The T-Extension Condition*

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Abstract

This paper presents a case study of Czech that opens a possibility of unifying various second-position phenomena as instances of an interface condition on head extension. The condition requires a head to undergo at least two instances of merge within its phase. The core of the paper explores properties of T. It is shown that any merge (external or internal, merge of a head or a phrase) yields a well-formed structure. Since it does not matter to the requirement what category merges to T, the condition must be stated as a general requirement on what category may be the root.

Keywords: EPP, second-position clitics, tree extension, Czech, interface filters

1 Introduction

In Czech, certain verbal forms cannot be sentence initial (henceforth, V1), as in (1). Surprisingly, as noticed by Ceplová (2003), the clauses improve if further embedded, as in (2).[1]

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[1]The data reported here are mostly from Standard Czech. However, some of the discussion will refer to Moravian Czech, an interdialect spoken by approximately 1 million speakers in the eastern part of the Czech Republic. Since in most cases there will be no significant difference between Standard Czech and Moravian Czech, I will use the word 'Czech' indescriminately. Whenever the difference becomes relevant, it will be clearly flagged. The reported judgements that are not from the literature were collected by elliciting native speakers's acceptability judgments and paper questionnaires. The speakers were originally from the Brno and Olomouc area, with a college degree and in their twenties or early thirties.

(1) *Illegitimate V1 clauses:*

a. ***Jsem** mluvil s Lucií.
AUX-PAST.1.SG talked.PP with Lucie
'I talked to Lucie.'

b. ***Bychom** mluvili s Lucií.
AUX-COND.1.PL talked.PP with Lucie
'We would talk to Lucie.'

(2) *V1 clauses are legitimate under embedding:*

a. Petr ví, že **jsem** mluvil s Lucií.
Petr knows that AUX-PAST.1.SG talked.PP with Lucie
'Petr knows that I talked to Lucie.'

b. Petr se ptal, zdali **bychom** mluvili s Lucií.
Petr REFL asked.PP whether AUX-COND.1.PL talked.PP with Lucie
'Petr asked whether we would talk to Lucie.'

Illegal V1 forms have been traditionally identified as second position (2P) verbal clitics (Veselovská, 1995; Franks, 1998; Bošković, 2001, among others). Under this view, the matrix-embedded asymmetry follows from the fact that they must be linearly preceded by phonologically overt material. I will provide evidence that there is another property that distinguishes verbal clitics from other verbal form: verbal clitics are base generated as T. In the light of this fact we might want to consider another hypothesis: it is plausible that the examples in (1) are not well-formed because they violate something like the EPP requirement.

I will argue that the right way to think about the pattern is indeed in terms of extension. In particular, I will argue that what causes the appearance of the second-position behavior of these verbal elements, i.e., those and only those that are base generated as instances of T, is an independent restriction on certain functional heads to be the last merged element within their phase. With this restriction in place, such a structure may be well-formed only if it is further extended.

As the embedding pattern in (2) suggests, however, Czech is less selective than other languages in what may satisfy the extension requirement. No matter which familiar version

of the EPP we consider here (Chomsky 1981, 1982, 1995; Alexiadou and Anagnostopoulou 1998, or Holmberg 2000), we will still not be able to capture the matrix-embedded asymmetry of (1) vs. (2). Instead of the EPP, I will argue that in order to account for the data we need the more general condition in (3).[2]

(3) **The T-Extension Condition (TEC):**
If Merge(T,α) applies, Merge(T',β) must be the next step of the derivation, where
(i) T' is a projection of T, and
(ii) β belongs to the same phase as T.

Since all that is required[3] is the existence of Merge(T',β), where T' is a projection of T, the TEC makes the following predictions:

(4) *Predictions made by the TEC:*
a. There is a heterogeneous set of merge operations that satisfy the TEC.
b. It is immaterial whether T or β is the category that projects.
c. It is immaterial where β merges: both merge to the root and head adjunction should suffice.
d. If β is merged outside of the phase of T, then it cannot satisfy the TEC.

Let's start with (4-a). Since there is no further restriction on the type of merge that satisfies the TEC, (3) predicts that any merge, be it internal or external, (or merge of a head or merge of a phrase) will do.[4]

[2]This definition is equivalent to the representational definition in (i) where asymmetric c-command is defined as in Kayne (1994), following May (1985). In this paper I will stick to the derivational definition in (3) but nothing I will say hinges upon this choice.

(i) *The T-Extension Condition* [representational version]
If there is T in the structure, then there must be α such that
a. α asymmetrically c-commands T, and
i α is within the phase of T (its CP).

[3]I will leave for now aside the question of the 2P clitics and the EPP with respect to the TEC. I will come back to it in the end of this section.

[4]If the merge operation is independently legal, of course. I use the term *merge* in the sense of Chomsky (2004). External merge corresponds to merge and internal merge to move in older terminology, for example that of Chomsky (1995).

Consider examples in (5)–(9). As I will show in detail in section 2, the finite verbs (in bold) are merged as instances of T. As such, they are subject to the TEC. As we can see, the condition gets satisfied by *internal merge of a phrase* (such as an adverb in (5), a subject in (6), a PP in (7), *wh*-object in (8), or a remnant VP in (9)). The TEC is possibly satisfied by *external merge of a phrase* as well, if the adverb in (5) has not moved into its surface position.

(5) Včera **jsem** mluvil s Lucií. `adverb`
yesterday AUX-PAST.1.SG talked.PP with Lucie
'Yesterday I talked to Lucie.'

(6) Petr **by** mluvil s Lucií. `subject`
Petr AUX-COND.3.SG talked.PP with Lucie
'Petr would talk to Lucie.'

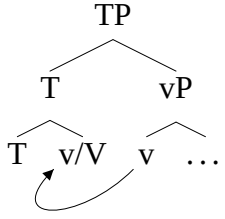
(7) S Lucií **by** mluvil Petr. `PP`
with Lucie AUX-COND.3.SG talked.PP Petr
'It would be Petr who would talk to Lucie.'

(8) Koho **jsem** viděl mluvit s Lucií? `wh-object`
whom AUX-PAST.1.SG seen.PP talk.INF with Lucie
'Who did I see talking to Lucie?'

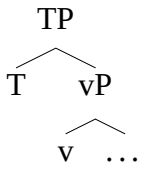
(9) [Jíst jablko] **jsem** viděl Lucii. `remnant VP`
eat.INF apple.ACC AUX-PAST.1.SG seen.PP Lucie.ACC
'It was Lucie who I saw eating an apple.'

Related to (4-a), the TEC is also satisfied by *external merge of a head*. For example, the TEC can be satisfied by external merge of C as a complementizer, as we saw in (2). As will be discussed in section 2, the TEC can be also satisfied by verb head movement, i.e., *internal merge of a head*. This predicts that there is a difference between verbs that are base generated as T and verbs that move to T in that whether they may be V1.

(10) *Legal V1 forms: ✓TEC:*



(11) *Illegal V1 forms: *TEC*



A note is in order here about what counts as the relevant extension. In what sense does internal merge of T with the v/V head complex satisfy the TEC? In order to answer this question, we have to properly define what counts as 'a projection of T'. If we stay with a set-characterization of merge, there are two theoretical options. (i) Either we require merge of T with α to be a proper subset of merge of T with β (=$\{\beta, \{T, \alpha\}\}$), or (ii) we merely require T to be a member of two distinct sets, i.e., $\{\beta, \{T, \alpha\}\}$ or $\{\{T, \beta\}, \{T, \alpha\}\}$. The latter option is independently needed, for example, for multidominance structures or for a representation of movement chains. Notice also that with respect to head adjunction the latter option provides a bare-phrase-structure counterpart to the category-segment distinction of the Principles and Parameters framework (Chomsky, 1986).

Both options have been suggested as the representation of head adjunction. Fukui and Takano (1998), Toyoshima (2001), Mohr (2005), and Matushansky (2006) argued that head movement, like phrasal movement, targets the root and as such extends the tree (contra Chomsky 2000). Under this view, the actual head adjunction is a result of a post-syntactic process, for example, m-merger as in Matushansky (2006). In contrast, treating head adjuction within the narrow syntax was argued for in Kayne (1994). If we adopt Kayne's account of adjunction, the only assumption we need to make is that linearization of morphemes is lexically given (though it must respect constituency, Baker 1985), i.e., both left and right adjunction is possible.

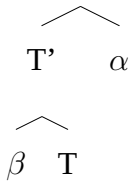
I believe the choice between these two options is a matter of further empirical investigation. In the current paper I will use the Kaynean view of head adjunction but as far as I

can tell nothing hinges upon this choice as both of the representations satisfy the TEC.

For now, we can conclude that there is no restriction on the type of merge operation that satisfies the TEC. Both external and internal merge, as well as merge of a head or merge of a phrase suffice. Therefore, (4-a) is borne out.

Let's now turn to (4-b). Since the TEC is a requirement on the first merger of T to be followed by merge of another element, it is immaterial whether merge of β yields an extension of T or an extension of β. As we have seen in (2), the TEC is satisfied by external merge of a C head. Since the resulting structure is CP, not TP, and yet the TEC is satisfied, we can conclude that there is no requirement on what projects. Thus, (4-b) is borne out as well.

The prediction in (4-c) concerns the exact location at which the relevant merge operation takes place. The merge operation can either target the tree root, or any non-root position as long as β merges with T'. When it gets to potential non-root positions, the only relevant structure to consider is head-to-head adjunction:



The mother of T, i.e., the merger of α and T, is not the tree root, but the condition on T extension should still be satisfied.[5]

As the actual argument is rather involved, I will devote section 2 to testing this prediction for verb head movement. If the prediction is correct, we expect other instances of head movement to satisfy the TEC as well. I will investigate this prediction in section 3. As we will see, it gets borne out as well.

[5]The assumption that head movement extends the tree is not crucial for the argument presented here. It is sufficient to assume that head movement results in head-adjuction. (The notion of adjunction as not targeting a tree-root is controversial. See, for instance, Frank and Shanker 2001 and Frank et al. 2002 for arguments that once c-command is defined as a primitive structural relation, head-adjunction yields a root as well.)

