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Generalized Inversion*
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Introduction

Chomsky (1995), (1998) proposes examining linguistic constructions as being the products of a potentially "perfect" language device, that is, of a system without significant redundancies, where only information relevant to the interfaces is represented in any linguistic expression. As Chomsky notes, this approach raises serious empirical questions, and optional movement processes, traditionally handled as stylistic, PF, or non-linguistic effects, form a particularly difficult sub-group. The existence of apparently optional processes calls minimalist assumptions into question and deserves careful reconsideration in the new theoretical climate. In this article, I consider two areas of apparent optionality in Russian, a "free" word order language: i) (apparently) optional verb movement and (ii) (apparently) optional local scrambling, and show that it is possible to analyze this apparent optionality as the interplay of certain deeper properties of language, as we would expect in an economical system. In particular, I show that verb movement occurs only with local scrambling and that such scrambling is essentially a form of raising to subject (although not for case purposes), under a particular view of the functional category structure of the clause¹. Because this construction results from A-movement, I call it Inversion rather than Scrambling in this article. And because it unifies various seemingly unrelated constructions and has much in common with other kinds of non-case-driven fronting, I call it Generalized Inversion.

I argue that all cases of Inversion in Russian are driven by a form of the Extended Projection Principle (EPP) that forces movement into SpecIP, in the spirit of Babyonyshev (1996), Collins (1997), Lavine (1998) and Miyagawa (1997, forthcoming). These constructions include some previously analyzed as feature-driven (adversity impersonals in Lavine (1998), Lavine & Friedin (forthcoming) and Locative Inversions in Babyonyshev (1996)), some that have typically been considered "stylistic", and others that have been treated separately, such as Dative experiencer and possessive-PP constructions. I argue that all these constructions involve raising of a constituent to SpecI for feature checking purposes, and that this movement is accompanied by verb-raising, which is absent in SVO

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¹I do not address Long-Distance scrambling in this article. For discussion of LD Scrambling in Russian, see Bailyn (2001, in press), Miyagawa (1997, forthcoming) and references therein. I assume, along the lines of those works, that LD Scrambling is A'-movement motivated by discourse factors, (or Focus). The eventual appropriate analysis of LD Scrambling does not bear directly on the subset of apparently optional processes covered in this article.

transitives. Seen in this light, both the apparent optionality of verb-raising and the apparent optionality of clause level A-scrambling in Russian can be eliminated. On the likely assumption that A'-scrambling is driven by Focus (Miyagawa 1997, Zubizaretta 1998, Bailyn 2001), the overall result is a picture of Russian movement that admits far less true optionality in its reordering of elements than previously thought. Rather, movements reflect the interaction of universal linguistic principles with certain language specific parameter settings. The results thus extend the line of research in Chomsky (1995) and Miyagawa (1997).

Furthermore, the Inversion analysis sheds light on the differences between languages like Russian and other Indo-European languages such as Romance and Germanic, such that we can now go beyond the usual distinction that Russian "is a free word order (constituent order) language" to see exactly in which parameter settings Russian differs, and its natural similarities to Icelandic, Yiddish, German, English and other languages emerge as a consequence of the analysis given here. In this sense, the use of the term "Inversion" has an additional benefit -- it underscores the similarities in construction type with the movement found involving the first constituent in Germanic V2 constructions, and deliberately echoes the use of the term found in Roberts 1993 and elsewhere in discussion of the relation of Inversion as constituent fronting to verb movement, something that is central to this article, and unique in the analysis of Slavic, as far as I know.

The article is structured as follows: In Sections 1-3, I discuss Inversion on the IP level. In section 1, survey the construction types that Inversion covers. In Section 2, the empirical core of the article, I provide evidence that in each case of Inversion the initial constituent is in A-position (filling the canonical subject position). In Section 3, the theoretical core, I discuss the nature of Extended Projection Principle driving the Inversion, and the important question of why there is verb raising in these constructions but not in SVO transitives, in Russian. In Section 4, I extend the discussion to the CP level and show that V2 constructions also fall under the rubric of Generalized Inversion but with the usual parameterized distinction in the position of a [+F] feature. The resulting picture of restricted parametric variation accounts for a range of language types which is discussed in conclusion.

1. Inversion Constructions in Russian

Despite considerable freedom of surface word order, usually attributed to Scrambling, Russian is generally considered an SVO language in basic order (Restan 1981, Bailyn 1995 among many others). This article concerns a subset of non-SVO orders, namely those in which a non-subject constituent appears in initial position followed by the tensed verb, which in turn precedes the nominative subject (if there is one).

1.1 OVS structures

Some examples with such Object-Verb-Subject order are shown in (1):

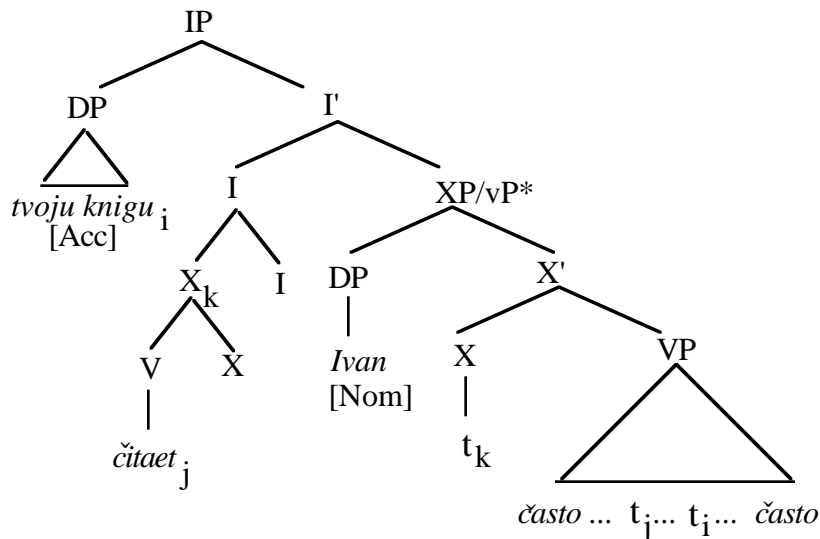
- 1) a. [Étu knigu] čitaet Ivan často **O-V-S-adv**
 [this book]-**Acc** reads Ivan-**Nom** often
 "Ivan reads this book often."
- b. [Perestroiku [obščestvennogo soznanija] načal v 1980 **O-V-S**
 perestroika-**Acc** public consciousness began in 1980
 [izvestnyj moskovskij muzykal'nyj kritik Artem Troitsky]
 [well-known Moscow music critic Artem Troitsky]-**Nom**

"The transformation of public consciousness was begun in 1980 by the well-known Moscow music critic Artem Troitsky." (Alexej Rybyn, 1997: Biography of rock star Viktor Tsoi, p.55)

- 1) c. Gazety darjat professora studentam **O-V-S_{nom}**
 [newspapers]-**Acc** give professors-**Nom** students-Dat
 "The newspapers are given by the professors rarely to the students."

The structure for (1a) to be argued for in this article is given in (2):²

- 2) Hypothesized structure for (1a):



Before turning to further discussion, certain assumptions have to be stated. First, I assume that Russian has one IP-level projection (not an exploded INFL with separate TP and AgrSP projections).³ Second, I assume that between IP and (minimal) VP, there is an additional functional category, corresponding to PredP (Bowers 1993), TrP (Collins 1997), or vP (Chomsky 1998), whose specifier houses the external argument, as seen in (2). I also assume, following Diesing (1990), Bobaljik & Jonas (1996) and Alexiadou & Anagnostopoulou (1998) that the SpecI position in some languages is *not* a case checking position, in the sense of structural case, and that in Russian, Nominative case checking

²It must be noted at the outset that there is presumably another possible derivation of (1a), one that involves A'-scrambling of the object to the left and extraposition of the subject to the right. According to most analyses of discourse bound Extraposition (Bailyn 1995, King 1994), this should entail contrastive focus or other emphasis on the extraposed subject, and as such is distinguishable from the constructions under consideration by intonation, context and other factors. I abstract away from such derivations in what follows.

³In discussing the nature of the parameter distinguishing between Split-IP Languages and non-split IP languages, Thráinsson (1996) suggests that independent T and Agr morphology must be present to set the parameter for a split projection, as in Icelandic. In Russian, tense and agreement are fused, and in the past tense the full range of person features is absent, thus providing the parameter setting I assume, namely a fused IP containing T and Agr. Further, Russian is not a syntactic referential pro-drop language, another indication of a less than full verbal agreement system.

occurs in the lower functional projection (SpexXP), and is divorced from EPP checking (an issue to whose typological implications we return in section 4).

Various recent proposals associate local IP movement operations with the EPP (Babyonyshev 1996, Lavine 1998, Lavine & Friedin forthcoming for Russian, Miyagawa forthcoming for Japanese, Collins 1997 for English Locative Inversion, among others.)

Thus in (2) we see that the direct object has moved out of the VP into SpecIP, in a fashion similar to the PP in English Locative Inversion constructions. Furthermore, the hypothesis is that the verb has raised out of minimal VP, by head movement, through X⁰, and into I⁰, thus crossing the Nominative subject. Of course, there are also constructions in which an internal argument is fronted to the left of the sentence, but V-movement over the subject does not occur, as in (3):

- 3) [Étu knigu] Ivan čitaet často **O-S-V-adv**
 [this book]-**Acc** Ivan-**Nom** reads often
 "Ivan reads this book often."

In (3), the direct object has been moved to the left periphery, but the underlying S-V order remains untouched. Despite their superficial similarities, I maintain that (1a) and (3) have radically different structures. In particular, (1a) involves A-movement of the object into subject position and verb raising into I, whereas in (3), as in SVO transitives, the Nominative subject has raised to SpecI to fulfill the EPP, the verb remains in place, and the direct object is adjoined to IP, by A'-Scrambling.⁴

Thus we predict significant differences in the availability of subject (A-)properties for the fronted objects in the two cases. We return to evidence for A-movement in Inversion in Section 2. We also predict that the verb remains inside VP in (3) but not in (1a). The generalization appears to be that whenever the EPP is satisfied by a non-Nominative argument, the verb has to move to I.⁵

⁴An anonymous review asks how the adverb tests familiar from Pollock (1989) and elsewhere, designed to test for verb position, fare with respect to the GI constructions discussed here. The tests are mostly indecisive, and speaker intuition provides a confusing picture of slight preferences but little pure ungrammaticality. presumably, this is related to the as yet poorly understood discourse status behind variance in word order patterns. Since it also appears that adverbials themselves can scramble in Russian (Bailyn 2001) the tests should not be expected to be particularly conclusive for identifying verb position. However, see footnote 5 for a possible test of verb position from negative ellipsis constructions.

