

## CHAPTER 2

# THE SYNTAX OF THE LEFT PERIPHERY

### 1 Introduction

Though SVO in unmarked utterances, Czech is primarily a discourse configurational language in which structural positions at the left and right edges of the clause are identified with specific discourse functions: continuing topic, contrastive topic and focus. Two structural positions serve to delineate important domains within the clause: the position of the lexical verb in the vP ( $v^0$ ) and the inflectional head ( $I^0$ ). The first part of this chapter provides evidence that supports a low position of the lexical verb; lexical verbs are shown to head the lowest vP projection. Once the position of the lexical verb has been established, we turn to the inflectional head which hosts second position clitics. This position delimits the left peripheral A-bar position ([Spec, IP]) which hosts XP's instantiating continuing topic, contrastive topic and focus discourse functions, as well as most wh-expressions.

My approach to the syntax of the left periphery is similar to that of Rizzi 1997 and Puskás 2000 in that I assume that XP's associated with a topic, a contrastive topic or a focus discourse function, as well as wh-expressions, are found in structural

positions at the left periphery (for a similar approach to Czech see Lenertová 2001). I depart from these approaches, however, in that, with the exception of dislocated XP's, all these elements are found primarily within the IP projection. Not only is an exploded CP not necessary for Czech, the CP projection hosts only *wh*-expressions (and even then only under certain circumstances); [Spec, IP] is the target left peripheral position for leftward A-bar movements.

It may appear that I have simply moved the various elements down one projection. However, I argue that this is not the case. Given the low position of the verb in Czech (it heads the lowest *vP* projection) and the fact that only one left peripheral XP is possible, it is not necessary to posit an exploded CP or to even make use of the CP projection in most cases. Independent evidence suggests that languages require both an inflectional and a verbal domain. If no additional functional projections are regularly needed by the language, it is preferable to avoid them for reasons of economy of representation (see Chomsky 1991).

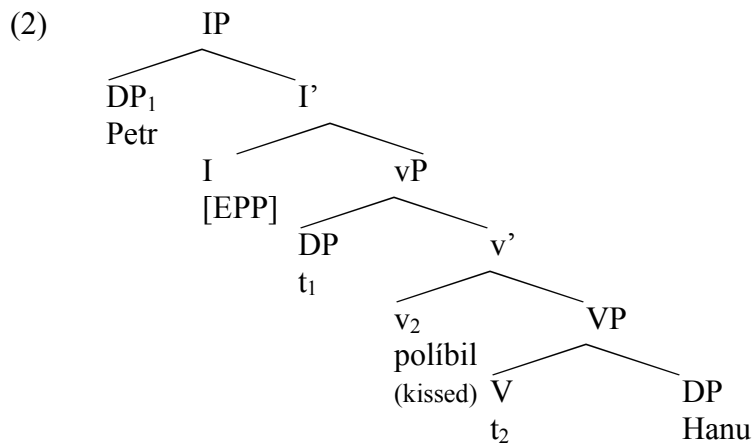
## **2 Clause Structural Assumptions**

I adopt standard assumptions about the verbal domain: internal arguments of the verb are base generated within the VP and the external argument is located in the specifier position of a dominating functional projection, *vP*. The head of this projection,  $v^0$ , licenses structural accusative case on verbal objects within the VP. In the following sections I provide evidence for several other assumptions. First, the verb remains low

in the syntax; as in English, it raises from  $V^0$  to  $v^0$  but no higher. Second, nominative case is valued through static Agree between the external argument in [Spec, vP] and  $I^0$ . Third, [Spec, IP] is not a position associated with case licensing, but, rather, it is an A-bar position associated with an EPP feature. This position is filled in one of two ways: by raising of the highest XP within the vP domain or by attraction of an XP with a particular discourse function (contrastive topic or focus). Discoursal movement is analyzed in depth in later sections.

Consider the transitive sentence in (1).<sup>1</sup>

- (1) Petr políbil Hanu.  
*Petr kissed Hana.ACC*  
 ‘Petr kissed Hana.’



The derivation in (2) proceeds as follows. The DP, *Hana*, Merges as a complement to the verbal head, *políbil* (‘kiss.PST). Since the verb is transitive, a vP shell dominates

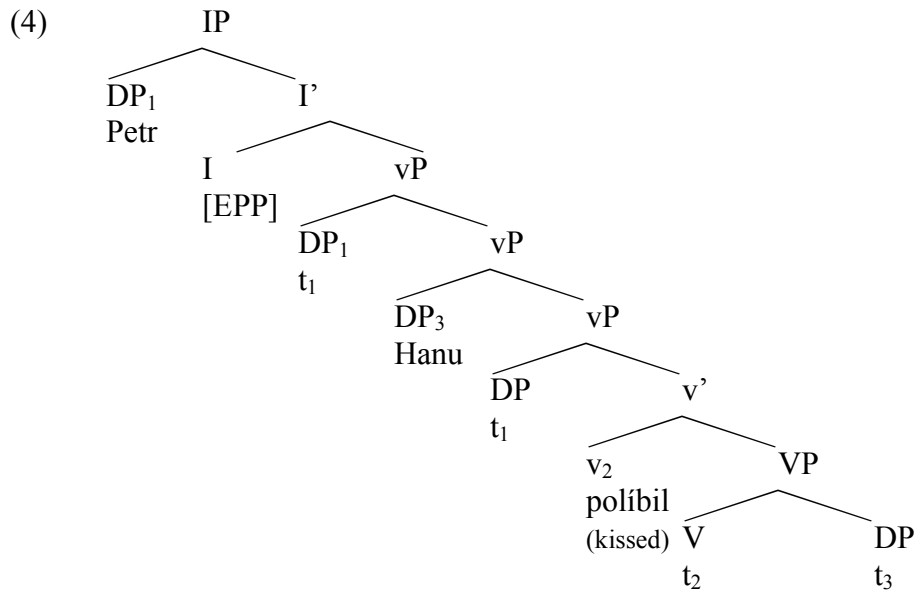
<sup>1</sup> Abbreviations in the dissertation are as follows: *C* (complementizer), *FUT* (future), *PST* (past), *INF* (infinitive), *COND* (conditional), *AUX* (auxiliary), *EXCL* (exclamative), *CL* (clitic), *REFL* (reflexive), *REL* (relative pronoun), *PRT* (particle), *FEM* (feminine), *MASC* (masculine), *NEUT* (neuter), *SG* (singular), *PL* (plural), *ACC* (accusative), *DAT* (dative), *NOM* (nominative), *INSTR* (instrumental), *LOC* (locative), *DIR* (directional).

the VP, and the external argument, *Petr*, Merges into its specifier position. By assumption, the verb raises from  $V^0$  to  $v^0$ .  $\Phi$ -features on *Petr* are checked with the inflectional head,  $I^0$ , via static Agree, and nominative case is licensed on that argument. The highest XP, the DP, *Petr*, raises to [Spec, IP] to check the EPP feature on  $I^0$ . Once in [Spec, IP], this element is associated with a topic interpretation.

Another position of the internal argument of the verb, *Hanu*, is possible, with little change in interpretation. In (3), *Hanu* precedes the verb.

- (3) Petr Hanu políbil.  
*Petr Hana.ACC kissed*  
 ‘Petr kissed Hana.’  
 Lit: ‘Petr Hana kissed.’

Czech, like German, allows scrambling of arguments and adjuncts to a preverbal position in the middlefield. I assume that these elements are adjuncts to vP because, unlike elements in specifier positions, ordering between multiple middlefield XP’s is unrestricted. The tree for (3) is provided in (4).



*Hanu* and *Petr* both scramble to an adjoined positions in the middlefield. Since *Petr* is in the highest adjoined to vP position, it raises to [Spec, IP] to satisfy the EPP feature on I<sup>0</sup>. Additional evidence for this syntactic analysis of the Czech middlefield is provided in section 5.1.

In this dissertation I assume a Copy and Delete theory of movement following Chomsky 1995. Movement is an operation composed of Agree and Remerge and takes place when there are uninterpretable features on the goal and/or the probe and the probe has an EPP feature. Moved elements leave behind a full copy in each position they occupy and, when movement is overt, lower copies remain unpronounced at PF. For illustrative purposes, I represent lower copies as traces in this chapter. However, the fact that full copies are present in lower positions plays a crucial role in the syntactic analysis of resumption in Contrastive Left Dislocation presented in chapter 5.

### **3 Identifying the Clause-Initial Position: Clitics in I<sup>0</sup>**

Following the literature, I assume Czech clitics are positioned syntactically in I<sup>0</sup> (for arguments supporting a syntactic, rather than a phonological, analysis see Fried 1994, Veselovská 1995 and Lenertová 2001). The position of verbal and pronominal clitics marks the right edge of [Spec, IP], the clause-initial position which is filled by an XP associated with one of three discourse functions: contrastive topic, topic or focus.

Czech has verbal and pronominal clitics which are restricted in both their syntactic position and their relative ordering. We first turn to pronominal clitics. Clitic pronominal forms exist for two of the seven nominal cases: dative and accusative; for nominatives, null pronouns, rather than clitics, alternate with strong forms. Only strong pronouns are used to express the remaining cases: genitive, locative, instrumental and vocative. Reflexive clitics can be both anaphoric to argument positions and used with lexically reflexive verbs. Among pronominal clitics there is an obligatory ordering principle: reflexive > dative > accusative. In (5), a reflexive clitic is followed by dative and accusative clitics.

- (5) Nelíbí se mi to.  
*NEG-please REFL-CL me.DAT.CL it.ACC.CL*  
 'I don't like it.'

