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GENERALIZED INVERSION *

ABSTRACT. In this article, I generalize the notion of “Inversion” on the IP-level to include all cases of what has previously been referred to as Inversion (following Collins 1997) and A-Scrambling (following Miyagawa 2000, forthcoming a, b) as well as various other constructions in which a non-Nominative subject fills the canonical subject position, SpecIP. I exemplify IP-Inversion using a range of constructions from Russian, and show that the “inverted” constituent has subject (A) properties, and that it is accompanied by verb-raising, which is required in such instances by the Overt Tense Condition. The ability to fill SpecIP with a non-Nominative constituent is a parameterized property of a language related to the strength of the Nominative case features in I. The driving force behind Inversion is (a version of) the (traditional) Extended Projection Principle (EPP), that is an overttness requirement on the specifier of the functional category I. Finally I argue that Inversion, as an overttness requirement on the specifier of a functional projection, can be generalized to the CP level as well, where an equivalent overttness requirement forces filling of SpecCP, as in Germanic V2 languages. The analysis allows us to unite various apparently disparate constructions as the result of a simple set of parameters, and to expose central issues of economy within the computational system.

INTRODUCTION

Chomsky (1995, 2000, 2001) proposes examining linguistic constructions as being the products of a potentially “perfect” language device, that is, of

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a system without significant redundancies, where only information relevant to the interfaces is represented in linguistic expressions. 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 related areas of apparent optionality in Russian, a “free” word order language: (i) (apparently) optional verb movement and (ii) some cases of (apparently) optional 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 a subset of scrambling involves a form of raising to subject, under a particular view of the functional category structure of the clause, and that it is accompanied by verb-movement.¹ Because this construction results from A-movement into canonical subject position, as demanded by an overtness requirement on the SpecIP position, I call it Inversion rather than Scrambling in this article. I conclude by uniting the Russian Inversion constructions with instances of non-case-driven fronting to SpecCP such as German-style Topicalization. The general process is therefore termed Generalized Inversion.

I argue that all cases of Inversion are driven by a particular form of the Extended Projection Principle (EPP) that forces movement into the specifier of a functional projection, in the spirit of Babyonyshev (1996), Collins (1997), Lavine (1998) and Miyagawa (1997, 2001, 2003). IP-Inversion constructions include some previously analyzed as feature-driven (Locative Inversion in Babyonyshev (1996), Adversity Impersonals in Lavine (1998, 2000), and Lavine and Freidin (2001)), some that have typically been considered “stylistic”, and others that have been treated separately, such as Dative experiencer and Possessive-PP constructions. All these constructions involve raising of a constituent to SpecIP, and this movement is accompanied by verb-movement, which is absent in SVO transitives. Verb-raising is required in exactly those cases in which the EPP is satisfied by a non-Nominative XP. If this approach is on the right track, both the apparent optionality of verb-raising and the apparent op-

¹ I do not address Long-Distance scrambling or VP-internal scrambling in this article. For discussion of LD Scrambling in Russian, see Bailyn (2001a, 2003), Miyagawa (1997, 2003) 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 analysis of LD Scrambling does not bear directly on the subset of processes covered in this article. For discussion of VP-internal scrambling, see Takano (1998).

tionality of clause level A-scrambling in Russian can be eliminated.² 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 languages, 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, exposing its natural similarities to Icelandic, Yiddish, German, English and other languages 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 used by Roberts (1993) and elsewhere in discussion of the relation of Inversion (constituent fronting) to verb movement, something that is central to this article, but unique in analyses 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, I survey Russian construction types where Inversion occurs. In section 2, the empirical core of the article, I provide evidence that in each case of Inversion the initial constituent is in an A-position (filling the canonical subject position). In section 3, the theoretical core, I discuss the nature of the Extended Projection Principle driving the Inversion, the question of why there is verb raising in these Russian constructions but not in SVO transitives, and issues of Economy. In section 4, I extend the discussion to the CP level and show that V2 constructions also fall under the rubric of Generalized Inversion with the usual parameterized distinction in the position of a finiteness [+F] feature, following Holmberg and Platzack (1995). The resulting picture of restricted parametric variation accounts for a range of language types which I discuss 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

² There remains only an Economy issue: why should the Inversion construction be available if it involves an apparently extra step (the verb raising) not required in standard SVO transitives? In section 3 I show that two construction types are in fact derivationally equivalent, following Kitahara (1997).

order (Restan 1981; Bailyn 1995a, b, among many others). This article concerns a subset of constructions with non-SVO order, 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

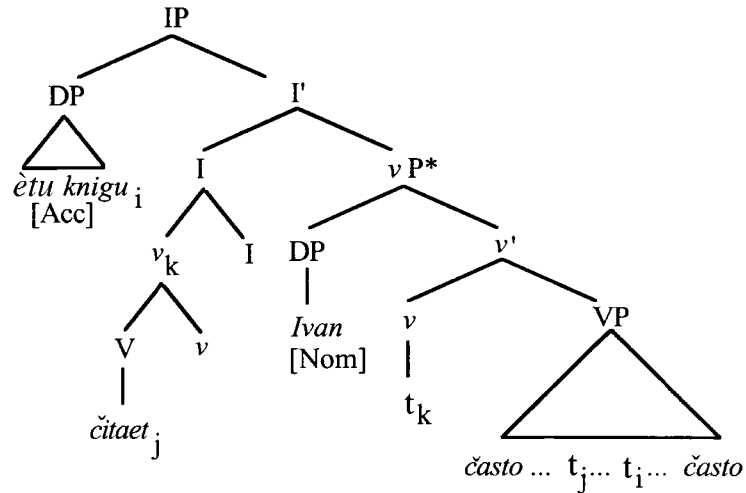
Some examples with Object-Verb-Subject order are shown in (1):

- (1)a. [ětu knigu] čitaet Ivan (často) **O-V-S-adv**
[this book]-ACC reads Ivan-NOM (often)
 Ivan reads this book often.
- b. [Perestroiku [obščestvennogo soznanija]] **O-V-S**
perestroika-ACC public consciousness
 načal v 1980 [izvestnyj moskovskij muzykal'nyj
began in 1980 [well-known Moscow music
 kritik Artem Troitskij]
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)
- c. Gazety darjat professora **O-V-S_{nom}**
[newspapers]-ACC give professors-NOM
 studentam
students-DAT
 The newspapers are given by the professors to the students.

The structure for (1a) to be argued for in this article is given in (2):³

³ It 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 some kind of extraposition of the subject to the right. According to most analyses of discourse-bound Extraposition (Bailyn 1995a, b; King 1995), 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.

(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 AgrP or other functional projections).⁴ Second, I assume that between IP and (minimal) VP, there is an additional functional category, corresponding to vP (Larson 1988; Chomsky 1995) or PredP (Bowers 1993; Bailyn 1995b), whose specifier houses the external argument, as seen in (2).⁵ I also assume, following Diesing (1990), Bobaljik and Jonas (1996) and Alexiadou and Anagnostopoulou (1998), that the SpecIP position in some languages is *not* a case position, in the sense of structural case, and that in Russian Nominative case is valued in the lower functional projection (vP), and is divorced from the EPP (an issue to whose typological implications we return in section 4).⁶ Thus in

⁴ In discussing the nature of the parameter distinguishing Split-IP Languages from non-split-IP languages, Thrainsson (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. A similar conclusion is reached in Franks 1995. Further, Russian is not a syntactic referential pro-drop language, another indication of a less than full verbal agreement system.

⁵ The exact identity of the category between VP and IP is not directly relevant to the analysis at hand. Collins (1997) employs Tr(ansitivity)P in a similar manner. AspP stands in for this category in some analyses. I will continue to use vP in this article following the convention used in Chomsky (1995), based on Larson (1988).

⁶ In the framework of Chomsky (1995) and Kitahara (1997), we are simply dealing with an instance of “weak” Nominative case features. In the Probe-Goal or Agree system of Chomsky (2000, 2001), where “strong” features are replaced by (a version of) the EPP

(2) we see that the direct object has moved out of the VP into SpecIP.⁷ Furthermore, the hypothesis is that the verb has raised out of minimal VP, by head movement, through v^0 , and into I^0 , thus crossing the Nominative subject.⁸

Various recent proposals associate local IP movement operations with the EPP (Babyonyshev 1996; Lavine 1998; Lavine and Freidin 2001 for Russian; Miyagawa 2001, 2003 for Japanese; Collins 1997, 2002 for English, among others.) For all of these accounts the issue of Shortest Move arises in considering structures such as (2). It is generally considered that overt verb raising allows movement of an internal argument over an external one by extending the domain (Bobaljik and Jonas 1996), or, in a Probe-Goal system such as that in Chomsky (2000), by rendering equidistant the two potential XP targets of the I head's attracting feature (Kitahara 1997).