The prediction in (4-d) concerns the cyclic character of the TEC. Extension beyond the CP domain is expected to be irrelevant. Evidence in favor of the cyclic view of the condition comes from clausal coordination facts. As can be seen in (12), clausal coordination does not improve an illegal V1 structure (Fried, 1994). Another merge must take place within the second conjunct.[6]

(12) *Clausal coordination does not satisfy the TEC:*

a. *[Budu nakupovat až zítra], ale [**jsem** už
AUX-FUT.1.SG shop.INF only tomorrow but AUX-PAST.1.SG already
nakoupila salát].
bought.PP salad
'I will go shopping only tomorrow but I have already bought salad.'

b. [Budu nakupovat až zítra], ale [už **jsem**
AUX-FUT.1.SG shop.INF only tomorrow but already AUX-PAST.1.SG
nakoupila salát].
bought.PP salad
'I will go shopping only tomorrow but I have already bought salad.'

c. *[Koupila jsem zákusek] a [**jsem** uvařila
bought.PP AUX-PAST.1.SG dessert and AUX-PAST.1.SG cooked.PP
večeři].
dinner
'I bought a dessert and (I) cooked a dinner.'

d. [Koupila jsem zákusek] a [uvařila **jsem**
bought.PP AUX-PAST.1.SG dessert and cooked.PP AUX-PAST.1.SG
večeři].
dinner
'I bought a dessert and (I) cooked a dinner.'

e. [Koupila jsem zákusek] a [taky **jsem** uvařila
bought.PP AUX-PAST.1.SG dessert and also AUX-PAST.1.SG cooked.PP
večeři].
dinner
'I bought a dessert and I also cooked a dinner.'

[6]Notice that the second conjunct forms a phonological unit with the *a* 'and', thus under a strictly phonological theory of second position clitics (12-c) should be well formed. However, coordination facts are compatible with the syntax-phonology proposal of Bošković (2001). The facts seem to be also subject of a dialectal variation: Milan Rezac, pers. comm., informed me that according to Šípková (1993) in Hanak Moravian dialects conjunction satisfies the TEC requirement. I don't have an explanation for this variation.

If the TEC is best stated as a condition on syntactic extension then there should be no difference between merging a covert or an overt element. If a covert syntactic element does not satisfy the TEC, it follows that it cannot be merged with T. The obvious covert syntactic element to consider is *pro*. In section 4, I will provide evidence from binding showing that *pro* in Czech does not move to T, thus, the prediction made by the TEC is borne out (see also Cardinaletti 1995 for Italian).

The definition of the TEC is stated as property of T. For my proposal it is not substantial whether or not the category under discussion is really T. The important point is that it is a category distinct from C and lower than C. As far as I can tell, the argument would hold even if the category was identified as Asp, Mod, etc. Furtermore, a natural question to ask is whether we can find a similar extension requirement in other phases as well. I will investigate one such case, suggesting a positive answer to this question, in section 5.

Another question that comes to mind is how the proposal relates to two other closely related proposals, namely the 2P clitics hypothesis and the EPP. Even though there is not much agreement on how to account for Slavic 2P clitics, most of the current proposals acknowledge that purely phonological approach won't do. Some syntactic information is needed (Fried, 1994; Schütze, 1994; Franks and King, 2000; Bošković, 2001; Lenertová, 2004, among others). Furthermore, it has been argued that 2P clitics do not form syntactically uniform class (Klavans, 1982, 1985; Kayne, 1994; Cardinaletti and Starke, 1999; van Riemsdijk, 1999; Stjepanović, 1999, among others). In this paper I will argue that only one class of so called 2P clitics, specifically high verbs, is base generated as instance of T and it is only this class that is subject to the TEC. Nothing else but the TEC is needed to account for high-verbs syntactic distribution.

In contrast, pronominal clitics are base generated below T. Consequently, the TEC does not apply to them. In section 3 I will provide evidence that reflexive pronominal clitics are head-adjoined to T and other pronominal clitics (argumental, non-argumental,

and adverbial) are adjoined to a lower projection (either vP or a projection between vP and TP) (cf. Veselovská 1995; Cardinaletti and Starke 1999; Stjepanović 1999). Assuming that verb movement to T is only optional in Czech (Veselovská, 1995), the syntactic placement on its own already accounts for much of the conspicuous second-position behavior and the fixed order within a clitic cluster.

However, the placement of pronominal clitics may be also driven by a phonological requirement, as that one proposed in Bošković (2001). Whether the surface position of a pronominal clitic is determined by its syntax or phonology seems to be matter of dialectal variation (see, for instance, Medová 2009 for a discussion of differences in reflexive clitic placement across Czech dialects).[7] In contrast, the position of a clitic cluster is always phonology driven. If a high verb is a part of a clitic cluster, then it becomes sensitive to phonology requirements as well. I have nothing more to say about clusters than is already in the clitic literature.[8]

Even though the question of the proper account of 2P clitics is secondary for the proposal, it is important to show that the syntactic distribution of high verbs indeed differs from pronominal 2P clitics in a way that is predicted by the TEC. As we will see, high verbs are always in the position of T, irrespectively of their potential phonological host. Thus, they may be sentence initial or in the third position, as long as this is where T is located. In contrast, pronominal 2P clitics must have a phonological host. If no appropriate host is accessible in their syntactic position, they must undergo phonological reordering (Lenertová, 2001, 2004). This difference can be demonstrated, for example, on their relative position with respect to low adverbs: while high verbs cannot follow low adverbs, pronominal 2P clitics may follow low adverbs if the structure does not provide a syntactically-higher

[7] It is plausible that high verbs in Hanak dialects are sensitive to the phonology component as well.

[8] A potentially interesting observation is that clitics are not the only syntactic elements that require a fixed order when being a part of a cluster. For example, wh-words in Czech may violate superiority but their order must be fixed if they form a cluster and move out of their matrix clause (Meyer, 2003, 2004).

phonological host. We will see such cases in section 2.2. Further differences will be discussed in section 2.5, including the fact that high verbs do not require a phonological host at all. In particular, they may appear between two phonological breaks (as long as this is the T position), an option unavailable to pronominal 2P clitics. Section 2.4 discusses different uses of verb 'be': 'be' may be merged either as a high verb (conditional and past tense auxiliary) or a low verb (future auxiliary, copula), thus, providing a minimal pair to test the TEC hypothesis. As we will see, the syntactic behavior of otherwise identical morphological forms differ in a way predicted by the TEC.

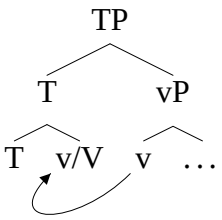
Thus, while high verbs must be accounted for in syntactic terms, Czech pronominal 2P clitics show mixed syntax-phonology behavior. I will have nothing to add to the account of Czech (and in general, Slavic) pronominal clitics than what has been already proposed in the literature, most notably in Schütze (1994); Bošković (2001); Lenertová (2001, 2004).

As for the EPP, I will conclude the paper by discussing a way to understand the TEC as a unifying principle for a wider range of syntactic configurations in which there is a category which needs to be extended (for example, the V2 requirement, some restrictions on bare nouns, and the requirement of English middle constructions to contain an overt adverbial). The EPP will be understood here as one of the language-specific requirements. As the discussion above shows, the EPP is too restrictive to account for the Czech data and as such it cannot be a universally valid principle. In the same time, the TEC is too general to fully account for the full range of language variations and it must be accompanied by a range of language-specific requirements. I will discuss the issue of the EPP in more detail in section 6.

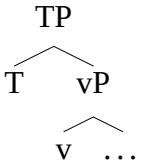
2 Internal Merge to T: Verb Head Movement

The TEC predicts that the ability of a verb to be V1 is related to its structural height: only verbs that are base generated below T and move to T may be V1, as the TEC is satisfied by internal merge of the verbal head. In contrast, a verb generated as an instance of T cannot be V1 unless the structure is independently extended, for instance, by a complementizer. Thus, the TEC predicts existence of two classes of finite verbs with respect to their V1 placement. I will call the set of verbal forms that may be V1 *low verbs*, (13), and verbs generated as instances of T *high verbs*, (14). Examples of legal V1 constructions with high verbs are given in (15).

(13) *Low verbs: ✓TEC*



(14) *High verbs: *TEC*



(15) *Legitimate V1 clauses:*

a. **Mluvím** s Lucií.
talk-I with Lucie
'I talk to Lucie.'

b. **Budu** mluvit s Lucií.
AUX-FUT.1.SG talk.INF with Lucie
'I will talk to Lucie.'

c. **Jsem** št'astný s Lucií.
am-I happy with Lucie
'It makes me happy to be with Lucie.'

The goal of this section is to investigate how we can tell apart whether or not something is base generated as T. If we can show that high verbs are base generated as T, we may pursue the hypothesis that extension is what matters here. Notice that for the 2P-clitics hypothesis, the question of base generation is irrelevant. Consequently, the fact that high verbs show the second-position behavior must be stipulated.

Furthermore, if we assume that head movement does not target the tree root, we have evidence that there is no requirement on the exact location on the merge operation, as long as the internally merged head merges with the merger of T' and β.

Let's now turn to the actual diagnostics. If high and low verbs occupy distinct base-generated positions (Toman, 1999; Veselovská, 2004; Veselovská and Karlík, 2004),[9] other differences in the syntactic distribution of high and low verbs are expected.[10] A high and a low verb should differ, for example, with respect to structurally fixed elements such as adverbs and negation. The predictions are borne out. As will be shown in the next subsections, evidence for a distinction between high and low verbs comes from (i) negation (Veselovská, 2004; Veselovská and Karlík, 2004), (ii) adverb position (Veselovská, 2004; Veselovská and Karlík, 2004), and (iii) the fact that high verbs have no non-finite forms. A list of high and low verbs is given in (16).

(16) a. High Verbal forms:
Conditional auxiliaries (*by*, *bychom*...)
Past Tense auxiliaries (*jsem*, *jsi*...)
b. Low Verbal forms:
Main finite verbs
Future auxiliaries (*budu*, *bude*...)