In addition to clitic pronominals, Czech has two types of clitic auxiliaries, both of which occur only with the past participle: clitic auxiliaries that mark person in the past tense and those that mark conditional mood. To express the past tense, the past participle occurs with a clitic auxiliary that marks person (*jsem* ('AUX.1SG.CL'), *jsi* ('AUX.2SG.CL'), *jsme* ('AUX.1PL.CL'), *jste* ('AUX.1SG.CL')). This clitic is required for first and second person subjects, (6), but is absent with third person subjects.

- (6) Vy jste mluvili s Janou v pondělí.  
*you.PL AUX.2PL.CL talked.PST with Jana in Monday*  
 'You talked to Jana on Monday.'

Conditional mood is expressed by the combination of the past participle and a conditional auxiliary clitic which is inflected for 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> person (*bych* ('COND.1SG.CL'), *bys* ('COND.2SG.CL'), *by* ('COND.2SG.CL'), etc.), (7).

- (7) Chtěla bych si přečíst tu novou knížku.  
*want.PST COND.1SG.CL REFL-CL read.INF that new book*  
 'I would like to read that new book.'

Auxiliary clitics obligatorily precede pronominal clitics, see (8).

- (8) Řekla jsem mu to.  
*told AUX.1SG.CL him.DAT.CL it.ACC.CL*  
 'I told it to him.'

I assume that verbal clitics are base generated in I<sup>0</sup>. It is beyond the scope of the dissertation to provide an analysis of pronominal clitic placement.

#### 4 Locating the Lexical Verb in v<sup>0</sup>

Now that basic assumptions about clause structure and the system of clitic pronouns and auxiliaries have been established, I consider the structure of the verbal domain. Evidence for a low position of the lexical verb and for positioning auxiliaries within the vP domain comes from three sources: from the position of VP adverbs, from the position of middlefield XP's and from VP ellipsis (VPE). In VPE, the fact that only verbs which correspond to the English modals, but not lexical verbs, can be stranded points to a low position for lexical verbs. The position of the lexical verb is important because it is one of the positions that delimits the middlefield (the span between I<sup>0</sup> and v<sup>0</sup>).

#### 4.1 VP adverbs

To demonstrate that the verb in Czech remains low, Veselovská 1995 appeals to work by Emonds 1978 and Pollock 1989. They diagnose the position of the verb in English and French using the structural position of VP adverbs such as *often*. VP adverbs adjoin to the highest projection of the VP domain, for me, the vP. Thus, if they precede the verb, the verb must remain within the verbal domain. If, on the other hand, a VP adverb follows the verb, the verb must raise into the inflectional domain. Familiar evidence from English and French is given below. The VP adverb, *often*, appears before the verb in English, (9a), and after it in French, (9b); this suggests a low position for the English verb (no V<sup>0</sup>-to-I<sup>0</sup> raising) and a higher position for the verb in French.

(9) a. James often kisses (\*often) Marie.

b. Jean (\*souvent) embrasse souvent Marie  
*Jean often kisses often Marie*  
'Jean often kisses Marie.'

(Pollock 1989: (4))

The position of VP adverbs in Czech patterns with that of English. The adverb *often* must precede the verb if it has sentential scope, example (10).

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

(Veselovská 1995: 83, (7))

This evidence suggests that the verb remains within the vP in Czech, raising from V<sup>0</sup> to v<sup>0</sup>, by assumption, but no higher.<sup>2</sup>

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<sup>2</sup> For Veselovská 1995, the verb raises to the head of an AgrO projection which immediately dominates the VP.

Czech has several verbs which correspond in meaning to English modals: *mocť* ('can.INF'), *muset* ('must.INF'), and the future form of *být* ('be.INF').<sup>3</sup> Unlike their English counterparts, these verbs inflect fully. Rather than analyzing these verbs as occupying I<sup>0</sup>, I propose that they are verbs which simply subcategorize for infinitival vP complements. Evidence presented below suggests that, like lexical verbs, Czech modals do not raise to I<sup>0</sup>, but remain within the vP domain.

Since *mocť* ('can.INF'), *muset* ('must.INF'), and the future form of *být* ('be.INF') take vP complements, we would expect their relative position with respect to VP adverbs to differ from that of other lexical verbs. *Often* adjoins to vP; if there is more than one vP projection, this element could adjoin to any of them. Further, if the modals appear in v<sup>0</sup> (and not in I<sup>0</sup>), VP adverbs should be able to precede them, follow them and intervene between them. This is what is found. Possible positions of the VP adverb with respect to these verbs is shown in the textual examples in (11). In (11a), *often* follows the stacked verbs and adjoins to the lowest vP shell, the shell headed by the lexical verb.

- (11) a. Mág bude muset často udělat víc než si naplánoval...  
*wizard will must.INF often finish-doing.INF more than REFL-CL planned*  
 'The wizard will often have to finish doing more than he planned...'  
 (things.magick.cz/magick/index.php?id=2&co=celej)

Other orders of this adverb with respect to these verbs are attested, but are uncommon. In (11b), the VP adverb precedes the clitic cluster.

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<sup>3</sup> Veselovská 1995 analyzes the Czech correspondent to 'will' (the future form of *být* ('be.INF')), but not the correspondents to *must* and *can*, as an auxiliary verb which takes a complement headed by an infinitival verb. One reason for this is that this verb has only an inflected form and must precede all verbs in a sequence of infinitival verbs.

- b. Naopak, mozek často bude muset dělat složité kotrmelce...  
*on-the-other-hand brain often will must.INF do.INF complicated somersaults*  
 'On the other hand, the brain will often need to do complicated somersaults...'  
 (www.rydval.cz/phprs/view/php?cislocclanku=2005123154)

In (11c), the VP adverb intervenes between the stacked verbs.

- c. Tento člověk se bude často muset vypořádávat s náročnými  
*that person REFL-CL will often must.INF struggle-out.INF with exacting*  
*situacemi...*  
*situations*  
 'That person will often have to struggle with exacting situations...'  
 (www.volny.cz/rosalynda/asryby.htm)

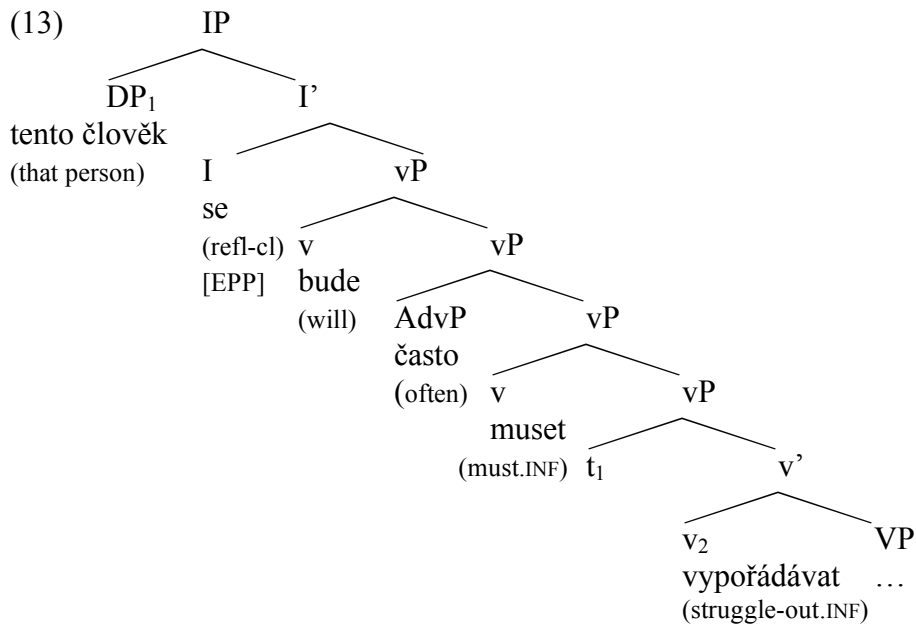
XP's in the Czech middlefield also adjoin to vP. The expectation would, again, be that these elements can occur in any order with respect to verbs which subcategorize for vP's. In (12) we see that a PP in the middlefield can follow a sequence of modals, (12a), or intervene between them, (12b).

- (12) a. ...že bych se mohl muset k dialupu ČTc vrátit...  
*C COND. 1SG.CL REFL-CL may.PST must.INF towards dial-up ČTc return.INF*  
 'At first, I figured that I would have to go back to ČTc [telecom] dial-up ...'  
 (mobil.idnes.cz/tiskni.asp?c=A030808\_5221467\_mob\_prakticky&r=mob\_prakticky)
- b. Marie bude za to muset platit.  
*Marie will after it must.INF pay.INF*  
 'Marie will have to pay for it.'

The tree in (13) exemplifies the analysis of the verbal domain using (11c) as illustration.<sup>4</sup>

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<sup>4</sup> *Bude* ('will.3SG') and *muset* ('must.INF') are Merged into the structure as V heads that raise to the head of a dominating vP projection. This is not illustrated in the tree for space reasons.



The subject DP, *tento člověk* (‘that person’), raises to [Spec, IP] to satisfy the EPP feature associated with  $I^0$ , and the reflexive clitic is positioned in  $I^0$ . In the verbal domain, the VP adverb, *často* (‘often’), intervenes between the first two verbs and adjoins to an intermediate vP projection. The lexical verb raises from the VP domain to head the lowest vP.

The low position of verbal elements in Czech leaves  $I^0$  available to house second position clitics, and permits the ‘first’ position to be identified as [Spec, IP], rather than [Spec, CP]. Any additional CP projection is unnecessary in most cases in Czech.

