

Peter Kosta

## On Free Word Order Phenomena in Czech as Compared to German: Is Clause Internal Scrambling A-Movement, A-Bar-Movement or Is It Base Generated?\*

### Summary

This article deals with the issue of *Scrambling* as a syntactic phenomenon which involves the base generation of scrambled elements in their surface positions and their LF movement to positions where they receive theta-roles. In the *first section* the basic dichotomy in the current approaches towards *Scrambling* will be analyzed, namely (i) the movement and (ii) the base generation approach. According to (i), there is one underlying word order and the variety of alternate word order arrangements in a clause is the result of A- vs. A-bar movement. According to (ii), there is not one basic order for constituents and the variable word order is the result of free generation of constituents in an arbitrary order. In the *second part* we adopt the idea of Bayer / Kornfilt (1994) that Scrambling of unfocused NPs is not due to movement (or Attract alpha) at all but rather is base generated and a subject NP can also be licensed inside of a VP.

### 1. Introduction

The present article is dedicated to a phenomenon which ever since Ross (1967) has been referred to as *Scrambling*. Ross proposed that free word order in languages such as Warlpiri, Latin, German, Japanese, Korean or Russian is brought about by a *Scrambling rule* that was ordered late in the block of transformations and followed the ordinary phrase structure rules, case marking, agreement, reflexivization and pronominalization transformations that free and fixed word order languages were assumed to have in common.

Czech is a language that exhibits a rich morphological system of case marking. Each grammatical relation in a sentence is usually encoded by a particular case: subjects are most often in the Nominative, direct objects in the Accusative, and indirect objects in the Dative. As a result, arguments can usually be freely reordered if they are clause mates:

- (1) a. ...*protože nikdo zřejmě knihu nekoupil*  
 because nobody(nom) probably book(ace) not bought  
 b. ...*protože knihu nikdo zřejmě t nekoupil*  
 because book(ace) nobody(nom) probably not bought

In languages with free word order the freedom of word order is assumed to reflect the information structure of a sentence on a communicative level (cf. Mehlhorn 2002; Kosta and Schürcks 2006/in prep.). In traditional descriptive or functional grammars the most often discussed factor in determining Russian word order is the so-called Theme/Rheme-distinction (or Given/New information; cf. e.g. Adamec 1966; Kovtunova 1976; Krylova and Chavronina 1984). The Theme/Rheme-distinction plays a major role in explaining the

\* Dieser Artikel ist dem Andenken von Prof. PhDr. Přemysl Adamec, DrSc., gewidmet, der mich durch seine theoretische Arbeit auf dem Gebiet der formalen und funktionalen Syntax der russischen Sprache stark geprägt hat. Seine persönliche Ausstrahlung, menschliche Wärme und Freundschaft werden mir fehlen.

syntactic properties of Russian word order in recent approaches within the generative Principles-and-Parameters theory and its extension, Minimalism (cf. King 1995; Bailyn 1995; Kondrashova 1994; Junghanns and Zybatow 1997; Sekerina 1995; Kosta 1997; Kosta 2002; Kosta and Schürcks 2006/in prep.; Mehlhorn 2002).

This article deals with the issue of *Scrambling* as syntactic phenomenon which involves the base generation of scrambled elements in their surface positions and their LF movement to positions where they receive theta-roles.

In the *first section* the basic dichotomy in the current approaches towards *Scrambling* will be analyzed, namely (i) the movement and (ii) the base generation approach. According to (i), there is one underlying word order and the variety of alternate word order arrangements in a clause is the result of A- vs. A-bar movement. According to (ii), there is not one basic order for constituents and the variable word order is the result of free generation of constituents in an arbitrary order.

### 1.1. *Scrambling as A-bar-movement*

Some standard approaches on *Scrambling* assume that *Scrambling* is an instance of optional overt A'-movement. Thus, there is one underlying word order and the variety of alternate structures is thought to be the result of Move-Alpha by adjunction an XP (NP, PP, AP or ADV) to IP or VP. In the above sentences (1a) would be considered to be the base-generated word order while (1b) is assumed to be derived by some type of Move-Alpha. The base-generation analysis generates both constituents orders in the former approaches at the level of D-structure, in other words the major constituents do not have a fixed syntactic position at D-structure (cf. Corver/van Riemsdijk 1994).

#### 1.1.1. *Scrambling and Islands*

Under a movement analysis, it is generally assumed that the direct object NP is adjacent to the verb at D-structure, from which it receives a theta role under sisterhood. The basic word order and the derived word order are derived by some sentence internal movement operation leading to a syntactic chain. The relevant question that arises is whether the scrambled constituent heads an A-chain or an A'-chain. Under a movement approach, one would expect scrambling to display properties generally associated with movement-derived structures. There must be an antecedent-trace relation; this relation is apparently unbounded; *Scrambling* obeys island constraints. Webelhuth (1989) has shown that *Scrambling* in German are sensitive to Ross's (1967) island constraints on movement transformations. The following ill-formed German sentences illustrate the sensitivity of *Scrambling* to island effects such as the Left Branch Condition (2a), the Coordinate Structure Constraint (2b), the PP-island condition (examples taken from Webelhuth 1989; cf. also Corver/van Riemsdijk 1994:3passim):

- (2a) \*...weil **meines Bruders** gestern [- - Auto] gestohlen wurde  
 ...because my brother's yesterday car stolen was
- (2b) \*...weil **Hans jemand** [- - und Maria] angemeldet hat  
 ...because Hans somebody and Mary registered
- (2c) \*...weil **ihre Freiheit** die Leute lange [für - - ]gekämpft haben  
 because their freedom the people long for fought have

If we compare Czech with German the same sensitivity to island effects arises:

- (3a) \*...protože **mého bratra** včera bylo ukradeno [auto - -]
- (3b) \*...protože **Petra** někdo [- - a Marii] přihlásil
- (3c) \*...protože **svou svobodu** lidé dlouho [pro - -] bojovali