⁵This second prediction appears to be borne out by *net*-ellipsis constructions, exemplified in (i):

- i) Ivan [ljubit detej], a Maria net [ljubit—detej]
 Ivan-Nom loves children-Acc, but Maria-Nom not loves children
 "Ivan loves children but Maria doesn't [love children]."

In (i), the *net* phrase replaces the entire VP. If an internal argument is A'-scrambled, *net*-ellipsis still obtains, since A'-scrambled items reconstruct, here into the VP elided under *net*. This is shown in (ii).

- ii) (LF) Detej Ivan [ljubit detej] a Maria net [ljubit—detej]
 children-Acc Ivan-Nom loves children, but Maria-Nom not loves children
 "Children, Ivan loves, but Maria doesn't [love children]."

This is as predicted. However, when we try an inversion construction such as (1a), in which the verb has raised above the subject by head movement (assumed not to reconstruct), the *net*-VP ellipsis fails. This is shown in (iii):

It is a central claim of this article that cross-linguistically non-Nominative EPP satisfaction underlies A-scrambling, which in strictest sense does not exist.⁶ It is therefore no surprise that Collins (1997) describes a very similar phenomenon in unrelated Bantu languages, where it is known as "subject-object reversal". The phenomenon is analyzed in cases like (7).

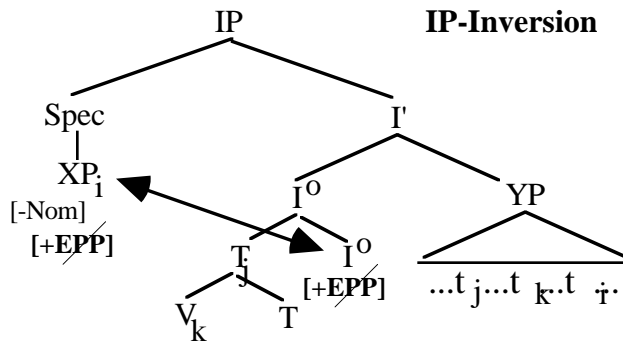
4) (BANTU) (from Collins (1997))

Maku ta-ma-ku-sol-ag-a mutu weneene
 6beer neg-6-prog-drink-hab-fv 1ps alone
 "A person does not usually drink beer alone."

Before turning to an analysis of the syntax these constructions, let us look at more cases of IP-Inversion in Russian.

We have already identified the first kind of Inversion above, which I will simply call OVS.⁷ In this section, we will consider other individual construction types that fall under the Inversion template, schematized in (5):

5) Schematic View of Inversion:



(Note that (5) excludes cases in which the EPP is checked by the Nominative subject. We return to these constructions in section 3.) (6) lists the central subclaims pictured in (5):

-
- iii) *Detej ljubit Ivan [ljubit detej] a Marija net [ljubit detej]
 children-Acc loves Ivan loves children but Maria-Nom not
 *"Children are loved by Ivan but Maria doesn't."

In (iii), the elided *net* VP does not contain the main verb or the raised object, since V-raising does not reconstruct, and therefore *net*-ellipsis of this sort is not available. Thus we have identified an independent diagnostic for VP structure, which can be used to determine whether or not the verb has moved out. Notice that in (iii) I have not assumed A-movement for the object. That is, I have proceeded on the assumption that V-raising is the only non-reconstructable movement in this derivation.

⁶I thus maintain a significantly different implementation of the basic idea of Fanselow (2001), namely that A-scrambling does not, in fact, exist. For Fanselow, however, this is achieved through base-generation of freely ordered constituents with LF checking of theta-features rather than standard configurational thematic relations. (See Bailyn (2001) for arguments against base-generation approaches.)

⁷I avoid the term "Stylistic Inversion" used in earlier version of this article, because of its application to the construction types discussed in Holmberg 2000, which do not share the properties of Inversion presented here.

6) Characteristics of the Inversion Construction:

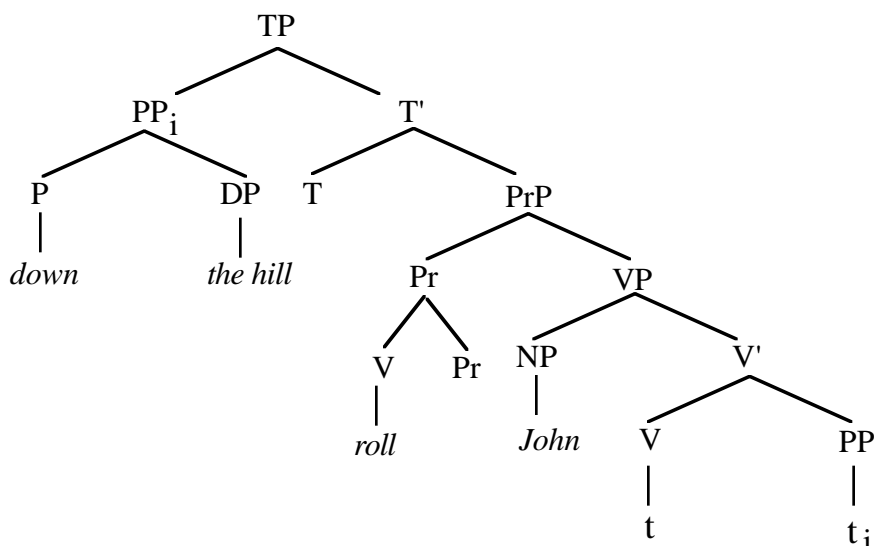
- a. A non-Nominative XP raises into the SpecIP position
- b. The finite Verb raises to I (for independent reasons -- see Section 3)
- c. The Nominative subject (if there is one) remains internal to the complement of I.
- d. There is no agreement between the constituent in SpecI and the tensed verb.⁸

Below, I identify 5 constructions that share these characteristics. In Section 2, I then provide syntactic tests showing that the XP in question is indeed in the SpecI position and not an adjoined, scrambled position.

1.2 *Locative Inversion*

Non-nominative subjects in SpecI is, of course, an attested phenomenon even in strict word order language such as English. Thus Collins (1997) analyzes English Locative Inversion as exactly such a phenomenon:

- 7) a. John rolled down the hill
- b. **Down the hill** rolled John
- 8) Structure of (7b): (from Collins 1997)



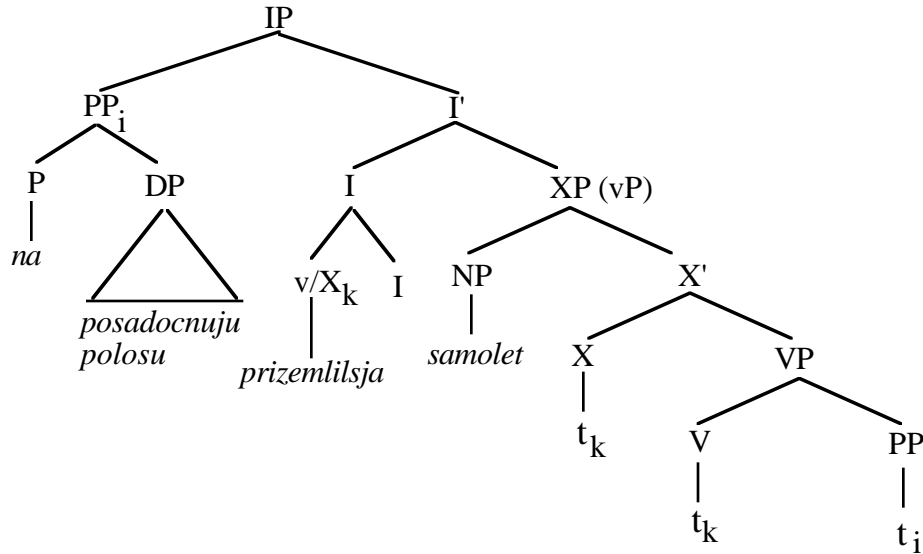
In (8) the PP [*down the hill*] checks the EPP feature of I. Russian also demonstrates cases of locative inversion, as shown in (9):

- 9) **Na posadočnuju polosu** prizemlilsja samolet.
 onto runway-Acc landed airplane
 "The airplane landed on the runway."

The proposed structure of (9) is shown in (10):

⁸Boeckx (forthcoming) argues that such constructions are, in fact, driven by a kind of agreement, which he calls "quirky agreement". This agreement, although not morphologically reflected, is required in his system to maintain both the idea that movement to subject position is not case-driven, which is compatible with the Inversion account, and the idea that all movement is an overt manifestation of a basic agreement relationship of some kind, as argued in Chomsky (2000). I return to this issue in Section 3.

10) Structure of (9):



In (10) we find a fronted PP and a post-verbal subject. This is very similar to the account given for Locative Inversion in Russian by Babyonyshev (1996). However, Babyonyshev argues that the EPP position can be filled by a non-Nominative argument just in case the Nominative subject in this construction can move at LF to check Nominative case. Under the Inversion approach taken here, more Locative Inversion EPP constructions exist than those discussed by Babyonyshev with fronted PPs in addition to all the other construction types shown in this section. This is possible (and, as we will see, required) because under this analysis the construction's driving force is completely divorced from Case Checking, as argued for convincingly in Lavine (1998), Lavine & Friedin (forthcoming), Lasnik (2001) and elsewhere.

1.3 Quotative Inversion

Another construction fitting the Inversion picture is Quotative Inversion, discussed in Collins 1997 and exemplified for English in (11):

- 11) a. "Wow!" said Mary.
 b. "Wow!" Mary said.

Russian Quotative Inversion is exemplified in (12):⁹

- 12) "Ničego sebe!" skazal Petja.
 -exclamation- said Petja-Nom
 "'Wow' said Petya."