## 4.2 VP Ellipsis

In this section, I propose an analysis of VPE in which the target of ellipsis is a vP complement to a modal, (i.e. *moct* ('can.INF'), *muset* ('must.INF'), and the future form of *být* ('be.INF')) (for other work on V-stranding and VPE see McCloskey 1991; Goldberg 2002, 2005; among many others).<sup>5</sup> Consider (14a-b).

- (14) a. „Vždyť to bude bolet,“ zaúpěl Timmie..., „Nebojte, nebude [<sub>VP</sub> ~~bolet~~].“  
*for-sure it will hurt.INF groaned Timmie NEG-fear NEG-will hurt.INF*  
 ‘“It will hurt for sure,” groaned Timmie... “Don’t worry, it won’t [<sub>VP</sub> ~~hurt~~].”’  
 (Czech National Corpus)
- b. ...každěj chce jít domů, ale já nemůžu [<sub>VP</sub> ~~jít domů~~].  
*every wants go.INF home but I NEG-can*  
 ‘Everyone wants to go home, but I can’t [<sub>VP</sub> ~~go home~~].’  
 (www.muweb.cz/www/vyzyvatel/VYZVA/SOUBORY/V49.htm)

Like VPE in other languages, Czech VPE allows the identity relationship between the antecedent and the elided material to be inexact. There are two possible interpretations of (15): either Pavel and Honza differ in their attitudes toward Pavel’s dog or each differs in his attitude towards his own dog. Note that the form of the elided possessive pronoun would differ under the two possible interpretations.

- (15) Pavel<sub>1</sub> nebude mít rád svého<sub>1</sub> nového psa ale Honza<sub>2</sub> bude [mít  
*Pavel NEG-will have.INF joy self’s new dog but Honza will have.INF*  
~~rád svého<sub>2</sub>/jeho<sub>1</sub> nového psa~~].  
*joy self’s /his new dog*  
 ‘Pavel<sub>1</sub> won’t love his<sub>1</sub> dog, but Honza<sub>2</sub> will [~~love his<sub>1/2</sub> dog~~].’

<sup>5</sup> Czech also has a type of ellipsis (possibly another type of VPE) in which a polarity head, rather than an auxiliary verb, is stranded, (i).

- (i) Já v tomhle stádiu nemám co ztratit. Ty ale jo [<sub>VP</sub> ~~máš co ztratit~~].  
*I in that stage NEG-have what lose.INF you EXCL yes have what lose.INF*  
 ‘I don’t have anything to lose at this stage. But, boy, you do [<sub>VP</sub> ~~have something to lose~~].’  
 (Czech National Corpus)

Further research is necessary to determine the exact nature of this construction.

As in English, Czech VPE requires that the ellipsis site be sister to a prosodically strong head. This explains why the complement to I<sup>0</sup> cannot be elided. Clitics, which appear in I<sup>0</sup>, are not prosodically strong, and thus, cannot license VPE.

Combined with earlier assumptions, analyzing VPE as elision of the vP complement to a modal makes two predictions. First, we saw in the previous section that Czech allows sequences of modals, each taking a vP complement. In such cases, there should be a choice as to which complement vP is elided. This is correct. In (16) there are two ellipsis possibilities: stranding the first modal or stranding the first two modals.

- (16) 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 [~~have to pass the exam~~].'  
 Lit: ', 'I will must pass the exam, but you won't (must) [~~have to pass the exam~~].'

Ellipsis can target the vP complement to either head.<sup>6</sup>

The second prediction concerns the stranding of lexical verbs in VPE. If lexical verbs raised out of the verbal domain to I<sup>0</sup> we would expect to be able to elide

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<sup>6</sup> There is one remaining issue. If clitics are in I<sup>0</sup> and ellipsis targets the vP complements, we would expect clitics to survive ellipsis. This is not the case.

(i) Já to budu studovat ale ty \*to nebudeš [~~studovat~~].  
*I it.CL will study.INF but you it.CL NEG-will [study.INF]*  
 'I will study it, but you won't [~~study it~~].'

This pattern is also found in Spanish and is analyzed as Null Complement Anaphora (NCA) in Depiante (2001).

More work is needed on this construction in Czech to clearly distinguish VPE from NCA. The availability of strict and sloppy readings suggests VPE, while the fact that clitics do not survive ellipsis suggests NCA.

the remnant vP, stranding just the verbal head.<sup>7</sup> Under the present analysis, however, lexical verbs raise only from V<sup>0</sup> to v<sup>0</sup>. Since VPE does not target VP complements, only vP complements, it should be impossible to strand a lexical verb in VPE. This is correct as shown by the ungrammatical (17).

- (17) \*Honza si koupil nové auto, ale Petr nekoupil<sub>I</sub> [<sub>VP</sub> t<sub>I</sub> ~~nové auto~~].  
*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 impossibility of lexical verb stranding in VPE provides further evidence for an analysis of the verbal domain in which lexical verbs remain low in the syntax, raising from V<sup>0</sup> to v<sup>0</sup>, but no higher. Other support for this analysis was found in the position of VP adverbs and middlefield XP’s, both of which adjoin to vP. Since both types of element obligatorily precede lexical verbs, the lexical verb must raise no higher than the head of the lowest vP projection.

## 5 The Left Periphery: Discoursal-syntactic mapping

Now that the syntax of the anchoring head positions (I<sup>0</sup> and v<sup>0</sup>) has been established, we turn our focus to the location of XP’s with respect to these anchors. With an exception to be discussed in section 7, only a single phrasal constituent can occupy the position before I<sup>0</sup>, which I identify as [Spec, IP]. This privileged structural position is associated with at least two specific discourse functions (narrow focus and

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<sup>7</sup> See section 5.2 for an instance when the lexical verb appears in I<sup>0</sup> and can license ellipsis.

contrastive topic). When not occupied by an element bearing one of those functions, it is associated with a constituent whose discourse referent is given or topical.

### 5.1 Discourse function and [Spec, IP]

Narrowly focused elements corresponding to the answers to wh-questions can appear in a left peripheral position preceding the clitic cluster.<sup>8</sup> Consider (18b).

- (18) a. Co jsi dala Honzovi k narozeninám?  
*what AUX.2SG.CL gave Honza.DAT towards birthday*  
'What did you give Honza for his birthday?'
- b. Knížku<sub>F</sub> jsem mu dala.  
*book AUX.1SG.CL him.CL gave*  
'I gave him [a book]<sub>F</sub>.'

Narrowly focused elements can also appear at the right edge of the clause. The example in (18c) is also a felicitous answer to (18a).

- c. Dala jsem mu knížku<sub>F</sub>.  
*gave AUX.1SG.CL him.CL book*  
'I gave him [a book]<sub>F</sub>.'

Both positions of focused elements, left and right edge, are equally felicitous for speakers.<sup>9</sup>

Another discourse function associated with [Spec, IP] is that of contrastive topic (CT). Contrastive topicalization exhibits the following characteristics. First, the discourse referent of a CT must be a member of a previously evoked set. Second,

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<sup>8</sup> Other types of focused elements can appear in this clause initial position as well. See Lenertová and Junghanns to appear for a discussion of wide focus and intonationally prominent clause-initial elements. Here, however, I limit myself to narrowly focused XP's.

<sup>9</sup> The clause-initial position of focus may be associated with a slightly lower register.

a clause containing a CT must also contain a focused element. Third, CT's are associated with an intonational rise (see Veselá, et al. 2003). The discourse function associated with CT's is the subject of chapter 4.

In (19b), the dative arguments, *Honzovi* ('Honza.DAT') and *Petrovi* ('Petr.DAT'), are CT's. The discourse referents that they denote are members of a previously mentioned set, and each clause contains a focused element (*autíčko* ('car') and *knížku* ('book')).

- (19) a. Co jsi koupila synům k svátku?  
*what AUX.ISG.CL bought sons.DAT towards name-day*  
 'What did you buy your sons for their name days?'  
 b. Honzovi<sub>CT</sub> jsem koupila autíčko<sub>F</sub> a Petrovi<sub>CT</sub> knížku<sub>F</sub>.  
*Honza.DAT AUX.ISG.CL bought car.DIM and Petr.DAT book*  
 'Honza<sub>CT</sub> I bought [a toy car]<sub>F</sub> and Petr<sub>CT</sub> [a book]<sub>F</sub>.'

Note that when a CT occurs at the left edge, the focus appears at the right, (19b).

These data suggest that [Spec, IP] can be associated with two distinct discourse functions: focus and CT. But, can more than one XP be found at the left periphery of the IP domain? In general, no. Assuming that the second position clitic marks the boundary between [Spec, IP] and the rest of the clause, only one XP can occur in the pre-clitic position, see (20). These judgments are robust for all speakers consulted.

- (20) a. \*Honzovi<sub>F</sub> knížku<sub>CT</sub> jsem dala.  
*Honza.DAT book AUX.ISG.CL gave*  
 Intended: 'I gave Honza<sub>F</sub> [a book]<sub>CT</sub>.'  
 b. \*Knížku<sub>CT</sub> Honzovi<sub>F</sub> jsem dala.  
*book Honza.DAT AUX.ISG.CL gave*  
 Intended: 'I gave [a book]<sub>CT</sub> [to Honza]<sub>F</sub>.'

That CT's and focused elements cannot co-occur in the pre-clitic position suggests that elements with these two discourse functions compete for the same structural position, [Spec, IP].

We now turn to the position between  $I^0$  and  $v^0$ , the Czech middlefield.

Elements that occur between the second position clitic cluster and the verb have been previously mentioned or evoked in the discourse context and are not subject to any ordering restrictions. This is illustrated in (21a-b). Internal arguments of the verb, *nepověsil* ('NEG-hung'), *prádlo* ('laundry') and *z okna* ('from window'), have raised out of the VP. Both orderings of these elements are felicitous and have the same interpretation.

