Across-the-Board extraction and clitic omission in Czech[1]

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1. Introduction

In the study of movement in natural languages, Across-the-Board (ATB) extraction is one of the most intriguing and challenging phenomena.

ATB-extraction is, descriptively speaking, movement of identical phrases out of conjuncts. (1) is an example of ATB wh-movement.

(1) What did you buy and read?

The wh-word *what* starts as an internal argument of both *buy* and *read*. Later on, it moves out of the VP coordination (i.e., undergoes ATB-extraction) into its surface position (Spec, CP).

Among many puzzling issues that ATB extraction raises, the one that is the central topic of this paper is a question of why an element that undergoes ATB extraction needs to escape the coordination in which it originates. I.e., why, unlike (1), the example (2) (in which *this book* starts as an argument of *buy* and *read* and ends up inside the first conjunct) is ungrammatical:

(2) *I said that this book John had bought and that Bill had read.

In two recent approaches to ATB extraction (Nunes, 2005, Citko, 2005), different answers to this question have been given. Even though both answers can explain the cases of ATB extraction which are usually discussed in the literature, namely ATB wh-movement, I am going to show that Nunes' approach is superior to Citko's once we look into the properties of a different type of ATB extraction.

In this paper, I analyze cases of clitic omission, as exemplified

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in (3), in which the clitics *jsem* and *ho* are omitted in the second conjunct.[2]

(3) Já **jsem** **ho** zavolal a představil známým.
I aux_{1sg} him_{acc} called and introduced friends
'I called him and introduced him to friends.'

I argue that clitic omission in Czech should be analyzed as a case of ATB extraction. If this analysis is on the right track, it comes as a surprise that clitics which undergo ATB extraction can surface inside the first conjunct. This, I am going argue, supports Nunes (2005)'s analysis of ATB over Citko (2005)'s analysis. Furthermore, I am going to show that this analysis supports Franks' analysis in which clitics appear in the second (Wackernagel) position through the interplay of syntax (which regulates clitics' movement) and phonology (which regulates the pronunciation of the right copy) (see Franks 1998, Bošković 2001).

The paper is organized in the following way. Section 2 discusses cases of ATB extraction of clitics. Section 3 focuses on examples in which clitics undergoing ATB extraction surface inside the first conjunct. Section 4 shows why the presented analysis offers an argument for Nunes (2005)'s approach to ATB extraction, but is problematic for Citko (2005). Section 5 concludes.

2. Clitic omission as ATB extraction

Clitic omission in Czech as exemplified in (3), patterns like ATB extraction and unlike ellipsis. To this point, I present three arguments in this section.

First, clitic omission is possible only in coordinations. It is ungrammatical in non-coordinated sequences of clauses (4-a), (4-b).

(4) a. *Já **jsem** **ho** zavolal. Potom představil známým.
I aux_{1sg} him_{acc} called. Then introduced friends
'I called him. Then I introduced him to friends.'

[2]All clitics are boldfaced. All glossed examples are from Czech. The glosses are: 1sg=1st person singular, acc=accusative, aux=auxiliary, refl=reflexive

b. *Poté co **jsem ho** zavolal představil známým.
After what aux_{1sg} him_{acc} called introduced friends
'After I had called him I introduced him to friends.'

The contrast between (3) and (4-a)-(4-b) follows if clitic omission is analyzed as ATB extraction. On the other hand, it would not be captured if we analyzed clitic omission as an instance of ellipsis. Standard cases of ellipsis, as VP ellipsis, sluicing, or NP ellipsis can normally be licensed in contexts similar to (4-a)-(4-b).[3]

Thus, based on the difference between (3) and (4-a)-(4-b), I suggest that (3) should be analyzed as (5):

(5) I past-aux$_i$ him$_j$ ... [$_{ConjP}$[$_{XP}$ called t_i t_j] and [$_{XP}$ introduced t_i t_j friends]]

The next two subsections present additional support for the analysis of clitic omission as ATB extraction.