### 1.1.2. Wh-movement, Topicalization vs. Scrambling

Ross's (1967) initially formulated descriptive generalization that Scrambling is clause bound exhibits for example German. Thus, in contrast to Wh-movement or topicalization, a finite CP may never be crossed by a scrambled constituent in languages like German:

- (4a) **Wen<sub>i</sub>** glaubt Hans, dass Maria liebt *t<sub>i</sub>*. (Wh-movement)  
Who believes Hans that Mary love
- (4b) **DEN HANS<sub>i</sub>**, glaubt Maria zu lieben *t<sub>i</sub>*. (Topicalization)  
It is Hans, that believes Mary to love
- (4c) \*...weil Hans **den Wagen** versprochen hat, dass er [- - reparieren würde]  
(Scrambling)  
...because Hans the car promised has that he repair would

The same distribution of clause-internal Scrambling vs. clause unbound movement exhibits Czech:

- (5a) *Koho*, Petr myslí, že Marie miluje *t<sub>i</sub>*. (K-movement)
- (5b) *PETRA<sub>i</sub>*, Marie myslí, že miluje *t<sub>i</sub>*. (Topicalization)
- (5c) \*...protože Petr **vůz<sub>i</sub>** slíbil, že by [opravil - -] (Scrambling)

### 1.1.3. Long Distance Scrambling (LDS)

In German, however, there is a construction in which the object-NP can be scrambled of infinitival *zu*-complements into the matrix-IP:

- (6) ...weil Heinrich den **Wagen**, versprochen hat [PRO *e<sub>i</sub>* zu reparieren]  
...because Heinrich the car promised has to wash  
(LDS)

A similar effect can be seen in (7) with an embedded infinitival complement and a matrix control verb in Czech:

- (7) ...protože Petr **vůz<sub>i</sub>**, slíbil [PRO *e<sub>i</sub>* opravit](LDS)

If one compares the German data in (4) vs. (6) or the Czech data in (5) vs. (7) one is likely to say that in special sentences (with a limited lexical class of control verbs) German and Czech exhibit something like Long Distance Scrambling (LDS) where an object-NP can be scrambled of infinitival complement clauses.

To show that an analysis of LDS as A-bar-movement cannot be the appropriate one let us consider the following data from Bayer/Kornfilt (1994:26) (8 a through c) and its Czech equivalents (9a through c).

First, consider the German case in which we move an adverb of quantification from its D-structure position in the complement into the matrix clause (8a through 8c)<sup>1</sup>:

- (8a) ...weil Heinrich versprochen hat [PRO dreimal den Rosenkranz zu beten]  
because Heinrich promised has three-times the rosary to pray
- (8b) [Dreimal]<sub>i</sub> hat Heinrich (e<sub>i</sub>) versprochen [PRO e<sub>i</sub> den Rosenkranz zu beten]  
(**ambiguous**) A'-movement
- (8c) ...weil Heinrich [dreimal]<sub>i</sub> versprochen hat [PRO (\*e<sub>i</sub>) den Rosenkranz zu beten]  
(**unambiguous**) LDS

Let (8a) be the underived D-structure where the adverb of quantification takes scope only over the act of praying, thus having narrow scope. Bayer/Kornfilt (1994:26) takes (8b) to be a clear case of A'-movement. The adverb of quantification *dreimal* can bind a trace inside the complement, and we thus get the reading of "three prayers", which (8b) shares with (8a). The second alternative structure is that *dreimal* is binding a trace inside the matrix IP; following this structure we would get a reading according to which there are "three promises". This creates the ambiguity. Assuming now that Scrambling is adjunction to VP, the same ambiguity should be available in (8c). However, the example (8c) is clearly unambiguous, providing us only with the interpretation of three promises. Following Bayer's and Kornfilt's (1994:26) explanation we can conclude that LDS is very unlikely to be a case of A'-movement. Our argument is the following: Adverbs of quantification can move to an A'-position, with all the consequences of A'-movement as in (8b). If LDS were A'-movement, these adverbs should behave syntactically as in A'-movement. However, they do not as illustrated in (8c). In the next example I would like to show that the same holds true for the analogous Czech sentences (9a through c):

- (9a) ...protože Petr slíbil [PRO třikrát se modlit růženec]  
(9b) ...[Třikrát]<sub>i</sub> Petr (e<sub>i</sub>) slíbil [PRO e<sub>i</sub> modlit se růženec] A'-movement  
(9c) ...protože Petr třikrát slíbil [PRO (\*e<sub>i</sub>) modlit se růženec] LDS

#### 1.1.4 Bound pronouns

Mahajan (1990) has shown that Scrambling in Hindi (unlike Quantifier Raising (QR) or instances of Wh-movement that applies only at LF) does not exhibit the weak crossover effects (WCO) that are typical for A'-movement, and that Scrambling does not allow for reconstruction. Note that reconstruction is usually possible in instances of A'-movement, thus avoiding apparent violations of the binding theory. Consider the following examples from German and Czech which involve a co indexation between a definite NP and a possessive pronoun:

##### Adjunction to VP (name-like binder)

- (10a) Wir wollten [dem Professor]<sub>i</sub> seine<sub>i</sub> Sekretärin vorstellen  
(10b) Wir wollten \*seine<sub>i</sub> Sekretärin [dem Professor]<sub>i</sub> vorstellen  
(10c) [Seine<sub>i</sub> Sekretärin]<sub>j</sub> haben wir [dem Professor]<sub>i</sub> e<sub>j</sub> noch nicht vorgestellt

<sup>1</sup> All German examples taken from Bayer/Kornfilt (1994:17-60).