In (13-14) we see that Quotative Inversion in Russian bears similar properties to its English counterpart:

⁹In Russian, as in English, the non-inversion counterpart is also fully acceptable. We assume such sentences to be normal subject EPP sentences with the quotation itself topicalized.

- 13) a. "Ničego sebe!" skazal Petja Nataše.
 -exclamation- said Petja-Nom Nataše-Dat
 "'Wow' said Petya to Natasha."
 ???b. "Ničego sebe!" skazal Nataše Petja.
 -exclamation- said Nataše-Dat Petja-Nom
 -same gloss-
- 14) a. "Kuda vy idete?" sprosil mal'čik starika.
 'where are you going?' asked boy-Nom old man-Acc
 "'Where are you going?' the boy asked the old man."
 ???b. "Kuda vy idete?" sprosil starika mal'čik
 'where are you going?' asked old man-Acc boy-Nom
 "'Where are you going?' the boy asked the old man."

Although Quotative Inversion shares the basic EPP movement properties with the other Inversion constructions we examine, we will not be able to discuss it with respect to subject properties in Section 2, since binding tests will not apply to the quotation itself. Nevertheless, I maintain that this is an Inversion construction because of the word order parallels with the other Inversion constructions.¹⁰

1.4 Adversity Impersonals

Lavine (1998) and Lavine & Friedin (forthcoming) analyze another class of Slavic impersonal constructions, illustrated in (15-18):

- 15) **Uši** založilo RUSSIAN
 ears-Acc clogged-up
 "(my) ears got clogged up."
- 16) **Bat'ka** kole v boci UKRAINIAN
 father-Acc pierce in side
 "My father has a sharp pain in his side."
- 17) **Kraťšich slov** se užívá častěji CZECH
 [shorter words]-Gen REFL use-3sg more often
 "Shorter words are used more often."
- 18) **Soldata** ranilo pulej RUSSIAN
 soldier-Acc wounded-3sg bullet-Instr
 "A soldier was wounded by a bullet."

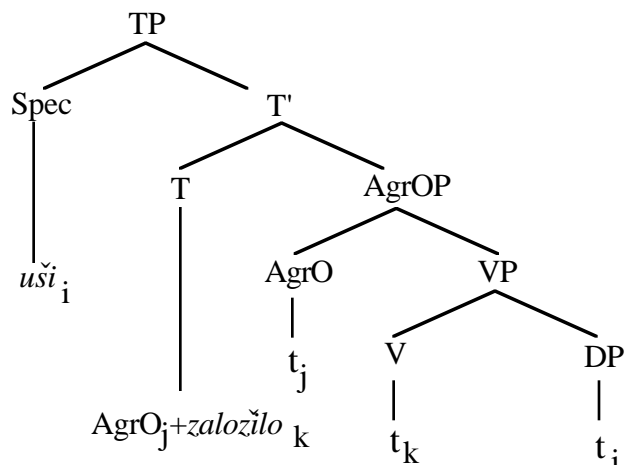
The term "adversity impersonal" is used by Babby (1994) and others in describing this phenomenon, whereby the natural position for an adversely affected Accusative internal argument is pre-verbal, and the non-agentive source of the adversity appears in a post-verbal Instrumental phrase.¹¹ In all the sentences in (15-18), an internal argument, marked

¹⁰It is unclear whether Quotative Inversion in Russian obeys the transitivity constraint well-known from English (see Collins 1997). I leave detailed discussion of such restrictions as an open question.

¹¹Lavine and Friedin (forthcoming) change the terminology to mesh more closely with their account of the phenomenon, and use the term "Accusative Unaccusative" for these constructions. Although much of what follows is consistent with their analysis, I will continue to use the more neutral term Adversity Impersonals for discussions of this construction.

Accusative or Genitive (given in boldface above), appears in the canonical subject position, followed by the verb. Lavine shows that is the "discourse-neutral" word order in these constructions. The proposed structure of (15) is given in (19):

19) Structure of (15), (Lavine 1998: 218):



Notice that this structure appears perfectly consistent with the more general picture of Generalized Inversion-- both involve an internal argument filling the EPP position in SpecI. They differ in that there is no Nominative Subject present in adversity impersonals. Crucially, both fronting operations are accompanied by V-movement, which we find to in all IP-Inversion constructions, for reasons to which we return in Section 3.¹²

1.5 Possessive PP constructions

Another Russian construction instantiating Inversion involves possessive PPs with the preposition *u* ('at, by'), as shown in (20):

- 20) a. **U nas** rodilas' dočka. **PP-V-S**
 at us was born daughter-Nom
 "We had a daughter born."
- b. **U menja** poterjalis' vse ključy. **PP-V-S**
 at me got lost [all keys]-Nom
 "We lost all our keys."
- c. **U nix** uexali deti davno. **PP-V-S-adv**
 at them left children long ago
 "Their children left a long time ago."

It is well-known that many languages do not have a transitive verb *have*. Rather, they use a possessive PP and a copula for possession. These form a sub-class of PP possessives which are EPP constructions. Consider the contrast between (21a) and (21b):

¹²For Lavine, the V-raising is not claimed to be required.

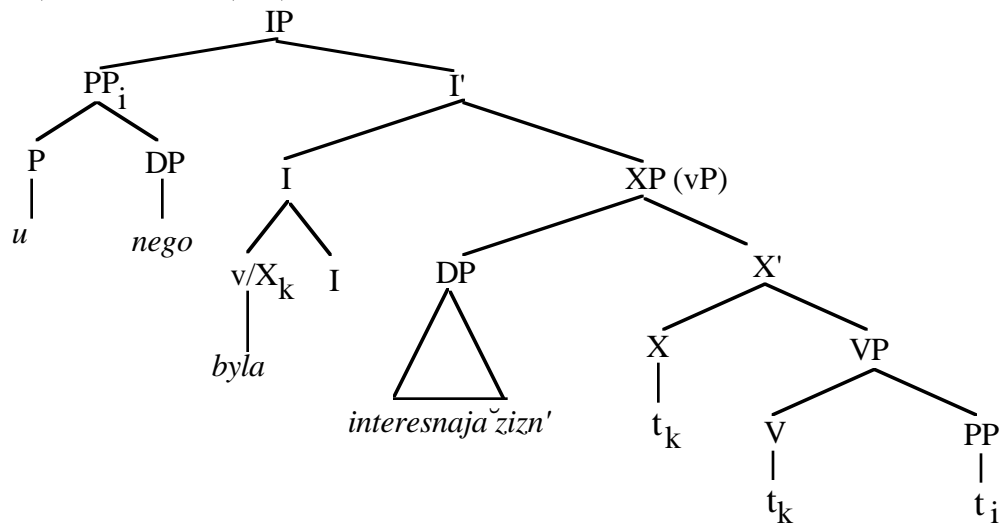
- 21) a. U nego byla interesnaja žizn'.
 at him was [interesting life]-Nom
 "He had an interesting life."
 b. ??U nego interesnaja žizn' byla.
 at him [interesting life]-Nom was
 "He had an interesting life."

In (21a), the possessive PP is fronted to the EPP position and the subject appears post-verbally. If the verb does not raise over the subject, as in (21b), the sentence is at best awkward (in a neutral context). Further, the contrast between (22a-b) and (22c) shows that the problem with (21) is not that it is verb-final and that even when there is another element sentence-finally, the S-V order is infelicitous.¹³

- 22) a. U nego byla_i v N'ju-Jorke interesnaja žizn' t_i.
 at him was in New York [interesting life]-Nom
 "He had an interesting life in New York."
 b. U nego byla_i interesnaja žizn' t_i v N'ju-Jorke.
 at him was [interesting life]-Nom in New York
 "He had an interesting life in New York."
 ??c. U nego interesnaja žizn' byla v N'ju-Jorke.
 at him [interesting life]-Nom was in New York
 "He had an interesting life in New York."

In (22a-b), which differ from each other only by where the locative PP is base-generated, verb raising over the subject occurs as expected under our account of the EPP. (22c), which is not verb-final, is out, on a neutral reading, because verb-movement has not occurred. Thus we can conclude that PP-possessives are another kind of EPP construction with obligatory verb-raising. The proposed structure for (21a) is given in (23):

23) Structure of (21a):



¹³Again, we exclude any kind of contrastive or non-neutral reading, such as the reading where (22b) implies a contrast with life in some place other than New York, on which the order in (22b) is expected.

We will see shortly that the fronted possessive PP shares essential subject properties with the other EPP constructions.

1.6 *Tošnit'* verbs

Preslar (1998) argues that Accusative only verbs such as *tošnit'* ('to feel nauseous'), which are analyzed by Babby (1991) as being absolutely "subjectless" in the sense of not licensing the structural subject position at all, in fact allow that position to be filled by the internal Accusative argument, in a manner consistent with IP-Inversion. His evidence is drawn from neutral word order and structural tests. Examples are given in (23)

- 23) Menja tošnit ot ryby
me-Acc nauseates from fish
"I felt sick from the fish."

Note that there is no Nominative subject available in these constructions. I assume this is the result of the particular kind of argument structure these verbs have and its projection onto syntax, following Babby 1994 and elsewhere.

1.7 *Dative experiencers*

It is well-known that in many languages Dative experiencers show subject properties (Maling & Zaenen 1990, Harbert & Toribio 1991, Moore and Perlmutter 2000). In Russian also, certain verbs and adjectives allow Dative-experiencer constructions to appear with Nominative-Theme objects. Examples are given in (24):

- 24) a. Saše nravjatsja deti.
 Sasha-Dat likes-pl children-Nom
 "Sasha likes children."

 b. Soldatam vidna doroga
 soldiers-Dat visible-fem sg road-Nom-f-sg
 "The soldiers can see the road."

As we will see shortly, these Dative experiencers also show subject properties beyond appearing in pre-verbal position. We therefore add them to our list of non-Nominative EPP constructions with verb-raising.

1.8 *Summary of section 1*

We now can unify the following construction types:

- 25) IP Inversion constructions in Russian:
i. OVS (Section 1.1)
ii. locative inversion (Section 1.2)
iii. quotative inversion (Section 1.3)
iv. adversity impersonals (Section 1.4)
v. possessive-PP inversion (Section 1.5)
vi. *tošnit'* verbs (Section 1.6)
vi. dative experiencers (Section 1.7)

We will refer to this cluster of constructions as IP Inversion. Informally speaking, all these constructions involve movement of an XP to SpecI, for EPP feature checking against I⁰, and V raising to I, for reasons as yet unexplained.

