverbs are considered to be the lowest (e.g. Cinque, 1999). If the verb consistently surfaces below them, it does not move out of the vP.

- (12) a. Zlodei xorošo znali povadki životnyx.
malefactors.NOM well knew [animals' habits].ACC
'The malefactors knew animals' habits well.'
- b. Èto v'juščeesja rastenie xorošo znali drevnie rimljane.
[this creeping plant].ACC well knew [ancient Romans].NOM
'This creeping plant was well known to ancient Romans.'
- c. Neftegazovye oligarxi živut očen' xorošo.
[oil and gas oligarchs].NOM live very well
'Oil and gas oligarchs live very well.'
- d. Xorošo vremja proletelo – i veselo, i nezametno!
well time.NOM flew away and merrily and imperceptibly
'How nicely the time has passed – imperceptibly and with fun!'

Certain Russian constructions involve V-to-C movement: e.g. root and embedded yes–no questions with the particle *li*, as in (13a), conditionals like (13b), etc. Almost nothing can precede the verb in such cases. Topics are impossible. As for adverbs, e.g. *togda* is possible, but with the meaning 'in this case', not with the temporal meaning 'then'. My conclusions do not extend to these special cases.

- (13) a. Ne uveren, znali li oni xorošo ètot jazyk.
not sure knew PART they well [this language].ACC
'I am not sure whether they knew this language well.'
- b. Slušali by deti vnimatel'no svoix roditelej...
listen.COND children.NOM attentively [self's parents].ACC
'If (only) children listened attentively to their parents...'

My conclusions also do not apply to auxiliaries and modals, which are interspersed with adverbs in Russian, like in English. Russian has only one auxiliary *byt'* ('to be'), used in imperfective Future forms, as in (14a), and in Passive. There is also only one modal verb *moč'* ('can'), shown in (14b) constructed on the basis of (14a). Otherwise modal predicative adjectives are used.

Table 1

Positions of different adverbs with respect to the verb.

	Adv V		V Adv		Total
<i>xorošo</i> ('well')	1368	99.8%	3	0.2%	1371
<i>medlenno</i> ('slowly')	564	99.5%	3	0.5%	567
<i>polnost'ju</i> ('completely')	796	97.1%	24	2.9%	820

- (14) a. Sintetika vposledstvii vseгда budet bystro temnet'.
 synthetics.NOM later always will quickly darken.IMPERF.INF
 'Afterwards, synthetic oil will always quickly darken.'
- b. Sintetika vposledstvii vseгда možet bystro potemnet'.
 synthetics.NOM later always can quickly darken.PERF.INF.
 'Afterwards, synthetic oil can always quickly darken.'

To investigate adverb placement facts in more detail, I analyzed samples with three very low adverbs: *xorošo* 'well', *medlenno* 'slowly' and *polnost'ju* 'completely' from the corpus *Bokrjonok*. I worked with two students, Tatiana Maljavko and Ekaterina Ershova, from the Department of Computational Linguistics at St. Petersburg State University.⁶ The results of the study presented in Table 1 show that Russian verbs consistently follow even the lowest adverbs, and hence do not move out of vP.

In most 'V Adv' cases (19 out of 30), adverbs are followed by an object, as in (15a). There are also several sentences with argument PPs, as in (15b), and with temporal and locative PP modifiers.

- (15) a. (Ešli vy polnost'ju doverjaete rebenku)
 i znaete xorošo ego družej, sverstnikov i staršix,
 and know.2PL well [his friends].ACC [of-the-same-age and older].ACC
 (ne lišnim budet proverit'...)
 '(If you trust your child) and know his friends, both of the same age and older, well enough (it will not hurt to check...)'
- b. (Vstupaja v nee,)
 čelovek otrekalsja polnost'ju ot sveogo prošlogo
 man.NOM renounced completely from his past
 (i daže menjal imja).
 '(Entering it) a man renounced his past completely (and even changed his name).'

These rare examples involve IS-related movement rather than verb raising. The adverb receives a secondary stress in these cases and is perceived as emphasized or contrasted. However, such stress can also be assigned without any reorderings, with the adverb in its canonical position ('S Adv V O' and 'O Adv V S').⁷ My view is supported by the fact that in (16), a future tense version of (15a), the adverb can follow the infinitive, which does not raise. (Slioussar, 2007) discusses such cases in more detail.

- (16) ...i budete znat' xorošo ego družej, sverstnikov i staršix.
 and will.2PL know.INF well [his friends].ACC [of-the-same-age and older].ACC

We came across only two cases, given in (17a–b), where a postverbal adverb is followed by the subject. They can receive a similar explanation. The other 267 sentences with postverbal subjects found in our corpus sample had the 'XP Adv V S' word order, as in (12b).

- (17) a. No ego faktičeski perepisali polnost'ju brat'ja Strugackie, sdelaav perevod.
 but it.ACC practically rewrote completely [brothers Strugatsky].NOM having made translation.ACC
 'But it was practically completely rewritten by the Strugatsky brothers when they translated it.'

⁶ We analyzed only the sentences where these three adverbs modify one-word finite verb forms (rather than adjectives, infinitives etc.). We did not include cases where adverbs bear narrow focus, like in (12c), or are fronted, like in (12d). Such constructions cannot be taken into account in verb movement tests because they contain additional IS-related reorderings.

⁷ The situation with the main stress is the same in Russian: for example, in a sentence containing a subject, an object and a verb, a focused subject can end up in the most embedded position, where the default main stress falls ('O V S'), or the stress can be shifted to it without any reorderings ('S V O').

- b. Ne za sčēt proizvodstva živet xorošo zapadnyj mir!
 not due to production lives well [western world]._{NOM}
 'The western world lives well not due to production (of material values)!'

To conclude, no verb movement caused by the EPP in T or by other requirements (V2, clustering, etc.) can be found in Russian, and so it is similar to English in this respect. These results show that O V S sentences cannot have a structure in which the verb moves over the *in situ* subject (as argued in Baily, 2003a,b, 2004).

3. Positions of postverbal subjects

In this section, I analyze the positions of Nominative arguments in sentences where they follow the verb. Section 3.1 shows that Russian postverbal internal arguments pattern with *in situ* subjects in other languages, while external ones do not. For example, in Greek, all Nominative DPs move up when they are topical and remain *in situ* when they are not. In the latter case, they can be followed by other *vP*-internal material, as (18) shows.

- (18) An dhiavaze sinithos telios kapios to vivlio.
 if read usually completely somebody the book
 'If somebody usually completely read the book.'

This is true only for Russian internal Nominative arguments. External subjects almost always precede the verb: not only when they are topical, but also when they are part of a wide focus. They surface after the verb only if they are in narrow focus (or highlighted inside a wide focus), and in this case no other constituents can follow them. I conclude that these external subjects also raise to [Spec; TP] and end up sentence-final as a result of additional IS-related movement. Among other things, this explains how 'XP Adv V S' arise: if the verb does not move out of *vP*, it cannot precede the subject in [Spec; *vP*].

Scope and binding tests in section 3.2 confirm a high position of postverbal external subjects, while internal ones are demonstrated to be *in situ*. Thus, Russian is similar to English not only with respect to verb raising. In both languages, only external Nominative DPs undergo obligatory EPP-driven movement. Internal Nominative arguments can either satisfy the EPP in T or remain in their original position.