In (10a) the Dative NP (being in its base-generated position) can bind the possessive pronoun *seine*. (10b), however, which is a normal case of (sentence internal) object scrambling, does not allow this binding. (10c) is a clear case of A'-movement yielding a well-formed sentence. In this sentence the NP<sub>j</sub> *seine Sekretärin* has moved to SpecCP, which is always an operator position in German. In contrast to (10b), in (10c) the moved NP<sub>j</sub> *seine* can be bound because it can reconstruct into the trace position at LF. The binding NP<sub>i</sub> can c-command NP<sub>j</sub> (cf. Bayer/Cornfilt 1994:19). If the case of Scrambling in (10b) were an instance of A'-movement, we would wrongly predict that reconstruction is possible here, too<sup>2</sup>. The same contrast between Scrambling and A'-movement is shown under (11b) vs. (11c) in Czech:

- (11a) *Chtěli jsme [profesorovi]<sub>i</sub> představit jeho<sub>j</sub> sekretárku*  
 (11b) *Chtěli jsme \*jeho<sub>i</sub> sekretárku [profesorovi]<sub>j</sub> představit*  
 (11c) *[Jeho<sub>i</sub> sekretárku]<sub>j</sub> jsme profesorovi<sub>i</sub> zatím ještě nepředstavili e<sub>i</sub>*

### 1.1.5. Anaphors

Consider next the binding properties of anaphors (in Czech e.g. *svůj, svá, své* and its inflected forms):

- (12a) *...protože Petr<sub>i</sub> vrátil svému<sub>i</sub>\*<sub>j</sub> pánovi psa<sub>j</sub>*  
 Peter gave back to his landlord the dog  
 (12b) *...protože Petr<sub>i</sub> vrátil psa<sub>j</sub> svému<sub>i</sub><sub>j</sub> pánovi*  
 Peter gave back the dog to his landlord

The example (12ab) shows that DO-argument shift alters binding possibilities and the landing sites for argument shift are relevant to binding theory. As already demonstrated, reflexive binding in (12b) can only be possible if the DO moves into a position that allows the anaphor (IO) to be bound by its antecedent (DO), e. g. under C-command. This seems to be an A-position rather than an A'-position. This asymmetry between IO and DO can be accounted for by assuming that the DO C-commands the IO, thus creating the interpretation that the dog belonged to the landlord. Thus, DO fronting can make reflexive binding possible. Reflexive binding in (12b) can only be possible if the DO is in an A-related position.<sup>3</sup> The same pattern seems to hold in German:

- (13a) *...weil Peter<sub>i</sub> seinem<sub>i</sub>\*<sub>j</sub> Herrn den Hund<sub>j</sub> zurück gab*  
 (13b) *...weil Peter<sub>i</sub> den Hund<sub>j</sub> seinem<sub>i</sub><sub>j</sub> Herrn zurück gab*

<sup>2</sup> Bayer/Cornfilt (1994:50, Fn. 4) stress that there is a crucial distinction here between "movement to the preverbal position in V2-structures" (as in 1c, our 10c) and standard Scrambling construction. The former type is not a type of a genuine Scrambling construction, rather it shows movement to an A'-position in SpecCP and hence is an instance of Move-Alpha.

<sup>3</sup> Anoop Mahajan (1994:301) assumes that this position rather than being a pure A-position is a L-related position. These are "...specifier and complement positions of a lexical item and functional heads lexically related to it. Within the clausal system it includes SPEC and Complement positions of V, AGR and T." Non-L-related positions are "all other positions that are not-L-related. These will include SPEC' CP and all adjunction positions."

The same seems to hold true for Hindi and other languages which obey Scrambling of DO as option.<sup>4</sup>

#### 1.1.6. Scrambling as adjunction

As a contrast to the above mentioned examples of DO-shift notice that PP-adjuncts can freely adjoin to VP or IP as demonstrated under (14a, 15a through 14c, 15c). The adjunction of the moved PP to these A'-positions is able to reconstruct into a trace-position as indicated in the following representations:

- (14a) ... *dass [in seiner<sub>i</sub> Wohnung]<sub>i</sub> Maria den Professor<sub>i</sub> e<sub>i</sub> schon oft besucht hat*  
 that in his apartment Maria the professor already often visited has  
 "that Maria has often visited the professor in his apartment"
- (14b) ... *dass Maria [in seiner<sub>i</sub> Wohnung]<sub>i</sub> den Professor<sub>i</sub> e<sub>i</sub> schon oft besucht hat*
- (14c) ... *dass [in seiner<sub>i</sub> Wohnung]<sub>i</sub> der Professor<sub>i</sub> schon oft e<sub>i</sub> von Maria besucht wurde*
- (15a) ... *že [v jeho<sub>i</sub> bytě]<sub>i</sub> Petr profesora<sub>i</sub> e<sub>i</sub> už několikrát navštívil*
- (15b) ... *že Petr [v jeho<sub>i</sub> bytě]<sub>i</sub> profesora<sub>i</sub> e<sub>i</sub> už několikrát navštívil*
- (15c) ... *že byl \*[v jeho<sub>i</sub> bytě]<sub>i</sub> [ve svém<sub>i</sub> bytě]<sub>i</sub> profesor<sub>i</sub> už několikrát navštíven Petrem*

As indicated by the traces, there is always a way of reconstructing the PP into a position where the pronoun *seiner/jeho* is C-commanded by the NP Professor. One difference that descends from idiosyncratic properties of Czech pronouns is the fact that an antecedent in nominative has to bind its anaphor *svůj, svá, své* in its inflected forms from the subject position. The reading *v jeho* would in this case only refer to Peter or to an antecedent outside the sentence.<sup>5</sup>

#### 1.1.7. Prosody

An obvious surface (PF) reflex of the difference between Scrambling as substitution and Scrambling as adjunction to IP has been observed by Bayer/Kornfilt (1994:23 forthcoming). They stated that an adjunction to IP creates a prosodic break that is clearly absent in the shift of an object-NP. They present some clear examples which show the difference between German Scrambling and English adjunction to IP:

- (16a) *dass den Heinrich niemand ausstehen kann*  
 that the Heinrich nobody stand can  
 "that nobody can stand Heinrich"
- (16b) ??*dass den Heinrich # niemand ausstehen kann*
- (16c) ??*that Henry nobody can stand*
- (16d) *that Henry # nobody can stand*

<sup>4</sup> Cf. also Viviane Deprez (1994:101 forthcoming) who states that the similarities between languages exhibiting object shift are the following: the creation of new-binding possibilities by the moved object; the absence and the repair of WCO violations; compatibility with floating quantifiers. For the differences cf. *ibidem*.