2.1. Case matching

It has been noted (see Dyla 1984, Franks 1993) that the constituent that undergoes ATB extraction must be assigned cases with the same morphological realization in both conjuncts.

Let us turn for a moment to ATB wh-movement. Notice that 'what' and 'who' are not always equally acceptable for ATB extrac-

[3]Notice that analyzing clitic omission as ATB extraction entails that it should not be possible in non-coordinated structures. However, it does not entail that it should always be possible in coordinations. For example, an anonymous reviewer finds clitic omission in the following example ungrammatical:

(i) *Už **se mu** ulevilo a je líp
already refl him_{him} relieve and is better
'He was relieved of pain and feels better.'

This would only be problematic for the presented analysis if other cases of ATB extraction would be possible in the same type of coordination. For example, ATB extraction of a wh-word is ungrammatical in this case, too. Presumably, the structure in (i) is different from other cases of coordination. See Postal, 1998 who analyzes coordinations in which the first conjunct serves as a cause of the second conjunct (i.e., cases like (i)) as subordinated structures.

tion. In case the first conjunct assigns nominative and the second conjunct assigns accusative, only 'what' is (marginally) acceptable (6-a). Similar examples with 'who' are ungrammatical, no matter whether nominative or accusative form is chosen (6-b).

(6) 1st conjunct - nominative, 2nd conjunct - accusative

a. ?Co tam leželo a ty jsi sebral?
what$_{\text{nom-acc}}$ there lay and you aux picked
'What lay there and you picked it?'

b. *Kdo/koho tam ležel a ty jsi sebral?
who$_{\text{nom}}$/who$_{\text{acc}}$ there lay and you aux picked
'Who lay there and you picked him?'

This is related to the fact that 'what' has one syncretic form for nominative and accusative, namely *co*, whereas 'who' has two distinct forms.

The connection between morphological forms and acceptability of ATB extraction can be made sense of if we assume an architecture of language in which syntax feeds lexical insertion, for example Distributed Morphology. In the cases (6-a) and (6-b), the lexicon is searched for an item that is an exponent of both cases (nominative and accusative). The paradigm of 'what' has such a lexical item (namely, *co*), unlike the paradigm of 'who'. Thus, in the case of 'who', no lexical item can be inserted.[4]

Notice that there is no reason to expect a similar requirement for ellipsis because there we deal with two different objects: the antecedent and the elided constituent. For example, an elided NP can differ in its morphological form from its antecedent (7-a).[5]

(7) the antecedent - accusative, the ellipsis - nominative

a. Marie měla ráda černovlasé kluky$_{\text{i}}$. Táně se
Marie had like black-hair guys$_{\text{acc}}$. Tanya refl

[4]This reasoning only works if we diverge from the mainstream of Distributed Morphology and do not assume that morphological forms in paradigms are always underspecified.

[5]Ellipsis in this example is marked by the underscore coindexed with the ellipsis' antecedent. The form *kluky* 'boys$_{\text{acc}}$' is realized as *kluci* in nominative.

líbili blondátí -i
appealed blond$_{\text{nom}}$ -
'Marie liked blackhair guys. The blond ones appealed to Tanya.'

Crucially, clitic omission patterns with ATB wh-movement and unlike ellipsis. 'he$_{\text{cl}}$' has the same form for genitive and accusative (*ho*), unlike 'they$_{\text{cl}}$' where the forms for the two cases differ (*jich* for genitive, *je* for accusative). As predicted, in case one conjunct assigns genitive and the other conjunct assigns accusative, only 'he$_{\text{cl}}$' is acceptable:

(8) 1st conjunct genitive, 2nd conjunct accusative

a. ?Já **se** **ho** bojím a nenávidím.
I refl him$_{\text{gen-acc}}$ be-afraid and hate
'I am afraid of him and loathe him.'

b. *Já **se** **jich/je** bojím a nenávidím.
I refl them$_{\text{gen}}$/them$_{\text{acc}}$ be-afraid and hate
'I am afraid of them and loathe them.'