3.1. Constructions with postverbal subjects, their frequency and IS properties

How often are subjects postverbal in Russian? Sirotinina (1965) estimated their frequency in various belles-lettres and scientific texts, finding that Tolstoy's *War and Peace* has postverbal subjects in 16–30% of sentences (depending on the chapter), a monograph on immunity has them in 16–22% of sentences, etc. Colloquial Russian corpus estimates are much lower: 7% of sentences on average. Sirotinina's massive corpus data indicate that almost all postverbal subjects are focused. Exceptions to this are provided by the V-to-C cases mentioned above (*li* questions, conditionals without conjunction, etc.).

In my second corpus study, carried out in collaboration with the same students, Tatiana Maljavko and Ekaterina Ershova, I analyzed constructions with postverbal subjects. We wanted to see what type of predicates are found in such constructions, what type of constituents follow postverbal subjects and how often. When compiling a corpus sample, one has to deal with the fact that the Nominative and Accusative forms of many Russian inanimate nouns coincide. In the *Bokrjonok* corpus, as well as in other reasonably big Russian corpora, grammatical tagging was done automatically, and the disambiguation of such cases is still in progress. Since postverbal Accusatives are much more frequent than postverbal Nominatives, we decided to limit the sample to unambiguous cases from the very start. Analyzing only animate nouns could bias the results in an unpredictable way, so we restricted ourselves to Singular forms of the 1st declension (like *čáška* 'cup'), where there is no ambiguity. This declension is highly frequent and contains most Feminine gender nouns, with no bias towards animate or inanimate ones. We analyzed 500 randomly selected sentences with postverbal subjects. The results are presented in Table 2.

The results indicate that when the subject is postverbal in Russian, it immediately follows the verb and is sentence-final in the absolute majority of cases (in 92% of cases in our sample). Now let us turn to 20 '(XP) V S XP' sentences. 8 examples are V-to-C structures. For example, verb-initial constructions, like (19), are characteristic of Russian fairy tales (and their imitations).⁸ I briefly come back to them in section 6.

- (19) Maxnula ptička pravym krylom...
 waved bird._{NOM} with right wing
 'The bird waved with its right wing' (and the old woman became a young beauty).

⁸ Most frequent V-to-C constructions, like *li* questions, were filtered out beforehand. The fact that (19) involves V-to-C can be proved by adverb placement: e.g. *slučajno* 'unintentionally' would follow the verb and the subject.

Table 2

Types of constructions with postverbal subjects and their frequency.

	No. of cases	Percentage	
XP V S	382	76.4%	92%
V S	78	15.6%	
XP V XP S	16	3.2%	4%
V XP S	4	0.8%	
XP V S XP	9	1.8%	4%
V S XP	11	2.2%	
(XP) V XP S XP	0	0%	0%

In 12 other sentences, postverbal subjects are *internal* Nominative arguments, as in (20). Out of 78 'V S' cases, 8 are V-to-C constructions, while in the other 70 the Nominative argument is also internal, as in (21).

(20) Inogda razvivaetsja polnaja gluxota v tečenie neskol'kix dnej ili daže časov.
 sometimes develops [complete deafness].NOM in several days or even hours
 'Sometimes there develops a complete deafness in several days or even hours.'

(21) Voznikaet neestestvennaja situacija.
 arises [unnatural situation].NOM
 'An unnatural situation arises.'

I will analyze the '(XP) V XP S' cases after discussing the IS properties of postverbal subjects. In Greek, Spanish and similar languages, subjects are preverbal when they are topical and postverbal when they are part of the focus or backgrounded (e.g. Alexiadou and Anagnostopoulou, 1998; Costa, 2000). In Russian, this is true only for internal Nominative arguments. This can be illustrated by (22b–c): in the 'S V XP' clause, the subject is topical, while in the 'V S XP' one, it is part of the focus.

- (22) a. Jajcekletka ... soxranjaet sposobnost' k oplodotvoreniju v srednem v tečenie 5–6 časov.
 'An ovum maintains its ability to be fertilized for 5–6 hours on average.'
- b. Process oplodotvorenija proishodit v perednej treći jajceprovoda,
 [process of fertilization].NOM happens in the outer third of the oviduct
 'The process of fertilization takes place in the outer third of the oviduct. ...'
- c. gde obrazuetsja novaja kletka (zigota)
 where forms [new cell].NOM zygote.NOM
 v rezul'tate slijanija jajcekletki so spermijem.
 as a result of merger between an ovum and a sperm cell
 '...where a new cell (a zygote) is formed as a result of merger between an ovum and a sperm cell.'

External Nominative arguments exhibit a different pattern. Postverbal subjects are necessarily in narrow focus, as in (23a), or are highlighted (contrasted or emphasized) inside a wide focus, as in (23b). In (23b), the fact that a man was bitten by a rabid fox, rather than by an ordinary dog, is the most salient part of the new information. Cases like this are analyzed in detail in (Slioussar, 2007).

- (23) a. Ètu malen'kuju peredaču ulovila odna očen' xudaja molodaja ženščina.
 [this small parcel].ACC noticed [one very skinny young woman].NOM
 'This small parcel was noticed by a very skinny young woman.'
- b. (Redkij slučaj v gubernii): čeloveka ukusila bešenaja lisa.
 man.ACC bit [rabid fox].NOM
 '(A rare case in the province): a man was bitten by a rabid fox.'

All other subjects, even if they are new and part of a wide focus, are preverbal. For example, in (24) the preverbal subject is non-specific, which excludes topicality.

- (24) Kakoj-nibud' očen' ser'eznyj turist-inostranec objazatel'no podaet
 [some.NON-SPECIFIC very serious foreign tourist].NOM necessarily gives
 v mestnyj sud žalobu...
 to the local court complaint.ACC
 'A very serious foreign tourist always lodges a complaint with the local court'...

As is well known, Russian allows for massive IS-related movement: topics and discourse-linked material surface at the beginning of the sentence, while foci become sentence-final. Relying on this generalization and on the data presented above, I argue that external Nominative arguments always raise to [Spec; TP] in Russian. However, when they are in narrow focus, subsequent IS-related movement occurs. It can be analyzed either as right-dislocating the subject or as moving the constituent below the subject (including adverbs, the verb, etc.) around it. Scope and binding arguments showing that sentence-final external subjects either occupy [Spec; TP] or pass through this position are given in the next subsection.

The first option appears more attractive given the crosslinguistic evidence that subjects become immovable after reaching [Spec; TP] (e.g. Rizzi and Shlonsky, 2007). Otherwise, choosing between these two options is not directly relevant to the topic of this paper and would require an extensive analysis of IS phenomena, so let me refer the reader to (Slioussar, 2007). In any case, the structure of 'XP Adv V S' sentences described in section 2 is explained: if the subject remained in [Spec; vP], it could not follow the verb, which does not move out of vP.

Finally, let me come back to the '(XP) V XP S' sentences from Table 2. All of them have external Nominative subjects in narrow focus. Since Russian allows for multiple topics, all other elements usually end up in the left periphery in such cases, so the 'XP V S' order is predominant. '(XP) V XP S' structures arise when one of the arguments is not a suitable topic: mostly when it is an anaphor, as in (25a), or forms a set expression with the verb, as in (25b). As we saw in section 2, sentences like (17a–b) are possible as well, but these did not occur in the corpus sample.