(21) 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...](http://www.okoun.cz/boards/nikdy_bych...))

b. Já bych z okna prádlo nikdy nepověsil.  
*I COND.CL from window laundry never NEG-hung*  
'I would never hang my laundry from the window.'

Since elements in this domain can appear in any order, I assume that they adjoin to vP. In section 4, I provided data which showed that modals, which appear in  $v^0$ , can appear in any order with respect to these adjuncts. This is expected if middlefield XP's adjoin to vP.

When there is no CT or focused element in the clause, the highest XP in the middlefield raises to satisfy the EPP feature on  $I^0$ . Consistent with traditional approaches to Czech, this clause-initial element is associated with a topic

interpretation. The discourse function of topic has sometimes been conflated with that of CT under the terms *topic* or *topicalization*; these two discourse functions are differentiated in this dissertation. Unlike CT's, topical elements need not co-occur with a focused element and are not associated with a rising intonational contour. Typically, discourse referents with a topic interpretation have been previously mentioned in the discourse context and continue to be discussed in the following clauses. These are not characteristics associated with CT's. CT's tend to be compared with other discourse referents in the context rather than continuing to be discussed in following clauses.

A textual example in (22) provides illustration. The DP referring to Vítek appears in [Spec, IP] in (22b), and, as a result, Vítek is interpreted as topical. I underline all references to this discourse referent.

- (22) a. Maminka Vítka zvedla a postavila ho do dveří vagónu.  
*mom Vitek.ACC brought and stood him to doors wagon.GEN*
- b. Vítek se těšil, jak vyleze po schůdkách sám.  
*Vitek REFL-CL looked-forward-to how climbs.3SG through stairs alone*
- c. Místo něho šla po schůdkách maminka.  
*in-place-of him went through stairs mom*

'Mom took Vítek and put him in the door of the train compartment. Vítek was looking forward to climbing the stairs alone. Instead of him, mom went up the stairs.'  
 (Řiha 1992)

Vítek is mentioned in the clause preceding its appearance in [Spec, IP], (22a), and continues to be discussed in the following clauses, (22b-c).

Any argument can appear in [Spec, IP]; there is no requirement that the nominative raise to satisfy the EPP. Since elements first scramble to an adjoined

position in the vP, it is the highest adjoined element which raises, whatever that may be. Consider (23b) in which an accusative-marked DP fills [Spec, IP].

- (23) a. V téhle stanici přistoupil do kupé pán s rezavým psíkem.  
*in that station boarded to compartment man with rust-colored dog*
- b. Toho pána Vítek skoro neviděl.  
*that man.ACC Vítek almost NEG-saw*
- c. Měl hlavu moc nahoře.  
*had head very high*

'At that station a man with a rust-colored dog entered the train compartment. Vítek could barely see him. He was very tall.' (Řiha 1992)

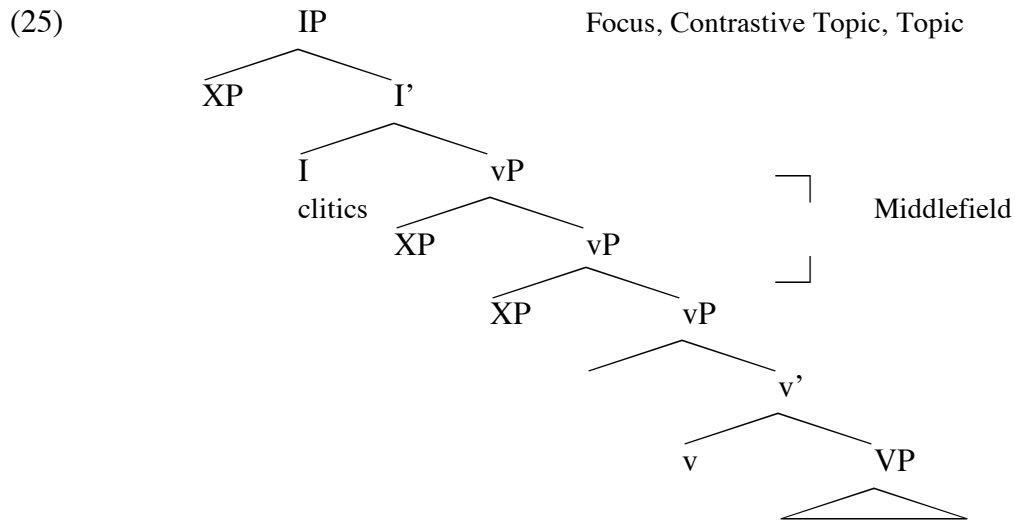
In this case it is the accusative argument that is topical. The discourse referent corresponding to *toho pána* ('that man.ACC') is introduced in (23a), and, since it is the only given element in the second clause, the DP which refers to it appears in [Spec, IP] in (23b). Another sign that this discourse referent is topical in (23b) is that fact that it is referred to by a null pronominal in the following clause, (23c).

Once again, only a single XP can occur in the left peripheral position in the clause. Like CT's and foci in (20), topical elements cannot co-occur with either CT's or focused XP's, (24).

- (24) a. \*Honzovi<sub>CT/F</sub> knížku<sub>T</sub> jsem dala.  
*Honza.DAT book AUX.ISG.CL gave*  
 Intended: 'I gave Honza<sub>CT/F</sub> the book.'
- b. \*Knižku<sub>T</sub> Honzovi<sub>CT/F</sub> jsem dala.  
*book Honza.DAT AUX.ISG.CL gave*  
 Intended: 'I gave Honza<sub>CT/F</sub> the book.'

The data in (20) suggested that there is one structural position at the left edge for which CT's and foci compete. The data in (24a-b) suggest that topics compete for the same position.

The schematic in (25) illustrates the proposed structure of the left periphery.



It follows from the preceding discussion that the syntactic position of an XP has interpretive consequences. For instance, CT's and foci must be in specific clausal positions in order to be interpreted felicitously. In section 6, a syntactic analysis is developed which motivates movement of these XP's to the left periphery.

### 5.2 $V^0$ -to- $I^0$ raising: Satisfying the EPP

I assume that an EPP feature is obligatorily associated with the highest inflectional head and is normally satisfied by movement of an XP into [Spec, IP]. Verb-initial sentences, however, are very common in Czech. One context in which they occur is when the subject is a null pronominal. Consider (26).

- (26) Pojedu do Francie příští týden.  
*go.FUT to France next week*  
 ‘I am going to go to France next week.’

Sentences of this type bring into question the assumption that the EPP is obligatorily associated with the highest inflectional head,  $I^0$ . Since there is no apparent overt element that satisfies the EPP, one possible solution would be to assume that it is a null subject pronominal that satisfies the EPP. This solution, though, is problematic because another common context for verb-initial clauses is when the subject argument appears in a right-edge focus position, see (27b).

- (27) a. Kdo si koupí pivo?  
*who REFL-CL bought beer*  
 ‘Who’s buying the beer?’
- b. Koupí ho Marek<sub>F</sub>.  
*bought it.CL Marek*  
 ‘Marek’s buying it.’

In (27b), as opposed to (26), there is no null argument which could potentially fill [Spec, IP].<sup>10</sup>

Examples (26) and (27b), then, appear to contradict the generalization that the highest inflectional head is associated with the EPP.<sup>11</sup> Alexiadou and

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<sup>10</sup> A possible solution would be to posit a null expletive. However, the fact that Czech has optional expletives makes this solution unsatisfying. Consider (i). There is no interpretational difference between these sentences.

(i) Prší. / Ono prší.  
*rains / EXPLETIVE rains*  
 ‘It’s raining.’

To pursue an analysis of this type, one would have to account for the fact that expletives are sometimes covert and sometimes overt.

<sup>11</sup> Veselovská 1995 argues that verb-initial sentences are the result of topicalization of the verb to a left-edge head position. I suggest that, though this may be true in some cases, it cannot account for all verb-initial sentences. I follow the formal analysis of Alexiadou and Anagnostopoulou 1998.

Anagnostopoulou 1998, however, propose that there are two ways that languages can satisfy the EPP: Move/Merge XP or Move X<sup>0</sup>. Languages that require Move/Merge XP are of the familiar type; movement of an XP to [Spec, IP] satisfies an EPP feature on I<sup>0</sup>, or, alternatively, an expletive is Merged into that position. Another class of languages are those with null subject pronouns and rich verbal morphology. Due to this rich inflection, the finite verb in these languages has the requisite pronominal features to satisfy the EPP through V<sup>0</sup>-to-I<sup>0</sup> raising.

Czech provides an interesting test case for the Alexiadou and Anagnostopoulou proposal. Unlike many languages that they consider, the lexical verb in Czech remains within the vP when an overt XP appears at the left edge. If the finite verb raised only when there was no other XP available to satisfy the EPP, there should be evidence of its higher position in just those cases. Such evidence exists. It was shown in section 4.1 that VP adverbs obligatorily precede the lexical verb when an XP appears in [Spec, IP], see (28).

- (28) Honza to často vidí (\*často) kolem sebe.  
*Honza it.CL often sees often around self*  
 ‘Honza often sees it near him.’

But, just in cases when the verb appears in the initial position, VP adverbs follow the lexical verb. Consider the textual example in (29a).

- (29) a. Vidím to často kolem sebe.  
*see it.CL often around self*  
 ‘I often see it near me.’  
 (www.pismak.cz/dilo.php?num=20538)

The same pattern is found with sentence-initial modals, (29b).

- b. *Budu to často vidět kolem sebe.*  
*will.1SG it.CL often see.INF near self*  
 ‘I will often see it near me.’