[9]The precise initial position of a low verb like the future auxiliary is irrelevant for the purposes of this paper. One option is that a main verb is in an instance of V, while a low auxiliary is merged as v taking a VP complement. Another option is that future tense is formed either by a biclausal structure or by restructuring of a V auxiliary. I will put these questions aside.

[10]Under Veselovská's and Veselovská and Karlík's analysis the fact that high auxiliaries cannot be clause-initial is solely attributed to them being 2P clitics. Another work that recognizes high verbs as being instances of T is that of Junghanns (1999) and Toman (1999). However, they also attribute the distributional properties of high verbs to their clitic character.

Passive auxiliaries (*jsem, jsi...*; *budu, bude...*)

Since only high verbs are subject to the TEC, we expect pronominal clitics to diverge in their syntactic behavior from their T-generated counterparts, i.e., high verbs. In contrast, under the 2P-clitics hypothesis, both high verbs and pronominal clitics should occupy the same position. We will see through out this section that only the TEC prediction is borne out.

2.1 Negation as Evidence that High Verbs are an Instance of T

Sentential negation in Czech is realized as a bound morpheme *ne-* prefixed to a verb. I will assume that a verbal head picks up negation in the process of movement.[11] Based on this assumption, a difference between high and low verbs with respect to negation is expected (Veselovská, 2004; Veselovská and Karlík, 2004). Thus, a verb merged as an instance of T will not pick up negation since NegP is located lower than T. In contrast, a low verb merged below NegP can be combined with negation in the process of head movement. This prediction is borne out, as can be seen in (17)−(20).[12]

(17) *High: Past Tense aux* j*sem*

a. *Já **ne-jsem** plakal.
I neg-AUX-PAST.1.SG cried.PP

b. Já **jsem** **ne**-plakal.
I AUX-PAST.1.SG neg-cried.PP

'I did not cry.'

(18) *High: Conditional aux* b*ych*

a. *Já **ne-bych** plakal.
I neg-AUX-COND.1.SG cried.PP

[11] Another option is to assume that a verb comes from the lexicon already negated. For negation to be licensed, there would have to be a point in the derivation when it would be c-commanded by Neg. This hypothesis makes the same predictions for the distribution of negation as the one given in the main text. Furthermore, I assume that it is a morpho-phonological property of the negation morpheme that it linearly precedes a verb.

[12] The examples contain overt pronominal subjects to be parallel. The strings in (17-b) and (18-b) would be ungrammatical without the overt subject (or some other element) in the preverbal position.

b. Já **bych** **ne**-plakal.
I AUX-COND.1.SG neg-cried.PP

(19) *Low: Future auxiliary* b*ude*[13]

a. On **ne-bude** plakat.
he neg-AUX-FUT.3.SG cry.INF
'He will not cry.'

b. #On **bude** ne-plakat.
he AUX-FUT.3.SG neg-cry.INF
'He will be not crying.'

(20) *Low: Main verb*

On **ne-pláče**.
he neg-cries
'He does not cry.'

Negation thus provides an argument that there is a difference in the initial position of a high verb and a low verb. A high verb is base generated above NegP, while a low verb is base generated below NegP.[14]

[13](19-b) is well formed only if *ne-* is interpreted as constituent negation. (There is no morphological difference between sentential and constituent negation in Czech.) The paraphrase would be 'he will be in a process of non-crying.' That we deal with constituent negation can be shown by the fact that negation can be doubled, an option unavailable to high verbs: *on ne-bude ne-plakat* 'he will not be in a process of non-crying.'

[14]An anonymous reviewer suggested an alternative analysis for the facts in (17)–(20). It could be the case that in Czech a verb never picks up negation in the process of movement but negation combines with a verb only if the verb is phonologically adjacent to negation. The reported contrast would then correspond to whether verb movement is obligatory or optional. If a verb obligatory raises higher than negation, it cannot be negated (∼ high verbs). If a verb stays below negation, it can be negated (∼ low verbs). This analysis cannot work for Czech for the following reasons. First, it predicts that the low verb should not be negated if preceded by a low adverb. This is incorrect, as seen in (21).

(21) Petr rychle ne-jede.
Petr fast not-drives
'It's not the case that Petr drives fast.'

Second, if movement to T or C is forced, there should be no difference between high and low verbs with respect to negation. This prediction is incorrect as well:

(22) a. Kdo ne-bude komu dávat dárky?
who.NOM not-AUX-FUT.3.SG whom.DAT give.INF presents.ACC
'Who will not give presents to whom?' *low verb*

b. Kdo by komu ne-dával dárky?
who.NOM not-AUX-COND.3.SG whom.DAT give.INF presents.ACC
'Who would not give presents to whom?' *high verb*

2.2 Position of Adverbs as Evidence for the High/Low Verb Distinction

It has been argued by Veselovská (1995) that the movement to T of low verbs is optional. The hypothesis that low verbs can optionally move to T and that high verbs are base generated as T then makes certain predictions.[15] First, since a high verb always occupies T (or is higher), it must precede low material, such as low adverbs. Second, a verb merged below T may follow a low adverb or may precede it, if optional *v*-to-*T* movement takes place. On the other hand, no difference between low and high verbs with respect to sentential adverbs is expected. Both predictions are borne out, as previously shown in Veselovská (2004); Veselovská and Karlík (2004).

As examples (23) and (24) demonstrate, a low verb can freely follow or precede low adverbs. On the other hand, a high verb is more restricted, as can be seen in (25) and (26).[16] A high verb may precede a low adverb but cannot follow it unless the adverb is focused.[17] This difference is predicted if we assume that the high verb is base generated above the position of low adverbials.[18]

(23) *Low: Main verb*

a. Marie **často** **nepláče**.
Marie often neg-cries

[15] If a low verb does not move to T, the TEC may be satisfied by something else, such as the subject or a high adverb.

[16] I use negated verbs in these examples since negation makes a clearer contrast between different scopal interpretations of adverbs. Thus, it is easier for speakers to evaluate the grammaticality of the examples with respect to the intended meaning. I do not have any principled explanation why judgments are easier in the presence of negation. Notice also that in order to derive a word order in which a negated low verb follows a low adverb, we have to assume either affix lowering of negation or the verb must come from the lexicon already negated.

[17] (25-a)–(25-b) and (26-a)–(26-b) are well-formed strings if *často* 'often' or *Marie* (or both) are contrastively stressed. The meaning of (25-b), for example, would be either 'It wasn't often that I cried', or 'It was often that I didn't cry', i.e., it roughly corresponds to *it*-cleft constructions in English.

[18] An anonymous reviewer correctly pointed out that the facts are compatible with an alternative hypothesis according to which high verbs are base generated low but undergo obligatory raising to T. As far as I can tell, the two hypotheses make the same predictions for the position of adverbs. However, the hypothesis presented in the main text, but not the alternative hypothesis, extends to other cases discussed in the paper.

b. Marie **nepláče** **často**.
Marie neg-cries often
'Marie does not often cry.

(24) *Low: Future auxiliary*

a. Marie **často** **nebude** plakat.
Marie often neg-AUX-FUT.3.SG cry.INF
b. Marie **nebude** **často** plakat.
Marie neg-AUX-FUT.3.SG often cry.INF
'Marie will not often cry.'

(25) *High: Past Tense auxiliary*

a. *Já **často** **jsem** neplakala.
I often AUX-PAST.1.SG neg-cried.PP
b. ***Často** **jsem** neplakala.
often AUX-PAST.1.SG neg-cried.PP
c. Já **jsem** **často** neplakala.
I AUX-PAST.1.SG often neg-cried.PP
'I did not often cry.'

(26) *High: Conditional auxiliary*

a. *Marie **často** **by** neplakala.
Marie often AUX-COND.3.SG neg-cried.PP
b. ***Často** **by** neplakala.
often AUX-COND.3.SG neg-cried.PP
c. Marie **by** **často** neplakala.
Marie AUX-COND.3.SG often neg-cried.PP
'Marie would not often cry.'

Crucially, pronominal 2P clitics do not obey the same restriction. This follows if we adopt a syntax-phonology approach to pronominal 2P clitics such as that of Bošković (2001) or Lenertová (2004). While high verbs are instances of T and their position is governed only by syntax, pronominal clitics require a phonological host. If the host is not provided in the structure, a phonological reordeing must take place. The constrast between high verbs and pronominal 2P clitics thus provide further evidence against treating both types of element as a natural class.

(27) *Pronominal 2P clitics may follow low adverbs:*

a. **Často se** rozplakala.
often REFL started-crying.PP
'She often started crying.'
b. **Často mu** radila.
often him.DAT given-advice.PP
'She often gave him a piece of advice.'
c. **Často tam** jen tak seděli a povídali si.
often there only so sit.PP and talked.PP
'They often just sat and talked.'

Crucially, the unacceptability of (25-b) and (26-b) is not a result of a constraint on the sequence **adverb+Aux*. With a high adverb, the effect disappears, as can be seen in (28).

(28) a. *High: Past Tense auxiliary*
Zřejmě JSEM neplakala.
evidently AUX-PAST.1.SG neg-cried.PP
b. *High: Conditional auxiliary*
Zřejmě BY neplakala.
evidently AUX-COND.3.SG neg-cried.PP
'I evidently didn't cry.'

In addition, as the examples in (29)−(32) illustrate, there are no restrictions on the relative position of finite verbal forms with respect to high adverbs.[19]

(29) *Low: Main verb*
a. **Zřejmě VIDÍM** Marii.
evidently see-I Marie.ACC
b. **VIDÍM zřejmě** Marii.
see-I evidently Marie.ACC
'I evidently see Marie.'