- (25) a. Otvetstvennost' za éto vzjala na sebja terrorističeskaja banda.
 responsibility.ACC for this took on itself [terrorist band].NOM
 'The responsibility for this was taken by a terrorist band.'
- b. Polučila razvitie tipologija iskusstvennyx jazykov.
 received development.ACC typology.NOM of artificial languages
 'A typology of artificial languages was developed.'

3.2. Scope and binding arguments

Let us start with the sentences in (27a–b). (26) provides a context for them. An elaborate context is essential because Russian speakers have a very strong preference for overt scope (see Ionin, 2001; Neeleman and Titov, 2009; Slioussar, 2011).

- (26) Na škol'nom predstavlenii šest' devoček i tri mal'čika ispolnjali narodnye tancy. V pervom nomere učastvovali vse devočki i tol'ko odin mal'čik. Posle etogo na scene ostalis' odni devočki, kotorye vyxodili tancevat' to po otdel'nosti, to vse vmeste.
 'At a school show, six girls and three boys were performing folk dances. All the girls and only one boy took part in the first number. Then only the girls remained on the stage and came out to dance, sometimes together, sometimes separately.'

- (27) a. A potom dva raza pojavil'sja každyj mal'čik. two > every
 and then two times appeared [every boy].NOM
- b. A potom dva raza stanceval každyj mal'čik. two > every, every > two
 and then two times danced [every boy].NOM

I conclude that the internal Nominative argument in (27a) remains *in situ*: it never comes to c-command *dva raza* 'two times', so the 'Q > Num' reading is impossible. However, this reading becomes possible in (27b) with the external subject. This indicates that the subject has raised, but then ends up sentence-final for IS reasons (as a contrastively focused entity).

Let us turn to (28)–(29). These sentences were included in my binding questionnaire (see Appendix A).

- (28) a. Otlčniki_i ljubjat svoix_i učitelej.
 A-students.NOM like [self's teachers].ACC
 'A-students like their teachers.'
- b. Svoix_i učitelej ljubjat otlčniki_i.
 [self's teachers].ACC like A-students.NOM

- c. Svoim_i učitelej otličniki_i ljubjat.
[self's teachers]_{.ACC} A-students_{.NOM} like
- (29) a. Otličniki_i nrvajatsja svoim_i učiteljam.
A-students_{.NOM} appeal [self's teachers]_{.DAT}
'A-students appeal to their teachers.'
- b. Svoim_i učiteljam nrvajatsja otličniki_i.
[self's teachers]_{.DAT} appeal A-students_{.NOM}
- c. Svoim_i učiteljam otličniki_i nrvajatsja.
[self's teachers]_{.DAT} A-students_{.NOM} appeal

Ljubit' 'to love' has an external Nominative argument and an internal Accusative one. *Nrvajatsja* 'to appeal' takes two internal arguments, a higher Dative and a lower Nominative. According to my analysis, the Nominative DP is in or has passed through [Spec; TP] in (28b) and remains *in situ* in (29b). Consequently, only (29b) is expected to be ungrammatical. This is true for my Russian idiolect. The judgments of my informants are given in Appendix A. Despite some variation, there is a clear tendency to judge (29b) as the worst.

Two more examples are given in (31a–b). Checking whether the subject is able to bind the Locative phrase, we can conclude that the subject is in [Spec; TP] or has passed through this position in (31a), but not in (31b).

- (30) V sočel'nik deti xodili po domam i peli pesni. Každaja devočka postaralas' poradovat' roditel'j i objazatel'no vystupit' pered nimi.
'On Christmas Eve, children went from house to house singing songs. Every girl tried to please her parents and to make sure that she performs in front of them.'
- (31) a. Net, v svoem dome spel každyj mal'čik.
no in self's house sang [every boy]_{.NOM}
- b. *Net, v svoem dome pojavil'sja každyj mal'čik.
no in self's house appeared [every boy]_{.NOM}

Finally, let us note that examples analyzed in this section show that internal Nominative arguments, unlike external ones, cannot first move to [Spec; TP] and then end up sentence-final as a result of subsequent IS-related movement. An anonymous reviewer asked *why* they cannot do so and receive a narrow focus reading. This can be easily explained if a configurational IS model is adopted (e.g. Neeleman and Reinhart, 1998; Neeleman and van de Koot, 2008; Reinhart, 2006; Szendrői, 2001; Slioussar, 2007). In these models, there are no dedicated IS features like Top or F and no fixed syntactic positions targeted by topics and foci. Rather, an element should be in a particular configuration to receive a particular interpretation.

The models mentioned above differ in various aspects, so I will take (Reinhart, 2006) as an example. In this model the focused constituent must contain the main stress. The main stress is assigned by default in the most embedded position, so either a focused constituent ends up there or the stress is relocated to it. If a required configuration is available without additional movements or stress shifts, they are ruled out by the Economy Principle. This is why Russian internal Nominative arguments must remain *in situ* if they are focused, and do not get into the sentence-final position as a result of additional movements.

To conclude, in this section I have demonstrated that external Nominative DPs always move to [Spec; TP] in Russian, but can subsequently appear in the sentence-final position when they are in narrow focus. Internal Nominative arguments raise and satisfy the EPP in T when they are topical and otherwise remain *in situ*. Thus, Russian is similar to English, in which only external subjects obligatorily move to satisfy the EPP. This is incompatible with an analysis in which O V S sentences have *in situ* subjects (as in Bailyn, 2003a,b, 2004).

4. Sentences without raised Nominative DPs

What satisfies the EPP in T in the sentences where internal Nominative arguments remain *in situ*? We saw in the previous section that Russian allows for 'V S' structures. As I show in section 4.1, these and some other constructions (e.g. 'VO', 'V') have *no* overt material in the left periphery. At the same time, obligatory raising of external Nominative arguments demonstrated in the previous section proves that the EPP requirement is certainly operative in Russian. Thus, we should either admit that the EPP in T is present in some Russian sentences, but not in the others, or that the latter sentences have covert expletives.

The first solution has never been suggested for any language and would obviously undermine the explanatory force of the EPP requirement. Therefore, I opt for the second one. As I mentioned in the introduction, the existence of silent expletives is a matter of ongoing debate, so I present additional arguments for them in section 4.2.

The next question is to determine where exactly silent expletives are needed. Several authors suggested that the EPP in T can be satisfied by various non-Nominative XPs in Russian (e.g. Babyonyshev, 1996; Bailyn, 2003a,b, 2004; Lavine, 1998; Lavine and Freidin, 2002) – the relevant cases were briefly presented in section 1.2. Sections 2 and 3 provide arguments

against non-Nominative EPP satisfaction in 'XP V S' sentences with external subjects, showing that these subjects are in or pass through [Spec; TP] and that the verb does not move out of vP.

In sections 4.1 and 5 I argue that non-Nominative XPs do not raise to [Spec; TP] in the sentences where internal subjects remain *in situ* or Nominative arguments are absent altogether. Therefore, covert expletives are necessary in these cases. Thus, another EPP-related similarity between Russian and English is revealed: Russian has covert expletives wherever English has overt *it* and *there*. In total, this means that only Nominative DPs or covert expletives can satisfy the EPP in T in Russian.