In both (29a-b), the highest finite verb precedes not only the adverbs, but also the second position clitic; this suggests that the first verbal element has raised out of the vP to I<sup>0</sup>. This raising of the verb, Alexiadou and Anagnostopoulou argue, can satisfy the EPP feature on I<sup>0</sup>.

This type of analysis also predicts that just when the lexical verb appears in I<sup>0</sup>, it should be able to license VPE. This is what is found, see (30).

- (30) *Jan chtěl jít do krámu, ale nakonec nešel.*  
*Jan wanted go.INF to store but after-all NEG-went*  
 ‘Jan wanted to go to the store, but didn’t after all.’

When the verb raises from v<sup>0</sup> to I<sup>0</sup> to satisfy the EPP, it is in a structural position that is high enough (I<sup>0</sup>) to license elision of its complement vP.

In the examples considered above, (26), (27b) and (29a-b), the verb fronted to satisfy the EPP feature on I<sup>0</sup> even when there were other XP’s in the sentence which could, in principle, have raised to satisfy the EPP. Though a comprehensive analysis of the restrictions on this sentence-initial position is beyond the scope of this dissertation, there appears to be a principle at the syntactic-pragmatic interface which requires that a sentence-initial XP be pragmatically linked to the previous clause (see also Sgall et al. 1973, 1980, 1986). This restriction may provide an explanation for the fact that, in some verb-initial contexts, the verb has fronted when there are other

XP's in the clause which could move. If these XP's cannot be associated with a topic interpretation, fronting is not felicitous.<sup>12</sup>

Given this analysis, it is possible to assume that the EPP is obligatorily associated with  $I^0$ . Czech provides two ways to satisfy the EPP: movement of an XP to [Spec, IP] or head raising of the finite verb. Verb raising is a last resort; it occurs only when there is no overt XP in the clause which can be associated with a topic discourse function.

## **6 Discoursally Motivated A-bar Movement**

Under the Minimalist Program, all movements are motivated by uninterpretable features on either the goal or the probe. In the case of discoursally motivated displacement, these features correspond to discourse features. In the following sections, I present evidence that suggests that, in Czech, all discoursally motivated movements are of the A-bar type. To provide a context for the discussion, I first establish the A-bar character of wh-movement in Czech.

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<sup>12</sup> Additional evidence for this restriction comes from Cummins 1998. Czech lacks obligatory definite and indefinite determiners and Cummins argues that syntactic position serves to mark definiteness. Clause-initial DP's are obligatorily associated with a definite interpretation. One reason for this interpretative restriction may be that the sentence-initial position is associated with a topic interpretation, an interpretation generally unavailable for indefinites.

## 6.1 Wh-movement

Czech wh-movement exhibits two familiar characteristics of A-bar constructions: long distance dependencies and island sensitivity. Extraction of wh-expressions out of all types of embedded clauses is possible. Consider the examples in (31a-b). Extraction out of the finite complement to the bridge verb *myslet* ('think.inf') is illustrated in (31a).

- (31) a. Koho<sub>1</sub> myslíš, že Marie pozvala t<sub>1</sub> na tu párty?  
*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?'

In (31b), a wh-phrase is extracted out of an embedded subjunctive clause in an object control structure.

- b. Co<sub>1</sub> jsi požádala Marii, aby mi koupila t<sub>1</sub>?  
*what AUX.2SG.CL requested Marie.ACC C.COND.3SG.CL me.DAT.CL bought*  
'What<sub>1</sub> did you ask Marie to buy me t<sub>1</sub>?'

As expected, wh-movement also obeys well-known island constraints. (32a)

illustrates a wh-island and (32b) a Complex NP island.

- (32) a. \*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*  
Lit: 'To who<sub>2</sub> do you wonder who<sub>1</sub> Marie introduced t<sub>1</sub> t<sub>2</sub>?'
- b. \*Komu<sub>1</sub> viděla Hana chlapa, který dal t<sub>1</sub> kytky?  
*who.DAT saw Hana guy REL gave flowers*  
Lit: 'To who<sub>1</sub> did Hana see a guy who gave flowers t<sub>1</sub>?'

Following standard analyses, I assume that Czech wh-movement is an operator-variable A-bar construction (for current approaches to operator movement in Minimalism see Reinhart 1998, Fox 2002, Adger and Ramchand 2005). An interpretable wh-operator feature, *q*, appears on a functional head at the left edge, as

well as an uninterpretable wh feature. Wh-expressions have an uninterpretable q feature and an interpretable wh feature on the head of their phrase. Thus, both the probe and the goal are active as both are associated with uninterpretable features. Czech has overt wh-movement, so the probe is associated with an EPP feature which motivates overt movement of the wh-expression into its specifier. In Czech, it appears that wh-movement targets [Spec, IP] rather than [Spec, CP], as is often assumed.<sup>13</sup> Evidence for this structural position is that fronted wh-phrases cannot occur with topical elements in the pre-clitic domain, see (33); wh-phrases appear to compete for the same position, [Spec, IP] (see also Lenertová 2001).<sup>14</sup>

- (33) \*Co Honza<sub>T</sub> by                    na to řekl?  
       *what Honza COND.3SG.CL on it say*  
       Intended: ‘What would Honza<sub>T</sub> say about that?’

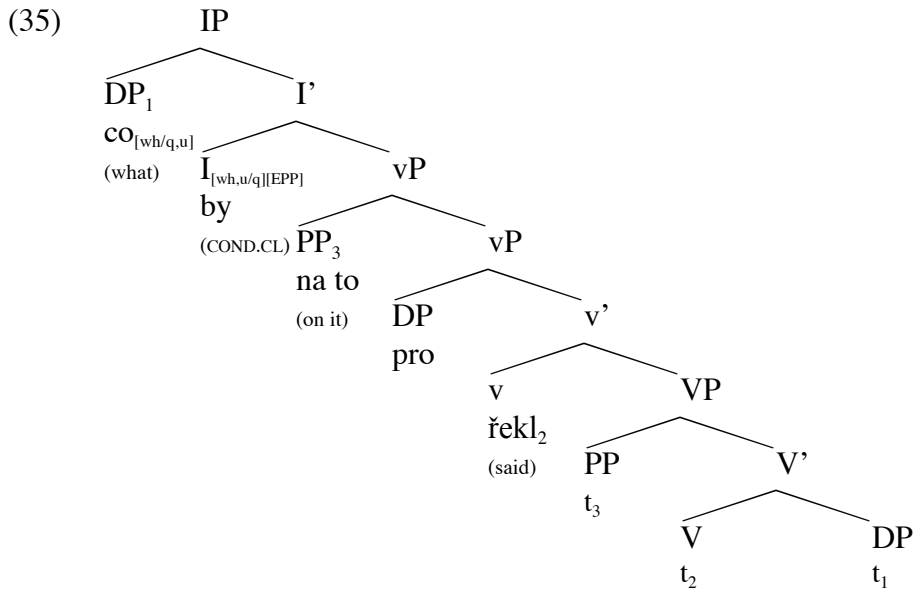
A illustrative tree for (34) is given in (35).

- (34) Co by                    na to řekl?  
       *what COND.3SG.CL on it say*  
       ‘What would he say about that?’

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<sup>13</sup> Manetta 2006 also assumes a low target for wh-movement in Hindi-Urdu. She assumes that the wh-phrase target [Spec, vP].

<sup>14</sup> In section 7 I return to this issue and show that wh-phrases can occur with CT’s in the preclitic domain. An expanded left periphery is posited at that point.



The uninterpretable features on the wh-phrase and  $I^0$  are valued through the movement operation (Agree and Remerge) of the wh-phrase to [Spec, IP]. The PP, *na to* ('on it'), scrambles to an adjoined position in the vP domain.

There is an additional complication, however. Czech is among the languages that allow multiple wh-fronting. Rudin 1988 divides multiple wh-fronting languages into two categories: +Multiply Filled Specifier, [+MFS], and –Multiply Filled Specifier, [-MFS]. Under her proposal, which is adopted in Richards 2001, languages either allow multiple movement to [Spec, CP] ([+MFS]) or restrict movement to [Spec, CP] to one wh-expression and adjoin other wh-phrases to a lower projection. Bulgarian and Romanian are languages of the first type, while Czech, along with Polish and Serbo-Croatian, are of the second type. For me, one wh-phrase in Czech fronts to [Spec, IP] and enters into a checking relationship with  $I^0$ , other wh-phrases adjoin to a lower projection.

Czech patterns with the [-MFS] languages according to two of the key diagnostics. The first diagnostic Rudin 1988 uses to distinguish between [+MFS] and [-MFS] languages is wh-island effects. The prediction is that [+MFS] languages should not show wh-island effects since there are multiple specifier positions of  $C^0$  in the embedded domain through which multiple wh-phrases can move, thereby escaping embedded clauses. Consider (36) for Bulgarian. It is fairly acceptable for a heavy wh-phrase to escape a wh-island.

- (36) ?[Koja ot tezi knigi]<sub>2</sub> se čudiš koj znae koj<sub>1</sub> prodava t<sub>1</sub> t<sub>2</sub>?  
*which of these books REFL-CL wonder who knows who sells*  
 ‘[Which of these books]<sub>2</sub> do you wonder who knows who<sub>1</sub> sells t<sub>1</sub> t<sub>2</sub>?’  
 (Rudin 1988: (20b))

[-MFS] languages, on the other hand, exhibit wh-island effects since there is only one specifier position of  $I^0$ . If this position is filled, as it is in embedded wh-questions, additional wh-phrases are restricted from moving out of the embedded clause. This restriction holds in Czech, see (32a).