(30) *Low: Future auxiliary*

[19]I assume that high adverbs in Czech are first merged relatively low, most probably adjoined to vP. This means that they are still base generated higher than low verbs but lower than high verbs. They can, however, optionally scramble higher, either to satisfy the TEC or for information structure purposes (Junghanns and Zybatow, 1997). Notice, however, that if it turns out that there are two high positions for merging high adverbs, and thus no movement is involved, then the presented argument would still hold. (I am grateful to Petr Biskup, pers. comm., for clarifying these issues.) This accounts for the word order contrast between (31-a) and (32-a) versus (31-b) and (32-b) . For example, in (31-a), the high adverb is the closest element that can satisfy the TEC. On the other hand, in (31-b), internal merge of the subject is preferred since the subject is contrastively focused.

a. **Zřejmě BUDE** plakat.
evidently AUX-FUT.3.SG cry.INF
b. **BUDE zřejmě** plakat.
AUX-FUT.3.SG evidently cry.INF
'I will evidently cry.'

(31) *High: Past Tense auxiliary*

a. **Zřejmě JSEM** neplakala.
evidently AUX-PAST.1.SG neg-cried.PP
b. Já **JSEM zřejmě** neplakala.
I.FOC AUX-PAST.1.SG evidently neg-cried.PP
'I evidently didn't cry.'

(32) *High: Conditional auxiliary*

a. **Zřejmě BY** neplakala.
evidently AUX-COND.3.SG neg-cried.PP
b. Marie **BY zřejmě** neplakala.
Marie.NOM AUX-COND.3.SG evidently neg-cried.PP
'Marie evidently didn't cry.'

2.3 Non-Finite vs. Finite Verbal Forms

The evidence provided so far shows a positional difference between high verbs and low verbs. I have not so far shown a difference that directly indicates that T is the location of high verbs. This must be the case if the inability of high verbs to be V1 is due to the TEC. A piece of evidence that high verbs are instances of T comes from the fact that high verbs occur only in finite forms, as seen in (34).[20] This absence is expected if we assume that

[20] An anonymous reviewer pointed out that the examples in (34) might be ungrammatical because the infinitival T has not been extended. This would suggest that PRO does not count for the TEC. However, as the example in (33) show, this cannot be the correct explanation because the structure does not improve if the non-finite verb is preceded by an adverb.

(33) a. *Marie tvrdila bezchybně **být** vyřešila ten problém do pěti.
Marie claimed be.INF flawlessly solved.PP the problem by five
b. *Marie tvrdila bezchybně **byla** vyřešila ten problém do pěti.
Marie claimed flawlessly been.PP solved.PP the problem by five
'Marie claimed to have flawlessly solved the problem by five.'

high verbs are instances of T, i.e., their Tense must be specified.[21]

(34) *Non-finite forms of high verbs do not exist:*

a. *Marie tvrdila **být** vyřešila ten problém do pěti.
Marie claimed be.INF solved.PP the problem by five

b. *Marie tvrdila **byla** vyřešila ten problém do pěti.
Marie claimed been.PP solved.PP the problem by five

'Marie claimed to have solved the problem by five.'

In contrast, low verbs, including low generated auxiliaries, are Tense *in*dependent, in the sense that they may be generated as instances of other functional heads and as such do not need to be specified with respect to Tense. Therefore, they are attested in non-finite forms as well, as seen in (35). Notice that in this respect, Czech high verbs are similar to English modals, which are merged as T and also lack non-finite forms (in contrast to the auxiliaries *have* and *be*).

(35) *Non-finite forms of low verbs exist*

Marie chtěla být překvapena z dárku.
Marie wanted be.INF surprised.PP from present
'Marie wanted to be suprised by the present.'

2.4 'be' verbs

The syntactic difference between high and low verbs may be further exemplified on verbs based on the 'be' root.[22] In Czech, 'be' is the root for all auxiliary forms, thus it functions both as an auxiliary and as the main verb. Crucially, there is no morphological[23] or phonological difference between different uses of 'be'. As predicted, however, there are

[21] I assume that non-finite forms are always base-generated below T.

[22] The 'be' paradigm is suppletive. I assume here a realizational morphology (Halle and Marantz, 1993), thus, the term root refers to a phonologically underspecified form.

[23] This is not precise. Even though 'be' belongs to an irregual inflection, in some dialects finite forms of the copula have regular endings of finite main verbs. This follows if we assume a (partially) realizational view of morphology, such as Distributive Morphology of Halle and Marantz (1993): the low verbs are more likely to be inflected as main verbs because both low verbs and main verbs are formed by the same complex of functional heads.

distributional differences corresponding to the expected syntactic differences between high and low verbs (Toman, 1980; Junghanns, 1999; Veselovská, 2004; Veselovská and Karlík, 2004).[24] Importantly, the differences cannot be tied to the copula vs. auxiliary difference, nor can the difference be tied to particular morphological forms. Thus, the differences between 'be' as a high auxiliary and as a low lexical verb can be taken as evidence for the TEC, understood as a purely structural requirement.[25] I demonstrate the differences using the above tests for distinguishing high vs. low verbs. As can be seen in (36), if the form *jsem* is used as the main verb 'be' and not as the Past tense auxiliary, (i) it can be V1, as in (36-a), (ii) it is compatible with negation, as in (36-b), and (iii) it has a non-finite counterpart, as in (36-c). As we have seen above, none of these properties are shared by the auxiliary.

(36) *Main verb* jsem*:*

a. Jsem šťastný.
am.1.SG.PRES happy
'I am happy.'

b. Já ne-jsem šťastný.
I neg-am.1.SG.PRES happy
'I am not happy.'

c. Petr musí být hladový.
Petr must be.INF hungry

[24] According to Toman (1980); Junghanns (1999); Veselovská (2004); Veselovská and Karlík (2004), the difference follows from the auxiliary being lexically specified as a second-position clitic.

[25] Milan Rezac, pers. comm., pointed out that the present theory predicts that V1 high verbs should be grammatical in yes/no questions as Czech forms questions by T-to-C movement. As already noticed by Toman (1980), this prediction is incorrect. Contrary to appearances, I believe this is not a problem for the proposal: for reasons I do not understand 'be' differs from other lexical verbs in that it *never* undergoes T-to-C movement, as seen in (i), being thus reminiscent of the ban on Stylistic fronting of *vera* 'be' in Icelandic (Holmberg, 2006). Whatever the reason is it has nothing to do with the high/low distinction. (The examples contain complex subjects because the pronominal subject is otherwise dropped, unless contrastively stressed which changes the word order.)

(i) a. Vy idioti jste šťastní?
you idiots are.2.PL happy

b. ??/* Jste vy idioti šťastní?
are.2.PL you idiots happy
'Are you happy, you idiots?'

‘Petr must be hungry.’

The fact that the distinct behavior is orthogonal to the auxiliary-main verb distinction can be seen on comparison of the future auxiliary and the future form of ‘be’ which share the same forms as well. As can be seen in (37), both the auxiliary and the main verb may be V1, (37-a)–(37-b), and are compatible with negation, (37-c)–(37-d).

(37) Budu *as future auxiliary vs. main verb:*

a. Budu pracovat.
AUX-FUT.1.SG work.INF
‘I will work.’

b. Budu šťastný.
be.1.SG.FUT happy
‘I will be happy.’

c. Ne-budu pracovat.
neg-AUX-FUT.1.SG work.INF
‘I won’t work.’

d. Ne-budu šťastný.
neg-be.1.SG.FUT happy
‘I won’t be happy.’

Note, however, that even though the same morphological form is expected to have different syntactic distribution stemming from its base generated position, the present theory does not predict that the Present main verb and the Past auxiliary (*jsem*, *jsi*) should behave identically in all types of syntactic interactions. This is indeed so. For instance, the second person present tense auxiliary *jsi* can be morphologically contracted with a reflexive clitic, as seen in (39). This is presumably a result of morphological merge of two adjacent heads[26], an option unavailable to the more complex main verb.

[26]Or even head-to-head adjunction as the contraction reverses the linear order of the heads. If the auxiliary contracts with a phrase, the linear order stays unchanged:

(38) a. Ty jsi ho nepoznal.
you AUX.2.SG him neg-recognized

b. Ty-**s** ho nepoznal.
you−AUX.2.SG him neg-recognized

(39) *High verb* jsi *can be morphologically contracted:*

a. Ty **jsi** se zase nevyspal.
you AUX.2.SG REFL again not-slept

b. Ty se-**s** zase nevyspal.
you REFL.ACC–AUX.2.SG again not-slept
'You did not sleep well again.'

c. Ty **jsi** si o to neřekl.
you AUX-2.SG REFL about it neg-said

d. Ty si-**s** o to neřekl.
you REFL.DAT–AUX.2.SG about it neg-said
'You haven't asked for that.'

(40) *Low verb* jsi *cannot be morphologically contracted:*

a. Ty **jsi** hladový.
you am.1.SG.PRES hungry

b. *Ty-**s** hladový.
you am.1.SG.PRES hungry

'You are hungry.'

If the relevant criterion is the structure, then the auxiliary should be able to contract only if the relevant host is its sister. Thus, we predict that the high auxiliary is not able to contract across a clausal boundary which is correct, as seen in (41). Notice that if the contraction followed from the auxiliary being a clitic, the difference would not be expected.[27]

(41) *Contraction is structure sensitive:*

a. *Komu-**s** mi řekl, že to dá t_{wh}?
who.DAT-AUX.2.SG me.DAT said that it gives
'Whom did you tell me that he would give it?'

---

c. ***S**-ty ho nepoznal.
AUX.2.SG–you him neg-recognized
'You didn't recognize him.'

[27] Milan Rezac, pers. comm., pointed out that there is one additional difference: only the forms of the Past tense auxiliary may be dropped: the 1sg form is optionally dropped in some dialects and the 3rd person forms are never present across the dialects, a fact which does not follow from the present proposal. I do not know what governs this partial auxiliary drop. I believe the phenomenon is indepenent of clitichood as auxiliary drop is present even in languages in which auxiliaries are not clitics, such as English (Fitzpatrick, 2006). Furthermore, non-clitic languages may have null auxiliaries in Present tense as well (e.g., Modern Hebrew). Even if we were to adopt the clitic hypothesis, it still would not explain why only the 1st person form and never the 2nd person form may be dropped.

b. Komu-**s** říkal t_{wh}, že přijde?
whom-AUX.2.SG said that comes.3.SG
'Whom did you tell that s/he would come?'