2. Evidence for IP Inversion

In this section, I show that Russian inversion constructions in fact involve movement to SpecI, as motivated by the Extended Projection Principle in a system where Nominative Case is checked in the next lower functional category.

2.1 IP Inversion is the (traditional) EPP

The parameter allowing this possibility in Russian is given in (26):

26) The Inversion Parameter: (first version)

The EPP feature in I can be checked by any XP

I propose that (26) encompass all constructions already discussed. I return in Section 3 to a discussion of the theoretical status of (26) and its compatibility with other recent analyses of the EPP.

It is clear, of course, that (26) does not account for the verb-raising, but only for the obligatory XP fronting. We return to the issue of verb raising in Section 3. In the remainder of this section, we assume that V movement is forced in all such inversion constructions by the tense system of Russian and will restrict ourselves to examination of evidence that the inverted XP in these constructions is indeed in SpecI subject position.

(26) allows Russian the ability to satisfy the EPP with any constituent whose movement does not violate independent principles. If such a generalized process of moving XPs into SpecI exists in Russian, the fronted constituent should show subject properties. We now turn to three such diagnostics: binding, scope, crossover and idiom chunk interpretation. (We exclude quotative inversion because of the difficulty of constructing appropriate examples.)

2.2 Subject tests for Inverted XPs

2.2.1 Scope It is well-known that in Russian, as in Hungarian, A'-fronting fixes scope relations (Bailyn 1995, Kiss (1987) and elsewhere). An A'-fronted argument, for example, takes wide scope over other, non-scrambled, quantifiers in the sentence. On my analysis of the EPP, however, we do not expect this pattern, because of the proposed non-A' status of the position. The EPP frontings should leave the sentence ambiguous (although it may change the preferred reading, it does not render the narrow scope reading for the fronted element unavailable, as A'-fronting does.) This is shown below for each proposed EPP construction in the contrast between the non-inverted and EPP sentences (a-b) on the one hand and the A'-fronted (c) sentence on the other hand.

i. OVS

- 27) a. Vse direktora rekomendujut dve firmy
 [all directors]-Nom recommends [2 firms]-Acc
 "All the director recommend 2 firms." (ambiguous)
- b. Dve firmy rekomendujut vse direktora
 [2 firms]-Acc recommend [each director]-Nom
 "2 firms are recommended by all the directors." (ambiguous)

- c. Dve firmy ja xocu, ctoby vse direktora rekomendovali
[2 firms]-Acc I want that [all directors]-N recommend
"I want 2 firms to be recommended by all the directors." (wide scope for 2)

ii. locative inversion

- 28) a. Dva celoveka zajezzali v kazdyj gorod.
[two persons]-Nom went to each city
"Two people went to each city." (preference for 2, but ambiguous)
- b. **V kazdyj gorod** zajezzali dva celoveka
to each city went [two persons]-Nom
"Two people went to each city." (preference for 2, but ambiguous)
- c. V kazdyj gorod ja xocu, ctoby dva celoveka zajezzali
to each city I want that [two person]-N went
"I want two people to have gone to each city." (wide scope for "each city")

iii. adversity impersonals

- 29) a. Kakoj-to morjak oprokinul dve lodki
[some sailor]-Nom overturned [two boats]-Acc
"Some sailor overturned two boats." (ambiguous)
- b. **Dve lodki** oprokinul kakoj-to volnoj
[two boats]-Acc overturned [some wave]-Instr
"Two boats were overturned by some wave." (ambiguous)
- c. Dve lodki (ja xocu, ctoby) kakoj-to morjak oprokinul
[two boats]-Acc I want that [each sailor]-Nom overturn
"I want two boats to have been overturned by some sailor." (wide scope for 2)

iv. possessive-PP inversion¹⁴

- 30) a. Dva zadanija byli u vsech studentov
[two tasks]-Nom were at all students
"All the students had two tasks." (ambiguous)
- b. **U vsech studentov** byli dva zadanija
at all students were two tasks]-Nom
"All the students had two tasks." (ambiguous)

¹⁴Notice that in (30b), a counter-argument could be attempted stating that the reason ambiguous scope remains is not the lack of overt A'-movement, but rather the fact that even after such movement, the raised quantifier does not c-command the other quantifier, being embedded within a prepositional phrase. (The same objection might apply to binding cases considered directly below.) Yadroff (2000), however, has shown that some Russian prepositions, those he calls "functional" prepositions, do not ever create an opaque domain for c-command relations, by virtue of an LF restructuring process, which other, "lexical" prepositions do not allow. This is shown on the basis of systematically distinct behavior of the two kinds of prepositions including binding and other structural relations. *u* ('at') in the usage given here, falls into the category of functional prepositions, and therefore the objection would not hold up, and the lack of unambiguous wide scope argues only for A-movement. The same counter-argument cannot therefore apply to the binding cases below either.

v. dative experiencers

- 31) a. Dve knigi nraŭjatsja každyu mal'čiku.
 [two books]-Nom please [each boy]-Dat
 "Masha likes her work." (ambiguous)
- b. Každyu mal'čiku nraŭjatsja dve knigi
 [each boy]-Dat please [two books]-Nom
 "Each boy likes two books" (ambiguous)
- c. Každyu mal'čiku dve knigi nraŭjatsja
 [each boy]-Dat [two books]-Nom please
 "Each boy likes two books" (wide scope for "each boy")

2.2.2 *Binding Principle A* The proposed movement into SpecI should allow anaphor binding from the moved position, on the assumption that the subject condition on anaphor binding in Russian (Rappaport 1986) reduces to a configurational relation between the SpecI position and an LF-raised anaphor in I⁰ (see Bailyn 1992 for discussion). Since the proposed inversion should demonstrate A-properties, and binding proceeds from the proposed landing site, the raised elements should show A-binding abilities. The (b) sentences in (32-35) show that all the construction types show an improvement in the possibility of anaphor binding by the raised EPP constituent over the non-raised argument in the (a) sentences.

i. OVS

- 32) a. *Svoi direktora rekomendujut etu firmu
 [self's directors]-Nom recommend [this firm]-Acc
 "Self's directors recommend this firm."
- b. ??Etu firmu rekomendujut svoi direktora
 [this firm]-Acc recommend [self's directors]-Nom
 "Self's directors recommend this firm."

Although the contrast in binding possibilities in (32) is quite strong for some speakers, it is also clear that (32b) is marginal at best. The IP-Inversion analysis accounts for the contrast, but not for the marginality of (32b). Here I assume, following Reinhart (1983) and others, that the factors involved in anaphor binding are more than purely structural. Thus in addition to the required structural configuration, there must also be no violation of relevant thematic hierarchies, which are poorly understood. In Russian, there is a tendency to associate reflexive pronouns with the Nominative subject, regardless of structural position, in which case the intended coreference in both cases of (32) would be cases of an A within A condition disallowing the antecedent of an anaphor to be the maximal projection containing it. Because the additional factors involve thematic hierarchies, IP-Inversion constructions in which the Nominative subject is an agent (OVS) should be least acceptable with the inverted construction binding. Thus in this section it is the *contrast* in acceptability between inverted and non-inverted orders, and not absolute acceptability of the binding ability of the inverted constituent, that demonstrates that A-movement has taken place. The same caveat applies to the Locative Inversion examples in (33).

ii. locative inversion¹⁵

- 33) a. *Svoji staryj mer vernulsja v razrušennyj rodnoj gorod_i
 self's old Mayor returned to destroyed native city
- b. ??V razrušennyj rodnoj gorod_i vernulsja svoji staryj mer
 to destroyed native city arrived self's old Mayor
 "To (his) destroyed native city_i returned its_i old Mayor"

iii. adversity impersonals (examples from Lavine & Friedin forthcoming)

- 34) a. *Oprokinuli lodku_i na svoji pravjyj bort
 overturned boat-Acc onto self's right side
 "They overturned the boat onto its_iside."
- b. ??Lodku_i oprokinulo na svoji pravjyj bort
 boat-Acc overturned onto self's right side
 "The boat was overturned onto its side."

That factors other than strict structural position are involved in reflexive binding, as discussed above, is borne out by the fact that when reciprocals are tested in similar constructions, the contrast emerges more strongly, thus providing more support for the A-movement analysis, as shown in Lavine & Friedin (forthcoming).

- 35) a. Milicionerov ranilo pujlami prinadležaščimi drug drugu
 policemen-Acc wounded bullets-Instr belonging each other-Dat
 "The police were wounded by bullets belonging to each other."
- b. *Pujjami prinadležaščimi drug drugu ranilo milicionerov
 bullets-Instr belonging each other-Dat wounded the police-Acc

¹⁵Lavine & Friedin (forthcoming) in fact explicitly argue that OVS structures, which they call "short scrambling" and assume to involve discourse-driven A'-movement, do not change Principle A binding relations. The evidence is based on their examples li-ii):

- i) *[Mašu i Ivana]_i poznamomili druž'ja drug druga_i (L& F: 46)
 [Masha and Ivan]_i-Acc introduced friends each other-Gen_i
- ii) Fotografii drug druga_i ljubjat [Maša i Ivan]_i bol'se vsego
 photos-Nom each other-Gen love [Masha and Ivan]-Nom most-of-all

However, these examples are misleading in several ways. First, L&F do not discuss the internal structure of genitive possessive phrases such as *druž'ja drug druga* ('friends of each other') and 'pictures of each other' which have independent properties with respect to Principle A. In particular, in the former case, but not the latter, due to the animacy of the DP subject, the reciprocal can potentially be bound DP-internally, which is perfectly acceptable for anaphors that do not fall under any kind of "subject requirement" such as reciprocals (which is why L&F use them in these examples to begin with). Second, they do not compare their examples with other OVS structures in which binding obtains after raising, such as (iii) below:

- iii) Ivanovyx udivila fotografija drug druga.
 the Ivanovs-Acc surprised photographs each other-Gen
 "The Ivanovs were surprised by p[hotographs of each other]."