The second diagnostic is Superiority. Czech patterns with other [-MFS] languages in that it lack Superiority effects in wh-questions. [+MFS] languages, on the other hand, respect Superiority; this is expected as movement to specifier positions is motivated by features of the attracting head ( $C^0$  in Rudin’s account). The highest wh-phrase within the clause is attracted first and moves into the highest specifier position; lower wh-phrases move to lower specifier positions of  $C^0$ . Wh-movement in Bulgarian, [+MFS] language, respects Superiority, (37a-b).

(37) a. Koj kogo vižda?  
*who.NOM who.ACC sees*  
'Who sees who?'

b. \*Kogo koj vižda?  
*who.ACC who.NOM sees*  
Intended: 'Who sees who?'

Czech, in contrast, entirely lacks Superiority effects in multiple wh-questions, (38).

(38) 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?'

Richards 2001 argues that the lack of Superiority effects is a direct result of the possibility of adjunction to a lower functional head in [-MFS] languages. Since the order of adjoined XP's is not restricted, if wh-phrases first adjoin to a lower functional projection and then the highest wh-expression raises to the specifier position of the attracting head, Superiority effects are not expected. Under this assumption, leftward movement of wh-phrases parallels that of non-wh-expressions which also first adjoin to a lower functional projection, see §5.1.

What structural position do the lower wh-phrases occupy? Rudin 1988 and Richards 2001 assume that they adjoin to IP. New evidence from Czech, however, suggest that lower wh-phrases target a lower functional projection, vP. The first wh-expression is separated from subsequent ones by the clitic cluster. Since clitics are, by assumption, in I<sup>0</sup>, this suggests that the lower wh-phrases adjoin to vP, rather than IP.<sup>15</sup> I assume that all wh-phrases first adjoin to vP, and from there, the highest wh-

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<sup>15</sup> Additional evidence for the lower adjunction site is provided in section 7.

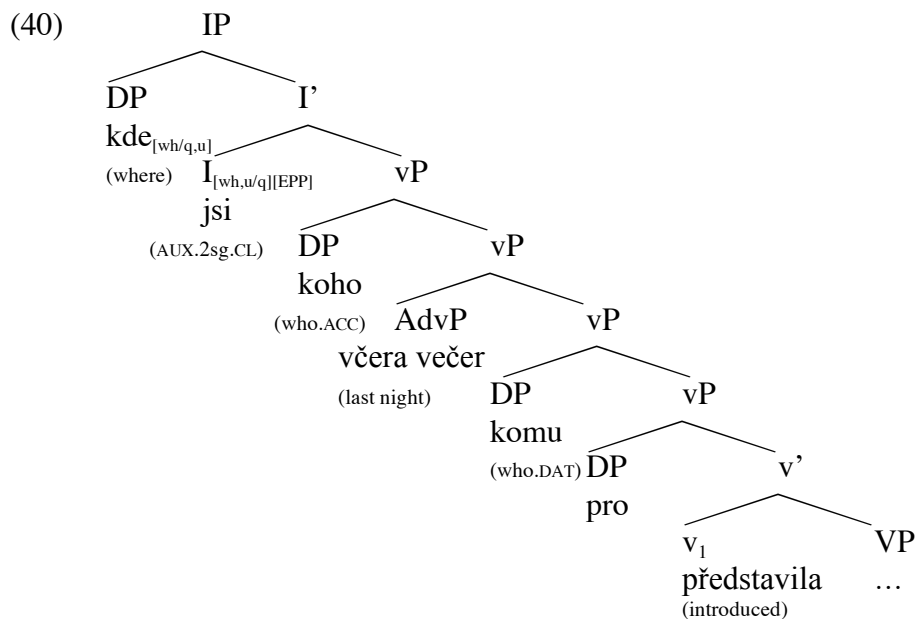
phrase raises to satisfy the EPP on  $I^0$ . The q-feature on other wh-phrases is also checked by  $I^0$  via static Agree, but there is no additional leftward movement.

If wh-phrases adjoin to vP, rather than IP, the prediction is that they can intervene between other non-wh elements in the middlefield. This is indeed possible.

In (39), the interleaving of wh- and non-wh-phrases in the middlefield suggests that lower wh-expressions do adjoin to vP.

- (39) 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 who last night?'  
 Lit: 'Where (last night) who (last night) to who introduced?'

The structure of (39) is illustrated in (40).



In the following sections, I consider focus movement and contrastive topicalization. I show that properties of contrastive topicalization in Czech parallel

those of wh-movement, suggesting that contrastive topicalization is also an A-bar movement.

## *6.2 Focus*

Because the subject of this dissertation is contrastive topic constructions, not focus, I will not provide a detailed syntactic analysis of focus movement. I assume that leftward movement of elements for interpretation as foci is an operator-variable A-bar movement motivated by syntactic features in  $I^0$ . Focused elements, however, can also be interpreted in their base positions at the right edge of the clause, suggesting that syntactic movement is not the whole story for focus in Czech. Some researchers, e.g. Büring 2001 and Arregi 2001, have argued for a prosodic analysis of focus placement in which focused elements are positioned in clausal positions where they can receive the required intonational rise. It is likely that intonational constraints play a role in motivating the structural position of focused elements in Czech, but I will not develop such an account here.

## *6.3 Contrastive Topicalization*

Czech contrastive topicalization exhibits typical characteristics of A-bar movement: reconstruction and long distance dependencies. To illustrate that contrastive topics are evaluated for Condition A in their base position, and not in [Spec, IP], I first show that Czech possessive and non-possessive reflexives obey Condition A. A version of this constraint is provided in (41-43).

- (41) *Binding Domain:*<sup>16</sup>  
A binding domain for  $\alpha$  is the most deeply embedded Complete Functional Complex (CFC) containing  $\alpha$  in which the basic binding requirements for  $\alpha$  can be met.
- (42) *Complete Functional Complex:*  
An XP in which all the  $\theta$ -roles compatible with a lexical head are assigned in A-positions.
- (43) *Condition A:*  
For  $\alpha$ , an anaphor, its basic binding requirements can be met in principle in a category C iff there is an assignment of indices to DP's within C (perhaps different from the actual assignment of indices within C) according to which  $\alpha$  is A-bound.

A reflexive possessive must be grammatically bound within its binding domain. This condition holds in (44).<sup>17</sup>

- (44) Honza<sub>1</sub> dal svému<sub>1</sub> příteli dárek.  
*Honza gave self's friend.DAT present*  
'Honza<sub>1</sub> gave his<sub>1</sub> friend a present.'

Czech has no logophoric uses of reflexive pronouns (see Sturgeon 2003). The possessive reflexive in (45) is ungrammatical because it appears across a sentence boundary from its antecedent and thus, c-command between the antecedent and the reflexive cannot hold.

- (45) Honza<sub>1</sub> měl narozeniny minulý týden. \*Svůj<sub>1</sub> přítel mu dal dárek.  
*Honza had birthday last week self's friend him.CL gave present*  
'Honza<sub>1</sub> had a birthday last week. His<sub>1</sub> friend gave him a present.'

Possessive reflexives occur freely in [Spec, IP] as subparts of contrastive topics, (46).

<sup>16</sup> A slight reformulation of Chomsky 1986 due to James McCloskey.

<sup>17</sup> All Czech reflexive pronouns are subject oriented and, thus, must be anteceded by a subject argument (see Sturgeon 2003):

- (46) [Svůj<sub>1</sub> sešit]<sub>CT</sub> jsem ztratil<sub>1</sub>, ale [svou<sub>1</sub> učebnici]<sub>CT</sub> ještě mám<sub>1</sub>.  
*self's notebook.ACC AUX.ISG.CL lost but self's textbook.ACC still have*  
 'I lost [my notebook]<sub>CT</sub>, but still have [my textbook]<sub>CT</sub>.'

After movement of the contrastive topic to the left edge, the reflexive possessive is no longer c-commanded by its antecedent. Given the grammaticality of (46), Condition A must be evaluated after reconstruction of the contrastive topic to its base position within the VP.

Reconstruction for quantifier binding also holds for contrastively topicalized elements. Like reflexive binding, quantifier binding requires that a quantificational DP c-command a bound pronominal. The bound pronominal in (47) is ungrammatical because the quantifier does not c-command it.

- (47) \*Svůj<sub>1</sub> pes kousnul každého<sub>1</sub> majitele.  
*self's dog bit every owner*  
 Intended: 'His<sub>1</sub> dog bit every<sub>1</sub> owner.'

In (48), the bound pronominal reading is available because the quantified NP c-commands the bound pronominal.

- (48) Každý<sub>1</sub> majitel krmil svého<sub>1</sub> psa.  
*every owner fed self's dog*  
 'Every<sub>1</sub> owner fed his<sub>1</sub> dog.'

The structural requirements for quantifier binding must also be evaluated after reconstruction, since contrastive topics can contain bound elements, see (49).

- (49) [Své<sub>1</sub> dceři]<sub>CT</sub> každá matka<sub>1</sub> dala do školy nové šaty, ale [svému<sub>1</sub> synovi]<sub>CT</sub> ne [~~dala každá matka<sub>1</sub> do školy nové šaty~~].  
*self's daughter.DAT every mother gave to school new clothes but self's son.DAT no gave every mother to school new clothes*  
 'Every mother gave her daughter new clothes for school, but not her son.'

Another diagnostic for A-bar movement is the possibility of long distance dependencies. Though it is generally less felicitous than long distance wh-movement, contrastive topics at the left edge of a matrix clause can be associated with a position within an embedded clause, (50).