2.2. Coordination with more than two conjuncts

As discovered by Ross (1967), conjuncts are islands. This descriptive generalization is known as the Coordinate Structure Constraint (CSC). There is a well-known exception to the CSC, as also noticed by Ross (1967). The CSC does not apply to a constituent that moves out of all conjuncts (i.e., undergoes ATB extraction). In other words, movement out of coordination is an all-or-nothing phenomenon. Either it takes place from all conjuncts (ATB extraction), or none of them. Since clitic omission is analyzed as ATB extraction we expect it to be an all-or-nothing phenomenon, as well. This prediction is borne out. (9) shows that clitics can undergo ATB extraction out of multiple coordination:

(9) Petr **se** myl, česal a holil.
Petr refl washed, combed and shaved
'Petr washed, combed, and shaved.'

However, it is crucial that clitics undergo ATB movement out of *all* conjuncts:

(10) *Petr **se** myl, česal si vlasy a holil.
Petr refl washed, combed his hair teeth and shaved
'Petr washed, combed his hair and shaved.'

The ungrammaticality of (10) follows if clitic omission is analyzed as ATB extraction. In (10), the clitic *se* undergoes extraction only out of the first and third conjunct; this, however, violates the CSC.

On the other hand, if clitic omission was a case of ellipsis, the ungrammaticality of (10) would come as a surprise. There is no reason to expect that ellipsis must take place in all conjuncts (apart from the first one which hosts the antecedent). For example, NP ellipsis of 'boys' is possible in the third conjunct only:

(11) Marie měla ráda černovlasé kluky$_i$, Zuzana neměla ráda
Marie had like black-hair guys$_{acc}$, Zuzana not-had like
nikoho, a Táně se líbili blonďatí $-_i$
nobody and Tanya refl appealed blond$_{nom}$ –
'Marie liked blackhair guys, Zuzana liked nobody, and the blond ones appealed to Tanya.'

This concludes arguments for analyzing clitic omission as ATB extraction. Based on the evidence presented, I believe that this analysis is correct. In the next section I concentrate on a surprising case of clitic omission: in which clitics arguably do not move out of the coordination but stay inside the first conjunct.

3. ATB extraction seemingly without extraction

3.1. Problematic examples

Take a look at the following example:

(12) Zavolal **jsem ho** a představil známým.
called aux$_{1sg}$ him$_{acc}$ and introduced friends
'I called him and introduced him to friends.'

First, notice that the clitics *jsem* and *ho* are omitted in the second conjunct. Clearly we deal with clitic omission, which, as I argued, should be analyzed as an ATB extraction of clitics. This means that both clitics *jsem* and *ho* originate in both conjuncts. Later on, they both move out of the coordination.

Notice that both clitics are linearly ordered at the end of the first conjunct. Therefore, the verb preceding them must be outside of the coordination as well. Thus, we end up with the structure (13) for example (12).

(13) [called$_i$ [past-aux$_j$ him$_k$ [$_{ConjP}$ [$_{VP}$ t$_i$ t$_j$ t$_k$] [$_{VP}$ introduced t$_j$ t$_k$ to friends]]]]

The problem is that in this structure, the participle undergoes movement from the first conjunct. But this movement violates the CSC and thus should render (12) ungrammatical. Furthermore, notice that according to (13) the first conjunct is empty. This violates another well-known constraint, the Conjunct Constraint (Grosu, 1981).

In short, we end up with a paradox. If we assume that clitic omission is a case of ellipsis which targets the clitic cluster we would have no explanation for the data discussed in the previous section (Section 2). But if we assume that clitic omission is a case of ATB extraction we expect the movement of the verb 'called' in (12) to violate the Coordinate Structure Constraint and the Conjunct Constraint, and therefore, we expect (12) to be ungrammatical, contrary to the fact.