2.5 A note on the second position placement

The exact definition of the legitimate placement of 2P clitics is notoriously difficult. In fact, the traditional second-position label is a misnomer: Slavic clitics often appear in the 3rd or the 4th position as well (Franks and King, 2000; Bošković, 2001, among others), and as we will see in section 3, Czech high verbs may be even V1 (in matrix clauses).[28] Crucially, under the present proposal, the legitimate placement of high verbs is strictly syntactic. No phonological factors should be relevant.

Since high verbs are instances of T, they should surface at the position we expect T. Thus, if more than one element is merged above T but still within the CP, the high verb should follow these elements. This is correct, as can be seen in (42). If more than one *wh*-word moves to C, as in (42-a), or if there is a topicalized adverb at CP and a contrastively stressed subject at Spec,TP, as in (42-b), a high verb appears in the 3rd position. The examples are presented as embedded clauses to ensure that the elements preceding the auxiliary are not outside of the CP.

(42) *Third position within CP:*

a. Marie se ptala, komu co **jsi** dal.
Marie REFL asked.PP whom.DAT what.ACC AUX-PAST.2.SG given
'Marie asked what you gave to whom.'

b. Říkám ti, že včera JÁ **jsem** pozval
say-I you.DAT that yesterday I.NOM AUX-PAST.1.SG invited.PP
Marii, ne Petr.
Marie.ACC not Petr.NOM
'I'm telling you that it was me yesterday who invited Marie. It wasn't Petr.'

[28] To my knowledge, this fact has not been reported in the second-position clitics literature yet, even though it has been observed that high verbs may be V1 in embedded clauses (Veselovská, 1995).

The predictions made by the TEC differ from the predictions made by Bošković (2001)[29]. Bošković gives a sophisticated account of clitic placement according to which the actual position of the clitic is a result of phonological and syntactic interactions. He argues that the clitic may come later either if the first position is outside of the CP, or if there is an intonational break between the first and the second position. Notice, however, that Bošković's system makes correct predictions for non-T 2P clitics, as seen in (43). Thus, the contrast in the placement of high verbs and pronominal 2P clitics provide further evidence for the necessity to treat high verbs as syntactically distinct from pronominal 2P clitics.

(43) *Pronominal 2P clitics are in the second position:*

a. *Marie se ptala, komu co **se** líbilo.
Marie REFL asked.PP whom.DAT what.ACC REFL liked.PP
'Marie asked who liked what.

b. Marie se ptala, komu **se** co líbilo.
Marie REFL asked.PP whom.DAT REFL what.ACC liked.PP
'Marie asked who liked what.

(44) a. *Říkám ti, že zítra JÁ **se** budu bát.
say-I you.DAT that tomorrow I.NOM REFL will worry
'I'm telling you that tomorrow it will be me who will be scared.'

b. Říkám ti, že zítra **se** JÁ budu bát.
say-I you.DAT that tomorrow REFL I.NOM will worry
'I'm telling you that tomorrow it will be me who will be scared.'

Furthermore, the TEC predicts that the presence or absence of an intonational break should be irrelevant for the placement of the high verb as long as the high verb is an instance of T and something else extends the structure. In Czech there is an obligatory intonational break after a subject relative clause and after a sentential subject. The TEC predicts that the auxiliary should surface immediately after the intonational break irrespectively of the

[29] See also Lenertová (2004) for a very similar proposal.

prosodic factors. It is less clear what the 2P clitics predictions are. If 2P clitics are enclitics, they shouldn't be able to follow an intentational break. On the other hand, if directionality of cliticization of Czech clitics is underspecified (they could be proclitics or enclitics depending on their environment), as in Fried (1994) and Toman (1996), the clitic should be able to follow the intonational break as long as the clitic can lean on the following phonological phrase. As has been observed in Fried (1994) and as we can see in (45), both the TEC prediction and the underspecified 2P clitics prediction are borne out.

(45) *High verb may immediately follow obligatory intonational break:*

a. Muže, kterého políbila Marie, || **by** Petra
man.ACC who.ACC kissed.PP Marie.NOM AUX-COND.3.SG Petra.NOM
nikdy nepozvala.
never invited.PP
'Petra would never invite a man who was kissed by Marie.'

b. Že se Pavel rozvedl, || **by** potěšilo jen
that REFL Pavel.NOM got-divorced.PP AUX-COND.3.SG pleased.PP only
Marii.
Marie.DAT
'That Pavel got divorced would please only Marie.'

To tease the two predictions apart, we need to look at structures in which a high verb is surrounded by two intonational breaks. Contrary to Fried's account, the TEC predicts that such a structure should be well-formed. As can be seen in (46), only the TEC prediction is borne out.[30]

(46) *High verb may appear between two intonational breaks:*

a. Ten muž, co si ho Marie bude
that man.NOM what.ACC REFL him.ACC Marie.NOM AUX-FUT.3.SG
brát, || **by**, || řekla bych, || nebyl
marry.INF AUX-COND.3.SG said.PP AUX-COND.1.SG neg-been.PP

[30]Other types of 2P clitics require at least one phonological phrase to lean on. See examples in Fried (1994) making this point. Notice, however, that even though this fact is compatible with a phonological analysis of clitics it also follows from independent syntactic restrictions on triggers of intonational breaks, i.e., appositions and subject relative clauses.

moc nadšený, kdyby o tom všichni věděli.
very excited if about it all knew
'The man who Marie will marry wouldn't be – I guess – too exited if everyone knew about the wedding.'

b. Že se Petr rozvedl, || **by**, || nebo si to
that REFL Petr.NOM got-divorced.PP AUX-COND.3.SG or REFL it
aspoň myslím, potěšilo jen Marii.
at-least think-I pleased.PP only Marie.ACC
'That Petr got divorced would please only Marie. Or at least that's what I think.'

3 Internal Merge to T: Clitic Movement

In the previous section, we saw that the TEC is satisfied by verb movement. If this is due to head movement, we predict that *any* kind of head movement to T will improve high verbs in the sentence-initial position. Moravian Czech allows us to test this prediction.[31] As can be seen in (47), the prediction is borne out. In this case, a high verb is attached to a reflexive clitic. Notice another important feature of these examples: the reflexive clitic *linearly follows* the high verb.

(47) a. ?jsem **se** tam nudil
AUX-PAST.1.SG **REFL** there bored.PP
'I was bored there.'

b. ?bych **se** tam nudil
AUX-COND.1.SG **REFL** there bored.PP
'I would be bored there.'

The reflexive pronoun *se* in (47) is a second-position clitic, more precisely, an enclitic. Crucially, however, not every second-position clitic improves a verb-initial clause with a high verb, as can be seen by comparing (47-a) with (48).[32]

[31] We turn to Moravian Czech because there are differences between phonological requirements on this dialect and Bohemian, i.e., eastern Czech dialects, clitics. The differences are in clitics ability to be in the sentence initial position and in their clustering properties. See, for instance, Franks and King (2000); Medová (2009).

[32] In Bohemian dialects, both (47) and (48) can be fully grammatical. In these dialects, however, it is possible to repair *any* clitic-like element in clause-initial position by preceding it by a glottal stop. I assume

(48) *Non-reflexive clitic* ho*:*

*jsem **ho** tam nudil
AUX-PAST.1.SG **him** there bored.PP
'I bored him there.'

I suggest that the contrast illustrated by (47) and (48) follows from structural differences between reflexive and non-reflexive nominal clitics. I will show that this contrast can be taken as additional evidence for the TEC by demonstrating that *reflexive clitics* (but not other clitics) *are heads adjoined to T*. Consequently, only a reflexive clitic (and not other types of clitics) asymmetrically c-commands T and satisfies the TEC.[33] In contrast, I will show that non-reflexive clitics are located below T.[34] Therefore, merge of a non-reflexive clitic does not extend the tree past T and does not satisfy the TEC. The structural differences between non-reflexive and reflexive clitics are schematized in (49).[35]

(49) a. *Reflexive clitics (47-a)*:
[$_{TP}$ jsem **se** [$_{XP}$ ...]]
AUX REFL
b. *Non-Reflexive clitics (48)*:
[$_{TP}$ jsem [$_{XP}$ **ho** ...]]
AUX him

---

that the glottal stop corresponds to a structural expletive and as such satisfies the TEC.
Notice also that some Moravian dialects allow non-reflexive pronominal 2P clitics to be stressed and to appear in the sentence initial position. Crucially, according to my informants, speakers who allow non-reflexive pronominal clitics to be stressed and appear sentence initially, do not allow reflexive clitics and high verbs to appear in this position, unless the high verb is followed by a reflexive clitic as in (47).

[33]The theory proposed in this paper predicts that a sentence with a high verb followed by a reflexive clitic should be fully grammatical. In fact, such a sentence is slightly degraded. I am not entirely sure why the structure is marginal rather than perfect. However, there is still a sharp contrast between (47) and (48), which the present theory explains.

[34]The exact location is irrelevant here. Non-reflexive clitics might be adjoined to vP or to a higher functional projection. What is crucial is that they are merged below T. Cf. Stjepanović (1999) for an argument that in Serbo-Croatian different clitics occupy distinct syntactic positions and Lenertová (2004) for a suggestion that Czech pronominal clitics occupy distinct structural positions as well.

[35]There are no adverbs intervening between a non-reflexive clitic and a high verb. This may be because a non-reflexive clitic is base-generated higher than a high adverb merged as an adjunct to vP in Czech. Another possibility is that non-reflexive clitics, i.e., weak pronouns, must move out of vP for semantic reasons, such as givenness. This is not unusual because, for example, pronouns in Germanic languages scramble and obligatorily precede adverbs as well.

The next subsections provide evidence for the proposed structural difference between reflexive and non-reflexive clitics. The evidence considered in this paper comes from (i) word order differences between reflexive clitics and non-reflexive clitics, and (ii) differences in behavior under ellipsis.