<sup>5</sup> For further examples cf. Bayer/Kornfilt (1994:22 forthcoming).

- (17a) *že Petra nikdo nemůže vystát*  
 (17b) ??*že Petra # nikdo nemůže vystát*

As (17a, b) show, Czech is a language that obeys the option of German rather than of English, e.g. (17a) is a well-formed sentence with shift of the DO into a position before the subject (there is no prosodic break) while (17b) with an artificially created prosodic break is rather weird or awkward. In English the pattern seems to be just the opposite. If there is no prosodic break, Scrambling is almost impossible, as the contrast in (16c, d) shows. According to this intuition, the cases of Scrambling as adjunction which allow for LF-reconstruction in (14, 15) are most naturally pronounced with a prosodic break after the scrambled PP.

Thus, it might be a correlation between Scrambling as adjunction and intonational phrasing and Scrambling as substitution or object shift without it. This observation made by Bayer/Kornfilt (1994:24) suggests that “only adjoined XPs allow for a prosodic break”.

#### 1.1.8. Parasitic gaps

A test to prove whether Scrambling behaves like A-bar-movement or A-movement has been first undertaken by Webelhuth (1989). He gives ample evidence for cases where a fronted DO phrase can at the same time bind the pronoun and a parasitic gap in an adjunct clause. Thus, it seems that Scrambling displays both A- and A'-properties.

- (18a) ?*Peter hat jeden Gast<sub>i</sub> [ohne e anzuschauen] seinem<sub>i</sub> Nachbarn t vorgestellt*  
 Peter has every guest without to-look-at his neighbor introduced  
 “Peter introduced every guest to his neighbor without looking at”  
 (18b) ?*Peter hat die Gäste<sub>i</sub> [ohne e anzuschauen] einander<sub>i</sub> t vorgestellt*  
 Peter has the guests without looking-at each other introduced-to  
 “Peter introduced the guests to each other without looking at them”  
 (18c) ?*Petr představil každého hosta<sub>i</sub> [nehledě na něho] jeho<sub>i</sub> sousedovi*  
 Peter has introduced every guest without looking at his neighbor  
 (18d) ?*Petr představil hosty<sub>i</sub> [nehledě na ně] sobě navzájem<sub>i</sub>*  
 Peter introduced all guests not looking at them each other  
 (18e) ??*Petr představil sobě navzájem<sub>i</sub> [nehledě na ně] hosty<sub>i</sub>*  
 Peter introduced each other guests

The scrambled structure in (18ab) manifest both an anti-weak crossover effect (an A-property) and parasitic gap licensing (an A'-property). This paradox raises the question whether the standard dichotomy A- vs. A-bar-movement is sufficient to adequately characterize the array of properties displayed by scrambled structures. According to Webelhuth (1989), the standard portioning of phrase structure positions in A- and A-bar positions is too rough. Therefore, he proposes an intermediate mixed position. Scrambling in German is then considered a unitary process in which there is a single derived landing position (a VO or IP adjoined position) for the scrambled phrase which simultaneously exhibits A- and A-bar properties.

### 1.2. Scrambling as A-movement

The following arguments have been provided to support the A-movement analysis. *First*, the fact that a finite clause boundary may not be crossed by a scrambled constituent as in German and Czech. We repeat the examples here:

- (4a) *Wen<sub>i</sub> glaubt Hans, dass Maria liebt t<sub>i</sub>*, (Wh-movement)  
Who believes Hans that Mary love
- (4b) *DEN HANS<sub>i</sub> glaubt Maria zu lieben t<sub>i</sub>*, (Topicalization)  
It is Hans, that believes Mary to love
- (4c) \*...weil Hans *den Wagen* versprochen hat, dass er [- - reparieren würde]  
(Scrambling)  
...because Hans the car promised has that he repair would

The same distribution of clause-internal Scrambling vs. clause unbound movement exhibits Czech:

- (5a) *Koho<sub>i</sub> Petr myslí, že Marie miluje t<sub>i</sub>*, (K-movement)
- (5b) *PETRA<sub>i</sub> Marie myslí, že miluje t<sub>i</sub>*, (Topicalization)
- (5c) \*...protože Petr *vůz* slíbil, že by [opravit - -] (Scrambling)

This reminds of the clause boundness of NP-movement in passive constructions or anaphoric binding in German and Czech that can be explained in terms of principle A of the Binding Theory (cf. Fanselow 1990 and Corver/van Riemsdijk 1994:7).

*Secondly*, Scrambling may give rise to new A-binding properties, as demonstrated in (12b)

- (12a) ...protože Petr<sub>i</sub> vrátil *svému<sub>i/sj</sub> pánovi psa<sub>j</sub>*  
Peter gave back to his landlord the dog
- (12b) ...protože Petr<sub>i</sub> vrátil *psa<sub>j</sub> svému<sub>i/sj</sub> pánovi*  
Peter gave back the dog to his landlord

The examples (12b) vs. (12a) show that DO-argument shift alters binding possibilities and the landing sites for argument shift are relevant to binding theory. As already demonstrated, reflexive binding in (12b) can only be possible if the DO moves into a position that allows the anaphor (IO) to be bound by its antecedent (DO), e. g. under C-command. This seems to be an A-position rather than an A'-position. This asymmetry between IO and DO can be accounted for by assuming that the DO C-commands the IO, thus creating the interpretation that the dog belonged to the landlord. Thus, DO-fronting can make reflexive binding possible. Reflexive binding in (12b) can only be possible if the DO is in a A-related position. The same pattern seems to hold in German:

- (13a) ...weil Peter<sub>i</sub> seinem<sub>i/sj</sub> Herrn den Hund<sub>j</sub> zurück gab
- (13b) ...weil Peter<sub>i</sub> den Hund<sub>j</sub> seinem<sub>i/sj</sub> Herrn zurück gab

*Thirdly*, Scrambling does not exhibit weak crossover effects, as demonstrated under (19ab):