There are, as far as I can see, two possible ways out of this paradox. The first one is to assume that the Coordinate Structure Constraint and the Conjunct Constraint apply in some cases but are not applicable in (12). The second way out of the paradox is to assume that there is something special about ATB extraction of clitics; something that enables them not to be pronounced outside of the coordination in cases like (12). In this case, the verb 'called' does not need to move out of the coordination, and therefore, no violation of the Coordinate Structure Constraint and the Conjunct Constraint takes place.

I am going to follow the second route.

3.2. Clitic placement at the syntax-phonology interface

One of the many issues connected with the study of clitics is the question of how to account for their placement. Is their second position the result of a phonological requirement, syntactic requirement, or both?

In his recent work, Steven Franks (Franks 1998; see also Franks 2000) suggests that we should consider clitic placement an interface phenomenon. It is a result of an interplay between syntax and phonology. The same idea is followed and elaborated upon in Bošković (2001).

Following the Copy theory of movement, Franks assumes that when a constituent moves it leaves a copy of itself in the original position. The two copies (one in the base position and the other in the target position of the movement) are indistinguishable. However, they do behave differently with respect to pronunciation. It is usually only the highest copy that is pronounced (even though there has been growing evidence that this does not always need to be so, for summary of the literature, see for example, Nunes 2005, section 1.5, or Bošković 2001, section 3.1). Crucially, as Franks suggests, the highest copy of clitics can only be pronounced if it does not violate clitics' phonological requirements.

Clitics enter the computation with syntactic requirements. For the sake of the argument let us assume that all clitics in Czech need to move through head movement to C (more on this later). However, unlike most other lexical items, clitics also come with phonological requirements that must be satisfied. Following Bošković (2001) I assume that (in the cases discussed in this paper) clitics in Czech need to lean on a host to their left.[6]

[6]As discussed by Fried (1994), Toman (1996), and many others, clitics in Czech do not always need to lean on a host to their left. They can be at the beginning of an intonational phrase and lean on a host to the right (i.e., behave as proclitics) (example (i-a)). They can, in fact, even be at the beginning of a clause in colloquial Czech (example (i-b)) (see Lenertová 2004 for more examples and discussion).

Recall that it is normally the highest copy of a moved constituent that is pronounced. Thus, we would expect clitics to be pronounced in their highest position, the head of C. However, this copy might violate the clitics' phonological requirements: if there is no material higher in the sentence, clitics cannot lean on any host to their left and the sentence is ungrammatical. Franks (1998) suggests that in this scenario, a lower copy of clitics is pronounced: the one that satisfies the phonological requirement.

Let us go through one example:

(14) Zavolal **jsem** **ho**.
called aux$_{1sg}$ him$_{acc}$
'I called him.'

Let us assume that the clitic 'him' is merged as the direct object of the verb and later on moves as a head to the projection which hosts the auxiliary. Furthermore, let us assume (following Veselovská 2004) that past auxiliaries are located in the head T. Thus, at the level of $\bar{\text{T}}$, the structure looks followingly:

(15) $[_{\text{T}'}\ [_{\text{T}}\text{past-aux him}_{\text{i}}]\ [_{\text{vP}}\ [_{\text{v}}\ ]\ [_{\text{VP}}\ [_{\text{v}}\text{called}]\ \text{t}_{\text{i}}\ ]\ ]\ ]$

T projects further up. Following Migdalski (2006), let us assume that to satisfy the EPP requirements of T, vP moves into its specifier. After that, C selects for TP and the clitics head move via T into the head C. This is the final structure:

(i) a. Já # tvoje máma # **jsem ti** slíbila hračku.
I # your mother # aux you promised toy
'I, your mother, promised you a toy.'
b. **Se mi** včera narodil syn. (ok only in colloquial Czech)
refl me yesterday born son
'My son was born yesterday.'