Of course, there are also constructions in which an internal argument is fronted to the left of the sentence, but verb-movement over the subject does not occur, as in (3):⁹

- (3) [Ètu 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, forcing overt movement, an Agree relationship is established between I and the (lower) Nominative subject without an EPP feature, that is without any overt movement being required. Note that this use of the EPP is not what is meant by the EPP in this article, which remains an overtness requirement on the specifier of a functional category.

⁷ I remain agnostic as to whether intermediate movement of the object to the left edge of vP is required for extraction. This is something that is required in the system of Chomsky (2000, 2001), but does not bear directly on the issues relevant in this article.

⁸ An anonymous reviewer raises the question of how the adverb tests familiar from Pollock (1989) and elsewhere, designed to test for verb position, fare with respect to the constructions discussed here. In cases of non-canonical word order, such 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 2001a), the tests should not be expected to be particularly conclusive for identifying verb position. However, see footnote 10 for a possible test of verb position from negative ellipsis constructions.

⁹ An anonymous reviewer raises the issue of whether Inversion can be followed by A'-movement. I follow standard assumptions that there can be cases where IP-Inversion is followed by A'-movement, parallel to other instances of A movement feeding A'-movement (as in WH-movement of passive subjects). This article concerns the first step and does not exclude the possibility of the second.

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 SpecIP to fulfill the EPP, the verb remains in place, and the direct object is adjoined to IP, by A'-Scrambling. In (3) the verb remains inside *vP*, not raising to I^0 , whereas in (1a) it raises to I^0 . If so, the generalization appears to be that whenever the EPP is satisfied by a non-Nominative argument, the verb has to move to I.¹⁰ 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.

It is a central claim of this article that cross-linguistically non-Nominative EPP satisfaction underlies A-scrambling, which in the strictest sense does not exist.¹¹ It is therefore no surprise that Collins (1997) and

¹⁰ This correlation is supported by *net*-ellipsis constructions, exemplified in (i):

- (i) Ivan [ljubit detej], a Marija 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) ~~Detej~~ Ivan [ljubit detej] a Marija 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 is strongly degraded. This is shown in (iii):

- (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, since verb-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.

¹¹ I thus maintain a (significantly different) version 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

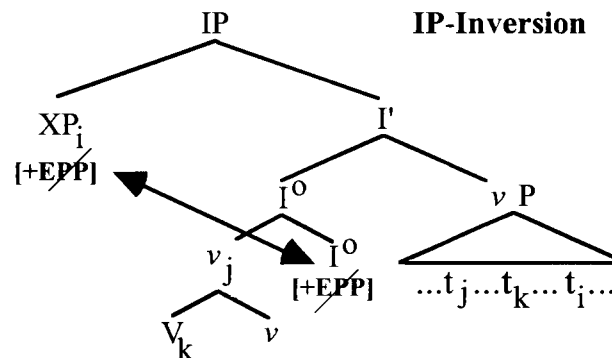
Ndayiragije (1999) describe very similar phenomena in Bantu languages, known as “subject-object reversal”. The phenomenon is analyzed in cases like (4).

- (4)a. (Kilega) (from Collins 1997)
Maku ta-ma-ku-sol-ag-a mutu weneene **O-V-S**
6beer neg-6-prog-drink-hab-fv 1ps alone
 A person does not usually drink beer alone.
- b. (Kirundi) (from Ndayiragije 1999)
Amatá y-á-ra-nyôye abâna. **O-V-S**
milk 3s-PST-drink:PERF children
 CHILDREN drank milk.

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

We have already identified one case of Inversion above, which I will simply call OVS.¹² In this section, I 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 – standard SVO transitives. We return to these constructions in section 3.) (6) lists the central subclaims pictured in (5):

rather than standard configurational thematic relations. (See Bailyn 2001a for arguments against base-generation approaches.)

¹² I avoid the term “Stylistic Inversion” 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 SpecIP and the tensed verb.¹³

Below, I identify six other constructions that share these characteristics. In section 2, I then provide syntactic tests showing that the XP in question is indeed in the SpecIP position and not an adjoined, A'-position.

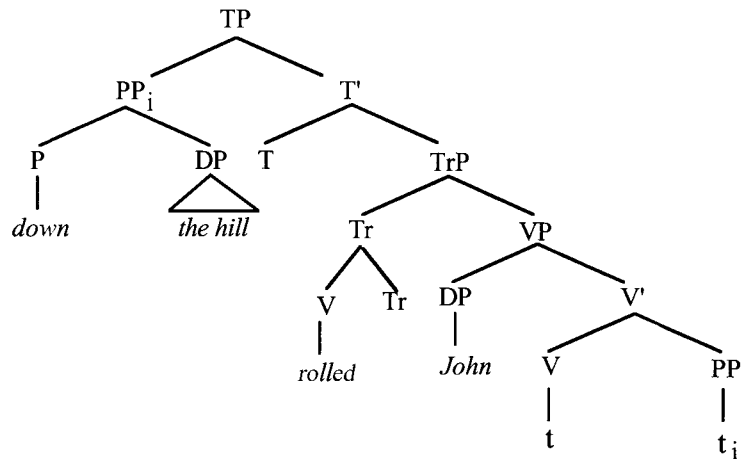
1.2. *Locative Inversion*

The appearance of non-Nominative constituents in SpecIP is, of course, an attested phenomenon even in strict word order languages 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)¹⁴

¹³ Boeckx (2000) argues that such constructions are, in fact, driven by a kind of agreement, which Boeckx calls “quirky agreement”. This agreement, although not morphologically reflected, is required in his system to maintain the idea that all movement is an overt manifestation of a basic agreement relationship of some kind, as argued in Chomsky (2000, 2001). I assume here that such a requirement is not a theoretical necessity but rather an empirical question, and follow Lavine and Freidin (2001) and Lasnik (2001) who provide arguments against such an approach.

¹⁴ Notice that in Collins’ account, TP is used for IP and TrP for *v*P. The distinction in labeling has no bearing on the current analysis.

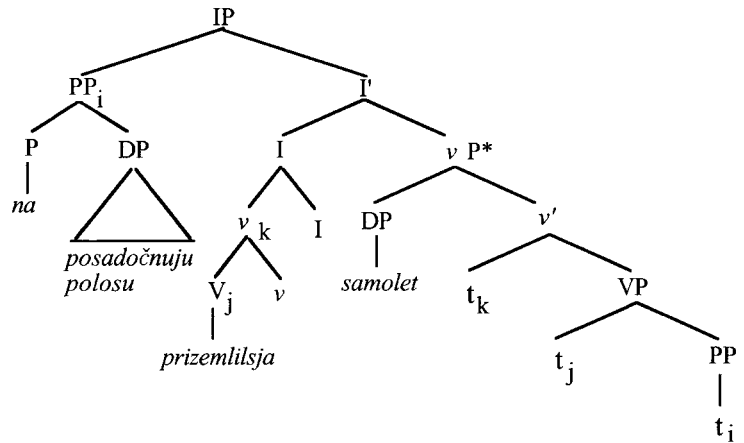


In (8) the PP [*down the hill*] checks the EPP feature of T (the equivalent of IP in the fused IP analysis appropriate for Russian). Russian also demonstrates cases of locative inversion, as shown in (9):

- (9) **Na posadočnuju polosu** prizemlilsja samolet.
onto runway-ACC landed airplane-NOM
 The airplane landed on the runway.

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

- (10) Structure of (9):



In (10) we find a fronted PP and a post-verbal subject. A similar account is 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 Inversion (EPP) constructions exist – those with fronted PPs in addition to the other construction types discussed below. This is possible because the construction’s driving force is divorced from Case Checking, as argued for in Lavine (1998, 2000), Lavine and Freidin (2001), Lasnik (2001) and elsewhere.