- (19a) ...weil jeden<sub>i</sub> seine<sub>i</sub> Mutter t mag
- (19b) ...protože každého<sub>i</sub> jeho<sub>i</sub> matka t miluje

- (20a) *Wer<sub>i</sub> [t<sub>i</sub> liebt seine<sub>i</sub> Mutter]?*  
 (20b) *Kdo<sub>i</sub> [t<sub>i</sub> miluje svojí<sub>i</sub> matku]?*  
 (20c) *\*Wen<sub>i</sub> [liebt seine<sub>i</sub> Mutter t<sub>i</sub>]?*  
 (20d) *\*Koho<sub>i</sub> [miluje jeho<sub>i</sub> matka t<sub>i</sub>]?*

The generally accepted explanation of the contrast between the subject Wh-movement and object Wh-movement is that in the grammatical examples the trace of Wh-movement is locally A-bar-bound by the Wh-phrase which is in SpecComp and the pronoun or anaphor are locally A-bound by the trace, while in the ungrammatical examples (20cd) both the pronoun and the trace are locally A-bar-bound by the Wh-phrase in SpecComp. It is generally assumed that the WCO effect arises whenever a single operator locally A-bar-binds both a pronoun and a trace, a context of so called multiple variable binding (cf. Kosta 1995/1996:23). If (19ab) were an instance of A-bar-movement the same effect should be expected; thus, the sentences with direct object shift should be ungrammatical. But this is not the case.

*Fourthly*, Scrambling does not allow for reconstruction. This was demonstrated under (8, 9).

There are also several facts that militate against taking Scrambling as A-movement. One serious fact is that as opposed to NP-movement Scrambling lacks the functional motivation of NP-movement. NP-movement is classically triggered by the interplay of Theta-theory and Case-Theory. Scrambling on the opposite does not exhibit such a trigger to let it move (for an interpretation of Scrambling as A-movement see, e. g., Witkoś 2006).

## 2. *The proposal by Bayer/Kornfilt 1994*

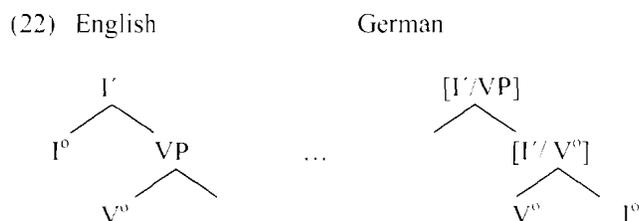
If Scrambling is neither an instance of A'-movement, nor of A-movement, what is it then? We would like to adopt the idea of Bayer/Kornfilt (1994:35passim) that Scrambling of unfocused NPs is not due to movement (or Attract alpha in the new terminology) at all but rather is base generated in the following way:

Bayer and Kornfilt (ibidem) argue that a subject NP, marked for nominative case, can also be licensed inside of a VP. This is because INFL in German can be viewed as a morphological category that attaches to V rather than being a terminal syntactic category which takes VP as its complement. In this sense (following Abney 1986) V is the semantic head of a complex category building a complex category formation as formulated under (21):

- (21) Complex Category Formation (CCF)  
 In a structure [...X<sup>0</sup> Y<sup>n</sup>...] where X<sup>0</sup> is a raising category that governs Y<sup>n</sup>. (0 ≤ n ≤ max). X<sup>0</sup> will project into the complex category [X' ] (Bayer / Kornfilt 1994:36)
- $$\begin{array}{c} [X' ] \\ \downarrow \\ Y^n \end{array}$$

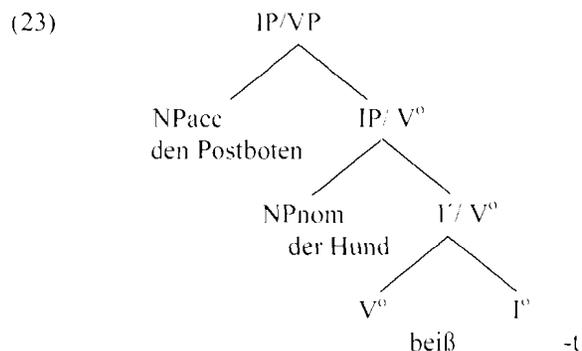
"In German, if X<sup>0</sup> is an inflectional affix I, the V-stem will attach to I in morphosyntax i.e., "before" it heads a VP. In English, however, due to the presence of a designated auxiliary system (...) – I is a terminal syntactic node." (Bayer/Kornfilt, ibidem). In Reuland

(1990) a similar analysis has been given, with the difference that he takes the inflected verb to be [ $X^0/I^0$ ]:



### 2.1. Ergative verbs vs. unergative verbs in German

The structure for German is motivated by the presence of ergative verbs which often show an unmarked constituent order dative-nominative-Verb. Furthermore, scrambled structures with an direct object in accusative before a nominative subject can be derived in the following way: since the verb is at the same time an  $I'$  category it can assign the nominative case under the standard condition of Spec-head-Agreement. This makes it possible to base-generate a scrambled clause such as *dass den Postboten-ACC der Hund-NOM beißt* ("that the dog bites the postman") as in (23):



Under this analysis it seems that some problems of Case assignment need to be clarified: First Bayer/Kornfilt assume that "Case assignment does not take place only under strict string-adjacency. Otherwise  $V$  would be able to assign accusative Case only to its sister node  $NP$ ." In their analysis, however, the governing force and hence Case-assigning ability of  $V$  is kept intact in the projections of  $V$ .

