

# The Middlefield in Slavic: Evidence from Czech<sup>\*</sup>

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## 1 Introduction

- Research on word order in Slavic languages has focused primarily on the syntax of the left and right peripheries and their role in structuring information, while the syntactic behavior of XP's within what I will call the middlefield has remained largely unexplored.
- Movement to the middlefield in Czech has characteristics associated with A-movement (new binding relationships can be established and movement is clause-bounded) as opposed to movement to the left periphery, which can be characterized as A-bar movement.
- These distinct types of movement available in Czech explain surprising characteristics of wh-movement: wh-movement exhibits characteristics of both A-movement and A-bar movement:
  - Wh-movement is not clause bounded (A-bar movement)
  - Wh-movement does not exhibit WCO effects (A-movement), see (1)

- (1) Kterého právníka<sub>1</sub> nenávidí jeho<sub>1</sub> klienti?  
*which lawyer.ACC hates his clients.ACC*  
Lit: 'Which lawyer<sub>1</sub> do his<sub>1</sub> clients hate?'

### Goals:

- Locate the middlefield in Czech clausal syntax.
- Provide evidence that movement to this domain is A-movement, distinct from movement to the left periphery, which is A-bar movement.
- Surprising characteristics of wh-movement in Czech are explained: wh-movement in Czech exhibits characteristics of both A-movement and A-bar movement.

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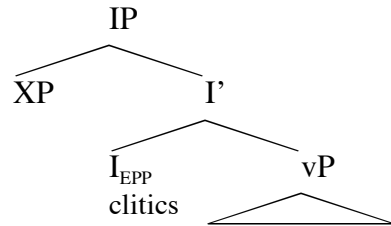
<sup>\*</sup> I would like to thank Judith Aissen, Vera Gribov, Shin Ishihara, Emily Manetta and James McCloskey for helpful comments on this project. I thank my primary Czech consultants, Kristina Valentinová and Zuzana Kartousová, for their help with the data. All remaining errors are my own.

## 2 Czech Clause Structure: Locating the middlefield

- The functional heads,  $I^0$  and  $v^0$ , provide anchoring head positions.

### Inflectional Domain: $I^0$

- Second position clitics in  $I^0$  delineate a unique left peripheral A-bar specifier position, [Spec, IP].<sup>1</sup> I assume that assertions lack a CP shell (see Lenertová 2001 for another approach to the Czech left periphery).



- [Spec, IP] can be filled by a single XP with one of the following discourse interpretations: focus, contrastive topic, continuing topic.

Only one element can precede the clitic cluster, (2).

- (2) \*Honzovi knížku jsem dala.  
*Honza.DAT book AUX.1SG.CL gave*  
 Intended: 'I gave Honza a book.'

In unmarked contexts, Czech is SVO. I assume that the highest verbal argument, the subject in (3), moves to [Spec, IP], due to an EPP feature on  $I^0$ .

- (3) [<sub>IP</sub> Jan [<sub>vP</sub> koupil knížku.]]  
*Jan bought book.ACC*  
 'Jan bought a book.'

Due to the low position of the lexical verb (see below) and the unmarked placement of internal arguments post-verbally, I assume that case is assigned to the internal arguments of the verb in their base positions within VP.

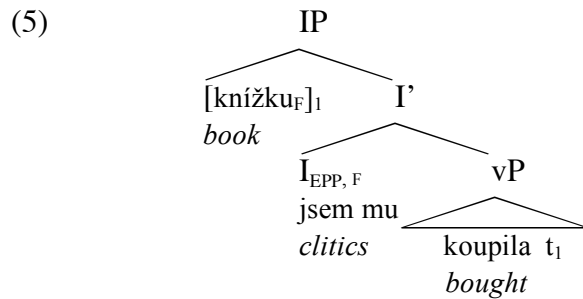
<sup>1</sup> Researchers assume that second position clitics in Czech are syntactically, rather than phonologically, positioned (see Fried 1994, Veselovská 1995, Lenertová 2001).