1.3. *Adversity Impersonals*

Lavine (1998) and Lavine and Freidin (2001) analyze a class of Russian impersonal constructions, known as Adversity Impersonals, illustrated in (11–14): (Examples from Lavine and Freidin 2001).

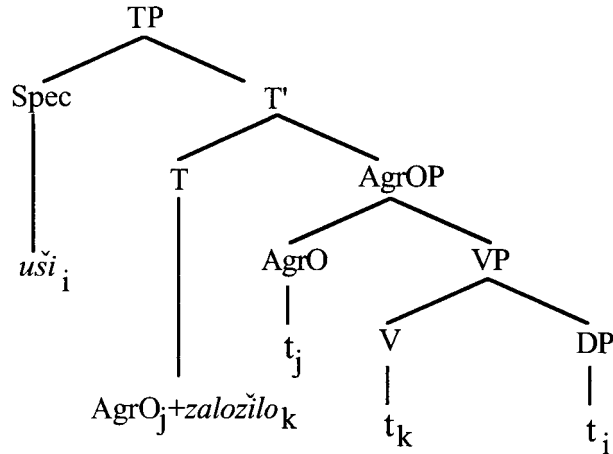
- (11) **Uši** založilo
ears-ACC clogged-up
 (my) ears got clogged up.
- (12) **Zenščinu** zadavilo kovrom samoletom v parke
woman-ACC crushed [carpet airplane]-Instr in park
 Gor’kogo
Gorky-Gen
 A woman was crushed by the flying carpet [attraction] in Gorky Park.
- (13) **Lodku** oprokinulo volnoj
boat-Acc knocked over wave-Instr
 A/the boat was knocked over by a wave.
- (14) **Soldata** ranilo pulej
soldier-ACC wounded-3sg bullet-INSTR
 A/the soldier was wounded by a bullet.

The term “adversity impersonal” is used by Babby (1994) and others in describing this construction, 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.¹⁵ In

¹⁵ Lavine and Freidin (2001) change the terminology to mesh more closely with their account of the construction, 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 here.

all the sentences in (11–14), an internal argument, marked Accusative and given in boldface, appears in the canonical subject position, followed by the verb. Lavine (1998) shows that this is the “discourse-neutral” word order in these constructions. The proposed structure of (11) is given in (15):

(15) Structure of (11), (Lavine 1998, p. 218)



Notice that this structure appears perfectly consistent with the more general picture of IP-Inversion – both involve an internal argument filling the EPP position in SpecIP. They differ in that there is no Nominative Subject present in adversity impersonals. Crucially, both fronting operations are accompanied by verb-movement, which we find in all IP-Inversion constructions, for reasons to which we return in section 3.¹⁶

1.4. PP Constructions

Another Russian construction instantiating Inversion involves PPs with the preposition *u* (‘at, by’), as shown in (16):

- (16)a. **U nas** rodilas’ dočka. **PP-V-S**
 [at us] was born daughter-NOM
 We had a daughter born.

¹⁶ In Lavine (1998) the verb-raising is not required. Possible correlations with other non-Nominative EPP checkers are not captured.

- b. **U menja** poterjalis' vse klučǐ **PP-V-S**
at me got lost [all keys]-NOM
 I had my keys stolen.
- c. **U nix** uexali deti davno. **PP-V-S-adv**
at them left children-NOM long ago
 Their children left a long time ago.

Russian employs a possessive PP and a copula for possession, rather than a transitive verb *have*. Possessive PP-constructions form a sub-class of the PP constituents that can satisfy the EPP. Consider the contrast between (17a) and (17b):

- (17)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.

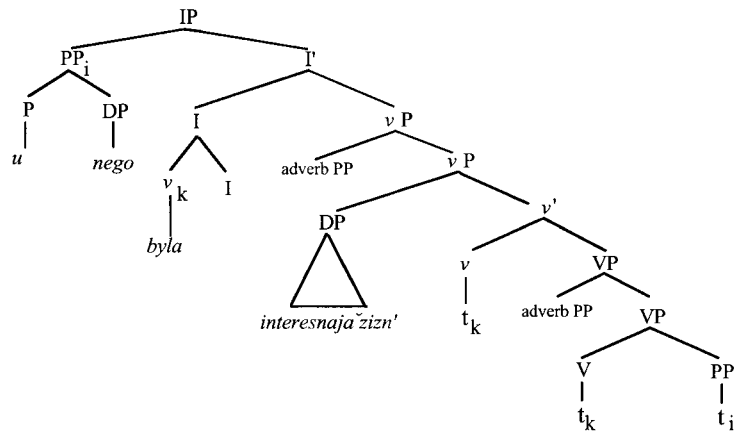
In (17a), the possessive PP is fronted to the EPP position and the subject appears postverbally. If the verb does not appear before the subject, as in (17b), the sentence is at best awkward (in a neutral context). Further, the contrast between (18a, b) and (18c) shows that the problem with (17) is not that it is verb-final: even when there is another element sentence-finally, the S-V order is infelicitous.¹⁷

- (18)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.

¹⁷ Again, we exclude any kind of contrastive or non-neutral reading, such as the reading where (18b) implies a contrast with life in some place other than New York (on which A'-movement is assumed to be involved, given the strong correlation with Focus).

In (18a, b), which differ from each other only by where the adverbial locative PP is base-generated, verb raising over the subject occurs as expected under our account of the EPP. (18c) is worse, on a neutral reading, because verb-movement has not occurred. Clearly, because of the final PP in (18c), this is more than a simple restriction on avoiding verb-final constructions. Thus we can conclude that PP-possessives are another kind of EPP construction with obligatory verb-raising. The proposed structure for (18a, b) is given in (19), with potential adverbial PP spots indicated, the higher for (18a), the lower for (18b).

(19) Structure of (17a):



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

1.5. “Bad Health” Verbs

Preslar (1998) argues that Accusative only verbs such *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 fully consistent with IP-Inversion. His evidence is drawn from neutral word order and structural tests. Example of Accusative experiencers filling SpecIP are given in (24) (from Preslar 1998).

- (20)a. **Sestru** tošnilo ot ryby
sister-ACC nauseated from fish
 The sister got nauseated from the fish.

- b. **Menja** zažalo!
me-Acc squeezed
 I got squeezed.

Preslar argues that the underlying direct object experiencers in such constructions move into SpecIP to satisfy the EPP. 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 others.

1.6. *Dative Experiencers*

It is well-known that in many languages Dative experiencers show subject properties (Maling and Zaenen 1990; Moore and Perlmutter 2000; Sigurdhsson 2002). In Russian also, certain verbs and adjectives allow Dative-experiencer constructions to appear with Nominative-Theme or Accuative objects. Examples are given in (21):

- (21)a. Saše nnavjatsja deti.
Sasha-DAT likes-pl children-NOM
 Sasha likes children.
- b. Soldatam vidna doroga.
soldiers-DAT visible-adj-f.sg road-NOM-f.sg
 The soldiers can see the road.
- c. Emu žal' sosedej.
him-DAT sorry neighbors-ACC
 He feels sorry for the neighbors.

As we will see shortly, Dative experiencers also show subject properties beyond appearing in pre-verbal position. We therefore add them to our list of IP-Inversion constructions.

1.7. *Quotative Inversion*

Another construction fitting the Inversion picture is Quotative Inversion, discussed in Collins (1997) and exemplified for English in (22):

- (22)a. “Wow!” said Mary.
 b. “Wow!” Mary said.

Russian Quotative Inversion is exemplified in (23–25):¹⁸

- (23) “Ničego sebe!” skazal Petja.
-exclamation- said Petja-NOM
 “Wow” said Petya.
- (24) “Ničego sebe!” skazal Petja Nataše.
-exclamation- said Petja-NOM Nataše-DAT
 “Wow” said Petya to Natasha.
- (25)??? “Ničego sebe!” skazal Nataše Petja.
-exclamation- said Nataše-DAT Petja-NOM
 - same gloss as (24) -

Although Quotative Inversion shares the basic EPP movement properties with the other Inversion constructions we examine, we will not discuss it with respect to subject properties in section 2, since binding tests do not easily 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.¹⁹

1.8. *Summary of Section 1*

We now can unify the following construction types:

IP Inversion constructions in Russian:

- i. OVS (section 1.1)
- ii. locative inversion (section 1.2)
- iii. adversity impersonals (section 1.3)
- iv. PP inversion (section 1.4)
- v. bad-health verbs (section 1.5)
- vi. dative experiencers (section 1.6)
- vii. quotative inversion (section 1.7)

¹⁸ In Russian, as in English, the non-inversion counterpart is also fully acceptable, as in (22a). I assume such sentences to be normal subject EPP sentences with the quotation itself topicalized.