3.1 Reflexive Clitics, Non-Reflexive Clitics and Word Order

The linear order of clitics is determined both by their type and by their morphological case. When a cluster of nominal clitics is uniform in type, containing only reflexive or only non-reflexive clitics, linear order within the cluster is determined by the morphological case of the clitics in the cluster: a Dative clitic precedes an Accusative clitic. However, when the cluster is of a mixed type, *a reflexive clitic always precedes a non-reflexive clitic* (Franks 1998, among others). This contrast is illustrated in (50)−(53).

(50) *Dative and Accusative Non-reflexive Clitics*:

a. Petr **mu** **ho** ukázal.
Petr him$_i$-**DAT** him$_j$-**ACC** showed

b. *Petr **ho** **mu** ukázal.
Petr him$_j$-**ACC** him$_i$-**DAT** showed

'Petr showed him$_j$ to him$_i$.'

(51) *Dative and Accusative Reflexive Clitics*:[36]

a. Petr **si** **se** nelíbil.
Petr REFL-**DAT** REFL-**ACC** neg-liked

b. *Petr **se** **si** nelíbil.
Petr REFL-**ACC** REFL-**DAT** neg-liked

'Petr didn't like himself.'

(52) *Sequence of Reflexive and Non-Reflexive Clitics (i)*:

a. Petr **se** **mu** nelíbil.
Petr REFL-**ACC** him-**DAT** neg-liked

b. *Petr **mu** **se** nelíbil.
Petr him-**DAT** REFL-**ACC** neg-liked

[36] Some Bohemian speakers find sequences of reflexive clitics ungrammatical. See Medová (2009) for a discussion of this dialectal variation.

'He didn't like Petr.'

(53) *Sequence of Reflexive and Non-Reflexive Clitics (ii)*:

a. Petr **si** **ho** namaloval.
Petr REFL-**DAT** him-**ACC** painted

b. *Petr **ho** **si** namaloval.
Petr him-**ACC** REFL-**DAT** painted

'Petr made a picture of him.'

The fixed word order suggests that reflexive clitics are structurally higher than non-reflexive clitics and in turn, is consistent with the hypothesistat reflexive clitics are adjoined to T, while non-reflexive clitics are located lower in the structure. This, however, is not a necessary conclusion. First, once we allowed left and right adjunction, we have weakened the mapping between c-command relations and the linear order. Second, the fixed ordering of clitics might be a result of an independent phonological process.[37]

Notice, however, that even though a head can be left- or right-adjoined, it still must respect constituency. Thus, if a reflexive clitic is adjoined to T and a non-reflexive clitic is adjoined to a lower projection, it should be possible to structurally separate a reflexive and non-reflexive clitic but not two reflexive clitics. This prediction is borne out:[38]

(54) *Only a reflexive and non-reflexive clitic may be separated:*

a. ?Petr se, stěžovala si Marie, mu nelíbil.
Petr REFL.ACC complained REFL Marie him.DAT not-liked
'Marie complained that he didn't liked Petr.'

b. *Petr si, stěžovala si Marie, se nelíbil.
Petr REFL.DAT complained REFL Marie REFL.ACC not-liked
'Marie complained that Petr didn't like himself (=his look).'

[37] I am grateful to an anonymous reviewer for bringing these objections to my attention.

[38] The fact that clitics within a cluster may be separated by additional phonological material suggests that all 2P clitics occupy a fixed syntactic position. They phonologically regroup only if they lack an appropriate phonological host. See Lenertová (2004) for further examples of this sort and for a discussion of consequences it has for the analysis of pronominal 2P clitics.

A related question is why only reflexive and not non-reflexive clitics may be right-adjoined (or linearized). A possible answer is that only reflexive clitics are heads. Non-reflexive clitics are weak pronouns (using the terminology of Cardinaletti and Starke 1999), i.e., sructurally deficient DPs.[39] This distinction is further supperted by contraction facts. We have seen in section 2.4 that the second person auxiliary *jsi* may become a bound morpheme and contract with a reflexive clitic (presumably, a result of head-to-head adjunction). In contrast, contraction with a non-reflexive clitic is not possible, as seen in (55)–(56). The difference follows if only a reflexive clitic is a head adjoined to T.

(55) *Reflexive clitics may contract:*

a. Ty **jsi** **si** o to neřekl.
you.NOM AUX-PAST.2.SG REFL.DAT about it.ACC not-asked.PP

b. Ty **si-s** o to neřekl.
you.NOM REFL.DAT–AUX-PAST.2.SG about it.ACC not-asked.PP
'You didn't ask for it.'

(56) *Non-reflexive clitics cannot contract:*

a. Ty **jsi** **mu** o to neřekl.
you.NOM AUX-PAST.2.SG him.DAT about it.ACC not-asked.PP

b. *Ty **mu-s** o to neřekl.
you.NOM him.DAT–AUX-PAST.2.SG about it.ACC not-asked.PP
'You didn't ask him for it.'

3.2 Clitics and XP-Ellipsis

That a reflexive clitic is higher than a non-reflexive clitic does not entail, of course, that it is adjoined to T. Evidence bearing more directly on this question comes from the interac-

[39] Cardinaletti and Starke (1999) discuss clitics in Slovak which is a language very close to Czech. The test used in their paper apply for Czech as well.

tion of clitics with XP-ellipsis.[40] XP-ellipsis in Czech does not trigger anything like *do*-insertion. In other words, T does not require an overt morphological realization. Nonetheless, if an appropriate context is provided, a verbal form may be a remnant of XP-ellipsis, i.e., it may be pronounced. This is true also of auxiliaries, including a high verb auxiliary (though the result is slightly degraded in the case of high auxiliaries).[41]

If a reflexive clitic is adjoined to T, we predict that the reflexive clitic will form part of the pronounced remnant, together with the high verb auxiliary. On the other hand, if a non-reflexive clitic is located lower in the structure,[42] it should be elided even if the high verb is pronounced. This prediction is correct, as shown in (57)–(60):[43]

(57) Já **jsem** **se** viděl v televizi
I AUX-PAST.1.SG REFL seen.PP in TV
'I saw myself on TV.'

(58) a. . . . a ty taky.
and you too
b. *. . . a TY **jsi** taky.
and you AUX-PAST.2.SG too
c. ?. . . a TY **jsi** **se** taky.
and you AUX-PAST.2.SG REFL too
'. . . and you did as well.'

(59) Já **jsem** **ho** viděl v televizi
I AUX-PAST.1.SG him seen.PP in TV
'I saw him on TV.'

[40] I am using the term XP-ellipsis as a generic name for ellipses of different sizes. The actual elided structure may be VP, vP, TP, or some other projection between vP and TP. The methodology of using ellipsis as a diagnostics for the relative height of clitics has been developed in Stjepanović (1999).

[41] Following Fiengo and May (1994) and Kennedy (2002), ellipsis must target the largest deletable constituent (MaxElide) where deletable is defined as lacking an anaphoric antecedent (marked by [+e] of Merchant (2001)). The fact that remnant auxiliaries are degraded is presumably a result of a violation of MaxElide. The reason why auxiliaries may be pronounced despite being given is because of their lack of surface identity with the antecedent. See for example Merchant (2001) for a discussion of further cases in which lack of surface identity interacts with MaxElide.

[42] I put aside the question of where exactly non-reflexive clitics are located in the structure.

[43] Lucie Medová, pers. comm., informed me that in her Bohemian dialect the contrast is not so sharp, even though it is present. I do not have an explanation for this dialectal difference but it is likely that it follows from other differences in clitic behavior. See, for example, Medová (2009), for a discussion of differences in clitic ordering and clustering between Moravian and Bohemian speakers.

(60) a. . . . a ty taky.
and you too
b. ?. . . a TY **jsi** taky.
and you AUX-PAST.2.SG too
c. *. . . a TY **jsi** **ho** taky.
and you AUX-PAST.2.SG him too
'. . . and you did as well.'

The structural difference between a reflexive and non-reflexive clitic with respect to XP-ellipsis is schematically given in (61). Since a reflexive clitic is part of T, it can escape the ellipsis (as in (61-a)). In contrast, a non-reflexive clitic, located below T, is trapped in the elided part of the structure (as in (61-b)).[44]

(61) a. *Reflexive clitics (58-c)*:
$[_{TP}$ jsi **se** $[_{XP}$ ~~viděl v televizi~~$]]$
b. *Non-Reflexive clitics (60-b)*:
$[_{TP}$ jsi $[_{XP}$ ~~**ho** viděl v televizi~~$]]$

3.3 Summary

Clitic head movement lends further support for the TEC. The argument is based on the observation that a reflexive clitic – but not a non-reflexive clitic – improves the grammaticality of otherwise impossible high-verb-initial sentences. There is also independent evidence for a structural difference between reflexive and non-reflexive clitics. Only a reflexive clitic is a head adjoined to T. Therefore, only merge of a reflexive clitic extends the tree and satisfies the TEC. Since non-reflexive clitics are adjoined below T, they do not extend the tree past T and thus do not satisfy the TEC.

The examples discussed in this section also support the TEC as a purely structural phenomenon. The extension condition seems to be independent of the word order. This

[44] An anonymous reviewer raised a question of why non-reflexive clitics cannot be stranded as well. This follows from MaxElide (see ftn. 43). Since non-reflexive clitics cannot be focused, they must be [+e], thus deletable. Reflexive clitics may escape this constraint because they are adjoined to a non-deletable node, T.

suggests that the proposed condition is a hierarchical condition on well-formedness on syntactic structures, not on the phonological output.

4 A note about pro

If the TEC is a structural condition, it should be irrelevant whether the element that satisfies the TEC is overt or covert. Thus, we predict that if a covert element does not satisfy the TEC it has not been merged with T. The data we have seen so far suggest that *pro* does not satisfy the TEC. If the TEC is a valid generalization, it follows that *pro* cannot be in Spec,TP.