Presumably, clitics in Czech are not underspecified for proclitization and encliticization. Instead, they are ambiguous. In (12) or (14) the enclitics were chosen in the lexicon: since these need to lean on their hosts to the left, the pronunciation of a lower copy is forced. If proclitics were used instead the highest copy could be pronounced (for reasons unclear to me, this latter option is possible only in colloquial Czech).

(16) $[_{CP}$ ~~$[_{C}$past-aux him$]_i$~~ $[_{TP}$ $[_{vP}$called$]_j$ $[_{T}$past-aux him$]_i$ $t_j]]$

However, in this case the highest copy of the clitics cannot be pronounced because it would violate its phonological requirements. Therefore, a lower copy is pronounced: the ones cliticized onto T. Pronunciation of the lower copy gives us the correct word order for (14).

3.3. ATB extraction with seemingly no extraction explained
Armed with an analysis of how the clitics' syntactic and phonological requirements together derive their position let us move to the example discussed in Section 3.1.

(17) Zavolal **jsem** **ho** a představil známým.
called aux_{1sg} him_{acc} and introduced friends
'I called him and introduced him to friends.'

Example (17) is a case of ATB extraction of clitics. Therefore, clitics must have moved out of the coordination. But if they have (so the reasoning went) then the verb 'called' must have moved out of the coordination, too, in violation of the Coordinate Structure Constraint and the Conjunct Constraint.

There is a flaw in this reasoning. In Section 3.1, I have assumed without discussion that what is pronounced is the highest copy of a moved constituent. In fact, this assumption is natural if one follows syntactic accounts to the second position of clitics and assumes that the second position is derived solely in syntax. However, we have seen in the previous section that this does not need to be so. More concretely, I presented an approach to clitic placement which argues that the second position is the result of a phonological requirement which leads to pronunciation of a lower copy.

Following the analysis presented in the previous section, I assume that in (17), two TPs are conjoined. T in both conjuncts host clitics *jsem* and *ho* which undergo ATB extraction into C. This is the final structure:

(18) $[_{CP}$ ~~$[_{C}$ past-aux him$]_i$~~ $[_{ConjP}$ $[_{TP}$ $[_{vP}$called$]_j$ $[_{T}$past-aux him$]_i$ t_j] and $[_{TP}$ $[_{vP}$introduced$]_k$ ~~$[_{T}$past-aux him$]_i$~~ t_k]]]

However, if the highest copy of the clitics was pronounced the clitics' phonological requirement would not be satisfied. Therefore, a lower copy must be pronounced. Thus, we arrive at the second highest copy: the ones cliticized onto T in the first conjunct. These copies of clitics are pronounced and we end up with the correct word order without violating the Coordinate Structure Constraint or the Conjunct Constraint.[7]

The analysis makes two predictions. First, notice that if we substitute clitics for DPs that do not have the phonological requirements forcing pronunciation of a lower copy, we would expect examples like (17) to be ungrammatical. This is correct, as can be shown by using proper names instead of the clitic 'him'. Notice first that proper names can license what looks like an object drop:

(19) Petra jsem zavolal a představil známým.
Petr$_{\text{acc}}$ aux called and introduced friends
'I called Petr and introduced him to friends.'

Since there is no object drop in Czech, example (19) is a case of ATB extraction: 'Petr$_{\text{acc}}$' starts out as an argument of the verb in both conjuncts and undergoes ATB extraction out of the coordination.

An example parallel to (17), in which the clitic *ho* 'him' is substituted by the full DP 'Petr$_{\text{acc}}$' is ungrammatical:

[7] I assumed without discussion that clitics always move to C. However, certain data from clitic omission show us that some clitics may stay relatively low.

(i) Zavolal **jsem** **ho** a představil **mu** známé.
called aux$_{\text{1sg}}$ him$_{\text{acc}}$ and introduced him$_{\text{dat}}$ friends$_{\text{acc}}$
'I called him and introduced some friends to him.'