¹⁹ It is unclear whether Quotative Inversion in Russian obeys the transitivity constraint well-known from English (see Collins 1997). I leave discussion of such restrictions as an open question.

In what follows, I refer to this cluster of constructions as IP Inversion. Informally speaking, all these constructions involve movement of an XP to SpecIP, to satisfy the EPP, whose formal nature will be discussed in section 3, and V^0 raising to I^0 , for reasons as yet unexplained.

2. EVIDENCE FOR IP INVERSION

In this section, I show that Russian IP-Inversion constructions involve A-movement to SpecIP, as motivated by the Extended Projection Principle in a system where Nominative Case is associated with a lower position.

2.1. *IP Inversion Satisfies the EPP*

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

- (26) *The Inversion Parameter: (first version)*²⁰
The EPP requirement in I can be satisfied by any XP SpecIP

I propose that (26) encompasses all constructions already discussed.

It is clear, of course, that (26) does not account for the verb-raising, but only for the obligatory XP fronting. I return to the issue of verb raising in section 3. In the remainder of this section, let us simply assume that verb movement is forced in all such inversion constructions and restrict ourselves to an examination of evidence that the inverted XP in these constructions is indeed in the SpecIP subject position.

(26) allows Russian the ability to satisfy the EPP with any constituent whose movement does not violate independent principles. If Inversion indeed involves moving XPs into SpecIP, the fronted constituent should show subject properties. I now turn to five such diagnostics: (i) binding Principle A, (ii) binding Principle B, (iii) binding Principle C, (iv) crossover and (v) idiom chunk interpretation. (I exclude quotative inversion because of the difficulty of constructing appropriate examples.)

²⁰ I will return in section 3 to a more detailed discussion of the actual nature of the EPP in a derivational system, its compatibility with other recent analyses of the EPP, and economy issues. For now, I assume it to be a simple overtiness requirement on the SpecIP position.

2.2. Subject Tests for Inverted XPs

2.2.1. Binding Principle A

The proposed movement into SpecIP should allow anaphor binding from the moved position, on the assumption that the subject condition on anaphor binding in Russian (see Rappaport 1986) reduces to a configurational relation between the SpecIP position and an LF-raised anaphor in I⁰ (see Bailyn 1992 for discussion). Since the proposed inversion is A-movement and binding proceeds from the proposed landing site, the raised elements should show A-binding abilities.²¹ The (b) sentences in (27–30) demonstrate 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

- (27)a. *Svoi podčinnenye volnujut Ivana
 [*self's subordinates*]-NOM worry Ivan-ACC
 Self's subordinates worry Ivan.
- b. ?Ivana volnujut svoi podčinnenye
 Ivan-ACC worry [*self's subordinates*]-NOM
 Ivan is worried by his subordinates.
- c. *Ivana my xotim, čtoby svoi podčinnenye
 Ivan-ACC we want that [*self's subordinates*]-NOM
 volnovali
 worry
 Ivan, we want self's subordinates to worry.

In (27) we see that an anaphor embedded in the subject causes ungrammaticality when the potential antecedent does not c-command it from an A-position. Long-distance (A'-) movement as shown in (27c) does not change things, as expected under reconstruction. However, the OVS Inversion construction placing the Accusative object in SpecIP is predicted to feed anaphor binding, as it does, as shown in (27b).²² Similar results are found for Japanese OSV sentences in Miyagawa (2001, 2003).

²¹ As for the question of *why* A-movement feeds changes in binding relations but A'-movement does not, see Bailyn (2003) for an analysis involving “feature-splitting” that is fully consistent with the IP-Inversion analysis given here.

²² Although the contrast in binding possibilities in (27) is quite strong for some speakers, it is also clear that (27b) remains marginal for some speakers. The IP-Inversion analysis accounts for the contrast, but not for the marginality of (27b). Here I assume, following

Similarly, Lavine and Freidin (2001) 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, based on their example (43), is given in (28):

- (28)a. *[Mašu i Ivana]_i poznamomili [druz'ja drug druga]_i
 [Masha and Ivan]_i-Acc introduced friends each other_i-Gen
 Masha and Ivan were introduced by friends of each other.
- b. [Fotografii drug druga]_i ljubjat [Maša i Ivan]_i
 photos-Acc each other-Gen love [Masha and Ivan]-Nom
 bol'se vsego
 most- of-all
 Pictures of each other Masha and Ivan love best of all.

However, these examples are misleading in several ways. First, acceptability of (28b) does not argue against the landing site of OVS constructions being an A-position, if we assume a derivational version of Principle A (Epstein et al. 1998; Grewendorf and Sabel 1998), whereby Principle A is satisfied if an A-binding relation obtains at any point during the derivation. In (28b) this is the case before movement, so the status of the movement involved is not relevant. (28a), on the other hand, appears to show that the accusative object does not feed a binding relation, implicating non A-movement. However, Lavine and Freidin do not discuss the internal structure of genitive possessive phrases such as *druz'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 could 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 Lavine and Freidin use them in these examples

Reinhart (1983) and others, that some 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. 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 element 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 (30).

to begin with). Further, they do not compare their examples with other OVS structures in which binding obtains after raising, such as (29) below:

- (29) Ivanovyx udivila fotografija drug druga.
 the Ivanovs-Acc surprised photograph each other-Gen
 The Ivanovs were surprised by a photograph of each other.

Therefore it appears that Lavine and Freidin'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. Their Weak Crossover tests point in the same direction (see below).

ii. *Locative Inversion*

In cases of Locative Inversion, the NP within the locative phrase can serve as an anaphor binder from Inversion position. This is consistent with recent findings from scope interactions reported in Anand and Nevins (2002).²³

- (30)a. *Svoj_i staryj mer vernulsja v razrušennyj rodnoj
 [self's old Mayor]-NOM returned to destroyed native
 gorod_i
 city
- b. ??V razrušennyj rodnoj gorod_i vernulsja svoj_i staryj
 to destroyed native city arrived [self's old
 mer
 Mayor]-NOM
 To (his) destroyed native city_i returned its_i old Mayor.

²³ The objection might arise that the raised R-expression in (30b) apparently does not c-command the anaphor, being embedded within a prepositional phrase. Yadroff (1999) and Franks and Yadroff (2002), however, have shown that some Russian prepositions, those which they call "functional" prepositions, do not 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. *V* ('to'), in the usage given here, falls into the category of functional prepositions, and therefore we should not expect that this kind of PP will form a c-command domain for the nominal in question. Binding proceeds as expected as if the nominal within were in the position of the PP itself. See Franks and Yadroff (2002) for more discussion.

iii. *Adversity Impersonals*

(31)a. *Oprokinuli lodku_i na svoj_i pravyj bort
overturned boat-ACC onto self's right side
 They overturned the boat_i onto its_i side.

b. ??Lodku_i oprokinulo na svoj_i pravyj 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 in footnote 22, 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 and Freidin (2001) (their example (42)):

(32)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. *Puljami prinadležaščimi drug drugu ranilo
bullets-INSTR belonging each other-DAT wounded
milicionerov
the policemen-ACC

The strong contrast in (32) is further evidence that the fronted constituent in adversity impersonals is in an A-position, as predicted by the Inversion approach.

iv. *Possessive-PP Inversion*

(33)a. ??Svoj_i sobstvennyj dom byl u nas_i
[self's own house]-NOM was at us
 We had our own home.

b. U nas_i byl svoj_i sobstvennyj dom
at us was [self's own house]-NOM
 We had our own home.

v. *Dative Experiencers*

- (34)a. ???Sebja_i žal' Maše_i
 [*self*]-ACC sorry *Masha*-DAT
 Masha feels sorry for herself.
- b. Maše_i žal' sebja_i
 Masha-DAT sorry *self*-DAT
 Masha feels sorry for herself.

The PP in (33b) and the Dative experiencers in (34b) serve as anaphor binders with no difficulty, also indicating A-position status. If a Theme containing the anaphor is raised to EPP position, as in (33a, 34a), the sentences are degraded. Thus all the construction types above have binding relations affected by raising into the EPP position of SpecIP, as expected under this analysis.