I will provide an argument that the prediction is correct and that in Czech *pro* is not merged at Spec,TP (neither externally, nor internally) (see also Cardinaletti 1995 for Italian and Takahashi 2001 for Japanese, contra Ceplová 2003). If there is any *pro* at all, it stays lower in the structure. Direct evidence for *pro* not being at Spec, TP comes from pronominal coreference.

In Czech, possessive pronouns may be coindexed with a c-commanding DP, as in (65).[45] If there is, however, another DP intervening between the pronoun and its potential binder the coreference possibility disappears. This can be seen in (66): in a raising construction with a non-argumental Dative in the matrix clause,[46] the raised subject corefers with the object inside of the infinitival clause.[47]

[45] In Czech, elements bound by a Nominative subject usually appear in a reflexive form. However, there is a possibility to use non-reflexive pronouns as well. In (65) I use non-reflexive pronouns because reflexive pronouns have very different binding properties from non-reflexive pronouns. For example, reflexive pronouns do not require to be c-commanded by their antecedent. Thus they cannot be used for positional tests. (To be more precise, reflexive pronouns must be c-commanded by their antecedent only if the antecedent is a Dative subject. Unfortunately, in Czech, Dative subjects do not undergo raising, the crucial test for determining the position of the binder.)

[46] For some Czech speakers, raising verbs can take only 'be' as their complement (see Vaněk 1977). I refer here to judgments only of those speakers who accept raising verbs with non-be complements as well.

[47] The following examples are here as a control. If the intervening Dative is not present, the subject corefers with the argument in the infinitival clause, as in (62). This is an unusual type of intervention but as we can see

(65) *Coreference: the basic case:*

a. Petr$_i$ vešel do jeho$_i$ pokoje.
Petr.NOM entered in his room
'Petr$_i$ entered his$_i$ room.'

b. Marie$_j$ vešla do jejího$_j$ pokoje.
Marie.NOM entered in her room
'Marie$_j$ entered her$_j$ room.'

(66) *Coreference across an intervener:*

a. Petr$_i$ se zdál Marii vejít do jeho$_{*i/\checkmark j}$ pokoje.
Petr.NOM REFL seemed Marie.DAT enter.INF in his room
'Petr$_i$ seemed to Marie to enter his$_i$ room.'

b. *[$_{TP}$ **Petr** seemed [$_{vP}$ to-Marie [$_{vP}$ to-enter his room]]]

We are now in a position to make the following prediction: if *pro* stays in its base position we expect to find a contrast between a *pro*-drop and an overt subject in raising constructions with a non-argumental Dative. If *pro* stays in Spec,vP, its coreference possibilities should not be affected by a non-argumental Dative (which is presumably adjoined to vP). Thus, there should be a difference between the structure with an overt subject and the *pro*-drop structure. The prediction is borne out, as seen in (67).[48]

(67) *Coreference across an intervener is possible with a pro-subject:*

in (63), the pattern is further supported by the fact that the Dative DP may also act as a binder. The mechanism behind this phenomena is not important for the present argument. I use it here only as a diagnostics. (The example in (62) is slightly degraded: for reasons I do not understand at this point raising in Czech is limited to verb 'be'. Raising of verbs like *zdát se* is fully grammatical only if modified by a non-argumental Dative.)

(62) ?Petr$_i$ se zdál vejít do jeho$_i$ pokoje.
Petr.NOM REFL seemed enter in his room
'Petr$_i$ seemed to enter his$_i$ room.'

(63) Petr$_i$ se zdál Marii$_j$ vejít do jejího$_j$ pokoje.
Petr.NOM REFL seemed Marie.DAT enter in her room
'Petr seemed to Marie$_j$ to enter her$_j$ room.'

We can informally generalize the pattern as follows:

(64) In Czech, a non-reflexive possessive pronoun may be bound only by its closest potential antecedent.

[48]The form *zdát se* is ambiguous between a raising verb 'seem' and a psych verb 'dream'. The coreference in (66-a) is possible under the psych reading.

a. Zdál se Marii vejít do jeho pokoje.
seemed-he REFL Marie.DAT enter.INF in his room
'He$_i$ seemed to Marie to enter his$_i$ room.'
b. [$_{TP}$ seemed [$_{vP}$ to-Marie] [$_{vP}$ **pro** to-enter his room]]]

If the difference in coreference is caused by the structural position of the subject, we predict that if the subject does not move to Spec, TP and the TEC is satisfied, for example, by an adverb, the overt subject should be able to bind the direct object. This is indeed correct, as seen in (68).

(68) *If the overt subject stays low, the Dative does not intervene:*
a. Včera se zdál Marii Petr$_i$ vejít do jeho$_i$ pokoje.
yesterday REFL seemed Marie.DAT Petr.NOM enter.INF in his room
'Petr$_i$ seemed to Marie to enter his$_i$ room.'
b. [$_{TP}$ yesterday seemed [$_{vP}$ to-Marie] [$_{vP}$ **Petr** to-enter his room]]]

So far I have only shown that *pro* may stay low but not that it *must* stay low. If *pro* must stay low we expect that it should block coreference of the Dative DP into the complement clause. As we can see in (69), this prediction is borne out.[49]

(69) *pro blocks coreference of the Dative DP into the complement clause:*
a. *Zdál se Marii$_i$ vejít do jejího$_i$ pokoje.
seemed-he REFL Marie.DAT enter.INF in her room
'He seemed to Marie$_i$ to enter his$_i$ room.'
b. [$_{TP}$ seemed [$_{vP}$ **to-Marie** [$_{vP}$ pro] to-enter his room]]]

[49]The fact that *pro* is not relevant for the TEC does not exclude the possibility that other covert elements are relevant. Unfortunately, the predictions are extremely hard to test. For covert operators and traces/copies, we need to consider embedded environments or clauses with an overt element in the left periphery. Since Czech embedded clauses must have an overt complementizer, in all these cases the TEC is always satisfied by an overt element. As for covert operators in matrix clauses, as far as I know there is no evidence that they move to the left periphery in the same way as their overt counterparts do. (See Takahashi 2001 for an extensive discussion and tests that for independent reasons cannot be replicated for Czech.) The only remaining element is PRO. Unfortunately, again, this is difficult to test because the only way to show that an infinitival complement is of TP size is to add an overt material (Wurmbrand, 2001; Dotlačil, 2004).

5 Extension outside of the T domain

In the previous sections I have discussed the extension requirement of T. A natural question to ask is whether the requirement is restricted to T or whether we might find it in other parts of the structure as well. A suggestive answer comes from distributional properties of Czech infinitival imperatives. As we will see in this section, imperatives are formed by a single head, presumably V, which cannot be the last element merged within its phase. If there is no β merged to the merger of V' and α, the imperative form is ungrammatical. I will use this pattern to suggest that the extension requirement is not exclusive to T but it possibly targets a larger set of heads.

In Czech, there are two types of imperatives: inflected ones and infinitival ones.[50] Inflected imperatives have a special set of endings reflecting number and person, while infinitival imperatives have an uninflected form identical to infinitives.

(70) *Inflected imperatives:*
   a. 2.sg: pracuj! 'work!'
   b. 2.pl: pracuj-te! '
   c. 1.pl: pracuj-me!

(71) *Infinitival imperatives:*
   a. Dobíhat! 'finish running!' (lit.: into-run.inf)
   b. Vypovídat se! 'finish talking!' (lit.: out-talk.inf REFL)

An interesting fact is that some infinitival imperatives are felicitous only in their negated forms. The non-negated form is not felicitous, as seen in (72). This is puzzling because if the inflected form is used, all non-negated imperatives are well formed, as in (73). As far as I know, there is no semantic difference between inflected and infinitival imperatives. The only difference is in the register.[51]

[50] The reported facts are not exclusive to Czech. For example, Modern Hebrew exhibits the same distributional restrictions on infinitival imperatives (Danny Fox, pers. comm.). I will restrain the discussion only to Czech.

[51] Infinitival imperatives belong to a lower register.

(72) *Some infinitival imperatives are possible only in their negated form:*

a. #Běhat! 'run!' (lit.: run.INF)
b. Neběhat! 'don't run!' (lit.: neg-run.INF)
c. #Říkat! 'say! (lit.: say.INF)
d. Neříkat! 'don't say! (lit.: neg-say.INF)

(73) *There is no contrast between negated and non-negated inflected forms:*

a. Běhejte! 'run!' (lit.: run.IMP)
b. Neběhejte! 'don't run!' (lit.: neg-run.IMP)
c. Říkejte! 'say! (lit.: say.IMP)
d. Neříkejte! 'don't say! (lit.: neg-say.IMP)

I argue that the imperatives in (71) are degraded because (i) they are formed by a V head, and (ii) there is no Merge(V', β) that would follow the first merge of V in its phase. In contrast, inflected imperative forms are formed by a larger head complex. Consequently, there is a part of the structure that extends V. A suggestive evidence in favor of a more complex structure – on top of the increased morphological complexity – comes from the fact that inflected imperatives are compatible with an overt subject, while infinitival imperatives are not, as seen in (74) and (75). This follows under the assumption that the external argument is introduced by an additional functional head.

(74) *Inflected imperatives may combine with an overt subject:*

a. ty běhej!
   you.2.SG run-IMP.2.SG
b. vy běhejte!
   you.2.PL run-IMP.2.PL

(75) *Infinitival imperatives cannot combine with an overt subject:*

a. *ty běhat!
   you.2.SG run.INF
b. *vy běhat!
   you.2.PL run.INF

I argue that V is subject to a condition parallel to the TEC:[52]

[52]This definition can be stated in representational terms as well:

(i) *The V-Extension Condition* [representational version]
If there is V in the structure, then there must be α such that

(76) **The V-Extension Condition:**
If Merge (V, α) applies, Merge(β, V') must be the next step of the derivation where
(i) V' is a projection of V,
(ii) and β belongs to the same phase as V.

The condition in (76) predicts that merging any material to the merger of V and its complement should improve otherwise impossible infinitival imperatives.[53] We have already seen one such case: the imperatives in (72) are well formed because V has been extended by merge of negation. I will examine here two further cases confirming the prediction: extension by modifying the imperative by an adverbial phrase, and extension by merging an Aspectual head.