- (50) a. *Ve třídě jsou čtyři žáci a tři ještě nemají učebnici.*  
*in class are four students and three still NEG-have textbooks*
- b. [Honzovi<sub>i</sub>]<sub>CT</sub> mi říkali, že učitel ji už dal t<sub>i</sub>, ale ostatním<sub>CT</sub>  
*Honza.DAT me.DAT told.PL C teacher it.CL already gave but others*  
*ještě ne.*  
*still no*
- 'There are four students in the class and three still don't have textbooks. Honza<sub>CT</sub> they told me the teacher gave a textbook to, but the others<sub>CT</sub> she hasn't yet.'

This long distance dependency, along with the evidence from reconstruction for binding, suggests that [Spec, IP] is an A-bar position and that the contrastive topic moves to this position for reasons unrelated to case assignment.

### 6.3.1 Weak Crossover

Since the early 1970's, researchers have distinguished various types of A-bar dependencies. Rizzi 1997 divides A-bar movements into two classes: operator movement constructions that bind a variable (wh-movement) and those that don't (topicalization). To distinguish these two classes, he uses the diagnostic introduced in Lasnik and Stowell 1991, Weak Crossover (WCO). WCO is used to identify 'true quantifier' constructions, A-bar constructions in which a syntactic operator binds a variable in the position of the trace.

For Lasnik and Stowell, English wh-movement is a true quantifier construction because it exhibits WCO effects. Co-variation between lawyers and that lawyer's clients is not possible in (51).

(51) \*Which lawyer<sub>1</sub> do his<sub>1</sub> clients hate?

English topicalization, however, does not exhibit WCO effects, (52).

(52) That first grader<sub>1</sub> I saw his<sub>1</sub> teacher scold, but that second grader<sub>1</sub> I didn't [~~see his<sub>1</sub> teacher scold~~].

Given evidence of this type, Lasnik and Stowell 1991 conclude that the syntactic nature of the movement operations in wh-movement and topicalization differ. In wh-constructions, an operator binds a variable in the position of its trace, but in English topicalization constructions there is no such binding.

WCO does not distinguish these two types of A-bar movements in Czech, however. Richards 2001 presents evidence that [-MFS] languages (for him, IP-absorption languages), such as Serbo-Croatian, do not exhibit WCO effects, even in wh-constructions. This also true for Czech. There is an available reading of (53) in which lawyers and their clients do co-vary.

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

Richards 2001 proposes that WCO effects are ameliorated by local A-scrambling of wh-phrases to adjoined positions in the IP (for me, the vP). From this adjoined

position, binding relations are established and WCO effects obviated.<sup>18,19</sup> Independent of wh- and CT-movement, otherwise expected WCO effects are obviated by overt scrambling to vP. We know that neither DP in (54) is in [Spec, IP] due to the presence of the adverbial, *včera* ('yesterday') at the left edge.

- (54) *Včera každého kluka<sub>1</sub> jeho<sub>1</sub> matka napomenula.*  
*yesterday every boy his mother scolded*  
 'Yesterday every boy was scolded by his mother.'  
 Lit: 'Yesterday every boy<sub>1</sub> his<sub>1</sub> mother scolded.'

The accusative marked DP, *každého kluka* ('every boy.ACC'), can bind the nominative DP, *jeho matka* ('his mother'), even though the nominative argument c-commands its base position. Some binding relationships appear to be established in scrambled positions in the vP domain.

WCO effects are absent in contrastive topicalization in Czech, (55). Since WCO effects are not found in wh-constructions, the absence of such effects in this construction is not surprising, and does not imply that wh-movement and CT-movement do not involve operator-variable A-bar movement.

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<sup>18</sup> This scrambling ameliorates WCO in local wh-movement. However, Richards 2001 predicts that WCO should hold in long distance wh-questions since local A-scrambling may not obviate this effect. This does not appear to be the case in Czech, see (i).

- (i) [Kterého právníka<sub>1</sub>]<sub>2</sub> řekl Honza, že jeho<sub>1</sub> klienti nenávidí t<sub>2</sub>?  
*which lawyer said Honza C his clients hate*  
 Lit: '[Which lawyer<sub>1</sub>]<sub>2</sub> did Honza say his<sub>1</sub> clients hate t<sub>2</sub>?'  
 This is an issue for future research.

<sup>19</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.'

- (55) Prváka<sub>1</sub> jsem neslyšela jeho<sub>1</sub> učitelku napomenout, ale toho  
*first-grader AUX.ISG.CL NEG-heard his teacher scold.INF but that*  
 druháka<sub>1</sub> jo [jsem ~~slyšela jeho<sub>1</sub> učitelku napomenout~~].  
*second-grader yes AUX.ISG.CL heard his teacher scold.INF*  
 ‘The first grader<sub>1</sub> I didn’t hear his<sub>1</sub> teacher scold, but that second grader<sub>1</sub> I did  
 [hear his<sub>1</sub> teacher scold].’

To account for the symmetry between wh- and CT-movement, I assume parallel syntactic derivations. XP’s scramble to positions adjoined to vP in both constructions. This ameliorates WCO. The highest element in the vP domain raises to [Spec, IP] and binds a variable in the position of the trace.

If WCO does not determine the type of A-bar movement instantiated by CT-movement, alternative means must be found. In the following section, I adopt Authier’s 1993 strategy for identifying operator-variable constructions.

### 6.3.2 *The operator-variable nature of Contrastive Topicalization*

Lasnik and Stowell 1991 suggest that one characteristic of ‘true quantifiers’ in operator-variable constructions is that they range over a possibly non-singleton set. CT constructions in Czech exhibit just this characteristic. Part of the conventional meaning of contrastive topicalization is that the discourse referent of a CT is a member of a non-singleton set (see chapter 4 for a more thorough discussion of the pragmatics of this construction). The CT construction in (56) conventionally implicates that there are other discourse referents under discussion with respect to the same open proposition, ‘I know/don’t know x’; the same is true for the English equivalent.

- (56) [Toho pána]<sub>CT</sub> neznám.  
*that man.ACC NEG-know*  
 'That man I don't know him.'

This characteristic of CT constructions follows from an operator-variable analysis.

Authier 1993 identifies another diagnostic for operator-variable constructions: participation in pairings of members of two sets. (57a) illustrates a felicitous multiple wh-question. The structure of the question indicates that a felicitous answer is a potluck attendee-potluck dish pair, (57b).

- (57) a. Who brought what to the potluck?  
 b. Mark the bean dip, Sally the casserole

This participation in multiple pairings follows from the operator-variable analysis of wh-movement in English.

However, unlike regular wh-questions, echo questions do not participate in multiple wh-questions in which there are pairings between members of two (or more) sets. (58) is, thus, infelicitous. Authier indicates an echo wh-phrase with an '↑'.

- (58) \*Who↑ did what? (Authier 1993: (10b))

Authier concludes from this that echo wh-constructions are non-quantificational and, thus, are not operator-variable constructions. The prediction, then, is that they will not exhibit WCO effects, as opposed to quantificational non-echo wh-questions. This is borne out in (59a). Compare the wh-question in (59b) to the echo question in (59a).

- (59) a. Who<sub>1</sub>↑ did [the claim that he<sub>1</sub> was drunk] bother?

- b. \*Who<sub>1</sub> did [the claim that he<sub>1</sub> was drunk] bother?  
(Authier 1993: (8a))

CT constructions behave like non-echo wh-questions in that pairings between members of two sets are not only possible, but extremely common. Multiple wh-questions are often answered by CT constructions, see (60a-b).<sup>20</sup>

- (60) a. Kdo co přinesl?  
*who what brought*  
'Who brought what?'
- b. Honza<sub>CT</sub> přinesl [vepřové maso s knedlíky]<sub>F</sub> a Marta<sub>CT</sub> bábovku<sub>F</sub>.  
*Honza brought pork meat with dumplings and Marta babovka*  
'Honza<sub>CT</sub> brought [the pork and dumplings]<sub>F</sub> and Marta<sub>CT</sub> [the pound cake]<sub>F</sub>.'

In (60b) guests are paired with dishes as an answer to (60a) (the opposite pairing of discourse function and participant is also possible).

CT constructions instantiate two characteristics of operator-variable constructions. I, therefore, conclude that CT movement in Czech is an operator-variable A-bar movement.

### 6.3.3 Syntactic analysis of CT constructions

I analyze operator movement for contrastive topicalization on a par with operator movement in wh-constructions. The head of the contrastively topicalized XP has an interpretable CT feature (comparable to an interpretable wh feature) as well as an uninterpretable CT operator feature, which I will call *ct* (comparable to the *q* feature).

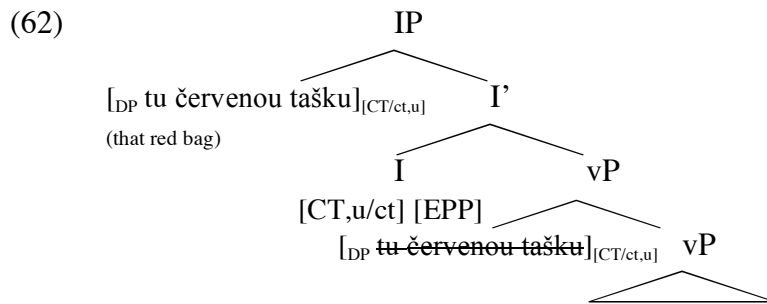
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<sup>20</sup> Topicalization in English also exhibits these two characteristics of operator-variable constructions: their discourse referents are members of a non-singleton set and they participate in pairings between members of two or more sets. This suggests that the role of WCO as a diagnostic of operator-variable constructions may be overstated (see Lasnik and Stowell 1991).

The landing site for CT's is [Spec, IP] and the head of that projection bears an interpretable ct feature and an uninterpretable CT feature, as well as the EPP.

The tree in (62) illustrates the analysis of (61).