2.2.2. *Binding Principle B*

Binding Principle B requires that pronouns must be free of any coindexed A-binders in their binding domain. Thus (35a) is a Principle B violation. 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, as in (35c), does not show this effect due to reconstruction.) Thus the contrast between the (a) and (c) vs. (b) sentences below provides further evidence for the A-movement account of IP-Inversion.^{24,25}

i. *OVS*

- (35)a. *Ivan_i ljubit ego_i druzej.
 Ivan-NOM loves [his friends]-ACC
 Ivan_i loves his friends_i.

²⁴ Again, the Inversion analysis accounts for the contrast but has nothing to say about the marginality of (35b).

²⁵ A possible 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 družej** ljubiti Ivan_i
[his friends]-ACC loves Ivan-NOM
 His_i friends are loved by Ivan_i.
- c. *Ego_i družej, my xotim, čtoby Ivan_i poljubil
[his friends]-ACC we want that Ivan-NOM love
 His_i friends, we want Ivan_i to love.

ii. *Locative Inversion*

- (36)a. *Staršij brat_i pojavilsja v ego_i dome.
[older brother]-NOM appeared in his house.
 The older brother_i appeared in his_i house.
- b. ?**V ego_i dome** pojavilsja staršij brat_i
in his house appeared [older brother]-NOM
 In his_i house appeared the older brother_i.

iii. *Possessive-PP Inversion*

- (37)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*

- (38)a. *Ètot rebenok_i nraivitsja ego_i roditeljam.
This child-NOM like his parents-DAT
 This child_i pleases his_i parents.
- b. ?**Ego_i roditeljam** nraivitsja ètot rebenok_i
his parents-DAT like this child-NOM
 His parents_i like this child_i.

2.2.3. Binding Principle C

Principle C of the binding theory requires that an R-expression must be free of any coreferent A-binders. Thus in the English sentence (39), 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.

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

However when the underlying direct object pronoun is passivized, as in (40), a configuration results in which *John* is bound by the coreferent pronoun *he*.

(40) *He_i was introduced to Mary by friends of John_i.

The violation obtains 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 (41–45) below. In (41c), for example, we see that Long Distance A'-fronting of the pronoun does not trigger a Principle C violation, as expected under reconstruction. IP-Inversion in (41b), however, causes a violation, as predicted.

i. OVS

(41)a. Novye znakomye Ivana_i predstavili ego_i
 [new friends]-NOM of Ivan introduced him-ACC
 predsedatelju.
 chairman-DAT
 Ivan's new friends introduced him to the Chairman.

b. *Ego_i predstavili novye znakomye Ivana_i
 him-ACC introduced [new friends]-NOM of Ivan
 predsedatelju
 chairman-DAT

*He_i was introduced to the chairman by Ivan's_i new friends.

- c. Ego_i my xotim, čtoby novye znakomye Ivana_i
he-ACC we want that [new friends]-NOM of Ivan
 predstavili predsedatelju.
introduced chairman-DAT
 We want Ivan's new friends to introduce HIM to the Chairman.

ii. *Adversity Impersonals*

- (42)a. Ego_i družja uveli morjaka_i
[his friends]-NOM 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_i was swept away in the direction of the sailor's_i house.

With Locative Inversion, possessive-PP inversion and Dative experiencers, we again find a contrast between IP-Inversion and Long Distance (discourse-related)-movement, as predicted:

iii. *Locative Inversion*

- (43)a. Znakomye Ivana_i žili u nego_i
friends-NOM of Ivan lived at him
 Friends of Ivan's_i lived at his_i house.
- b. *U nego_i žili znakomye Ivana_i.
at him lived friends-NOM of Ivan's
 At his house lived friends of Ivan's.
- c. U nego_i my xotim, čtoby žili znakomye Ivana_i.
at him we want that lived friends-NOM of Ivan's
 We want friends of Ivan's to live at HIS house.

iv. *Possessive-PP Inversion*

- (44)a. ?Igruški Ivana_i byli u nego_i.
toys-NOM of Ivana were at him
 Toys of Ivan_i he_i had

- b. ***U nego_i** byli igruški Ivana_i.
at him were toys-NOM of Ivan
 He_i had toys of Ivan's_i.

v. *Dative Experiencers*

- (45)a. Znakomye Ivana_i nrajatsja emu_i.
friends-NOM of Ivan like him-Dat
 Friends of Ivan_i please him_i. (cf. * “He likes friends of Ivan.”)
- b. ***Emu_i** nrajatsja znakomye Ivana_i.
he-DAT like-pl friends-NOM of Ivan
 He_i is liked by friends of Ivan_i.

2.2.4. *Weak Cross-over*

Weak Crossover (WCO) is often used as a test for A'-movement. Thus Lavine and Freidin (2001) provide WCO examples in support of their claim that adversity impersonals involve A-movement to SpecIP, a finding fully consistent with the IP Inversion analysis. This evidence, repeated in (46), 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 (46a), 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*).

- (46)a. *[nogu ego_i nositelja]_k natiraet t_k [každym, novym
foot-ACC of-its wearer-GEN rubs-sore every new
sapogom]_i
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 (46b), 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 (46b) involves A-movement.

Lavine and Freidin go on to observe, indeed, that OVS constructions, which they do not analyze as EPP movement, have the same asymmetric character. This is based on (47), and parallels the binding possibilities in the English translations (involving passive, a well-known case of A-movement).

- (47)a. *Ee_i sobaka ljubit každyju devočku_i
[her dog]-NOM loves [every girl]-ACC
 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 (47a), 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 pronoun. In (47b), 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 SpecIP.

Oddly, Lavine and Freidin do not consider the parallel behavior of (46) and (47) to be evidence that the OVS construction and the adversity impersonal construction have similar properties. Rather, they claim that “the weak crossover facts demonstrate that both SpecTP and the position to which an argument may scramble are A-positions” (p. 22). The question arises of why two positions should share this property: more likely, they are simply the same position; the correlation has no structural explanation on the Lavine and Freidin analysis where one kind of movement (EPP) is substitution, whereas the other (scrambling) is adjunction. Under the IP-Inversion analysis proposed here, the positional behavior correlates with the facts discussed above – movement into SpecIP has A-properties, adjunction does not. We thus expect a case of long distance scrambling such as (48) to cause a WCO violation, and it does:

- (48) *Každyju devočku ja xoču, čtoby ee sobaka poljubila
[every girl]_i-ACC I want that [its dog]-NOM loves t_i
 Every girl_i, I want her_i dog to love.

Thus extending the IP Inversion construction to include OVS in addition to Adversity Impersonals eliminates the need for a claim of any adjoined

positions having A-properties, and unifies A-behavior as being unrelated to scrambling.²⁶

In examining our other IP-Inversion constructions, we find that in no cases are weak crossover violations incurred by the movement involved. This is shown in (49–51):

iii. *Locative Inversion*

- (49)a. *[Ee_i uborščica] vošla [v každyju komnatu_i].
its cleaning lady-NOM entered into every room
 Its_i cleaning lady entered every room_i.
- b. **V každyju komnatu_i** vošla [ee uborščica_i]
into every room entered its cleaning lady-NOM
 Into every room_i entered its cleaning_i.

iv. *Possessive-PP Inversion*

- (50)a. *[Ee_i sobaka] byla na rukax u [každyj devočki]_i
its dog-NOM was on arms at every girl
 Her_i dog was in every girl's_i arms.
- b. **U [každyj devočki]_i** byla na rukax [ee_i sobaka]
at every girl was in arms her dog-NOM
 Every girl_i had her_i dog in her arms.

v. *Dative Experiencers*

- (51)a. ??[Ee_i sobaka] nužna [každyj devočke]_i
her dog-NOM needs every girl-DAT
 Her_i dog is needed by every girl_i.

²⁶ Lavine and Freidin's claim that OVS and Adversity Impersonals differ in this way crucially relies on an argument from "Focus Projection". The idea is that Focus interpretation can spread to the entire sentence in the case of adversity impersonals, whereas it cannot in OVS structures. Assuming Junghanns and Zybatow's (1997) generalization that Focus projection is interrupted by A-scrambling only, Lavine and Freidin contend that OVS must involve A'-movement. However, it is not clear that Focus Projection is a useful syntactic test, since Junghanns and Zybatow's generalization may not hold in all A'-movement cases. V-S intransitives, for example, certainly allow focus projection, but have been argued to involve rightward A'-movement (see Bailyn 1995a), so for these cases the generalization does not hold. It is also not clear that all cases of A-movement do not disrupt Focus Movement. Rather, a Thematic Hierarchy appears relevant in Focus spreading. 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.