4.1. Overview of various constructions

In this subsection I consider various constructions where Nominative DPs either remain *in situ*, being internal arguments, or are absent altogether. First of all, Russian has impersonal sentences like (32) with no overt material except the verb.

- (32) Temneet.
[gets darker].IMPERS
'It is getting darker.'

For such cases, a solution that does not involve covert expletives has been proposed. Lavine and Freidin (2002), who associate the EPP requirement with Agr_S, claim that verbs like *temnet'* do not project an Agr_SP. Hence, there is no EPP requirement in such sentences. However, this solution is not available if the EPP requirement is associated with T and is undesirable for other reasons.⁹ In particular, it does not apply to examples like (33) below.

Let us turn to the sentences with a single internal argument, as in (33)–(34). (34a–b) are provided with their corpus contexts, as I will need them later.

- (33) Pojavilis' pervye cvety.
appeared [first flowers].NOM
'There appeared the first flowers.'
- (34) a. (I vdruk... Bac!!! Takoj oglušitel'nyj zvuk!)
Uši založilo, čestnoe slovo!
ears.ACC clogged.IMPERS word of honor
'(And all of a sudden... Bang!!! Such a deafening sound!) My ears got clogged, honestly!'
- b. (Baraxtalas', bojalas' vdoxnut' i vydoxnut').
Založilo uši.
clogged.IMPERS ears.ACC
'(I floundered, I was afraid to breathe in and out). My ears got clogged.'

In section 3, we saw that single internal Nominative arguments can raise to [Spec; TP] or remain *in situ*, depending on their IS properties. In the latter case, illustrated by (33), there is no overt material that could potentially satisfy the EPP in T. This word order is not associated with the specific intonational contour and interpretational effects characteristic for V-to-C cases and is used in wide-focus contexts, so no IS-related movement could obscure the subject position.

Now let us look at (34a–b) with a single non-Nominative argument. The verbs taking such arguments are known as Adversity Impersonals, but, as examples (48a–b) in section 4.2 show, this term is misleading: they do not always denote something adverse. Bailyn analyzes (34a), although without any context (2003b:159, n. 6). Following Babyonyshev (1996), he claims that such sentences exhibit obligatory EPP-driven object raising.

However, if this were the case, sentences like (34b) would be ill-formed, while in fact they are grammatical and frequently used. To illustrate this claim, I searched for (34a) and (34b) in the National Corpus of Russian Language (www.ruscorpora.ru), looking at pure 'O V' and 'V O' sentences, as well as '(XP) O V (XP)' and '(XP) V O (XP)' constructions. I also added examples with the verb *zakladyvalo*, the Imperfective counterpart of *založilo*. The distribution of word orders is presented in Table 3. Obviously, this small data sample can only be used as an illustration. But it clearly indicates that VO orders are by no means marginal – in this case, they were even predominant.

What IS properties are associated with the two word orders in (34a–b)? Expectedly, the 'O V' order is used when the object is topical, while the 'V O' order is appropriate in the rare context when the verb is anaphorically given. Then the first element receives so-called topic accent and the main stress falls on the second. However, as the contexts I provided in (34a–b) show, both 'O V' and 'V O' constructions can also have wide focus. In these cases, the main stress falls on the object.

To figure out why these two word orders can have the same IS properties, one should keep in mind that this problem is not restricted to constructions like (34a–b). (35a–b) shows that both 'S V O' and 'S O V' sentences with the main stress on the object can have a wide focus.

⁹ Let me note that Russian impersonal verbs have the same endings as the verbs with 3 SG NEUTR overt subjects, like *sostojanie* 'state' or *ono* 'it'.

Table 3

Word order distribution for a sample OV/VO case.

<i>založilo</i> 'clogged.PERF.IMPERS' + <i>uši</i> 'ears.ACC'	'(XP) O V (XP)' (out of them pure 'O V') '(XP) V O (XP)' (out of them pure 'V O')	22 (6) 33 (6)
<i>zakladyvalo</i> 'clogged.IMPERF.IMPERS' + <i>uši</i> 'ears.ACC'	'(XP) O V (XP)' (out of them pure 'O V') '(XP) V O (XP)' (out of them pure 'V O')	4 (2) 7 (3)

- (35) a. On rabotaet, a ty p'es' čaj.
 he works and you drink tea.ACC
 'He is working, and you are drinking tea.'
- b. On rabotaet, a ty čaj p'es'.
 he works and you tea.ACC drink

This problem was extensively studied in the Russian linguistic tradition. *Kovtunova (1976)* suggested that OV orders are emphatic, but eventually most authors agreed that while written Russian uses VO constructions, colloquial Russian tends to use OV orders, and there are no clear interpretative differences between them (e.g. *Kodzasov, 1989, 1996; Sirotinina, 1965*). Rather, they reflect syntactic differences between written and colloquial Russian.

Discussing these differences here would lead us too far afield, so let me refer the reader to (*Slioussar, 2007*). In brief, colloquial Russian might be slowly undergoing VO-to-OV shift. Here it is crucial to prove that the tendency to use OV in colloquial Russian has nothing to do with the EPP in T. (35a–b), where [Spec; TP] is definitely occupied by the subject, and (36) below demonstrate that the position of preverbal objects is rather low.

- (36) (Nenavižu samolety), mne vseгда uši zakladyvaet.
 me.DAT always ears.ACC clogs.IMPERS
 'I hate planes, my ears always get clogged.'

We can conclude that all three sentences in (33)–(34) have no overt material in the left periphery. What does this mean for the EPP in T? If we do not want to say that it holds in some sentences, but not in the others, covert expletives must be introduced in these cases.

Finally let us consider sentences with two internal arguments. (37a–d), taken from *Williams (2006:416, n. 34a–b)*, demonstrate an important generalization: one of the arguments obligatorily moves out of vP.

- (37) a. Saše ne nraivitsja Boris.
 Sasha.DAT NEG appeals Boris.NOM
 'Sasha does not like Boris.' Answer to: Do you foresee any problems with our group trip?
- b. Boris ne nraivitsja Saše.
 Boris.NOM NEG appeals Sasha.DAT
 'Sasha does not like Boris.' Not an answer to: Do you foresee any problems with our group trip?
 Answer to: Who likes Boris?
- c. Nraivitsja Saše Boris.
- d. Nraivitsja Boris Saše.

The verb *nraivitsja* takes two arguments, a higher Dative and a lower Nominative. The higher argument raises 'by default', i.e. without any IS effects: (37a) is felicitous in the all-new context. The lower argument can also raise—when it is topical. The same pattern can be observed in Locative Inversion (LI) cases, like (38a–b) below (*Babyonyshev, 1996:52, n. 37a–b*), where the 'PP_{LOC} V DP_{NOM}' is the canonical word order. The verb-initial orders in (37c–d) are extremely infrequent and can be used when the verb is anaphorically given or focus-fronted and in 'folksy' contexts, as in example (19) in section 3. All these uses are associated with specific intonational properties. It is commonly assumed that such constructions involve additional verb movement after internal argument raising (e.g. *Lavine and Freidin, 2002:272*).

- (38) a. V klasse pojavilsja noven'kij.
 in class appeared new.NOM
 'A new boy entered the class.'
- b. Noven'kij pojavilsja v klasse.
 new.NOM appeared in class

Lavine and Freidin explain the obligatory argument raising in cases like (37a–d) or (39a–b) below (2002:282, n. 44a–b) by appealing to the EPP requirement.