If any extension improves infinitival imperatives, we expect that an imperative that is not felicitous on its own will improve if modified by an adverbial phrase. As can be seen in (77), this prediction is borne out.

(77) *Extension by another phrase:*
a. #Běhat!
run.INF
'run!'
b. Běhat kolečka!
run.INF little-circles.ACC
'run in circles!'
c. Běhat jenom tady!
run.INF only here
'run only here!'
d. Běhat pomalu!
run.INF slowly
'run slowly!'

In contrast, the condition predicts that merging a complement will not improve the

a. α asymmetrically c-commands V, and
b. α is within the phase of V (its vP).

[53]Notice that since no external argument can be merged with an infinitival imperative, it is likely that there is no PRO in the structure. In fact, if the hypothesis presented here is correct, there cannot be any PRO in the infinitival-imperative structure, otherwise the extension condition would always be satisfied.

imperative.[54] As can be seen in (78), this prediction is borne out.[55]

(78) *Merge of a complement does not improve infinitival imperatives:*

a. #Jíst koláče!
eat.INF cakes.ACC
'Eat (the) cakes!'

b. #Nosit přezůvky!
carry.INF slippers
'Wear slippers!'

There is nothing intrinsically wrong with complements of imperatives. As the following examples show, if the infinitival imperative is negated, or if the imperative is inflected, the structure is grammatical.

(79) *If the structure is extended by other means, imperatives may combine with complements:*

a. Nejíst koláče!
neg-eat.INF cakes.ACC
'Don't eat (the) cakes!'

b. Jezte koláče!
eat.IMP cakes.ACC
'Eat (the) cakes!'

Another prediction is that merge of a higher head, for example, an Aspectual head (realized either as a prefix or an infix) should improve the infinitival imperative as well. As we can see in (80), this prediction is borne out.

(80) *Extension by an Aspectual head:*

a. #Běhat!
run.INF

b. Doběhat!
in-run.imperf.INF
'finish running!'

[54] *běhat* 'run' is an unergative verb and even if it is modified by a DP, as in (77-b), the DP is a manner modification, not a complement.

[55] If we assume the bare-phrase structure, the distinction between a complement and a modifier becomes non-trivial. The problem can be avoided either by assuming string vacuous extensions or by stating the extension condition in terms of asymmetric c-command.

c. Vyběhnout!
out-run.perf.INF
'start running!'

To sum up, we can explain the syntactic distribution of infinitival imperatives by assuming that they are formed by V and that merge of V must be followed by another merge within the same phase. Thus, V is subject to the same extension condition in its phase as T is in its phase.

6 Conclusion

There are certain syntactic positions that must be filled. What position must be filled seems to be a matter of a cross-linguistic variation. Thus, the V2 requirement is usually understood as a requirement of C head and the EPP requirement is often associated with T. A similar requirement may be found in other places as well. For example, the obligatory presence of adverbs in English middle constructions might be a reflex of a similar requirement of v[56] and cross-linguistic differences in the distribution of bare NPs as a requirement of D head.

[56] As far as I know there is no semantic explanation for the obligatory presence of an adverb. The explanation is furthermore complicated by the fact that the adverbial requirement may be elevated by negation, a modal, or emphatic stress on the verb (Roberts, 1987; Condoravdi, 1989; Lekakou, 2005, among others). I want to suggest that this might be a result of a syntactic requirement similar to the TEC: since there is no external argument merged, for v to satisfy the extension condition, something else must be merged. In Czech (but also in French or Greek), it is a reflexive clitic; in English, it might be an adverb, negation or a modal. Notice also that the extension condition predicts that only adverbs merged within the lower phase should be relevant. Thus, while low adverbs are acceptable in the English middle constructions, speaker oriented adverbs are not.

(81) *English middles:*
a. #Bread cuts.
b. Bread cuts easily.
c. Bureaucrats may bribe, but you never know. (Ackema and Schoorlemmer, 2002)
d. This book doesn't read. (Lekakou, 2005)
e. #Bread cuts certainly.

The problem of *what position* must be filled is, in principle, independent of the problem of *how* it must be filled. For example, in the discussion of the EPP requirement it has been suggested that languages may differ in whether the requirement must be satisfied by a head or by a phrase (Alexiadou and Anagnostopoulou, 1998).[57] Furthermore, languages like French seem to suggest that sometimes both merger of a head and merger of a phrase is required.

This paper has presented a case study that opens the possibility of unifying these phenomena as instances of a well-formedness condition on syntactic structures which disallows certain heads from being the last merged element within a relevant syntactic domain. In other words, the structure must be further extended for the head to be licensed in its base-generated position. This structural requirement is independent of the question how the extension is realized.

Thus, for example, Greek has a language-particular condition that forces verbal heads to move to T. In English, it might be a Case requirement that enforces Spec,TP to be occupied either by DP, or by CP (leaving aside various types of inversion). Similarly, French might combine both the English type and the Greek type of requirements. As we have seen, Czech is more liberal in that it does not enforce a particular way of satisfying the condition and even an external merge of a higher head may suffice.[58]

In its nature, the proposed TEC principle is very much reminiscent of the EPP. There is, however, a significant difference: the EPP is a requirement that regulates merge, i.e., it specifically targets the question of what position must be filled. The TEC is underspecified in this respect. Instead, the TEC is a condition on the form of the structure sent to Spell-out: it is parasitic on syntactic operations that are independently attested in a given language. As such it must be supplemented with language-specific proposals that target the question of

[57] See also Miyagawa (2001) for a similar idea suggesting that the EPP on C may be satisfied either by external merge of a Q-morpheme or by wh-movement.

[58] Similar data have also been reported for Breton (Jouitteau, 2007).

what must be merged. Thus, the TEC *per se* cannot be associated with a particular feature.

There are two families of proposals that are close in their spirit to the TEC. Landau (2007) suggests to understand the EPP as an interface filter on a phonological realization. As such the EPP is not active in syntax but only in the syntax-phonology interface. I differ from Landau in that I have argued that the TEC is a syntactic requirement. It cannot be reduced to phonology. Another related family of approaches is the so called eliminating approaches to the EPP, i.e., approaches that attempt to eliminate the EPP in favor of independently needed syntactic principles, such as Case or cyclicity (Fukui and Speas, 1986; Lasnik and Saito, 1992; Martin, 1999; Grohmann et al., 2000; Bošković, 2002; Epstein et al., 2005; Epstein and Steely, 2006; Bošković, 2007). These approaches raise the question of the right representation of A-movement chains and especially the question of the motivation for intermediate steps in English raising constructions. One difference between the TEC and the eliminating approaches is that the TEC assumes that there is a well-formedness condition on syntactic structures – independent of otherwise needed syntactic operations. Thus, even though the TEC does not have a feature representation, failure to satisfy it leads to ungrammaticality. Furthermore, even though the eliminating approaches might work well for English, they do not extend to other languages with more varied forms of a second-position requirement. As such, the eleminitating approaches target only a subset of cross-linguistic data and miss a cross-linguistic generalization about second-position-related phenomena.

The tension between what must be extended and what element is legitimate to extend the structure in a given language is reflected in the recent reasoning about the EPP, most prominently in Holmberg (2000).[59] This reasoning reacts to two empirical challenges: first,

[59]Holmberg (2000) in his recent study of Icelandic stylistic fronting questioned whether we can identify the EPP with a particular syntactic feature. The empirical challenge he addresses is that there is a wide variety of syntactic elements that seem to satisfy the EPP requirement in Icelandic. Holmberg thus proposes to define the EPP with respect to a more abstract feature – a p(honological)-feature, the idea being that any element may become an expletive by means of separating the p-matrix from the rest of the item feature bundle. A similar idea, recast in terms of other abstract features can be found, for example, in Platzack (1992); Rezac (2004); Jouitteau (2007).

there is growing evidence that the original Chomsky's formulation of the EPP as a requirement of T to have a specifier (Chomsky, 1982) is too specific to cover the whole range of cross-linguistic data.[60] Second, contrary to Chomsky for whom the EPP might have been satisfied both by overt or non-overt elements (PRO and *pro*), the current formulations attempt to capture the fact that the relevant structural position must be filled by phonetically overt material.[61]

As we have seen in the previous sections the main problem that arises for EPP approaches of this type is that they tie the relevant EPP-like feature to a particular syntactic head. In other words, they are too specific. The fact that the Czech requirement may be satisfied either by merge to T, or merge to C stays unexplained.[62] The presented study thus can be seen as an exploration of the limits of the EPP. If the argument is on the right track, the EPP cannot be a universal principle.

The TEC attempts to resolve the observed empirical tension by strictly dividing the question of *what* must be extended from the question *how* it must be extended. Once this is done, the extension requirement may be recognized as a requirement underlying a broader set of phenomena than the phenomena traditionally attributed to the EPP. At the same time, by lifting the pressure of cross-linguistic generalization it may open the space for more precise language-specific characterizations.

[60] The original proposal in Chomsky (1981) formulated the EPP as an English specific requirement.

[61] This family of approaches to the EPP builds on the following assumptions: (i) subjecthood and the EPP need to be separated (McCloskey, 1997; Svenonius, 2002), and (ii) features constituting a lexical item may be split (Chomsky, 1995; Taraldsen, 1996). The task is then to identify the relevant feature or a set of features: p-feature in Holmberg (2000), a categorial feature in Rezac (2004), and so on.

[62] The fact that sometimes the EPP-like requirement of T may be satisfied by merge of C has been previously noticed in the literature and it lead to attempts to find a different type of solution. The work I am aware of attempts to reanalyze the relevant structure in a way so the feature checking would be local, contrary to appearances. For example, Bury (2003) suggests that if there is head movement to T, C may count as a specifier of T.

A different route has been taken by Jouitteau (2007). Instead of redefining the notion of a specifier, she argues that in a language like Breton the locus of the EPP may be seemingly on a higher head but only if the EPP head incorporates into the higher head.

As we have seen in the Czech data, external merge of a head counts even if there is no head movement to T or to C.

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