Second, the nominative  $NP$  in (23) is governed by  $V$ . This does not mean, however, that it is also licensed by  $V$ . If it were the case that  $V$  licenses the subject, the marked Scrambling order in (22) would be indistinguishable from the unmarked dative-nominative order of German ergative verbs or psych-verbs. According to standard assumptions, an unergative  $V$  cannot take a definite subject  $NP$  as an argument. The subject  $NP$  is (in the active clause) licensed by  $I$  for Case and by  $VP$  for its theta-role. Adjoining the nominative  $NP$  to  $V$ -zero, the adjoined position must be licensed as the specifier of  $I$ . Thus, the only difference between scrambled  $IP$  like (23) and an unscrambled canonical  $IP$  is that in the Scrambling constructions, the  $VP$  remains unsaturated until the Spec $IP$  position is li-

censed. That the nominative NP in Scrambling constructions is not licensed by V is shown by the fact that the Nominative/participle sequence cannot be moved together to first position in German V2-clauses:

- (24) \* [Der Hund-NOM gebissen] hat den Postboten-ACC erst einmal  
 the dog bitten has the mailman only once

Since V does not license the nominative NP in (24) it also does not form a constituent with it. These sentences with unergative verbs contrast sharply with corresponding constructions including ergative verbs as in (25):

- (25) [Die Luft-NOM ausgegangen] ist dem Taucher-DAT erst einmal  
 the air ran out is the diver only once

Because the nominative subject of an ergative verb is a genuine internal argument of the verb, it is licensed by it and forms a constituent with it. Compared to Czech we cannot exclude sentences like (24) and it seems contrainstuitive to describe the mechanisms in the same way as in (24) vs. (25). There are, however, facts of binding properties that allow us to explain the mechanisms of object shift as an operation of base-generation.

## 2.2. Scope and binding

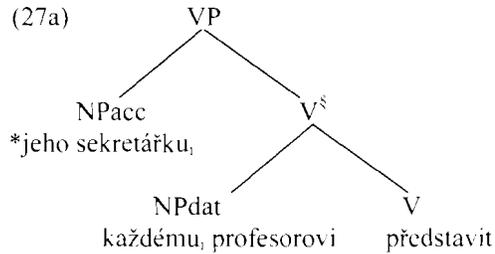
The CCF proposal of Bayer/Kornfilt (1994:40) seems to allow to base generate the OSV-word order as demonstrated above, cf. ex. (26a):

- (26a) \**Chtěli jsme* [<sub>VP</sub> [<sub>VP</sub> *jeho<sub>i</sub> sekretárku<sub>i</sub>*], [*každěmu profesorovi* ]], *představit e<sub>i</sub>*]

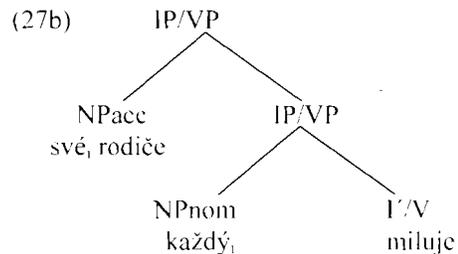
As a consequence, the scrambled object NP will be in a regular A-position. This yields the results of the NP-movement theory which are desirable with respect to binding and the above demonstrated WCO effects without requiring the functional trigger of NP-movement or attract Alpha. Recall now that with respect to a quantified binder there is a significant difference between apparent adjunction to VP (11b) and apparent adjunction to IP:

- (26b) ...*protože* [<sub>IP</sub> [*své<sub>i</sub> rodiče<sub>i</sub>*], *každý<sub>i</sub>*], *zřejmě e<sub>i</sub> miluje*]  
 because his parents(acc) everyone(nom) probably loves

Imagine now a representation without traces of movement. Thanks to the CCF mechanism the constituent structure of (26b) is obvious. The structure of double object construction is less clear. Let us hypothetically (and neglecting VP-internal subjects) assume that in the canonical IO DO order the dative NP is attached to an A-position outside VP for reasons of the thematic structure of the verb, i.e., in [<sub>VP</sub> IO [<sub>VP</sub> DO V]] the dative IO would still be in an A-position, because the lexical entry of the verb requires such a position. One could argue that the IO is licensed as an argument of the verb by virtue of its lexical case, while the DO is licensed by virtue of the structural object position provided by the X-bar-syntax. Attachment of IO to V would yield the scrambled order in (26a). In order to distinguish the resulting structure from a pure head category we use the superscript "§", i.e. V<sup>§</sup> refers to a phrase that is not induced by the X-bar-system but by the satisfaction of the theta grid of the ditransitive verb. (26ab) would then have the following structure:



If we invoke unrestricted movement of the quantified NP to an operator position by QR, we can account for the ill-formedness of (27a). (27a) would cause a case of WCO. But so would (27b) which however is well-formed. What could be the reason that QR does not apply in clauses with scrambled word order?



Kiss (1987) has suggested that LF-movement occurs in languages with a rather fixed order of constituents, while languages like Hungarian, which can reorder their constituents at S-structure more freely make LF-movement superfluous. According to Kiss, Hungarian has a flat IP, but an articulated pre-IP structure into which operators move at S-structure. Thus, Hungarian is said to encode scope relations syntactically, while English leaves scope assignment to LF. With respect to word order freedom, German and Czech are somewhat between English and Hungarian. Deviations from the unmarked order of a quantified IO and quantified DO leads to a loss of the otherwise observed scope ambiguity. If LF-movement could freely undo the S-Structure scope relations exhibited by scrambled sentences, the semantic effect of Scrambling would be destroyed, and Scrambling would lose its function. Therefore we take the following thesis as granted:

(28) Scrambling bleeds LF-movement

Observe now how can we predict the facts shown in (27ab). (27a) is a case of Scrambling. Thus (28) applies and the Q-NP cannot move. As a consequence, the Q-NP will not C-command and thus fail to bind the possessive pronoun *jeho/seine*. The same is true for (27b). The only difference is that here the pronoun and its potential binder are dominated by an identical segment, namely IP. We assume that the scope of a Q-NP will spread to the highest common node that dominates it. As a consequence, the pronoun in (27b) will be in the scope of the Q-NP without LF-movement to have taken place. Thus, the CCF-mechanism will guarantee the bound variable reading.