- (61) [Tu červenou tašku]<sub>CT</sub> si koupila Jana<sub>F</sub>.  
*that red bag.ACC REFL-CL bought Jana*  
 'The red bag]<sub>CT</sub> Jana<sub>F</sub> bought.'



First, the CT'ed DP, *the red bag*, scrambles to an adjoined position in the vP domain. It then raises to [Spec, IP] to satisfy the EPP feature on I<sup>0</sup> and check the uninterpretable features associated with the moved element and the head of the landing site, I<sup>0</sup>. Assuming a Copy and Delete theory of movement, the bottom copy deletes and the top copy is pronounced.

## 7 Another Look at Multiple Wh-Questions

Now that the syntactic behavior of contrastive topicalization constructions has been shown to be that of operator-variable A-bar movement, it is possible to turn to a

puzzle concerning multiple wh-movement in Czech.<sup>21</sup> Though, normally, two XP's cannot appear before the clitic cluster, the order shown in (62) is fully grammatical.

(63) WH > CT > clitic cluster

In this section, we consider what syntactic characteristic of wh-movement allows wh-phrases to co-occur with CT's in the pre-clitic domain, but restricts the co-occurrence of non-wh-XP's, (20) and (24).

### 7.1 Multiple pre-clitic XP's

The question in (64) is an attested example. Both the wh-phrase, *co* ('what') and the contrastive topic, *Ema*, precede the second position clitic. We know that *Ema* is a CT because that DP is associated with intonational rise. An example of this type would occur in a context in which the speaker is considering several individuals with respect to their feelings about a particular topic. The sentence preceding (64) is: 'And Josef, he likes the idea'.

(64) A co Ema<sub>CT</sub> by na to řekla?  
*and what Ema COND.3SG.CL on it say*  
 'And what would Ema say about that?' (Lenertova 2001: (8))

The grammaticality of (64) contrasts robustly with the question in (65) in which a topic and a wh-phrase precede a clitic.

(65) \*Co Honza<sub>T</sub> mu dal?  
*what Honza him.CL gave*  
 'What did Honza give him?'

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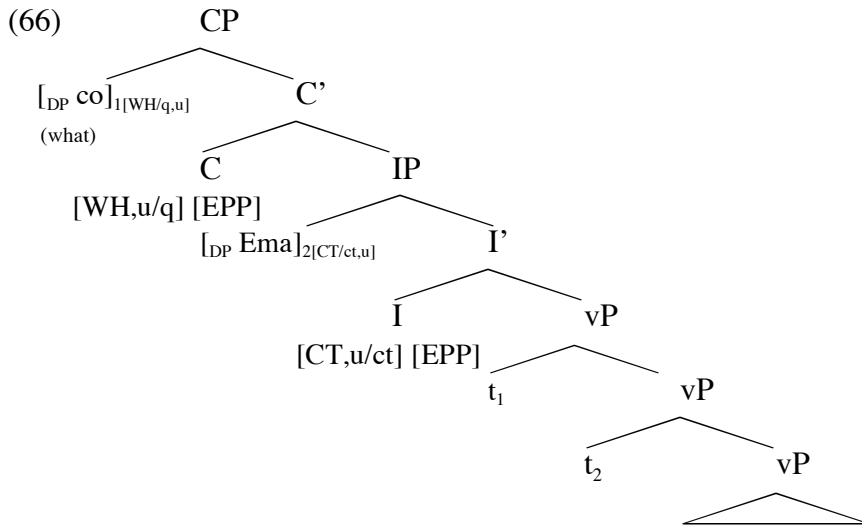
<sup>21</sup> Lenertová 2001 asserts that wh-expressions can be interpreted *in situ*. I have not found examples of wh-*in situ* to be grammatical for my consultants and, therefore, do not consider examples of that type here.

There is an important difference between the co-occurrence of a CT and a wh-phrase and that of a wh-phrase and a topic.<sup>22</sup> Both CT's and wh-phrases participate in operator-variable movement associated with particular feature matrices ([wh, q] for wh-movement and [CT, ct] for contrastive topicalization). XP's associated with these features must move to the left periphery in order to be interpreted felicitously. An XP interpreted as a topic, on the other hand, fronts only to satisfy the EPP on I<sup>0</sup>.

To account for the grammatical co-occurrence of wh-phrases and CT's, I assume that it is a fact of the Czech lexicon that the featural matrices associated with wh-constructions ([wh,u/q]) can appear in either C<sup>0</sup> or I<sup>0</sup>. The features associated with CT-movement, however, are obligatorily associated with I<sup>0</sup>. A C<sup>0</sup> associated with wh-features may select for an I<sup>0</sup> associated with CT features. Thus, in a derivation involving wh-movement and CT-movement, wh-features appear in C<sup>0</sup> and those associated with CT-movement appear in I<sup>0</sup>. This raises the question whether wh-features always have the option of appearing on C<sup>0</sup>. I assume that structural economy conditions restrict wh-features from appearing on C<sup>0</sup> when they could appear on I<sup>0</sup>. The tree in (66) illustrates the proposal.

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<sup>22</sup> I assume that wh-phrases and focused elements cannot co-occur in the left periphery since they instantiate the same discourse function.



It is also possible for the CT to appear in a post-clitic position, (67). We know that *Ema* is a CT and not a scrambled element in the vP domain because it is associated with the same intonational rise here as in (64) and would be used in the same contexts.

- (67) A co by Ema<sub>CT</sub> na to řekla?  
*and what COND.3SG.CL Ema on it say*  
 'And what would Ema say about that?'

To account for the two positions of the clitic cluster, I assume that clitics can appear in I<sup>0</sup> or optionally raise to the next higher head, C<sup>0</sup>, when it is projected.

One last question remains. Why are CT's and foci restricted in the pre-clitic domain? Consider the ungrammatical (68), repeated from (20a).

- (68) \*Honzovi<sub>F</sub> knížku<sub>CT</sub> jsem dala.  
*Honza.DAT book AUX.ISG.CL gave*  
 Intended: 'I gave Honza<sub>F</sub> [the book]<sub>CT</sub>.'

Under the assumption that features associated with focus movement, as well as those associated with CT-movement, are restricted to I<sup>0</sup>, this pattern is expected. There is

only one preclitic position which can host discursal features. If  $I^0$  is associated with either focus or CT-features, it is not possible for features associated with the other type of discursal movement to appear in the left periphery. Thus, only a CT or a focused element can appear in the pre-clitic position.

### 7.2 *The position of non-initial wh-phrases*

The possibility of two elements in the pre-clitic domain provides more direct evidence that non-initial wh-phrases adjoin to vP, rather than IP. Let us consider the facts. CT's obligatorily appear in [Spec, IP]. When they co-occur appear in wh-questions, they immediately follow the first wh-phrase, (69a). Other wh-expressions follow both the CT and the clitic cluster, suggesting that they appear below  $I^0$ , in the vP domain.

- (69) a. Kde ty<sub>CT</sub>-jsi koho komu představila?  
*where you AUX.2SG.CL who.ACC who.DAT introduced*  
 'Where did you<sub>CT</sub> introduce who to who?'  
 Lit: 'Where you<sub>CT</sub> who to who introduced?'

Alternative orders of the adjoined wh-phrases and the CT are considerably degraded, (69b).

- b. ??Kde koho komu ty<sub>CT</sub> jsi představila?  
*where who.ACC who.DAT you AUX.2SG.CL introduced*  
 Intended: 'Who did you<sub>CT</sub> introduce to who?'

If we assume that non-initial wh-phrases adjoin to vP, the facts presented in (69a-b) follow. Assuming that they adjoin to IP would incorrectly predict (69b) to be grammatical.

The assumption that wh-features, in the lexicon, are associated with either  $I^0$  or  $C^0$ , while discursal features are restricted to  $I^0$ , allows us to account for the co-occurrence restrictions found in the left periphery. Wh-expressions can co-occur with CT's in the pre-clitic position, but no other combination of XP's is allowed. Once the relative positions of wh-phrases, CT's and non-initial wh-expressions has been established, additional evidence for a low position of these wh-expressions is available. Since non-initial wh-phrases obligatorily follow the CT, they must hang in an adjoined position within the vP, below  $I^0$ , while the CT occupies [Spec, IP].

## 8 Conclusion

In this chapter, I have established the basic assumptions about Czech clause structure that underlie the analysis to come. With the exception discussed in the last section, all elements in the Czech clause appear within the IP. Unlike other approaches to the left periphery, for Czech, positing an exploded CP domain (or even making use of CP in all clauses) is unnecessary. Facts which support this analysis are the low position of the lexical verb (in  $v^0$ ) and the fact that the left peripheral position is restricted to one XP.

Two head positions anchor Czech clause structure:  $I^0$  and  $v^0$ . The lexical verb appears in the lowest  $v^0$  position and clitics appear in  $I^0$ . Various diagnostics establish the position of the lexical verb in the verbal domain: the positions of VP adverbs and VPE. VP adverbs must precede the lexical verb and lexical verbs cannot be stranded

in VPE. Additionally, positioning verbal and pronominal clitics in  $I^0$  allows us to understand the distribution of XP's in the Czech clause. One specifier position, which can be filled by contrastive topics, topics, foci or wh-phrases, precedes the clitic cluster. The middlefield of Czech is the domain between  $v^0$  and  $I^0$ , and XP's which are given in the discourse context can scramble to adjoined positions in this span of the clause.

Given the analysis presented in this chapter, the pivotal left-peripheral A-bar position in Czech is [Spec, IP], not [Spec, CP]. All left-peripheral XP's (wh-expressions, CT's, focused elements and topics) can be accommodated within the IP. Avoiding a proliferation of functional projections is thus possible in the left peripheral domain.