- (39) a. Soldata ranilo pulej.
 soldier.ACC wounded.IMPERS bullet.INSTR
 'A soldier was wounded by a bullet.'
- b. Pulej ranilo soldata.
 bullet.INSTR wounded.IMPERS soldier.ACC

However, this explanation is undermined by three facts. First, XPs occupying [Spec; TP] are expected to bind possessive anaphors, as happens with quirky subjects in Icelandic (Zaenen et al., 1985). (40)–(41) show that this is not the case in Russian. In section 5, specifically dedicated to binding and coreference, this will also be demonstrated for experiencer constructions like (37a), LI sentences like (38a) and other cases. In general, section 5 concludes that non-Nominative XPs occupy an A'-position both in 'XP V S' and in 'XP S V' constructions.

- (40) a. Soldata ranilo ego / *svoej pulej.
 soldier.ACC wounded.IMPERS his self's bullet.INSTR
 'A/the soldier was wounded by his bullet.'
- b. Každogo soldata ranilo ego / *svoej pulej.
 [every soldier].ACC wounded.IMPERS his self's bullet.INSTR
 'Every soldier was wounded by his bullet.'
- (41) Upavšimi kirpičami zavalilo ix / *svoego xozjaina.
 [fallen bricks].INSTR blocked.IMPERS their self's owner.ACC
 'Fallen bricks blocked their owner.'

Second, the presence of other XPs in the left periphery, as in (42a–b), does not change the pattern. If Locative PPs can satisfy the EPP, raising of internal arguments becomes unnecessary. Nevertheless, one of them still obligatorily moves up.

- (42) a. Na peredovoj soldata ranilo pulej.
 on the front line soldier.ACC wounded.IMPERS bullet.INSTR
 'On the front line, a soldier was wounded by a bullet.'
- b. Na peredovoj pulej ranilo soldata.
 on the front line bullet.INSTR wounded.IMPERS soldier.ACC

One can object that Locative PPs should be able to satisfy the EPP only in LI constructions. Various restrictions on LI are still unclear even in English, where it has been studied extensively, but it appears to matter what type of predicate is used. So I can only note that *ranilo* 'wounded.IMPERS' and similar verbs can be used without their Instrumental argument in cases like (43), which look like LI. Thus, my observation might still be interesting even if this objection is correct.

- (43) Na peredovoj ranilo soldata.
 on the front line wounded.IMPERS soldier.ACC
 Canonical order: 'On the front line a soldier was wounded'.

Third, as (33)–(34) show, there is no obligatory movement in the sentences with *one* internal argument. If the EPP requirement in Russian obligatorily triggered raising of some XP, either Nominative or non-Nominative, internal subjects and objects would always move to [Spec; TP] in such cases. I.e. they would be expected to behave in the same way as single external Nominative arguments: 'S V'/'O V' orders would be used in wide focus sentences, and in narrow focus sentences, additional IS-related reorderings would be possible. Moreover, structures like (32) without any overt arguments would be ruled out.

In total, this forces the conclusion that the movement in (37)–(39) has some independent causes, which have still to be identified.¹⁰ In section 5 I argue that non-Nominative XPs raise to an A'-position in such constructions, so there is no overt material in [Spec; TP]. Therefore, this is another group of cases where covert expletives must be introduced. As a result, another EPP-related similarity between Russian and English is revealed. Russian needs covert expletives analogous to English Nominative expletive *it* and Caseless expletive *there* and uses them in the same types of constructions: wherever

¹⁰ Non-EPP-driven movement out of vP is discussed by Alexiadou and Anagnostopoulou (2001), but their analysis applies only to the examples where two arguments bear structural Case (i.e. to the sentences with a subject and a direct object).

Nominative DPs remain *in situ* or are absent altogether. Since the existence of covert expletives is a matter of ongoing debate, additional arguments for them are provided in the next subsection.

4.2. Covert expletives

As I mentioned in section 1.1, initially it was assumed that covert expletives are used in all those sentences in various languages where the subject is absent or does not move to [Spec; TP]. Alexiadou and Anagnostopoulou (1998) and their followers challenged this assumption, arguing that the EPP in T is satisfied by the raised finite verb in some languages and covert expletives should not be introduced in them. The debate is still open: Holmberg (2005), Neeleman and Szendrői (2007), Rizzi and Shlonsky (2007) and other authors provided numerous arguments for covert expletives in various languages.

In any case, even if languages like Italian or Greek lack covert expletives, this does not mean that they are absent in other languages, where the finite verb does not obligatorily raise to T. A Dutch example with an optionally covert expletive and a German sentence with an obligatorily covert one are given in (44) (Perlmutter and Moore, 2002:645, n. 102a–b) and (45) (Reuland, 1983:5, n. 8b). Haerberli (1999) examines Germanic languages in great detail and argues for covert expletives in German, Yiddish, Dutch, Frisian and Icelandic.

(44) Gisteren kwam (er) door de achterdeur iemand binnen.
yesterday came EXPL through the back door someone inside
'Yesterday someone came in through the back door.'

(45) Er sagte, daß (*es) angenommen wurde daß jeder sofort weggehen würde.
he said that EXPL was assumed that everyone at once would leave
'He said that it was assumed that everyone would leave immediately.'

As I showed in section 2, Russian also belongs to the group of languages where the EPP in T cannot be satisfied by the raised verb because the finite verb normally does not move further than *v*. Perlmutter and Moore (2002) present some EPP-independent evidence for the existence of covert expletives in Russian impersonal constructions. As (46)–(47) show (Perlmutter and Moore, 2002:621, n. 5a–b, 9a–b), impersonal constructions cannot be infinitival, although all other types of predicates are used in infinitival sentences.

(46) a. ... čtoby my uexali na vokzal.
in order we.NOM [go out].SUBJUNCT to railway station
'in order that we go out to the railway station'

b. ... čtoby nam uexat' na vokzal.
in order we.DAT [go out].INF to railway station
'in order for us to go out to the railway station'

(47) a. Čtoby morozilo na Gavajax, (nado, čtoby zemlja perevernulas').
in order freeze.SUBJUNCT in Hawaii
'In order that it freeze in Hawaii, (the world would have to turn upside down).'

b. *Čtoby morozit' na Gavajax, (nado, čtoby zemlja perevernulas').
in order freeze.INF in Hawaii
Intended meaning: 'In order for it to freeze in Hawaii, (the world would have to turn upside down).'

The impersonal verb in (47a–b) has no overt arguments. (48a–b) illustrate that the same generalization holds for impersonal verbs taking overt arguments.

(48) a. Čtoby Mašu osenilo, (ej nado pomeditirovat').
in order Masha.ACC dawn-on.SUBJUNCT
'In order that Masha get an insight, (she needs to meditate).'

b. *Čtoby Mašu/ Maše osenit', (ej nado pomeditirovat').
in order Masha.ACC Masha.DAT dawn-on.INF
Intended meaning: 'In order for Masha to get an insight, (she needs to meditate).'

Perlmutter and Moore propose the following explanation: "impersonal clauses have a silent expletive subject whose Nominative case clashes with a language-particular requirement that the subject of infinitival clauses be Dative" (Perlmutter

and Moore, 2002:620). Importantly, it is not the case that infinitival clauses must always have overt subjects, as (49) shows (Perlmutter and Moore, 2002:634, n. ii).