- b. [Každoj devočke]_i nraivitsja [ee_i 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 borne 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 – idiom chunk interpretation.

2.2.5. *Idiom Chunk Interpretation*

Consider the idiom presented in (52):

- (52) Mal'čiki b'jut bakluši
boys-NOM hit pieces of wood-ACC
 The boys are distracted, bored (twiddling their thumbs).

In (52) we have a normal SVO sentence, with highly idiomatic interpretation. It is generally assumed that A'-movement disrupts the idiomatic meaning of idioms, as is shown in the downgraded sentence (53) (on the idiomatic interpretation):

- (53) ??Bakluši, ja xoču, čtoby mal'čiki bili
pieces of wood-ACC I want that boys-NOM hit-subj
 I want the boys to be distracted, bored (twiddling their thumbs).

However, in OVS constructions, the idiomatic interpretation obtains, as shown in (54):

- (54) Bakluši b'jut mal'čiki
pieces of wood-ACC hit boys-NOM
 The boys are distracted, bored (twiddling their thumbs).

Thus we have yet an additional piece of evidence that the OVS construction (54) does not involve A'-movement, as opposed to long fronting of the object in (53). This provides further evidence in favor of the analysis given here. The test is not applicable to the other constructions because most Russian idioms are V-O constructions.

2.2.6. *Summary of Section 2.2*

In section 2.2, we have seen significant syntactic evidence in favor of the IP Inversion analysis, based on Miyagawa's (2001, 2003) account of

Japanese OSV constructions and in particular in favor of the claim that the movement involved is movement into an A position, which under the current account is movement into SpecIP, a modern day Raising to Subject of morphological non-subjects. I suggest that this kind of Inversion underlies all cases of IP-level A-scrambling, thus allowing a narrower view of scrambling as A'-movement only, related to discourse structure and involving adjunction (see Bailyn 2001a). 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 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 (2001), discussed immediately below. This brings us to the surprising conclusion that the limited Inversion possibilities of English 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 and Jonas (1996), Reuland (2000) and references therein, Lasnik (2001) and Svenonius (2002) and references therein. Russian in this respect is no different, and the evidence in section 2 has demonstrated that the inverted constituent is, in fact, in a VP-external

A-position, namely SpecIP. The version of the EPP assumed thus far in this article is given in (55):

- (55) *The External Projection Principle:*
IP must have a filled specifier

The difference between Russian and a language like English appears to lie in the range of possible constituents that can satisfy the EPP requirement of IP.²⁷ A descriptive account of this parameter was given in (26), and is repeated below:

- (26) *The Inversion Parameter: (first version)*
The EPP requirement in I can be satisfied by any XP in SpecIP

Notice that (55) is not stated in terms of feature checking. Simply stated, it is a lexicalization requirement of the IP specifier position. Various recent work, including Chomsky (2000), Pesetsky and Torrego (2001), Boeckx (2000), however, has attempted to derive the EPP as the overt manifestation of an already existent agreement relation in the derivation. Thus in addition to the requirement that an uninterpretable feature must be “checked” (in the terminology of Chomsky 1995) or probed and agreed with (in the terminology of Chomsky 2000), an EPP feature would force overt movement. This is the view in Miyagawa (1997), for example, who analyzes Japanese local A-Scrambling as driven by the EPP. In that account, however, such movement is case-driven, or at least related to structural case checking, as it is Miyagawa’s claim that in Japanese only structurally case-marked arguments can undergo A-Scrambling. We have seen that Russian is not restricted in this way. I therefore do not entertain the possibility that EPP movement is case-related, sharing in this the conclusion arrived at in Lavine and Freidin (2001) and Chomsky (1995, 2000, 2001).

A stronger version of the view that the EPP is related to an existing checking or agreement relation is argued for in Pesetsky and Torrego 2001. The analysis given here is consistent with the typological claims there, but differs in the account of the nature of EPP itself, siding with Lavine and

²⁷ I take this to be essentially a syntactic difference, and not a functional distinction, although it is clear that some kind of correlation exists. That is, I assume that the functional use of the inverted position as a Theme (in Theme-Rheme structure) relates to it being syntactically available, but that its thematic nature, in those cases where SpecIP correlates with Theme, is not the syntactic trigger of the movement any more than it is in English Locative Inversion constructions. How to formalize the relationship between the syntactic process of Inversion and the surface alignment of functional elements is an important question that lies outside the scope of this article.

Freidin (2001) in maintaining that the EPP is an independent requirement that must be satisfied by overt material in the Specifier of some category. In Lavine and Freidin (2001) the case is made that Adversity Impersonals involve A-movement driven by the EPP but unrelated to another Agree relation.²⁸

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 (56–57):

(56) Mary will see someone.

(57) Who(m)_i [~~Mary will see t_i~~]? (IP-ellipsis)

(57) is derived by IP-ellipsis, as shown. Only the fronted WH-phrase *who* escapes the ellipsis of the entire remaining IP. Typically, of course, $I^0 \rightarrow C^0$ is required in non-Nominative WH-questions in English. That requirement is related to the checking of some kind of [+T] feature on C. Yet in (57), overt $I^0 \rightarrow C^0$ 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 (58):

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

(58) is a case of VP-ellipsis, as expected. However, by analogy with (57), 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 (57). This would leave only the modal verb, and the result should be grammatical, but it is not:

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

We should be able to delete the relevant features of *she* through ellipsis. However, (59) clearly shows that this is impossible, despite the parallel operation being acceptable in (57). 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:

²⁸ A similar point for Scrambling is made by Kitahara (2002), who claims that Scrambling involves Match but not Agree.

(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, p. 360)

Thus we can conclude that the EPP is an independent overttness requirement not related to feature checking.

To summarize thus far: The EPP in Russian is checked by a raised XP in the SpecIP position, with all the expected properties. If the raised XP is the Nominative subject, we derive a standard SV(O) transitive or unergative construction. If the construction involves 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 Verb Raising in Inversion*

Various non-Nominative XPs can satisfy the EPP in Russian, and the verb must raise in these constructions,²⁹ or the A-properties we have seen with the inverted XPs do not hold. This is shown in (60):

- (60) * [Ego_i druzej] Ivan_i ljubit t
 his friends-ACC Ivan-NOM loves
 His friends, Ivan loves.

²⁹ An anonymous reviewer raises the interesting question of whether adjectives also raise to I when they are the primary predicate, presumably in cases like (i):

- (i)a. Ivan dovolen rabotoj. (uninverted)
 Ivan satisfied work-Instr
 Ivan is satisfied with his work.
- b. Rabotoj dovolen Ivan (inverted)
 work-Instr satisfied Ivan-Nom

If A-raising fully parallels V-raising, on the analysis where short form adjectives in Russian are treated as primary predicates (Bailyn 2001b) we expect (ib) to be a typical IP-inversion construction: the NP *rabotoj* ('work') raises to SpecIP out of the AP (primary predicate) just as a direct object NP raises out of the VP in OVS. Then, if the constructions are indeed fully parallel, the A head raises to I just as the V head does in IP-Inversion. The inverted NP is predicted to have subject properties. This is a matter of empirical investigation that I leave to further research, pending a better understanding of how such adjectival constructions are structured in Russian to begin with.

In (60), 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 (41–45) where Inversion, when it is accompanied by verb movement, acquires A-properties. However, if movement into SpecIP were possible in this case also, (60) would be grammatical (the A-movement of Inversion would bleed the Principle B violation). But the sentence is ungrammatical. Therefore V-movement in Inversion must be obligatory. Without the accompanying verb movement, the construction is possible only as a case of Topicalization (A'-Scrambling) which reconstructs, which is why the construction is impossible with coreference, as opposed to the cases shown in (41–45). 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 Overt Tense Condition, based on the [Finiteness] account of V2 in Holmberg and Platzack (1995) (the parameter involves whether or not the checking requires overt movement, which it does in the Germanic languages, except English).