Therefore it appears that L&F's claim that Adversity Impersonals obtain A-binder status can and should be extended to the first constituent of OVS constructions as I have suggested.

The strong contrast in (35) is further evidence that the fronted constituent in adversity impersonals is in an A-position, as predicted by the Generalized Inversion approach.

iv. possessive-PP inversion

- 36) a. ??Svoj_i sobstvennyj dom byl u nas_i
 [self's own house]-Nom was at us
- b. U nas byl svoj_i sobstvennyj dom
 at us was [self's own house]-Nom

v. dative experiencers

- 37) a. ??Svoja_i rabota nravitsja Maše_i
 [self's work]-Nom pleases Masha-Dat
 "Masha likes her work."
- b. Maše_i nravitsja svoja_i rabota
 Masha-Dat pleases [self's work]-Nom
 "Masha likes her work."

Possessive PPs (36) and Dative experiencers (37) serve as anaphor binders with no difficulty, also indicating EPP status. The (b) sentences of (36-37) show that direct objects are marginal anaphor binders, but only when they are fronted into EPP position (and there is accompanying V-raising). If a Nominative theme containing the anaphor is raised to EPP position, as in (36a, 37a), the sentences are degraded. Thus all the construction types above have binding relations affected by raising into the EPP position of SpecI, as expected under this analysis.

2.2.3 *Binding Principle B* Binding Principle B states that pronouns must be free in their binding domain of any coindexed A-binders. Thus (38a) is a Principle B violation.¹⁶ The prediction for IP Inversion constructions is clear: If Inversion involves A-movement, and the inverted construction contains a pronoun, the Principle B violation should disappear. (A'-movement would not show this effect due to reconstruction.) Thus the contrast between the (a) and (b) sentences below provide further evidence for the A-movement account of IP-Inversion.¹⁷

i. OVS

- 38) *a. Ivan_i ljubit ego_i druzej.
 Ivan-Nom loves his friends
 "Ivan_i loves his friends_i."

¹⁶There are, however, some speakers who allow for pronominal possessive pronouns to be bound, as they can be in English. It appears that most Russian speakers with strong knowledge of English fall into this category. We exclude such judgments for the purposes of this section and report only the judgments of speakers with a strong distinction between the acceptability of anaphors versus pronouns in basic, undervived structures like (38a).

¹⁷Another difficulty with this test is the apparent restriction some speakers have on backward pronominalization of any kind. Thus there are speakers who reject all instances of ego ('his') when it precedes its antecedent, regardless of hierarchical relations or position. I therefore report judgments only of those speakers without this general ban on backwards pronominalization and leave analysis of this linear phenomenon aside, but note that it appears to be relevant only for Principle B.

??b. **Ego_i druzej** ljubit Ivan_i
 his friends loves Ivan
 "His friends are loved by Ivan."

ii. locative inversion

- 39) *a. Staršij brat_i pojavilsja v ego_i dome.
 older brother-Nom appeared in his house.
 "The older brother appeared in his house."
 ?b. **V ego_i dome** pojavilsja staršij brat_i
 in his house appeared older brother
 "In his house appeared the older brother."

40) iii. possessive-PP inversion

- *a. Tol'ko Maša_i est' u nee_i
 only Masha-Nom is at her
 "Masha_i is all she_i has."
 ?b. **U nee_i est' tol'ko Maša_i**
 at her is only Masha-Nom
 "All she_i has is Masha_i."

iv. dative experiencers

- 41) *a. Etot rebjonok_i nraivitsja ego_i roditeljam.
 children-Nom like their parents-Dat.
 "This child_i pleases his_i parents."
 ?b. **Ego_i roditeljam** nraivitsja deti_i
 his parents-Dat like children-Nom
 "His parents_i like this child_i."

2.2.4 *Binding Principle C* Principle C of the binding theory states simply that an R-expression must be free (at LF) of any coreferent A-binders. Thus in the English sentence (42), the R expression *John* embedded in the subject clause *friends of John* does not enter into a c-command relation with the coreferent pronoun *him*, and neither Principle B nor Principle C are violated.

42) [Friends of John]_i introduced him_i to Mary.

However when the underlying direct object pronoun is passivized, as in (43), a configuration results in which *John* is bound by the coreferent pronoun *he*.

43) *He_i was introduced to Mary by friends of John_i

This LF violation results on the standard assumption that A-movement does not reconstruct for the purposes of binding. Thus the possibility of triggering a Principle C violation is evidence of the A status of the raised constituent. It is here that we find perhaps the most striking evidence of the Inversion account: When running through our IP Inversion types, we find systematic violations in comparable structures, as shown in the (b) sentences of (44-48) below.

i. OVS

- 44) a. [Novye znakomye Ivana]_i predstavili ego_i predsedatelju.
 new friends of Ivan introduced him-Acc chairman-Dat
 "Ivan's new friends introduced him to the Chairman."
 *b. **Ego_i** predstavili novye znakomye Ivana_i predsedatelju
 him introduced new friends of Ivan chairman-Dat
 *"He_i was introduced to the chairman by Ivan's_i new friends"

ii. adversity impersonals

- 45) a. [Ego_i družja] uveli morjaka_i
 his friends led away sailor-Acc
 "His_i friends led the sailor_i away ."
 *b. **Ego_i** uneslo v storonu doma morjaka_i.
 him-Acc swept away in direction of house sailor-Gen
 *"He was swept away in the direction of the sailor's house."

iii. locative inversion

- 46) a. [Znakomye Ivana]_i byli u nego_i.
 friends of Ivan were at him
 "Friends of Ivan's_i were at his_i house."
 *b. **U nego_i** byli znakomye Ivana_i.
 at him were friends-Nom of Ivan's
 "At his house were friends of Ivan's."

iv. possessive-PP inversion

- 47) ?a. [Igruški Ivana] byli u nego.
 toys-Nom of Ivana were at him
 ?"Toys of Ivan_i he_i had"
 *b. **U nego_i** byli igruški Ivana_i.
 at him work toys-Nom of Ivan
 *"He_i had toys of Ivan's_i."

v. dative experiencers

- 48) a. [Znakomye Ivana]_i nravjatsja emu_i.
 friends-Nom of Ivana like him-Dat
 "Friends of Ivan_i please him_i." (cf. *"He likes friends of Ivan.")
 *b. **Emu_i** nravjatsja znakomye Ivana_i.
 he-Dat like-pl friends-Nom of Ivan
 *"He_i is liked by friends of Ivan_i."

2.2.5 *Cross-over* Weak Crossover (WCO) is often used as a test for A'-movement. Thus Lavine & Friedin (forthcoming) provide WCO examples in support of their claim that adversity impersonals involve A'-movement to SpecI, a finding fully consistent with the IP Inversion analysis. This evidence, repeated in (49), involves

movement of the internal argument in adversity impersonals across a pronoun serving as its antecedent, which typically, in cases of A'-movement, triggers a weak crossover violation. The violation can be seen in (49a), where the movement in question is the *covert* LF movement of the phrase containing the quantifier across the pronoun (compare English **His_i mother kissed every child_i*).

- 49) a. *[nogu ego_i nositelja]_k natiraet t_k [každym novym sapogom]_i
 foot-Acc of-its wearer-Instr rubs-sore every new boot-Instr
 "The foot of its_i wearer is rubbed sore by every new boot_i."
 b. [každym novym sapogom]_i natiraet nogu ego_i nositelja
 every new boot-Instr rubs-sore foot-Acc its wearer
 "Every new boot_i rubs sore the foot of its_i wearer."

However, in (49b), the overt movement of the internal argument into the EPP position, an A-position under their account, does not trigger a WCO violation, and subsequent quantifier raising (QR) reconstructs only to the highest A-position, and therefore does not trigger any violation. This is evidence that (49b) involves A-movement.

L&F go on to observe, however, that OVS constructions, which they do not analyze as EPP movement, have the same asymmetric character. This is based on (50), and parallels the binding possibilities in the English translations, given that the translation of (50b) involves passive, a well-known case of A-movement.

- 50) a. *Ee_i sobaka ljubit každyju devočku_i
 [her dog]-Nom loves [every girl]
 "Her_i dog loves every girl_i."
 b. [Každyju devočku]_k ljubit ee sobaka t_k
 [every girl]_i-Acc loves [her_i dog]-Nom
 "Every girl is loved by her dog."

In (50a), an SVO structure, the violation is presumed to be caused by the LF movement of the phrase containing the quantifier over the phrase containing the coreferent quantifier. In (50b), therefore, where similar movement occurs overtly, we would expect a WCO violation just in case the movement had A'-properties. In fact, however, there is no violation, and this contrast supports the analysis that the movement in question is A-movement into SpecI. Oddly enough, Lavine & Friedin do not use the parallel behavior of (49) and (50) as evidence that the OVS construction and the adversity impersonal construction have similar properties. Rather, they resort to the claim that "the weak crossover facts demonstrate that both Spec-TP and the position to which an argument may scramble are A-positions." (p. 22) This appears consistent with standard observations that "short" scrambling has A-properties (Miyagawa in press), whereas Long Distance scrambling has A'-properties. However, this observation has long been suspect exactly because it has no structural basis on the analysis where one kind of movement (EPP) is substitution, whereas the other (short scrambling) is adjunction. Under the IP-Inversion analysis proposed here, the positional behavior correlates with the facts discussed above -- EPP movement into SpecI has A-properties, adjunction does not. We thus expect a case of long distance scrambling such as (51) to cause a WCO violation, and it does, although weakly:

- 51) *Každyju devočku ja xoču, čtoby ee sobaka poljubila
 [every girl]_i-Acc I want that [its dog]-Nom loves t_i
 "Every girl, I want her dog to love."