- (49) Čto delat'?
 what do.INF
 'What is one to do?'

Perlmutter and Moore emphasize that introducing covert expletives in Russian does not mean that they should be postulated in analogous constructions in other languages. They note that silent expletives might be absent in Irish or Greek, because these languages exhibit certain systematic contrasts with Russian. For example, they have no Case-related restrictions on the distribution of impersonals, which can be used in ECM constructions in Irish and in Genitivus Absolutus constructions in Greek.

5. Positions of raised non-Nominative XPs

This section examines whether non-Nominative XPs can occupy [Spec; TP] in 'XP V S' sentences with *in situ* subjects. If they could, they would have A-properties, as opposed to the A'-properties found in 'XP S V' constructions. This question has been most thoroughly studied by Bailyn (2003a,b, 2004), who looked at various cases with internal Nominative DPs, including constructions analyzed in (Babyonyshev, 1996; Lavine and Freidin, 2002), as well as the 'O V S' vs. 'O S V' sentences. I will therefore go over his examples as a starting point. The sentences for which my native speaker intuitions did not coincide with the ones reported by Bailyn were included in a questionnaire and presented to 20 informants (see Appendix A).

First, cases with personal and possessive pronominals, such as the homophonous *ego* 'him' and *ego* 'his', will be considered. A'-movement reconstructs, while A-movement is expected to change binding and coreference possibilities with respect to the canonical word order. Section 5.1 shows that 'XP V S' and 'XP S V' receive *the same* ratings in the absolute majority of cases, although, surprisingly, these ratings can sometimes vary from 'grammatical' to '**' among speakers.

All grammatical examples show A'-properties, but sometimes both 'XP V S' and 'XP S V' sentences are judged bad, as if we were dealing with A-movement. Since no A-position is available to XPs in 'XP S V' constructions, I conclude that the ungrammaticality is caused by independent factors. This means that all raised non-Nominative XPs occupy an A'-position higher than [Spec; TP]. The data analyzed in this paper have no bearing on the exact nature of this position, so I leave it unspecified.

Second, I will analyze sentences with the possessive anaphor *svoj* 'self's', to see whether XPs can bind it in 'XP V S' cases, as opposed to 'XP S V' ones, because binders of such anaphors are standardly assumed to occupy [Spec; TP]. Importantly, *svoj* does not always function as an anaphor (Rappaport, 1986). The relation between anaphoric and non-anaphoric *svoj* (their status in the lexicon, their distribution, etc.) is far from clear. One way to distinguish between them is to check whether *svoj* can be replaced with *sobstvennyj* 'own' and to look for additional shades of meaning associated with the non-anaphoric reading: 'private', 'closely related'. For example, the expression *svoi ljudi* 'self's people' refers to the people one has some special relations with, often to one's fellow criminals. In section 5.2, I show that once this factor is controlled for, there is no evidence that the XPs in the 'XP V S' cases have subject properties. This is another argument in favor of my conclusion that all raised non-Nominative XPs occupy an A'-position rather than [Spec; TP].

5.1. Examples with pronominals

Let us first look at the examples with possessive pronominals. Consider (50a–b) (Bailyn, 2003b:161, n. 14a–b), given here without their grammaticality evaluations.

- (50) a. Staršij brat_i pojavilsja v ego_i dome.
 [older brother].NOM appeared in his house
 Intended meaning: 'The older brother_i appeared in his_i house.'¹²
- b. V ego_i dome pojavilsja staršij brat_i.
 in his house appeared [older brother].NOM

According to Bailyn, (50a) deserves a '**' and (50b) with Locative Inversion a '?'. He assumes that (50a) involves a Principle B violation, which is remedied in (50b), because A-movement does not reconstruct. However, I find both sentences highly degraded. Almost all my informants shared my judgments, but often rated (50a) as slightly *better* than (50b). Apart from that, two participants found (50a) grammatical and gave (50b) a '?', and one gave them a '?' and a '**' respectively. All answers are given in Appendix A.¹¹ Thus, for the absolute majority of speakers, whether they accept or reject (50a), movement in (50b) does not change binding and coreference possibilities.

¹¹ An anonymous reviewer suggested converting the ratings (ok, ?, ??, ???, *) into a numerical scale (0–4). This way, averages can be computed and it is easy to appreciate whether sentences received roughly the same ratings or not, and how big the difference is.

¹² All translations of Bailyn's original examples are taken from his work.

If we turn to the Dative experiencer constructions in (51a–c), there is more variation between my informants. Bailyn's (51a–b) (2003b:161, n. 14a–b) are supplemented by (51c) showing their 'XP S V' counterpart. As with (50a–b), Bailyn gives (51a) a '*' and (51b) a '?'. Most participants evaluated (51a) as *the best*. (51b) and (51c) were usually equal (from 'grammatical' to '*'). For me, (51a–c) are all bad.

- (51) a. Deti_i nravjatsja ix_i roditeljam.
 children.NOM appeal [their parents].DAT
 Intended meaning: 'Children_i please their_i parents.'
- b. Ix_i roditeljam nravjatsja deti_i.
 [their parents].DAT appeal children.NOM
- c. Ix_i roditeljam deti_i nravjatsja.
 [their parents].DAT children.NOM appeal

Although this section is dedicated primarily to the sentences with internal Nominative arguments, let us also consider (52a–c), which have external subjects, for the sake of completeness (Bailyn, 2003b:168, n. 31a–c). Bailyn rates (52a–c) as '*', 'grammatical' and '??'. Most of my informants gave all three sentences '???' or '*' (as I do). (52b–c) were never found better than '??' and almost always received the *same* ratings, while (52a) received three '?' ratings and was even accepted by one speaker.

- (52) a. Ivan_i ljubit ego_i druzej.
 Ivan.NOM loves [his friends].ACC
 Intended meaning: 'Ivan_i loves his_i friends.'
- b. Ego_i druzej ljubit Ivan_i.
 [his friends].ACC loves Ivan.NOM
- c. Ego_i druzej Ivan_i ljubit.
 [his friends].ACC Ivan.NOM loves

Before I draw any conclusions, let us turn to the cases involving personal pronominals in (53a–b) and (54a–b) (Bailyn, 2003b:163, n. 20a–b, 21a–b). I have added (53c) and (54c) to these examples. Bailyn claims that (53a) and (54a) are grammatical, while (53b) and (54b) deserve a '*', and explains this as a Principle C violation. Most of my informants agree with his evaluations, as I do. But both 'XP S V' cases receive the same low ratings.

- (53) a. Znakomye Ivana_i byli u nego_i doma.
 [friends of Ivan].NOM were at him at home
 'Friends of Ivan were at his house.'
- b. U nego_i doma byli znakomye Ivana_i.
 at him at home were [friends of Ivan].NOM
- c. U nego_i doma znakomye Ivana_i byli.
 at him at home [friends of Ivan].NOM were
- (54) a. Znakomye Ivana_i nravjatsja emu_i.
 [friends of Ivan].NOM appeal to him
 'Friends of Ivan please him.'
- b. Emu_i nravjatsja znakomye Ivana_i.
 to him appeal [friends of Ivan].NOM
- c. Emu_i znakomye Ivana_i nravjatsja.
 to him [friends of Ivan].NOM appeal

(53)–(54) are evaluated as if we had A-movement not only in 'XP V S', but also in 'XP S V' constructions, which is very strange. However, when we look at all the sentences presented in this subsection, the following tendency emerges. Most speakers tend to reject all examples with backward anaphora—both 'XP V S' and 'XP S V' cases, both when the canonical order is judged as grammatical and when it is not. Thus, some independent factor must be at work here.