Elements other than the nominative subject also appear in [Spec, IP]. I assume that when  $I^0$  is associated with an operator feature (such as *wh*, focus or contrastive topic), the highest XP with the appropriate featural make-up fronts to satisfy the EPP and check the operator feature on  $I^0$ .

In (4b), the focused constituent, *knížku* ('book'), moves to [Spec, IP] to satisfy the EPP on  $I^0$  and to check the focus operator feature (for left peripheral XP's with other discourse functions, see Sturgeon 2006).

(4) a. Co jsi koupila Honzovi k svátku?  
*what AUX.ISG.CL bought Honza.DAT towards name-day*  
 'What did you buy Honza for his name day?'

b. [Knížku<sub>F</sub>]<sub>1</sub> jsem mu koupila t<sub>1</sub>.  
*book.ACC AUX.ISG.CL him.CL bought*  
 'I bought him a book<sub>F</sub>.'



### Verbal Domain: $v^0$

The lexical verb remains low in the syntax, raising from  $V^0$  to  $v^0$ , but no higher (see Veselovská 1995).

- Evidence for this comes from the fact that VP adverbs must precede the lexical verb, (6).

(6) Honza často líbá (\*často) Marii.  
*Honza often kisses often Marie*  
 'Honza often kisses Marie.'

(Veselovská 1995: 83, (7))

- These VP adverbs can precede or follow auxiliaries, suggesting that they head vP projections, (7).

(7) Zeměměřič (často) bude (často) zpracovávat zakázky v různých lokalitách.  
*land-surveyor often will often work.INF orders in various locations*  
 'Land-surveyors will often work on jobs at various locations.'  
 (www.gepro.cz/new/clanky/atlas\_.htm)

Additional evidence that the lexical verb remains low in the syntax can be found in VP ellipsis.

- Czech allows multiple auxiliaries in a clause and any of these can be stranded in VP ellipsis, see (8).

(8) *Já budu muset udělat zkoušku, ale ty nebudeš (muset)*  
 I will must.INF pass.INF exam but you NEG-will must.INF  
~~[udělat zkoušku].~~  
 pass.INF exam  
 ‘I will have to pass the exam, but you won’t (must)[~~have to pass the exam~~].’

- However, the lexical verb cannot be stranded, see (9).

(9) \**Honza si koupil nové auto, ale Petr nekoupil [<sub>VP t<sub>1</sub> nové auto</sub>].*  
 Honza REFL-CL bought new car, but Petr NEG-bought new car  
 Intended: ‘Honza bought a new car, but Petr didn’t [~~buy a new car~~].’

### The middlefield

The positions between the I<sup>0</sup> and the lexical verb in v<sup>0</sup> constitute the middlefield.

- Any number of ‘scrambled’ elements, (10), can adjoin to vP in any order.

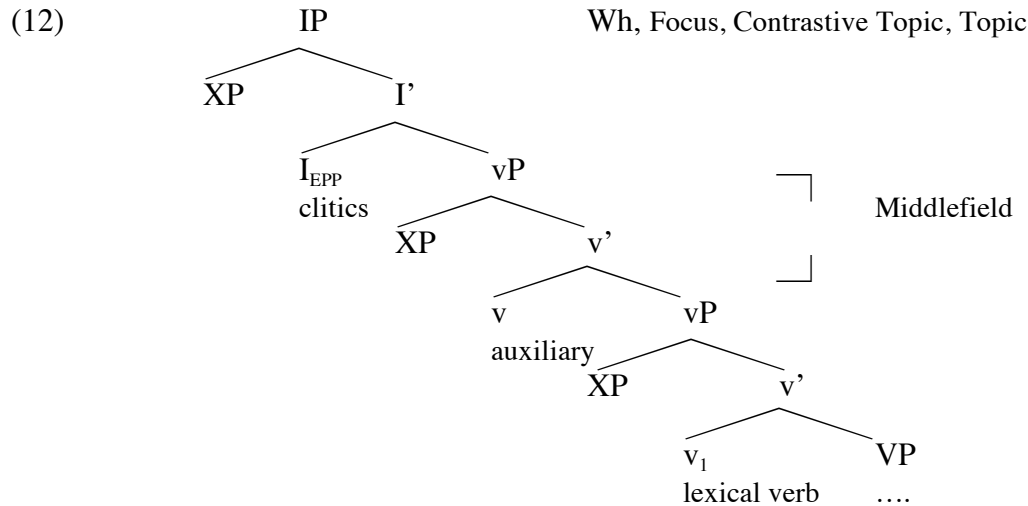
(10) a. *Já bych prádlo z okna nikdy nepověsil.*  
 I COND.CL laundry from window never NEG-hung  
 ‘I would never hang my laundry from the window.’  
 (www.okoun.cz/boards/nikdy\_bych...)