In (i), the clitic *mu* 'him$_{\text{dat}}$' has stayed inside the second conjuct, and only *jsem* 'aux' underwent ATB extraction to C. Let us accept the mainstream assumption that excorporation is banned in head movement. That means that *mu* must be lower than T. In fact, an example similar to (i) has been used by Bošković (2001) as one argument that clitics may stay low (even though this has been concluded for different reasons than here). I am thankful for an anonymous reviewer for pointing the relevance of (i) to me.

(20) *Zavolal jsem Petra a představil známým
called aux$_{1sg}$ Petr$_{acc}$ and introduced friends
'I called Honza and introduced him to friends.'

This follows from the analysis presented. 'Petr$_{acc}$' comes with no phonological requirements that would force pronunciation of a lower copy in this example. Therefore, the highest copy of 'Petr$_{acc}$' has been pronounced in (20). Since the highest copy must be outside of the coordination, the verb 'called' must have moved out of the coordination, as well. But this movement of the verb violates the Coordinate Structure Constraint and the Conjunct Constraint.

The second prediction that the analysis presented makes concerns the relation between clitic omission and the size of the conjuncts. To license clitic omission, clitics have to move out of the coordination even though this movement is masked by the fact that the copy outside of the coordination is not pronounced.

Crucially, clitics must be able to move out of the coordination, otherwise the structure is illicit. If we were dealing with a coordination of conjuncts which are islands for clitic movement (i.e., if we were dealing with a structure bigger than TP) clitics should not be able to undergo ATB extraction out of the coordination and clitic omission should consequently be ungrammatical. This should be so even though the clitics are not pronounced outside of the coordination.

This prediction is also borne out. Notice first that clitic omission is possible in conjoined TPs in embedded contexts:

(21) Řekl že **jsem ho** zavolal a představil známým.
Said that aux$_{1sg}$ him$_{acc}$ called and introduced friends
'He said that I had called him and had introduced him to friends.'

However, once we conjoin CPs clitic omission is impossible:

(22) *Řekl že **jsem ho** zavolal a že představil
said that aux_{1sg} him_{acc} called and that introduced
známým.
friends
'He said that I had called him and that I had introduced him to friends.'

As is well-known, clitics cannot move out of CP (see Dotlačil 2007 for one possible explanation). In (22), the clitics have to undergo ATB extraction out of the coordination. However, since clitics cannot move out of CP this movement is illicit, and since ATB extraction is impossible, clitic omission cannot take place in (22).

In conclusion, ATB extraction of clitics supports the analysis of clitic placement in Czech along the lines of Franks (1998) / Bošković (2001). The next section shows that the analysis presented can furthermore give us an argument against Citko (2005)'s approach to ATB extraction and for Nunes (2005)'s approach.

4. Comparing two analyses of ATB

In her work on ATB extraction, Citko (2005) follows recent approaches to movement and assumes that movement is an instance of merge, called Internal Merge. Unlike External Merge (the traditional merge) which takes two independent objects from the numeration and merges them into one tree, Internal Merge merges together two constituents that are already in the tree.

As Citko (2005) shows, the combination of Internal and External Merge gives rise to a new operation which she calls Parallel merge.

Like External Merge, Parallel Merge joins two independent objects (i.e., the two objects are not a part of one tree). Like Internal Merge, Parallel Merge merges a subpart of one tree with another tree.

As Citko (2005) suggests, Parallel Merge plays role in ATB extraction. The constituent that undergoes ATB extraction is first merged through Parallel Merge. Once the two independent tree structures are coordinated and become one tree the constituent can move up from the position in which it was parallel-merged into a

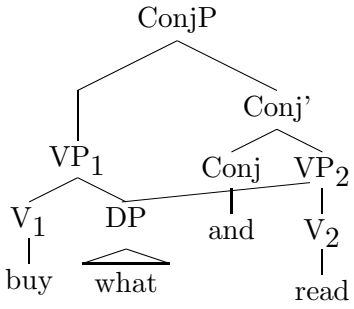
higher position (i.e., the constituent can undergo Internal merge).