Finally, Bailyn presents examples where alleged WCO violations are remedied in 'XP V S' cases. I did not include them in my questionnaire, so I rely on informally collected judgments. First consider (55a–b) (Bailyn, 2004:28, n. 49a–b).

- (55) a. Ee_i uborščica vošla v každyju komnatu_i.
[its cleaning lady].NOM entered into every room
'Its cleaning lady entered into every room.'
- b. V každyju komnatu_i vošla ee_i uborščica.
into every room entered [its cleaning lady].NOM

Bailyn gives (55a) a “*” and rates (55b) as grammatical. All speakers I asked rejected both sentences and their ‘XP S V’ counterparts. Independent factors might be involved, because *uborščica (etoj) komnaty* ‘(this) room’s cleaning lady’ also sounds bad in Russian. So I tested different examples in (56a–c).

- (56) a. Ee_i xozjain prišel v každyju kvartiru_i.
[its owner].NOM arrived in every apartment
'Its owner came to every apartment.'
- b. V každyju kvartiru_i prišel ee_i xozjain.
in every apartment arrived [its owner].NOM
- c. V každyju kvartiru_i ee_i xozjain prišel (pervym).
in every apartment [its owner].NOM arrived first

(56a) is rejected by all speakers. Many people also do not like (56b–c). Those who accept these sentences find (56b) better—as predicted by Bailyn. However, this preference disappears once some constituent is inserted at the end of (56c). Apparently, the problem has nothing to do with WCO—people do not like the verb-final order because it presupposes narrow focus on the verb *prišel* ‘arrived’. It is difficult to imagine what this predicate could be contrasted with.

No such problems are expected with the predicate *nравит'sja* ‘to like’. So let us compare Bailyn’s (57a–b) (2004:28, n. 51a–b) with (57c). Bailyn rates (57a–b) as ‘??’ and grammatical respectively. While many people I asked tend to reject (57a) altogether and not all of them accept (57b–c), those who do judge them as equal.

- (57) a. Ee_i sobaka nraivitsja každoj devočke_i.
[her dog].NOM appeals [every girl].DAT
'Every girl likes her dog.'
- b. Každyj devočke_i nraivitsja ee_i sobaka.
[every girl].DAT appeals [her dog].NOM
- c. Každyj devočke_i ee_i sobaka nraivitsja.
[every girl].DAT [her dog].NOM appeals

What factors are responsible for the pattern in (56)–(57)? First of all, they are not limited to WCO because (56a) and (57a) remain degraded without *každyj* ‘every’. Apparently, these sentences suffer from the same backward coreference problem as the ‘XP V S’ and ‘XP S V’ examples at the beginning of this subsection. In (57b), no WCO effects could arise in any case, because the Dative argument is merged higher than the Nominative one and therefore never crosses it. In fact, it is unclear whether Russian has WCO effects at all—at least, it is one of the languages in which local *wh*-movement does not induce WCO violations. Finally, so far it is unclear why some speakers accept (56b–c) and (57b–c), while the others do not. In any case, let me stress that there is no difference between ‘XP V S’ and ‘XP S V’ cases.

5.2. Examples with anaphors

Let us turn to examples with the possessive anaphor *svoj*, starting with (58a–b) (Bailyn, 2003b:160–161, n. 12a–b). I have added (58c) to this comparison.

- (58) a. ??? Svoj_i dom byl u Petrovyx_i.
[self's house].NOM was at Petrovs
'The Petrovs had their own house.'
- b. U Petrovyx_i byl svoj_i dom.
at Petrovs was [self's house].NOM
- c. U Petrovyx_i svoj_i dom byl.
at Petrovs [self's house].NOM was

Bailyn argues that in (58b), the PP occupies [Spec; IP], satisfies the EPP and binds *svoj*, while otherwise it is impossible, as (58a) shows. However, my (58c) is also grammatical, although the PP is definitely higher than [Spec; IP]. There was very little disagreement in the informally collected judgments, so I did not include (58a–c) in my questionnaire.

I believe that *svoj* is non-anaphoric in these examples (meaning 'own', 'private', which, incidentally, is stressed in Bailyn's translation). (58a) might be judged as somewhat degraded out of the blue, because the neutral word order in this possessive construction is 'PP V DP_{NOM}'. Once (58a) appears in a proper context (e.g. after the question *U kogo byl sobstvennyj dom?* 'Who owned a house?'), it becomes acceptable.

Although possessive constructions like (58a–c) are analyzed alongside Locative Inversion (e.g. Babyonyshev, 1996:34), let us also look at (59a–c) with Locative PPs. Unlike in (58a–c), *svoj* cannot be replaced with *sobstvennyj* 'own' in these examples, so the possibility of a non-anaphoric reading does not influence the judgements. All speakers I asked unanimously rejected (59a–c). Thus, when independent factors are controlled for, raised PPs show no subject properties either in 'XP V S' or in 'XP S V' constructions.

- (59) a. *Svoji_i xozjain vošel v kvartiru_i.
[self's owner]._{NOM} entered in apartment
Intended meaning: 'The owner of the apartment entered the apartment.'
- b. *V kvartiru_i vošel svoji_i xozjain.
in apartment entered [self's owner]._{NOM}
- c. *V kvartiru_i svoji_i xozjain vošel.
in apartment [self's owner]._{NOM} entered

Let us move to Bailyn's (60a–b) (2003b:161, n. 13a–b) and to my (60c). Bailyn marks (60a) as '???' and (60b) as grammatical. Most of my informants judged (60a) as the worst and (60b) and (60c) as equally good or bad (from 'grammatical' to '*'). For some, (60b) was slightly better than (60c) or vice versa. I would give both '??'.

- (60) a. Svoja_i rabota nravitsja Maše_i.
[self's work]._{NOM} appeals Masha._{DAT}
Intended meaning: 'Masha_i likes her_i work.'
- b. Maše_i nravitsja svoja_i rabota.
Masha._{DAT} appeals [self's work]._{NOM}
- c. Maše_i svoja_i rabota nravitsja.
Masha._{DAT} [self's work]._{NOM} appeals

This diversity in ratings can be partly explained by two possible readings of *svoj*. Notably, if *svoj* is replaced with *sobstvennyj* 'own', (60a) still looks worse than (60b–c) out of context. In any case, there is no tendency to prefer the 'XP V S' case over the 'XP S V' one. Let me add that (59b–c) and (60b–c) are grammatical with possessive pronominals, although (59c) requires some context to justify the narrow focus on *vošel* 'entered'. Although this rule is not without exceptions, usually pronominals are allowed only when anaphors are ruled out. As for (58a–c), this construction already has a possessive meaning, so possessive pronominals become superfluous.

Explaining the extensive variation among speakers calls for further research. Nevertheless, the distinction between 'XP V S' and 'XP S V' cases clearly was not supported. It is also notable that (59b–c), where the non-anaphoric reading definitely does not interfere, were unanimously rejected. This indicates that raised XPs do not occupy [Spec; TP] either in 'XP V S' or in 'XP S V' constructions.