b. *Já jsem včera večer od Matyáška zase dostala takovou nakládačku...*  
 I AUX.ISG.CL yesterday night from Matyášek again got such kick  
 ‘Again last night I got such a kick from Matyášek...’  
 www.emimino.cz/modules.php?name=News&file=article&sid=4400

Also, as expected, middlefield XP’s can both precede and follow auxiliary verbs, (11). This is expected if these XP’s adjoin to vP.

(11) *Marie (za to) bude (za to) zaplatit.*  
 Marie after it will after it pay.INF  
 ‘Marie will pay for it.’

Schematic tree:



### 3 A-movement vs. A-bar movement

The cover term ‘scrambling’ has often been used to describe word order variation. Researchers have teased apart distinct types of movements with respect to their behavior (see Mahajan 1990 for Hindi, Nemoto 1999 for Japanese, Grewendorf and Sabel 1999 and Hinterhoelzl and Pili 2003 for German, Bošković 2004 for Russian and Serbo-Croatian, among many others).

- The most common dichotomy has been ‘short distance movement’, which usually has characteristics of A-movement and ‘long(er) distance movement’, which has characteristics of A-bar movement. I adopt the terms A-movement and A-bar movement in this paper.
  - A-movement has been associated with the following characteristics
    - new binding relationships can be established
    - movement is clause-bounded
  - A-bar movement is associated with the following characteristics:
    - no new binding relationships can be established
    - movement is not clause-bounded

Movement to [Spec, IP] exhibits characteristics of A-bar movement

Movement to the middlefield, the vP domain, exhibits characteristics of A-movement

### 3.1 A-bar movement to [Spec, IP]

Operator movement to the left periphery exhibits characteristics of A-bar movement. In the following examples I consider contrastive topicalization. Other types of operator movement to the left periphery behave in a similar manner (focus movement, wh-movement).

- Contrastive topicalization to [Spec, IP] is not clause-bounded, see (13).<sup>2</sup>

(13) a. There are four students in the class and three still don't have textbooks.

- b. [Honzovi<sub>1</sub>]<sub>CT</sub> mi říkali, že učitel ji už dal t<sub>1</sub>, ale  
*Honza.DAT me.DAT told.PL C teacher it.CL already gave but*  
*ostatním<sub>CT</sub> ještě ne.*  
*others still no*

Lit: 'To Honza<sub>CT</sub> they told me the teacher gave it, but to the others<sub>CT</sub> he hasn't yet.'

- New binding relationships *cannot* be established after the movement of contrastively topicalized elements; binding relationships are evaluated after reconstruction. Examples (14) and (15) exhibit weak crossover (WCO).

(14) \*Každého kluka<sub>1</sub> by jeho<sub>1</sub> matka napomenula ve školě.  
*every boy.ACC COND.CL his mother scolded in school*  
 Intended: 'Every boy was scolded by his mother at school.'

- (15) is ungrammatical under a bound reading.

(15) Žadnému<sub>1</sub> politiku nevěří jeho<sub>2/\*1</sub> sousedé.  
*no politicians.DAT NEG-trust his neighbors.NOM*  
 'No<sub>1</sub> politician is trusted by his<sub>2/\*1</sub> neighbors.'