(61)a. *The Overt Tense Condition*

An uninterpretable [+T] feature must be checked by overt movement

b. *The Tense Domain Parameter*

The [+T] is generated in either in the IP or CP domain

Analyses of Tense or finiteness being the driving force behind the V2 effect on the CP level, involving something like (61a), have a significant history in generative grammar, dating back in spirit to den Besten (1983) and worked out in detail in Holmberg and Platzack (1995). Holmberg and Platzack also analyze a subset of the Germanic languages, such as Icelandic, as IP-level V2 languages, following Diesing's (1990) account of Yiddish. The literature therefore has already determined the need for something such as (61b).³⁰ For Russian, [+T] is in IP and must be checked overtly. This is what forces the $V^0 \rightarrow I^0$ movement in IP-Inversion cases.

In the case of the Germanic IP-level V2 languages, such as Yiddish, (61) is always satisfied by the raised finite verb. So far, it appears that Russian is similar, once we have isolated the effects of Inversion and verb-raising, as opposed to A-Scrambling. However, there is a crucial difference

³⁰ Roberts (1993) also proposes that the placement of this feature is crucial in the history of English as it changed from a German style (CP-level) V2 language to an IP-level V2 language to its current status.

involving standard SVO transitives in Russian. In these constructions, although it can be safely assumed that the subject raises to SpecIP to fulfill the EPP, it has been established that there is no accompanying verb movement, as we will see in the next section. Thus $V^0 \rightarrow I^0$ is in complementary distribution with a Nominative-cased DP checking the EPP. However, I will show that there is nothing unusual or unexpected about this distribution, as it is in fact identical to the distribution of $I^0 \rightarrow C^0$ raising in English WH-questions, and can be accounted for in similar fashion. First, however, we must determine the empirical validity of the claim that there is no verb raising out of vP in SVO transitives.

3.2.2. *Lack of Verb Movement in SVO transitives*

King (1995) 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 (62a) are claimed to be parallel to their Welsh equivalent in (62b):

- (62)a. (RUSSIAN)
 Posadil ded repku **V-S-O**
planted gramps-NOM turnip-ACC
 Gramps plantd 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 I^0 where it case marks the subject in SpecVP" (King 1995). 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 (62a) (Bailyn 1995a, b; Babyonyshev 1996; Brown 1999). Evidence is drawn from ditransitive verbs, which do not behave in a fashion parallel to their Welsh equivalents. This is shown in (63–64):

- (63) (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.

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

(63), 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 conclude that there is a difference in verb raising between English and French indicate that Russian patterns with English and not French.³¹ This is shown in (65–66):

- (65) (FRENCH)
 a. Je sais 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 sais 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)
- (66) (RUSSIAN)³²
 a. Ja dumaju, čto Ivan často celuet Mašu. [čto [S-adv-V-O]]
I think that Ivan-NOM often kisses Mary-ACC
 I know that Ivan often kisses Mary.
 b. *Ja dumaju, čto Ivan celuet často Mašu. *[čto[SVadvO]]
I think that Ivan-NOM kisses often Mary-ACC
 I know that Ivan often kisses Mary.

Thus we see in (66) that the familiar French surface word order possibilities in (65) do not obtain in Russian. The adverbs are located exactly where we should expect them to be in a non-raising account of Russian.

³¹ Note that this test can be used here more successfully than in the Inversion constructions because of the canonical word order involved (see footnote 8).

³² The 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.

We are able to eliminate the optionality of 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 $V^0 \rightarrow I^0$ movement. (I return to the issue of surface VSO sentences below).

3.2.3. *The Overt Tense Condition*

The facts presented above show that the strong claim of overt verb-raising in all Russian sentences cannot be maintained.³³ In SVO sentences, typically, then, there is no verb-raising, whereas in IP-Inversion constructions there is, as we have seen. Thus we derive a correlation between IP Inversion and $V^0 \rightarrow I^0$ raising. $V^0 \rightarrow I^0$ 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 Overt Tense Condition (61) is satisfied in Russian in one of two ways, as shown in (67):

- (67) Ways of satisfying the Overt Tense Condition (61) in Russian:
- a. by a Nominative subject moving to SpecIP
 - b. by a raised tensed verb (head movement)

This distribution raises two questions:

- (68) Questions about the Overt Tense Condition in Russian:
- a. Why can a Nominative XP satisfy the Tense requirement (in addition to the EPP) but other XPs cannot?
 - b. If a Nominative XP can satisfy both the EPP and the Overt Tense Condition, why does it not do so always (since satisfying them separately appears to be 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:

³³ Schoorlemmer (1995) argues for verb-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 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. Not to mention the fact that Russian is not a grammatical pro-drop language (Franks 1995). Furthermore, adverb placement facts do not support the verb raising analysis, as we have seen. 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.

when the WH-phrase is the Nominative subject, $I^0 \rightarrow C^0$ movement does not occur. However whenever the WH-phrase originates from anywhere lower in the clause, $I^0 \rightarrow C^0$ movement obligatorily accompanies WH-movement. The relevant facts are given in (69):

(69)a. [Who [\emptyset [t left]].

b. What did you see?

(70)a. *[Who [did [t t leave]]]?

b. *[What [\emptyset [you saw]]]?

In subject WH questions (69a, 70a) $I^0 \rightarrow C^0$ movement does not occur (and cannot in nonemphatic contexts). In contrast, in non-subject WH-questions, $I^0 \rightarrow C^0$ is required, as in (69b); its absence results in ungrammaticality, as in (70b). This distribution is summarized in (71):

(71) Ways of satisfying the T condition for WH-movement in the English CP domain

a. with a Nominative subject moving to SpecCP

b. by a raised tensed element (head movement)

Pesetsky and Torrego (2001) 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:

(72) *The Tensed Nominative Parameter*

Nominative Case checks a Tense feature (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.³⁴ If the EPP is checked by NP-nom, $V^0 \rightarrow I^0$ is unnecessary (and hence impossible).

³⁴ It is also possible that this is universal. If so, it explains English subject WH-questions but raises issues about V2 languages that predict a location for the verb in Nominative initial clauses different from that 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, possibly being related to pro-drop.

Notice, further, that with (72), 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 agreement 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. I return to the second question, namely that of economy of derivation, in section 3.3. First, we turn to the issue of Russian VSO sentences such as (62a).

3.2.4. VSO Sentences

It remains to account for the VSO sentences such as (62a). The first thing to notice about the VSO sentence (62a) is that it is unacceptable in an embedded context. This is shown in (73).

- (73)a. Ja znaju, čto ded posadil repku. [čto[SVO]]
I know that gramps-NOM planted turnip-ACC
 I know that gramps planted a turnip.
- b. *Ja znaju, čto posadil ded repku. *[čto[VSO]]
I know that planted gramps-NOM turnip-ACC
 I know that gramps planted a turnip

Other characteristics of Russian VSO sentences which any account of them should derive are given in (74):

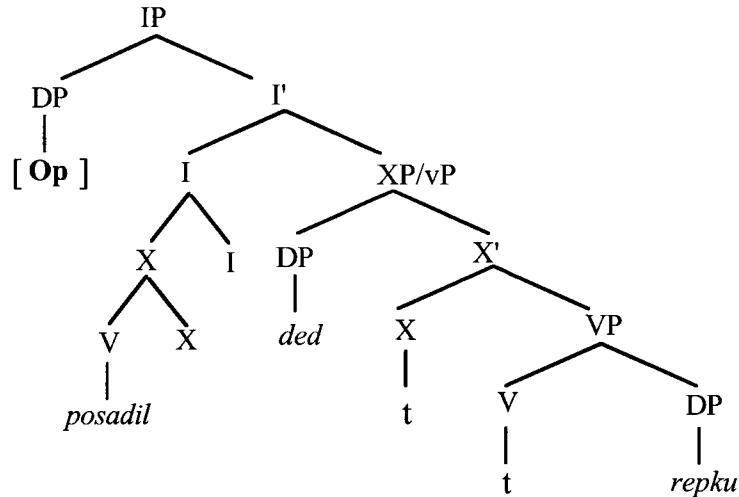
- (74) VSO sentence characteristics:
- a. verb-initial
 - b. begins a story of discourse
 - c. old-fashioned

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, joke 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 verb-initial constructions in exactly such circumstances.