Thus extending the IP Inversion construction to include OVS in addition to Adversity Impersonals, a step L&F are unwilling to take, eliminates the need for a claim of any adjoined positions having A-properties, and unifies A-behavior as being unrelated to scrambling.¹⁸

In examining our other IP-Inversion constructions, we find, in fact, that in no cases are weak crossover violation incurred by the movement involved. This is shown in (52-54):

iii. locative inversion

- 52) a. *[Ee uborščica] vošla [v každuju komnatu].
 its cleaning lady entered into every room
 "Its cleaning lady entered every room."
 b. **V každuju komnatu** vošla [ee uborščica]
 into every room entered its cleaning lady-Nom
 "Into every room entered its cleaning lady."

iv. possessive-PP inversion

- 53) a. *[Ee_i sobaka] byla na rukax u [každoj devočki]_i
 its dog-Nom was on arms at every girl
 "Her dog was in every girl's arms."
 b. ?U [každoj devočki]_i byla na rukax [ee_i sobaka]
 at every girl was in arms her dog-Nom
 "Every girl had her dog in her arms."

v. dative experiencers

- 54) a. ??[Ee sobaka] nužna [každoj devočke]_i
 her dog-Nom needs every girl-Dat
 "Her_i dog is needed by every girl_i."
 b. [Každoj devočke]_i nraivitsja [ee sobaka]
 every girl-Dat likes her dog-Nom
 "Every girl_i needs her_i dog."

In this section we have seen that the A-movement analysis of all these constructions is born out by facts from weak crossover, which is not triggered by movement across a pronoun in cases of IP Inversion. We next turn to another test, taken from idiom chunk interpretation.

¹⁸L&F's claim that OVS and Adversity Impersonals differ in this way crucially relies on an argument they label "Focus Projection". The idea is that Focus or rhematic interpretation can extend to the entire sentence in the case of adversity impersonals, whereas it can not in OVS structures. This is based on a Junghanns & Zybatow's 1997 generalization that Focus projection is interrupted by A'-scrambling only, and therefore, OVS must involve A'-scrambling. However, it is not clear that Junghanns & Zybatow's generalization holds in all cases, and indeed that Focus Projection is a useful syntactic test. V S intransitives, for example, certainly allow focus projection, but have been argued to involve rightward A'-movement (see Bailyn 1995), and for these cases the generalization does not hold. It is also not clear that all cases of A-movement do not disrupt Focus Movement. Therefore it would appear that the WCO test is a better indicator of syntactic status, and it indeed shows the two constructions to behave similarly.

2.2.7 *Idiom Chunk Interpretation*

Consider the idiom presented in (55)

- 55) Mal'čiki b'jut bakluši-Acc
 boys hit pieces of wood
 "The boys are distracted, bored (twiddling their thumbs)."

In (55) we have a normal SVO sentence, with highly idiomatic interpretation. It is generally assumed that A'-movement can disrupt the idiomatic meaning of idioms, as is shown in the downgraded sentence (56) (on the idiomatic interpretation):

- 56) ??Bakluši-Acc, ja xoču, čtoby mal'čiki bili
 pieces of wood I want that boys hit-subj
 "The boys are distracted, bored (twiddling their thumbs)."

However, in OVS constructions, the idiomatic interpretation obtains easily, as shown in (57):

- 57) Bakluši-Acc b'jut mal'čiki
 pieces of wood hit boys-Nom
 "The boys are distracted, bored (twiddling their thumbs)."

Thus we have yet an additional piece of evidence that the OVS construction does in fact involve A-movement. The test is not applicable to the other constructions because most Russian idioms are V-O constructions.

2.2.7 Summary of Section 2.2 In Section 2.2, we have seen significant syntactic evidence in favor of the IP Inversion analysis, and in particular in favor of the claim that the movement involved is movement in to an A position, which under the current account is movement into SpecI, a kind of modern day Raising to Subject of morphological non-subjects. I suggest that this kind of Inversion can replace A-scrambling or "short scrambling" thus allowing a narrower view of scrambling as A'-movement only, related to discourse structure and involving adjunction (see Bailyn 2001). In the next section we turn to theoretical issues raised by this syntactic approach to what was formerly known as A-scrambling.

3. IP Inversion and the Extended Projection Principle

In this section, I discuss the consequences of analyzing all the Russian Inversion constructions we have seen as being driven by the Extended Projection Principle. If such a unification can be maintained, it represents a welcome step forward in understanding the nature of non canonical word order patterns in languages like Russian. Indeed, as we shall see, such an approach allows for a natural combination of Inversion constructions on the IP level with their more familiar counterparts on the CP level, namely V2 constructions. Thus, in effect, Russian is a kind of IP-level V2 language (like Yiddish, see Diesing 1990), with one important distinction in the nature of Nominative case, in the spirit of Pesetsky and Torrego (1999), discussed immediately below. This brings us to the surprising conclusion that the limited Inversion possibilities of English in this regard stem from the absence of overt verb movement, which in effect forces the Nominative subject to fulfill the EPP.

3.1 Extending the EPP

The Extended Projection Principle was originally proposed within Government and Binding Theory as the requirement that all sentences (in languages such as English) have an overt subject, hence the obligatory presence of expletives in existential and impersonal constructions. Extensive work on expletive constructions in English, Icelandic and other languages has demonstrated the necessity of some kind of EPP, see Chomsky 1995), Bobaljik & Jonas (1996), Reuland (2000) and references therein, and Lasnik (2001). Russian in this respect is no different, and the evidence in Section 2 has demonstrated that the inverted XP is, in fact, in a VP-external A-position, namely SpecIP. The difference between Russian and a language like English appears to lie in the range of possible XPs that can satisfy the EPP requirement of IP. A descriptive account of this parameter was given in (26), and is repeated below:

26) The Inversion Parameter: (first version) (Russian)

The EPP feature in I can be checked by any XP

Descriptively, (26) is accurate. However, we will see shortly, however, that (26) assumes a feature-checking version of the EPP that we have independent reasons not to maintain. Further, (26) turns out to be more of an epiphenomenon of other interacting parameters involving Nominative case and verb movement.

The version of the EPP assumed in this article is given in (58):

58) The External Projection Principle: *IP must have a filled specifier*

Notice that (58) is not stated in terms of feature checking. Simply stated, it is a lexicalization requirement of the IP specifier position). Various recent work, however, has attempted to derive the EPP as the overt manifestation of an already existent agreement relation in the derivation that must be "checked" (in the terminology of Chomsky 1995) or agreed with (in the terminology of Chomsky 2000). This is the view of Miyagawa (1997), for example, who analyzes Japanese local (A)-Scrambling as driven by the EPP. In that account, however, such movement is essentially case-driven, or at least related to structural case checking, as it is Miyagawa's claim that in Japanese only structurally case-marked argument can undergo A-Scrambling. We have seen that Russian is clearly not restricted in this way. I therefore do not entertain the possibility that EPP movement is case-related, sharing the conclusion arrived at in Chomsky (1995, 1998, 2000).

A more generalized version of the view the EPP is related to an existing checking or agreement relation is argued for in Pesetsky & Torrego (1999) and Chomsky (2000). The analysis given here is consistent with the typological claims of those works, but differ in the account of the nature of EPP itself, siding with Lavine & Friedin (forthcoming) in maintaining that the EPP is an independent feature that must be checked by overt material in the Specifier of some category.

The same conclusion is reached in Lasnik (2001) for independent reasons, which show that the feature-based account of the EPP is suspect. The Lasnik argument is based on IP and VP-ellipsis constructions of the kind found in (59):

- 59) a. Mary will see someone.
b. Who(m)_i [Mary will see t_i]? (IP-ellipsis)

(59b) is derived by IP-ellipsis, as shown. Only the fronted WH-phrase *who* escapes the ellipsis of the entire remaining IP. Lasnik notes, however, that the unelided version of (59b) is, of course, ungrammatical (without the I-->C raising, as shown in 60):

60) *Who(m)_i will_k [Mary t_k see t_i] ? (IP-ellipsis)

Typically, of course, I-->C is required in non-Nominative WH-questions in English. That requirement related to the checking of some kind of [+T] feature on C. Yet in (59b), over I-->C movement does not take place, and somehow the checking requirement is met nonetheless. Lasnik argues that the reason for this is related to the features of the element in I, which are deleted under elision. Thus the feature checking requirement can be handled by either the usual movement or elision. He then turns to sentences such as (61):

61) Mary said she can't swim, even though she (really) can [~~swim~~]. (=VP ellipsis)

(61) is a case of VP-ellipsis, as expected. However, by analogy with (59b), it should be possible *not* to raise the subject out of the VP (or VP-shell), and delete the offending features through ellipsis, as in (59b). This would leave only the modal verb, and the result should be grammatical, but it is not:

62) *Mary said she can't swim, even though (really) can ~~she swim~~. (why not VP ellipsis?)

We should be able to raise the relevant features of *she* if the residue can be deleted. However, (62) clearly shows that this is impossible, despite the parallel operation being acceptable in (59b). This indicates that the EPP requirement on overt subjects is more than a feature-checking operation -- it requires, as the original formulations stated, that something overt be in the SpecIP position. Lasnik summarizes the situation as follows:

"(we must) formulate the EPP so that it demands that the functional head of the clause have a specifier, just as in Chomsky 1982 and Chomsky 2000, as opposed to Chomsky 1995. Why the EPP should differ in this way from other instances of movement considered here is an important question, but one I am not prepared to answer at this point." (Lasnik 2001: 360)

Given this conclusion, we now reformulate the generalization in (26) as (63):

63) The Inversion Parameter: (second version) (Russian)

The EPP can be satisfied by any XP

To summarize thus far: The EPP in Russian is checked by a raised XP in the SpecIP position, with all the expected subject properties. If the raised XP is the Nominative subject, we derive a standard SV(O) transitive or unergative construction. If the construction contains Inversion, as in the many Russian constructions we have analyzed, the verb raises over the Nominative subject. In the next section we first show that SVO Nominatives do not have such raising, and then discuss the nature of the requirement that the other constructions do.

3.2 IP Inversion and Verb Movement

3.2.1 *The obligatory nature of V raising in Inversion* Various non-Nominative XPs can satisfy the EPP in Russian, and the verb must raise in these constructions, or the A-properties we have seen with the inverted XPs do not hold. This is shown in (63):

64) a. *[Ego_i družej] Ivan_i ljubit t
his friends Ivan loves
"His friends, Ivan loves."

- b. Ego_i, [znakomye Ivana]_i predstavili t predsedatelju
 him friends of Ivan introduced chairman-Dat
 "Him, Ivan's friends introduced to the chairman."