Movement to [Spec, IP] exhibits familiar characteristics of A-bar movement:

- Movement is not clause-bounded
- Binding relationships are evaluated at reconstruction

### 3.2 A-movement and the middlefield

Unlike movement to the left periphery, movement to the middlefield has characteristics of A-movement: new binding relationships can be established and movement is clause-bounded.<sup>3,4</sup>

<sup>2</sup> It is also possible to extract contrastively topicalized elements out of embedded subjunctive and non-finite clauses. This movement also obeys island constraints.

<sup>3</sup> Note that Czech differs from another Slavic language, Serbo-Croatian. In Serbo-Croatian, movement to the left periphery *can* amnesty WCO violations, suggesting that [Spec, IP] is an A-position. Richards 2001 provides (i) as an example.

(i) Nijednom<sub>1</sub> policaru njegov<sub>1</sub> susjedi ne vjeruju  
*no politician.ACC his neighbors.NOM not trust*  
 'No<sub>1</sub> politician is trusted by his<sub>1</sub> neighbors.'

- Compare (16) with (14), above. WCO is amnestied by movement to the middlefield, but not by movement to [Spec, IP].

(16) Včera každého<sub>1</sub> kluka jeho<sub>1</sub> matka napomenula.  
*yesterday every boy.ACC his mother.NOM scolded*  
 ‘Yesterday every<sub>1</sub> boy was scolded by his<sub>1</sub> mother.’  
 Lit: ‘Yesterday every boy<sub>1</sub> his<sub>1</sub> mother scolded.’

- The same pattern emerges in (17).

(17) Nikdy žádnému<sub>1</sub> politiku jeho<sub>1</sub> sousedé nevěří.  
*never no politician.DAT his neighbors.NOM NEG-trust*  
 ‘No<sub>1</sub> politician is ever trusted by his<sub>1</sub> neighbors.’

- Additionally, movement to the middlefield is clause bounded. It is not possible for movement from an embedded clause to target a position in the middlefield, (18).

(18) \*Petr si Honzovi<sub>1</sub> myslí, že učitel ji dal t<sub>1</sub>.  
*Petr REFL.CL Honza.DAT thinks C teacher it.CL gave*  
 Intended: ‘Petr thinks Honza<sub>1</sub> that the teacher gave it t<sub>1</sub>.’

Movement to [Spec, IP] exhibits familiar characteristics of A-movement:

- Movement is clause-bounded
- New binding relationships can be established after movement.

Kučerová 2007, however, suggests that unstressed Given elements in Czech, unlike stressed elements, such as contrastive topics and foci, that move to the left periphery also undergo A-movement and new binding relationships can be established from a left peripheral position (see also Hinterhoelzl and Pili 2003 for German). I leave this an area for future research.

<sup>4</sup>Richards follows Bošković 1998 in noting that A-scrambling does not affect binding conditions such as Condition A. Condition A is still evaluated after reconstruction, see (i). Binding of *his son* by *Honza* is possible even though c-command between the binder and the bindee does not hold at the surface; these relations are established in the base positions of the two arguments.

(i) Včera ji svému<sub>1</sub> synovi Honza<sub>1</sub>dal.  
*yesterday it.CL self's son.DAT Honza gave*  
 ‘Yesterday Honza<sub>1</sub> gave it to his<sub>1</sub> son.’

Hinterhoelzl and Pili 2003 cite similar data from German. Two explanations are given for this anomaly. First, they note that for some speakers A-movement creates new binding possibilities and eliminates old ones, but not for all. Second, all reflexive pronouns in Czech (and some in German) are subject oriented. For this reason, new binding relationships cannot be established through A-movement since the new binder will not be in an appropriate structural position. Examining the behavior of reciprocals, which are not subject-oriented in Czech, is likely a fruitful area for future research.

I posit that movement to the middlefield is adjunction to vP. I remain agnostic on the exact mechanism of the movement (see Miyagawa 2005 for an EPP-style analysis).

- Elements that move to this domain can appear in any order, which is characteristic of adjunction.
- Movement of XP's to the middlefield is not required by Czech syntax.
- Also, there is no independent evidence of additional functional projections between  $v^0$  and  $I^0$  in Czech.
  - Internal arguments are assigned case in their base positions; there is no evidence that internal arguments raise out of VP.
  - For German, Hinterhoelzl and Pili 2003 suggest that A-movement to the middlefield targets specifiers of functional projections licensing clitics. This seems unlikely for Czech as clitics are syntactically positioned higher, in  $I^0$ .