This implicates some kind of null-element in SpecIP which also forces verb-raising to have its feature checked (and also restricting the range of VPs that can participate in this construction). Thus the structure of (62a) is given in (75):

(75) Structure of (63a): *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 (76):

(76) *The Null-EPP OP Parameter*

Allow EPP to be satisfied by \emptyset -OP with certain features
 (Russian [story initial], English [-])

3.3. Economy

We have already seen that the verb raising in IP-Inversion renders the internal and external arguments in all the given constructions equidistant from the SpecIP landing site (as in Object Shift constructions) and therefore a shortest move violation is not incurred with IP-Inversion. However, in (68b) another question about the status of IP-Inversion with respect to Economy was raised, as repeated here:

- (68) Questions about the Overt Tense Condition in Russian:
- b. If a Nominative XP can satisfy both the EPP and the Overt Tense Condition, why does it not do so always (since satisfying them separately appears to be more costly)?

Let us assume a derivational system, such as that of Chomsky (1995) or Kitahara (1997), subject to the Shortest Derivation Condition, given in (77):

- (77) *The Shortest Derivation Condition* (Kitahara 1997: 26)
Minimize the number of elementary operations necessary for convergence.

We are concerned about the competition between the following two constructions:³⁵

- (78)a. Ivan čitaet knigu (SVO)
Ivan-Nom reads book-Acc
 Ivan is reading a book.
- b. Knigu čitaet Ivan (OVS)
book-Acc reads Ivan-Nom
 Ivan is reading a book.

In terms of *overt* movement, (78a) involves raising of the Nominative subject into SpecIP, for EPP satisfaction. (Recall that this movement is solely for EPP satisfaction purposes, and that Nominative case is valued *in situ* in Russian.) In (78a), overt verb movement is presumably unavailable because covert movement is preferred over overt movement for economy reasons, *all else being equal* (Chomsky 1995, ch. 2). (78b), on the other hand, involves inversion of the object into SpecIP *and* verb raising, hence two overt steps. We have already seen that IP-Inversion without verb raising leads to ungrammaticality independently; such a derivation violates Shortest Move, since without the domain extension provided by verb movement, the subject is closer to SpecIP than any internal arguments (Chomsky 1995, ch. 3). It also violates the Overt Tense Condition,

³⁵ I exclude the possibility here that the two derivations do not share the same numeration, with the difference being related to Information Structure or Assertion Structure in the sense of Zubizarreta (1998). Should such information prove to be part of core grammar, and relevant to IP-Inversion constructions, it is possible that the economy question under discussion will turn out not to be relevant. However, for present purposes, I do not assume any difference in the numerations underlying the two constructions at hand.

since neither the Nominative subject nor the tensed verb raises to the IP domain. Both sentences contain one movement to satisfy the EPP. On the assumption that verb raising occurs in the LF component in those cases where it does not occur overtly, both derivations involve two operations, and they differ only in the number of *overt* operations, which is relevant to economy only in cases where *all else is equal*, a crucial distinction here, since all else is *not* equal: the Inversion derivation without V-movement is ungrammatical for the reasons given above; in non-Inversion (SVO) constructions, overt verb-movement is prohibited. However the number of overall operations is identical. No economy violation arises then, under this view of the Russian EPP and T system. Thus, constituent frontings of the various kinds united here do not constitute an economy violation.^{36,37}

4. TYPOLOGICAL EXTENSIONS

4.1. *Is the EPP Universal?*

At first glance, 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 and Anagnostopoulou (1998) share the conclusion that the EPP is an independent IP level phenomenon (AgrS in their system). They propose that the EPP

³⁶ I do not take a stand here on what determines the choice of XP moving to SpecIP in constructions where there is more than one option. Presumably, which argument serves that role is a matter of free choice (or related to Information Structure, see footnote 35), 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. So long as neither construction causes ungrammaticality, both should be freely available. Which one obtains is a matter of language use, which falls outside the domain of this analysis. We now can see this set of Russian fronting operations as similar 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 some economy issues involved.

³⁷ The analysis has other implications, in particular for A'-Scrambling. The approach to Economy assumed predicts that A'-scrambling should always be blocked by a cheaper derivation involving no such movement, everything else being equal, since there is no EPP process involved in A'-scrambling. It should therefore only be possible if the numerations underlying a canonical order and an order derived by A'-scrambling are different. This supports the claim that A'-scrambling is driven by Focus (Miyagawa 1997; Zubizarreta 1998; Bailyn 2001a), and perhaps supports the idea that it is feature-driven (Kitahara 1997; Kawamura 2001). Derivations including lexical items with distinct feature make-ups do not compete in terms of Economy.

can be checked in one of two ways, either by raising into the Specifier of the relevant category, or by head raising.³⁸ The latter accounts for 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 (the Russian/English situation), or, in certain languages, by the raised verb, it should be possible to maintain its universality. The parameter proposed by Alexiadou and Anagnostopoulou is paraphrased in (79):

- (79) *The EPP Parameter* (based on Alexiadou and Anagnostopoulou 1998)
The EPP is satisfied by either an XP in SpecIP or a raised head (but is universal)

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

4.2. Summary of Parameters

In the preceding sections, I have discussed several parameters and conditions, summarized below:

- (61)a. *The Overt Tense Condition*
An uninterpretable [+T] feature must be checked by overt movement
- b. *The Tense Domain Parameter*
The [+T] is generated in either in the IP or CP domain
- (72) *The Tensed Nominative Parameter*
Nominative Case checks a Tense feature (English, Russian)
- (76) *The Null-EPP OP Parameter*
Allow EPP to be satisfied by \emptyset -OP with certain features (Russian [story initial], English [–])
- (79) *The EPP Parameter*
The EPP is satisfied by either an XP in SpecIP or a raised head

³⁸ Alexiadou and Anagnostopoulou (1998) do not discuss the issue of non-canonical or inverted EPP constructions but they are fully compatible with their analysis.

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

4.3. *The CP Domain*

We can immediately extend the EPP overttness requirement to the CP domain. An additional parameter is required, going back to ideas of den Besten (1983) and many others, namely that some languages have root IP clauses and some have root CP clauses.³⁹ Given that, the V2 requirement itself falls out from the presence of an [+F] or [+T] feature in the highest functional category. But this is not enough, of course. Something requires that a Topicalized element be located in SpecCP before the tensed verb in German-style languages. This requirement is stated as in (80) by Roberts (1993) (compare (55) above).

(80) A head containing Agr must have a filled specifier.

(80) is simply (our version of) the EPP acting on the CP level and forcing overt occupancy of its specifier position. The Overt Tense Condition then forces the requirement that there be verb-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.

4.4. *Kinds of Languages*

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

(81) Language Types:

Nom = [+T]	Tense domain	Kind of EPP	Weak NOM case	Language
+	IP	XP	–	English
–	IP	XP	–	French
–	IP	XP	+	Icelandic, Yiddish
+	IP	XP	+	Russian
	IP	X ⁰	–	Greek, Spanish/Italian
	IP	X ⁰	+	Celtic, Arabic
	CP	XP		German, Swedish
	CP	X ⁰		??

³⁹ Of 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.

Various comments on (81) are in order. First, it does not appear that the Weak Nom Case parameter is relevant for CP-domain languages. Second, 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 verb to satisfy the EPP, and therefore the Overt Tense Condition is (always) also satisfied by the raised verb. Third, 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 (81) that if the Overt Tense Condition is really universal (that T must be checked in its domain overtly), then the only languages that do not everywhere have either $V^0 \rightarrow I^0$ or $I^0 \rightarrow C^0$ 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, verb raising is forced to fulfill the Overt Tense Condition. Thus $V^0 \rightarrow I^0$ 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. However, some languages, like English, are defective (Pollock 1989; Chomsky 1995), and do not allow overt $V^0 \rightarrow I^0$ for non-auxiliary verbs.

Clearly, the schema provided in (81) is inexact, but it shows 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 (82):

(82) Russian word order patterns reconsidered:

<i>Order</i>	<i>Construction type</i>
SVO	underlying
VSO	SIC
VOS	Extrapolation or VP fronting (not discussed here)
OVS	IP-Inversion
OSV	Topicalization ⁴⁰
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 requirement of I, in turn, motivates the movement of various non-Nominative constituents to a special sentence initial position with various A-properties. (If parallel movement exists within VP, we can maintain an EPP-style analysis for those cases as well.) Thus verb-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, 2000).

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⁴⁰ I 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 verb movement in such cases. See Bailyn (2001a, 2003) for discussion.

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