In (64a), an internal Accusative XP containing a pronoun is fronted, but is interpreted in base position (after reconstruction of A'-scrambling) where it is improperly bound by *Ivan*. This is in direct contrast to the constructions in (38-41) where Inversion, when it is accompanied by verb movement, acquires A-properties. In (64b), the same distinction holds. In this case, the fronted pronoun, were it is an A-position, would feed a Principle C violation. However, without the accompanying V movement, the construction is possible only as a case of Topicalization (A'-Scrambling) which reconstructs, which is why the construction is possible with coreference, as opposed to the cases shown in (44-47). Thus the A-properties identified in section 2 obtain if and only if the verb has raised across the subject. But what forces the accompanying verb raising? My claim is that this is a reflex of what can be called the Tense Condition, which is given in (65):

65) a. The Tense Domain Parameter

An uninterpretable T feature must be checked, either in the IP or CP domain

b. The Overt Tense Parameter

*The T feature must be checked in the overt syntax
 (the [+T] feature is strong)*

The settings of (65) for Russian state that T is housed in I and must be checked overtly. Aspects of such a requirement has a significant history in generative grammar, often being taken as the requirement that forces V raising to C in the Germanic languages. (Holmberg & Platzack 1995). In this sense, my claim is that Russian is an IP-level T2 language just as German is a CP-level T2 language, with the V normally checking the T feature, (but not always, see below!)

In the case of an IP-level V2 language, such as Yiddish, (55b) is satisfied by the raised finite verb. So far, it appears that Russian is in fact no different, once we have isolated the effects of Inversion and V-raising as opposed to A'-Scrambling. However, the crucial difference involves standard SVO transitives. In these constructions, although it can be safely assumed that the subject raises to SpecIP to fulfill the EPP, there is no accompanying verb movement, as we see in the next section:

3.2.2 *Lack of Verb movement in SVO transitives* King (1994) and Schoorlemmer (1995) argue that Russian is a verb raising language, in the sense of Pollock's (1989) analysis of French, or various analyses of Celtic VSO languages. Thus Russian sentences such as (66a) are claimed to be parallel to their Welsh equivalent in (66b):

- 66) a. (RUSSIAN) Posadil ded repku. **V-S-O**
 planted gramps turnip-Acc
 "Gramps planted a turnip."
- b. (WELSH) Gwelodd Mair y ddamwain **V-S-O**
 saw Mary the accident
 "Mary saw the accident."

The essentials of the King analysis are that "Russian is a VSO language: SpecVP is subject position, and the tensed verb raises to I⁰ where it case marks the subject in SpecVP." (King 1993) However, standard verb-movement tests and other diagnostics lead to the conclusion that Russian is *not* a verb-raising language, and is fact quite similar to English,

despite the existence of VSO sentences such as (54) (Bailyn 1995a,b; Babyonyshev 1996, Brown 1999). Evidence is drawn from di-transitive verbs, which do not behave in a fashion parallel to their Welsh equivalents. This is shown in (57-58):

67) (WELSH)

Rhoddodd yr athro	lyfr	i'r	bachgen	ddoe	V-S-O-IO
gave-3 sg	the teacher	book	to.the boy	yesterday	
"The teacher gave a book to the boy yesterday."					

68) (RUSSIAN)

*Dal učitel'	knigu	mal'čiku	včera	*V-S-O-IO
gave	teacher	book-ACC	boy-DAT	yesterday
"The teacher gave a book to the boy yesterday."				

(67), in which the ditransitive verb precedes all three of its arguments, is unacceptable in Russian, whereas it is the norm in a true VSO language such as Welsh. Furthermore, the same kind of adverb facts that led Pollock (1989) to their conclusion of a difference in verb raising between English and French clearly indicate that Russian patterns with English and not French. This is shown in (69-70):

69) (FRENCH)

a.	Je	vais	que	Jean	embrasse	souvent	Marie.	S-V-adv-O
	I	know	that	Jean	kisses	often	Mary	
"I know that John kisses often Mary." (out in English)								

*b.	Je	vais	que	Jean	souvent	embrasse	Marie.	*S-adv-V-O
	I	know	that	Jean	often	kisses	Mary	
"I know that John often kisses Mary." (ok in English)								

70) (RUSSIAN)¹⁹

a.	Ja	dumaju,	čto	Ivan	často	celuet	Mašu.	[čto [S-adv-V-O]]
	I	think	that	Ivan	often	kisses	Mary	
"I know that Ivan often kisses Mary."								

*b.	Ja	dumaju,	čto	Ivan	celuet	často	Mašu.	*[čto[SVadvO]]
	I	think	that	Ivan	kisses	often	Mary	
"I know that Ivan often kisses Mary."								

Thus we see in (70) that the familiar French surface word order possibilities in (69) do not obtain in Russian. The adverbs are located exactly where we should expect them to be in a non-raising account of Russian.

We are now close to being in a position of being able to eliminate optional verb movement in Russian completely, having seen that S-V-O is the basic surface order and involves no verb movement. IP-Inversion constructions, on the other hand, require (construction-specific) V-->I raising. It remains to account for the VSO sentences such as (66a) that originally led King (1994) to posit the V-raising analysis for Russian.

¹⁹The Russian sentences in question are embedded so as to neutralize the discourse factors that interfere with close examination of underlying word order patterns. However, native speaker judgments do not change for non-embedded contexts, showing the same, English-like, distribution.

3.2.3 *VSO sentences* The first thing to notice about the VSO sentence (66a) is that it is unacceptable in an embedded context. This is shown in (71).

71) a. Ja znaju, čto ded posadil repku. [čto[SVO]]
 I know that gramps planted turnip
 "I know that gramps planted a turnip."

*b. Ja znaju, čto posadil ded repku. *[čto[VSO]]
 I know that planted gramps turnip
 "I know that gramps planted a turnip."

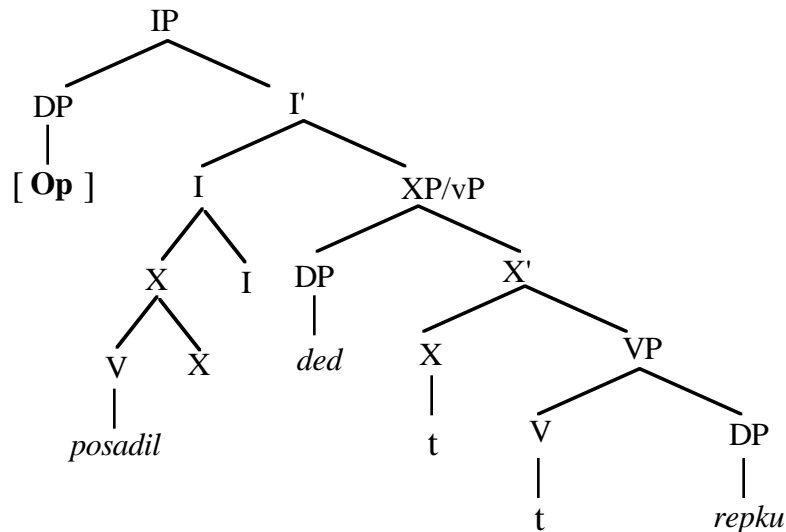
Other characteristics of Russian VSO sentences which any account of them should derive are given in (72):

- 72) VSO sentence characteristics:
 a. V-initial
 b. begins a story or discourse
 c. old-fashioned

Surely it is not a coincidence that all VSO sentences are interpreted as story-initial. In fact, VSO order in such constructions is accepted by most native speakers *only* in a story-initial position as the start of a fairy tale, story or legend. It appears that these constructions have a special discourse character, allowing them to be used discourse-initially, and thus not in embedded clauses. Their EPP status is related to this discourse anomaly in some way, just as many Germanic languages allow V1 constructions in exactly such circumstances.

This implicates some kind of null-operator in SpecI which also forces V-raising to have its feature checked (and also restricting the range of VPs that can participate in this construction). Thus the structure of (66a) is given in (73):

73) Structure of (66a): *Posadil ded repku*.



Let us call this construction the **Story Initial Construction (SIC)**. English does not allow such sentences. The parameter allowing Russian to have such constructions is given in (24):

74) The Null-EPP OP Parameter:²⁰

Allow EPP to be checked by Op to be \emptyset with certain features
(Russian [story], English [-])

3.2.4 *The Tense Condition* The facts presented above show that the strong claim of overt verb-raising in Russian can not be maintained.²¹ In SVO sentences, typically, then, there is no V-raising, whereas in IP-Inversion constructions there is, as we have seen. Thus we derive a correlation between the IP Inversion and V-->I raising. V-->I raising is obligatory in cases where the EPP is satisfied by a non-Nominative argument and absent otherwise. Thus, the proper generalization is that the Tense Condition (65) is satisfied in Russian in one of two ways: *either* by a Nominative subject in SpecI *or* by a raised tensed verb. This generalization appears to be true, and raises two questions:

75) Questions about the Tense Condition in Russian:

²⁰Presumably, the nature of this parameter is broader than implied here. That is, it should include whatever language-specific information is necessary for Icelandic to allow transitive expletive constructions, as analyzed by Bobaljik & Jonas (1996). Since such constructions do not exist in Russian, we defer the typological discussion of this parameter to further research. SIC is very similar to the Transitive Expletive Constructions described in Bobaljik & Jonas (1996) and exemplified in (i):

i) Frisian

Der lêst ien in boek
there reads somebody a book
"There is someone reading a book."

According to Bobaljik & Jonas, the existence of such constructions should correlate with overt Object Shift (as in Germanic). In Russian, overt Object Shift appears to be limited to pronouns. An example is given in (ii):

ii) Gde moja kniga?
where my book
"Where's my book?"

iii) Ja ee prodal.
I it-Acc sold
"I sold it."

The existence of sentences such as (ii) sets the SpecT parameter (allowing a Nominative case position such as my SpecXP/vP) of Bobaljik & Jonas (1996) as positive for Russian, allowing SIC (TEC for them) to exist in the language.