#### 4 Further Predictions of the Analysis: Wh-movement

Wh-movement in Czech presents a puzzle: fronted wh-expressions exhibit behavior of both A-movement and A-bar movement.

- Their movement is not clause-bounded. They can be extracted out of finite complements to the bridge verb, *myslet* ('to think'), (19).<sup>5</sup>

(19) Koho<sub>1</sub> myslíš, že Marie pozvala t<sub>1</sub> na tu pártý?  
*who.ACC thinks C Marie invited on that party*  
 'Who<sub>1</sub> do you think Marie invited t<sub>1</sub> to the party?'

- However, they do not exhibit WCO effects, see (20).

(20) Kterého právníka<sub>1</sub> nenávidí jeho<sub>1</sub> klienti?  
*which lawyer.ACC hates his clients.ACC*  
 Lit: 'Which lawyer<sub>1</sub> do his<sub>1</sub> clients hate?'

Before I explain this apparent anomaly, I lay out basic assumptions about wh-movement in Czech.

- Czech is a multiple wh-fronting language and has been characterized by Rudin 1988 as a –Multiply Filled Specifier language ([–MFS]), like Polish and Serbo-Croatian. This means that only the first wh-phrase undergoes movement to the left periphery ([Spec, IP]) and additional wh-expressions are positioned lower in the syntax.<sup>6</sup>

<sup>5</sup> It is also possible to extract wh-expressions out of embedded subjunctive and non-finite clauses. Wh-expressions also obey island constraints.

<sup>6</sup> Evidence supporting this analysis is that wh-expressions in Czech cannot escape islands. Since there is only one specifier position in the embedded domain, this is expected. See the wh-island in (i).

- I adopt standard assumptions about wh-movement:
  - The highest wh-phrase is attracted to [Spec, IP] due to the feature-checking requirements of  $I^0$  (which has the features, [wh, U/q]).

(21) [<sub>IP</sub> Komu<sub>1</sub> ji [<sub>VP</sub> dal t<sub>1</sub>? ]]  
*who.DAT it.CL gave*  
 ‘Who did they give it to?’

Why do Czech wh-questions lack WCO effects? The answer lies in the position of non-initial wh-expressions.

- The position of non-initial wh-expressions have been the subject of some debate.
  - Rudin 1988, Richards 2001 assume that these wh-XP’s adjoin to IP.
  - Stjepanović 1998 provides evidence for Serbo-Croatian from adverb placement that they adjoin lower (see also Bošković 1997, 2002).
- I suggest that wh-phrases first move to the middlefield, adjoin to vP, and then the highest wh-phrase is attracted to [Spec, IP] due to the featural matrices of  $I^0$  and the wh-phrase (see also Richards 2001).

Through this initial A-movement, WCO are obviated, see (20), repeated here.

(22) Kterého právníka<sub>1</sub> nenávidí jeho<sub>1</sub> klienti?  
*which lawyer.ACC hates his clients.ACC*  
 Lit: ‘Which lawyer<sub>1</sub> do his<sub>1</sub> clients hate?’

This movement also accounts for other features of this construction as well:

#### Scrambled middlefield XP’s

- If wh-expressions adjoin to vP, they should be able to intervene between non-wh scrambled XP’s.
- This prediction is borne out in the data, see (23).

(23) Kde jsi (včera večer) koho (včera večer) komu představila?  
*where AUX.2SG last night who.ACC last night who.DAT introduced*  
 ‘Where did you introduce who to whom last night?’  
 Lit: ‘Where (last night) who (last night) to whom introduced?’

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(i) \*Komu<sub>2</sub> by tebe zajímalo koho<sub>1</sub> Marie představila t<sub>1</sub> t<sub>2</sub>?  
*who.DAT COND.3SG.CL you.ACC interested who.ACC Marie introduced*  
 Intended: ‘To whom<sub>2</sub> do you wonder who<sub>1</sub> Marie introduced t<sub>1</sub> t<sub>2</sub>?’