6. Conclusions

This paper discusses the EPP requirement in Tense domain in Russian. Section 2 demonstrates that it does not trigger verb movement. Using scope, binding and other tests, section 3 shows that external Nominative arguments obligatorily raise to [Spec; TP], while internal ones can either satisfy the EPP or remain *in situ*, as in English. Unlike English, Russian is rich in IS-related movement, so external subjects in narrow focus nevertheless end up in the sentence-final position.

Section 4 shows that some Russian sentences have no overt material in the left periphery. External subject raising proves that the EPP requirement is certainly operative in Russian, so one can either admit that it does not work in these cases or introduce covert expletives in them. The former solution would deprive the EPP requirement of its explanatory force, so I opt for the latter.

Contrary to several recent models (e.g. Babyonyshev, 1996; Bailyn, 2003a,b, 2004; Lavine, 1998; Lavine and Freidin, 2002), sections 4 and 5 demonstrate that raised non-Nominative XPs never exhibit subject properties in Russian and hence do not pass through [Spec; TP]. This means that covert expletives are needed in all sentences where Nominative arguments remain *in situ* or are absent altogether, and only Nominative DPs (and covert expletives) can satisfy the EPP in T in Russian.

The fact that Russian patterns with English with respect to the EPP in T is interesting from a typological perspective. As a result, Russian ‘free word order’ systematically differs from the one in Spanish or Greek where IS-related movement is also abundant, but is superimposed on different EPP-driven processes (verb raising rather than subject raising). The question of whether the EPP in T can be satisfied by non-agreeing XPs is also important for a more general debate on the relation between two basic grammatical operations, Agree and Move (or internal Merge). For example, Chomsky (2008) suggests dissociating them and mentions Lavine and Freidin’s Russian EPP model as an important argument. Potential exceptions to agreement-based EPP models have been found in various languages (e.g. Collins, 1997; Holmberg, 2000; Miyagawa, 2001; Nevins and Anand, 2003; Ura, 2000), so removing one of them certainly does not solve the problem. Rather, it shows that every such case deserves close scrutiny.

Finally, let me make a brief remark on the place of Russian in the EPP typology. Contrasting EPP-driven subject raising and verb raising, Alexiadou and Anagnostopoulou (1998) note that the latter option is taken in languages with rich verbal morphology and stress the importance of agreement in person. *Prima facie* Russian is known for its complex verbal morphology. However, Russian Past tense forms are former participles that agree only in number and gender (in the Singular). In Old Russian, these participles were used with *to be* auxiliaries, which were subsequently lost.

The question of whether the EPP requirement in Old Russian worked like the EPP in Spanish and Greek and then changed is difficult to answer. Most early texts, especially syntactically complex narratives, were written in Church Slavonic, while Old Russian was a spoken language. I can only note that Church Slavonic texts indeed have many ‘(XP)VSXP’ constructions, and such examples are also numerous in Russian folk epics and fairy tales where many archaic forms are preserved. For example, (61) is the first sentence in the classic fairy tale about a gigantic turnip. A similar case was presented in (19). Further research is needed to determine what the structure of such sentences was in Old Russian, and whether they were subsequently reanalyzed (as I noted in section 2, modern Russian constructions with verb raising involve V-to-C movement).

(61) Posadil ded repku.
 planted [old man]._{NOM} turnip._{ACC}
 ‘An old man planted a turnip.’

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Appendix A. Binding and coreference questionnaire

20 adult native speakers of Russian from St. Petersburg and Moscow took part in this questionnaire. Below, they are coded by numbers 1–20. All participants received a printed form with sentences and instructions. The instructions asked them to judge sentences using five symbols: ‘ok’ (normal), ‘?’ (slightly odd), ‘??’ (rather odd, but possible), ‘???’ (almost impossible, but not ungrammatical) and ‘**’ (impossible). Indices were used to indicate coreference. Their meaning was explained in the beginning of experiment and demonstrated on two sample sentences. In addition to that, periphrastic descriptions of intended meanings were included in the questionnaire. Two sets of sentences were added to the questionnaire later, so only 11 speakers judged them. An anonymous reviewer suggested converting the ratings (ok, ?, ??, ???, **) into a numerical scale (0–4, 4 being worst) so that averages could be computed. This way it is much easier to appreciate whether the sentences received roughly the same ratings or not, and how big the difference is.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
28a	–	–	–	–	–	–	–	–	–	ok	ok	ok	ok	ok	ok	ok	ok	ok	ok	ok	0.0
28b	–	–	–	–	–	–	–	–	–	ok	?	???	?	ok	ok	??	??	ok	??	??	1.2
28c	–	–	–	–	–	–	–	–	–	ok	?	??	ok	ok	ok	?	??	ok	?	??	0.8
29a	–	–	–	–	–	–	–	–	–	ok	ok	ok	ok	ok	ok	ok	ok	ok	ok	ok	0.0
29b	–	–	–	–	–	–	–	–	–	*	??	*	???	?	??	*	*	*	*	???	3.2
29c	–	–	–	–	–	–	–	–	–	ok	ok	???	?	ok	?	*	*	ok	??	???	1.6
49a	ok	???	???	ok	*	???	???	?	??	*	*	*	???	???	??	???	*	*	???	*	2.9
49b	?	*	*	?	*	*	*	*	???	*	*	*	*	*	???	*	*	*	*	*	3.6

Appendix A (Continued)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
50a	?	??	ok	?	?	?	?	ok	ok	*	?	ok	ok	?	?	*	??	??	??	*	1.4
50b	*	???	???	ok	ok	ok	*	???	???	*	*	???	??	*	???	???	*	*	*	*	3.0
50c	*	???	???	ok	?	ok	*	???	???	*	??	?	?	*	??	*	*	*	*	*	2.8
51a	??	???	?	ok	*	??	???	?	?	*	??	???	???	*	???	*	*	*	???	*	2.8
51b	??	*	??	??	*	*	*	*	???	*	*	*	*	*	*	*	*	*	*	*	3.7
51c	??	???	??	??	*	*	*	*	???	*	??	*	*	*	*	???	*	*	*	*	3.5
52a	?	ok	ok	ok	ok	ok	ok	ok	ok	ok	ok	ok	ok	ok	ok	ok	?	ok	ok	ok	0.1
52b	?	???	*	ok	*	*	*	??	*	*	*	*	???	*	??	*	*	*	*	*	3.4
52c	?	???	???	?	*	*	*	???	*	*	*	*	*	*	?	*	*	*	*	*	3.4
53a	??	?	ok	?	ok	???	???	?	??	*	?	ok	?	ok	?	?	*	?	ok	???	1.5
53b	??	??	*	ok	*	*	*	*	*	*	*	*	*	*	???	*	*	*	*	*	3.6
53c	??	??	*	??	*	*	*	*	*	*	*	*	*	*	??	*	*	*	*	*	3.6
59a	?	ok	?	?	???	?	??	??	?	*	??	??	???	*	???	??	???	*	???	??	2.2
59b	ok	ok	ok	ok	ok	ok	ok	?	??	*	?	?	??	???	?	ok	?	ok	??	??	1.0
59c	ok	ok	ok	ok	?	ok	ok	??	ok	*	?	ok	?	??	??	?	??	ok	??	?	1.0

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