### 2.3. Unsolved problems: LDS and LF

Independently, however, there seem to be an ample evidence that cases of LDS have to be explained with another mechanism than short Scrambling within the clausal boundary. Besides examples like

(7) ...protože Petr *vůz*, slibil [PRO *e*, opravit](LDS)

there seems to be evidence at least for Czech that there are also examples with LDS comparable to the LDS in Japanese and Serbo-Croatian:

(29) Tuto knihu Petr a Pavel vědí kdy Mojmir přečetl

(30) \*? Jakou knihu Petr a Pavel vědí kdy Mojmir přečetl

These examples show, however, that LDS and Wh-movement also behave different with respect to the type of Scrambling (A-bar vs. A-movement). In the former cases LDS can be treated as base-generated in A-positions with LF-movement to Theta-positions. It can be demonstrated that LDS in Czech which treat Scrambling as an instance of costless overt movement, run into an overgeneration problem. In particular, they cannot account for the contrast between scrambled and Wh-moved elements when they are extracted out of a Wh-island. Bošković and Takahashi's theory, which involves the base-generation of scrambled elements in their surface positions and their LF movement to positions where they receive theta roles, does not run into these problems. For the sake of time and lack of space we cannot go more deeply into this problem.

### References

- ABRAHAM, W. / S. DE MITT (eds.) 1986. Topic, Focus and Configurationality. Amsterdam: John Benjamins.
- ADAMEC, P. 1966. Projadok slov v sovremennom ruskom jazyke. Praha.
- BAYLIN, J. F. 1995. A configurational approach to russian „free” word order. Ph.D. Dissertation, Cornell University, Ithaca, New York.
- BAYLIN, J. F. 2001. On scrambling: a reply to Bošković and Takahashi. *Linguistic Inquiry* 32, 635-658.
- BAYLIN, J. F. 2003. Does Russian scrambling exist? In: K. KARIMI (ed.) 2003. *Word order and scrambling*. Oxford: Blackwell, 156-176.
- BAYER, J. / J. KORNFELT. 1994. Against scrambling as an instance of Move-alpha, in: CORVER, N. / H. VAN RIEMSDIJK (eds.), 1994. *Studies on Scrambling. Movement and Non-Movement Approaches to Free Word-Order Phenomena*. Berlin + New York : Mouton de Gruyter (Studies in Generative Grammar 41), 17-60.
- BISKUP, P. 2006a. Scrambling in Czech: syntax, semantics, and information structure. Proceedings of NWLC 21. UBC Working Papers in Linguistics, 1-15.
- BISKUP, P. 2006b. Scrambling in Czech. Proceedings of CamLing 2005. Cambridge.
- BISKUP, P. 2006c. Phase Featuring-driven EPP-features and EPP-driven Subjacency in Czech. To appear in: KOSTA, P. / L. SCHURCKS (eds.), *Contributions of the Sixth European Conference on Formal Description of Slavic Languages FDSL VI held at Potsdam University, November 30-December 2, 2005*. Frankfurt am Main etc.: Peter Lang Verlag (Potsdam Linguistic Investigations: 1).
- BOŠKOVIĆ, Ž. 2003. On Left Branch Extraction, in: KOSTA, P. / J. BLASZCZAK / J. FRASEK ET AL. (eds.), *Investigations into Formal Slavic Linguistics. Contributions of the Fourth European Conference on Formal Description of Slavic Languages – FDSL IV held at Potsdam University, November 28-30, 2001, Part II*. Frankfurt am Main etc., 549-577 (*Linguistik International*; 10.2).
- BOŠKOVIĆ, Ž. 2004. Topicalization, Focalization, Lexical Insertion, and Scrambling. *Linguistic Inquiry* 35, 613-638.
- BOŠKOVIĆ, Ž. AND D. TAKAHASHI 1998. Scrambling and Last Resort. *Linguistic Inquiry* 29, 347-366.