Position of wh-expressions with respect to non-clitic auxiliaries

- Auxiliaries, such as *will*, head vP projections as shown by the position of VP adverbs in the vP domain, see (6) and (7).
- Scrambled wh-expressions, like scrambled non-wh XP's, should be able to precede and follow auxiliaries, see (24).<sup>7</sup>

(24) Kdo (bude) koho (bude) volit?  
*who will who.ACC will vote-for.INF*  
 'Who will vote for whom?'  
 (www.ahasweb.cz/hovory/23.htm)

Lack of superiority effects in Czech

Czech lacks Superiority effects in both matrix, (25a-d) and embedded contexts, (26). This is due to the fact that intermediate A-scrambling is adjunction and free ordering is, thus, expected.

(25) a. Komu by kdo co dal?  
*who.DAT COND.CL who.NOM what.ACC gave*  
 'Who would give what to whom?'  
 Lit: 'To whom would who what give?'

b. Komu by co kdo dal?  
*who.DAT COND.CL what.ACC who.NOM gave*

c. Co by kdo komu dal?  
*what.ACC COND.CL who.NOM who.DAT gave*

d. Co by komu kdo dal?  
*what.ACC COND.CL who.DAT who.NOM gave*

(26) Přestal se starat, co si kdo o čem myslí.  
*stopped REFL-CL care.INF what REFL-CL who about what thinks*  
 'He stopped caring about who thought what about what.' (Meyer 2003: (8))

Wh-expressions exhibit characteristics of both A- and A-bar movement due to the fact that movement of wh-expressions proceeds first through adjunction to vP and then to an A-bar position at the left edge of the clause.

<sup>7</sup> Meyer 2003 was the first to notice that non-initial wh-expressions can follow a non-clitic auxiliary.

## 5 Conclusion

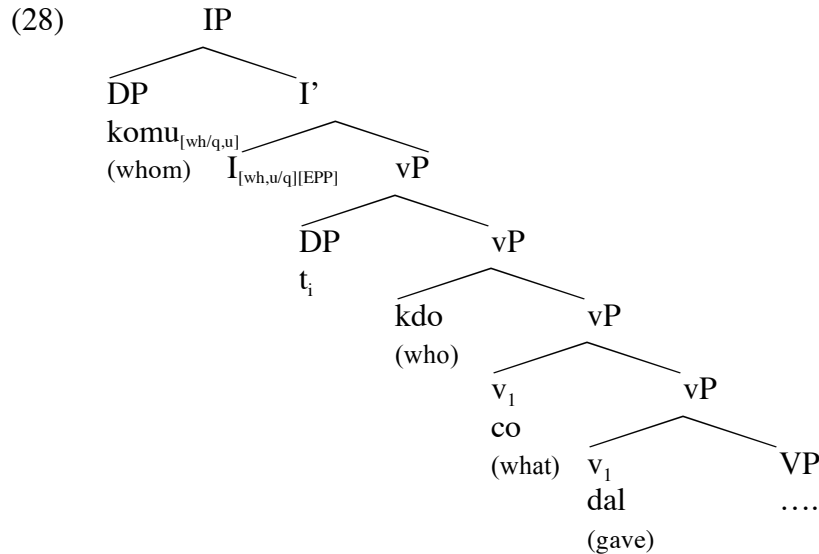
- Different domains in Czech clausal syntax exhibit different syntactic behavior.
  - Movement to the middlefield exhibits characteristics of A-movement.
  - Movement to the left periphery, on the other hand, is A-bar movement.
- These two types of available movement operations explain the fact that wh-movement exhibits characteristics of both A- and A-bar movement.

## 6 Appendix

Schematic for multiple wh-movement in Czech:

- (27) Komu kdo co dal?  
*who.DAT who.NOM what.ACC gave*  
 ‘Who gave what to whom?’

- Wh-expressions freely adjoin to vP, obviating WCO effects and Superiority.
- The highest wh-expression moves to [Spec, IP] to satisfy the EPP and check operator features on I<sup>0</sup>.



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