²¹Schoorlemmer (1995) argues for V-raising on theoretical rather than empirical grounds, reasoning that Russian's rich verbal morphology entails a [+strong] Agr feature in V, thus forcing overt movement. Theoretically, however, it is not clear that rich verbal morphology alone sets this the Agr parameter in this way, and is partially suspect in Russian due to the morphologically deficient character of verbal morphology in the past tense (a historical past participle) and the accompanying lack of overt morphology of the present tense copula. Furthermore, adverb placement facts do not support the verb raising analysis, as we have seen. Schoorlemmer notes the apparent counter-evidence of adverb placement, and stipulates that the adverbs themselves may move, for which there is no empirical evidence, as far as I know. Thus her account follows a dubious theoretical line in contradiction to relevant empirical data. Furthermore, it appears that nothing crucial to her account of Aspect in Russian rests on overt verb raising, and reevaluation of this component would not undermine the rest of her important findings.

- i. Why can an Nominative XP satisfy the Tense requirement (in addition to the EPP) but other XPs cannot?
- ii. If a Nominative XP can satisfy both the EPP and the Tense Condition, why does it not do so always (since satisfying them separately is more costly)?

With regard to the first question, it is no coincidence that this state of affairs is exactly parallel to the situation with WH-movement in English: when the WH-phrase is the Nominative subject, I-->C movement does not occur. However whenever the WH-phrase originates from anywhere lower in the clause, I-->C movement obligatorily accompanies WH-movement. Pesetsky and Torrego (1999) analyze the head raising in question as needed to satisfy the checking requirements of an uninterpretable T feature on C in English. In non-Nominative WH-movement, raising of the auxiliary to C serves to check this feature. However in Nominative WH-movement, the Nominative case itself checks the T feature on C. Thus we add to our system the possibility that some language can check a T feature with a Nominative case-marked nominal:

76) The Tensed Nominative Parameter

Nominative Case checks a Tense feature in SpecIP(English, Russian)

If a language has a positive value for this parameter, it has a choice as to what can check the T feature, either the tensed verb or the raised Nominative nominal. If the EPP is checked by NP-nom, V-->I is unnecessary (and hence impossible).²²

With respect to the second question, why the Nominative XP does not always move to SpecI, I assume, following Collins (1997), that economy is calculated locally, and that all internal arguments are equidistant from the SpecIP position for economy purposes. No optionality arises then, under this view of the Russian EPP and T system. Furthermore, constituent frontings of the various kinds united here also do not represent true optionality. One and only one argument can fill the EPP position.²³

Notice, further, that with (76), we are now in a position to eliminate from the grammar of English the statement that only a Nominative XP can check the EPP (as opposed to Russian). English should have the ability to check the EPP with any XP, in the same manner that Russian does. However, English lexical verbs *cannot* raise, as we know from the deficient *agr* system and the work of Pollock (1989). So any English derivation that does not satisfy the EPP without verb raising (Nominative subjects, expletives, locative PPs predicated of the subject), will be ungrammatical. The apparent distinction in what can satisfy the EPP is epiphenomenal and falls out from the possibility of verb raising.

²²It is also possible that this is universal. If so, it explains English subject WH-questions but raises issues about V2 languages that predict distinct placement for the verb in Nominative initial clauses than in inverted clauses, just as in Russian. I know of no such evidence that this is the case in V2 languages. I therefore continue to assume that this is parameterized, and assume it to be related to pro-drop.

²³I do not take a stand here on what determines the choice of XP moving to SpecI in constructions where there is more than one option. Presumably, which argument serves that role is determined lexically, as it is in English locative constructions where either the Locative Inversion sentence ("Down the hill rolled John") or the standard order ("John rolled down the hill") are acceptable, as distinct construction types. Of course in English this is not considered "free" word order or "scrambling". We now reduce this set of Russian fronting operations to alternations found in "fixed" word order languages like English. This in itself represents a significant advance in Slavic syntax. See Collins (1997) for discussion of the economy issues involved.

3.2.5 *Is the EPP Universal?* Intuitively, it would appear that the EPP as stated could certainly not be universal -- clearly there are languages without a filled IP specifier in overt syntax, and these fall into two types (at least). One is (real) VSO languages such as Welsh, and the other is pro-drop languages such as Italian and Spanish that (often) have no overt IP specifier. Alexiadou & Anagnostopoulou (1998) share the conclusion that the EPP is an independent IP level phenomenon (AgrS in their system). They propose that the EPP also can be checked in one of two ways, either by raising into the Specifier of the relevant category, or by head raising²⁴. The latter setting accounts of VSO languages and the possibility of pro-drop. Under such an analysis, the EPP is always strong, which is consistent with its "externalizing" nature. Languages differ as to how they can fulfill it. If we assume that the EPP can be handled *either* by a raised specifier, or, in certain languages, by the raised verb, it should be possible to maintain its universality. The parameter proposed by A&A is paraphrased in (77):

77) The EPP Parameter (based on Alexiadou & Anagnostopoulou 1998)

The EPP can be checked by either an XP in SpecI or a raised head but is universal

Russian and English instantiate the first options, VSO and pro-drop languages the second.

3.2.2 *Summary of Section 3.* In this section, I have proposed several parameters and conditions, summarized below:

65) a. The Tense Domain Parameter

*An uninterpretable T feature must be checked, either in the IP or CP domain
(IP for Russian)*

b. The Overt Tense Condition (universal)

*The T feature must be checked in the overt syntax
(the [+T] feature is strong)*

74) The Null-EPP OP Parameter:

Allow EPP to be checked by Op to be \emptyset with certain discourse features

76) The Tensed Nominative Parameter

*Nominative Case checks a Tense feature in SpecIP(English, Russian)
(English, Russian)*

77) The EPP Parameter

The EPP can be checked by either an XP in SpecI or a raised head (but is universal)

The various setting of these parameters predict a typological range of language types that appear to be attested, as we see shortly. First, however, we turn to the issue of fitting CP-level V2 language into the picture.

²⁴Alexiadou & Anagnostopoulou (1998) do not discuss the issue of non-canonical or inverted EPP constructions but they are fully compatible with their analysis.

4 Generalized Inversion and Typology

4.1 The CP Domain

In fact, we should immediately be able to extend (77) to the CP domain. Thus an additional parameter, going back to ideas of den Besten (1983) and many others is that some languages have root IP clauses and some have root CP clauses.²⁵ Given that, the V2 requirement itself falls out from the presence of an [+F] or [+Agr} feature in the highest functional category. But this is not enough. Something requires a Topicalized element before the tensed verb in German-style languages. This requirement is stated as in (78) by Roberts (1993) (compare (63) above).

78) A head containing Agr must have a filled specifier.

(78) is simply the EPP acting on the CP level and forcing overt occupancy of its specifier position. The Tense Condition then forces the requirement that there be V raising to I to C. Thus we are left with a simple matrix of language types.

We are now in a position to sketch out the typological situation.

4.2 Typological consequences

Let us consider the language types predicted by this analysis, given the parameters provided:

78) Language Types:

<u>EPP</u>	<u>Spec.XP</u>	<u>Tense Domain</u>	<u>Tensed Nom</u>	<u>Language</u>
XP	--	IP	+	English
XP	--	IP	-	French
XP	+	IP	-	Icelandic, Yiddish,
XP	+	IP	+	Russian
X ⁰	--	IP		Greek, Span/ Ital
X ⁰	+	IP		Celtic
XP		CP		German / Swedish
X ⁰		CP		Arabic

Various comments are in order. First, it does not appear that the SpecXP parameter is relevant for CP-domain languages. Second, among VSO languages, I assume that some are IP-domain (such as Welsh) and others, such as Arabic are CP domain. Third, it should be clear that the Tensed Nom parameter is only relevant for languages that have the XP setting for the EPP -- all others raise a V to satisfy the EPP, and therefore whether the T condition is (always) also satisfied by the raised verb. Fourth, it should be noticed that there are other differences among languages not relevant for our purposes (head initial vs. head final for example). Finally, and most important, it should be clear from (78) that if

²⁵Of course some analyses of English posit a CP root there too, but with no overt movements into its specifier or head position. Without morphological evidence in favor of such an analysis, I continue to share the more traditional assumptions of different root clauses.

the Tense Condition is really universal (that T must be checked in its domain overtly), then the only languages that do not everywhere have either V-->I or I-->C are those with the Tensed Nom condition (Russian and English, as it happens, in this survey of languages). In IP-domain languages, if that value is negative, V raising is forced to fulfill the Tense Condition. Thus V-->I itself is not a "parameter", and the grammar need not include direct reference to it in the case of French, Yiddish, Icelandic and so on.

Clearly, the schema provided in (78) is inexact at best, but it show the progress that can be made on the basis of proper analysis of Russian Inversion constructions and how they enable us to see Russian as more similar to its European relatives than has usually been thought. In that respect, the results appear to be a useful step forward.

5. Conclusion

We are now in a position finally to see the "freedom" of Russian word order as the result of syntactic processes resulting from overlapping settings of parameters independently needed for the grammar of Russian and many other languages. The construction breakdown of the specific word order types is given in (79):

34) Russian word order patterns reconsidered:

<u>order</u>	<u>construction type</u>
SVO	underlying
VSO	SIC (TEC)
VOS	Extraposition (not discussed here)
OVS	IP-Inversion
OSV	Topicalization ²⁶
SOV	Object Shift (not discussed here)

In this article, we have seen that significant cases of apparent optionality, when properly analyzed, reveal the interaction of deeper, syntactic properties of language that do not involve true optionality. first, we determined that apparent optionality of verb movement in Russian is directly related to a certain kind of fronting process, namely IP-level EPP. The EPP feature on I, in turn, motivates the movement of various non-Nominative constituents to a special sentence initial position with various A-properties. A parallel kind of movement exists within VP, thus allowing us to maintain an EPP-style analysis for those cases as well. Thus V-raising and A scrambling all reduce to known syntactic, feature-driven movement, as expected under an economical system. The result is a picture of Russian surface word order far more closely related to strict word order languages like English than previously envisioned, a welcome result on a tightly constrained economical; system such as that described by Chomsky (1995).

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²⁶I have not discussed Topicalization or other A-bar movement processes here. I assume they are long-distance adjunction of the kind proposed throughout the literature, in Webelhuth (1989), Saito (1992), Miyagawa (1997) and many other places. Crucially, I follow standard analyses in assuming there is no accompanying V movement in such cases.

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