- CHOMSKY, N. 1981. Lectures on Government and Binding. Dordrecht: Foris.
- CHOMSKY, N. 1995. The Minimalist Program. Cambridge, MA: MIT Press.
- CHOMSKY, N. 1999. Derivation by Phase. in: MIT Occasional Papers in Linguistics 18 [also appeared in: KENSTOWICZ, M. 2001 (ed.), *Ken Hale: A Life in Language*, 1-52. Cambridge, MA: MIT Press].
- CHOMSKY, N. 2000. Minimalist Inquiries: The Framework, in: MARTIN, R. / D. MICHAELS / J. URIAGEREKA (eds.), *Step by Step. Essays on Minimalism in Honor of Howard Lasnik*, 89-155. Cambridge, MA: MIT Press.
- CORVER, N. / H. VAN RIEMSDIJK. 1994. Introduction: approaches to and properties of scrambling, in: CORVER, N. / H. VAN RIEMSDIJK (eds.), 1994. *Studies on Scrambling, Movement and Non-Movement Approaches to Free Word-Order Phenomena*. Berlin / New York: Mouton de Gruyter (Studies in Generative Grammar 41), 1-15.
- DEN BESTEN, H. / J. RUTTEN. 1989. On Verb Raising, Extraposition and Free Word Order in Dutch, in: D. JASPERS / W. KLOOSTER / Y. PLITSEYS / P. STUREN (eds.), *Sentential Complementation and the Lexicon. Studies in Honour of Wim de Geest*. Dordrecht: Foris, 41-56.
- DEPREZ, V. 1994. Parameters of object movement, in: CORVER, N. / H. VAN RIEMSDIJK (eds.) 1994: *Studies on Scrambling, Movement and Non-Movement approaches to Free Word Order-Phenomena*. Berlin / New York: Mouton de Gruyter (Studies in Generative Grammar 41), 101-152.
- FANFLOW, G. 1990. Scrambling as NP-Movement, in: G. GREWENDORF – W. STERNFELD (eds.), *Scrambling and Barriers*. Amsterdam: Benjamins, 113-140.
- GLADROW, W. / P. KOSTA. 1999. Syntax und Syntaxkonzeptionen, in: H. JACINOW (ed.), *Handbuch der sprachwissenschaftlichen Russistik und ihrer Grenzdisziplinen*. Wiesbaden: Harrassowitz, 386-424.
- GREWENDORF, G. / W. STERNFELD (eds.) 1990. *Scrambling and Barriers*. Amsterdam: Benjamins.
- HAIDER, H. 1988. 0-Tracking Systems – Evidence from German, in: L. MARACZ / P. MUYSKEN (eds.), *Configurationality*. Dordrecht: Foris, 185-206.
- HOJI, H. 1986. Logical Form Constraints and Configurational Structure in Japanese. Doctoral Dissertation, University of Washington.
- HOLMBLARG, A. 1986. Word Order and Syntactic Features in the Scandinavian Languages and English. Doctoral Dissertation, University of Stockholm.
- JUNGHANS, U. / G. ZYBATOW. 1997. Syntax and Information Structure of Russian Clauses, in: BROWN, E. W. ET AL. (eds.), *Annual Workshop on Formal Approaches to Slavic Linguistics. The Cornell Meeting 1995 (= Michigan Slavic Materials: 39)*. Ann Arbor, Michigan: Michigan Slavic Publications, 289-319.
- KING, TRACY HOLLOWAY. 1995. *Configuring Topic and Focus in Russian*. PhD Diss. Stanford, California.
- KISS, K. É. 1987. *Configurationality in Hungarian*. Dordrecht: Reidel.
- KONDRASHOVA, N. 1994. Agreement and Dative Subjects in Russian, in: *Proceedings of the Second Annual Workshop on Formal Approaches to Slavic Linguistics: the M.I.T. Meeting 1993*, ed. by SERGEY AARUFIN, SILVÉN FRANKS, AND LIJANA PROGOVAC, Michigan Slavic Publications, Ann Arbor, 255-285.
- KOSTA, P. 1997. Syntaktische Prinzipien und Informationsstruktur in sogenannten „nichtkonfigurationellen“ Sprachen, in: KOSTA, P. / E. MANN (eds.), *Slavistische Linguistik 1996. Referate des XXII. Konstanzer Slavistischen Arbeitstreffens*, Potsdam, 17.-20.09.1996. München: Sagner 1997, 105-135.
- KOSTA, P. 1995/1996. Empty Categories, Null-Subjects and Null-Objects and How to Treat them in the Minimalist Program, in: *Linguistics in Potsdam 2/3 (1995/1996)*, 7-38. Univ. of Potsdam.
- KOSTA, P. 2002. Minimalism and Free Constituent Order (in Russian as Compared to German), in: KOSTA, P. / J. FRASIK (eds.), *Current Approaches to Formal Slavic Linguistics. Contributions of the Second European Conference on Formal Description of Slavic Languages FDSL II held at Potsdam University, November 20-22, 1997*. Frankfurt am Main etc.: Peter Lang Verlag 2002 (Linguistik International: 9), 253-272.
- KOSTA, P. / L. SCHÜRCKS. 2006 in prep. The Focus Feature Revisited. To appear in: KOSTA, P. / L. SCHÜRCKS (eds.), *Contributions of the Sixth European Conference Formal Description of Slavic Languages FDSL VI held at Potsdam University, November 30-December 2, 2005*. Frankfurt am Main etc.: Peter Lang Verlag (Potsdam Linguistic Investigations: 1).

- KOVTUNOVA, I. 1976. *Sovremennij russkij jazyk. Porjadok slov i aktual'noe členenie*. Moskva: Prosveščenie.
- KRYLOVA, O. / S. CHAVRONINA. 1984. *Porjadok slov v russkom jazyke*. Moskva: Russkij jazyk.
- MAHAJAN, A. 1990. *On the A-A' Distinction*. Doctoral dissertation, MIT, Cambridge, Mass.
- MEHLHORN, B. 2002. *Kontrastierte Konstituenten im Russischen: experimentelle Untersuchungen zur Informationsstruktur*. PhD. Diss. Univ. Leipzig, Frankfurt am Main etc.: Peter Lang (Europäische Hochschulschriften, Reihe 16, Slawische Sprachen und Literaturen: 65).
- RELLAND, E. 1990. *Head Movement and the Relation Between Morphology and Syntax*, in: G. BOOIJ / J. VAN MARLE (eds.), *Morphology Yearbook 3*, 129-161.
- RIEMSDIJK, H. VAN 1989. *Movement and Regeneration*, in: P. BENINCÀ (ed.), *Dialect Variation and the Theory of Grammar*, Dordrecht: Foris, 105-135.
- ROSS, J. R. 1967. *Constraints on Variables in Syntax*. Doctoral Dissertation, MIT.
- SABEL, J. / M. SAITO. 2005. *The Free Word Order Phenomenon. Its Syntactic Sources and Diversity*. Berlin / New York: Mouton de Gruyter (Studies in Generative Grammar 69).
- SAITO, M. 1985. *Some Asymmetries in Japanese and Their Theoretical Consequences*. Doctoral Dissertation, MIT.
- SEKERINA, I. A. 1995. *Scrambling and Configurationality: Evidence from Russian Syntactic Processing*, in: BROWNE, E. W. ET AL. (eds.), *Annual Workshop on Formal Approaches to Slavic Linguistics. The Cornell Meeting 1995 (= Michigan Slavic Materials; 39)*, Ann Arbor, Michigan: Michigan Slavic Publications, 433-463.
- WIBELHUTH, G. 1989. *Syntactic Saturation Phenomena and the Modern Germanic Languages*. Doctoral Dissertation, University of Massachusetts, Amherst.
- WITKOŚ, J. 2006/ in prep. *Polish and A-type scrambling*. To appear in: KOSTA, P. / L. SCHÜRCKS (eds.), *Contributions of the Sixth European Conference Formal Description of Slavic Languages FDSL VI held at Potsdam University, November 30-December 2, 2005*. Frankfurt am Main etc.: Peter Lang Verlag (Potsdam Linguistic Investigations; 1).

Prof. Dr. Peter Kosta, Universität Potsdam, Institut für Slavistik, Slavische Sprachwissenschaft, Postfach 60 15 53, 14415 Potsdam, Deutschland ([pkosta@uni-potsdam.de](mailto:pkosta@uni-potsdam.de))