Let us take a look at one example.

(23) *What did John buy and read?

what is first merged via Parallel Merge with both *buy* and *read*. If there is a node in each of the conjuncts that requires merge of the direct object again, the direct object again merges through Parallel Merge. That is presumably not the case in (23), so we can ignore it for the moment. At the level of VPs, the two conjuncts are joined into one coordinated structure:

(24)



After building the tree up to CP, *what* is merged through Internal Merge at the specifier of CP and it is pronounced in this position.

A question is why we don't find cases of ATB extraction in which a constituent would end up in one of the conjuncts, i.e., why (25) is ungrammatical.

(25) *I said that this book John had bought and that Bill had read.

Citko offers an interesting answer: given the Linear Correspondence Axiom (LCA), the constituent cannot be linearized in the position in which it is shared (through Parallel Merge) by both conjuncts.[8]

[8]The Linear Correspondence Axiom states that asymmetric c-command of non-terminals is mapped on precedence relation of the dominated terminals. In the case of (24), VP_1 asymetrically c-commands VP_2. Thus, everything that is dominated by VP_1 must precede VP_2. However, V_2 asymetrically c-commands

This reasoning works well for the cases discussed previously in literature. However, the clitic omission analyzed in this paper is problematic. As I argued in the previous section clitics can undergo ATB extraction but be pronounced *inside* the coordination, namely as a part of the first conjunct. In Citko's framework, it is hard to see how this could be possible. It cannot be the case that they are pronounced in the position in which they are shared by both conjuncts through Parallel Merge (see footnote 8). The only possible way to capture the data is to assume that clitics first undergo Internal Merge into the first conjunct and only then they are merged outside of the coordination. In that case, the higher copy in the first conjunct could be pronounced without violating LCA (Barbara Citko, p.c.). The problem is that it is unclear how to motivate Internal Merge of clitics into the first conjunct. In Citko's framework, merge is allowed only when features are checked. But then, what would be the feature that allows only the first conjunct to merge clitics? Notice that this is not a matter of coming up with a reasonably sounding name for the feature. The crucial issue is to show that this feature is present in the first conjunct but absent in the second one. But what would block the same feature in the second conjunct? Assuming that the second conjunct includes the feature but it can be checked without Internal Merge does not help either. In that case, it would remain unclear why the same feature forces Internal Merge only in the first conjunct. I do not see any non-stipulative answer to this question.

Another recent approach to ATB has been developed by Jairo Nunes (Nunes, 2005). He suggests that ATB extraction is an instance of sideward movement.

A constituent moves via sideward movement if it moves from one syntactic tree to another, independently assembled syntactic tree. More concretely, since Nunes breaks movement into copying+merge, sideward movement is a case of copying an element in one syntactic tree and merging the copy in another syntactic tree. To see this, take example (25). Under Nunes' approach, *this book* starts as the object

the object D. Thus, the verb dominated by V_2 must precede the object dominated by D. These two requirements are in conflict with the property of linear order of natural languages, which is asymmetrical.

of *read*. The tree consisting of *read* is built up to the level of CP. After that, another, independent tree is being built: the verb *buy* is taken from the numeration. The verb needs the object that satisfies its theta-role. This object can be found in the independently assembled CP, namely the DP *this book*. Thus, the DP from the independently assembled tree (CP *that Bill had read this book*) is copied and the copy is merged into a new tree, i.e., undergoes sideward movement.

A question is why the constituent cannot stay inside the first conjunct. What forces its movement out of coordination, once it undergoes sideward movement?

In Nunes' account, the driving force is the need to form a chain. A chain is necessary to delete copies.[9] Crucially, the chain can only be formed under c-command. In case of sideward movement no c-command relation is established between the two copies. Therefore, the chain cannot be formed in example (25) and the sentence is ungrammatical. On the other hand, example (23) is fine since in this case sideward movement is followed by movement of *what* to a position from which all the other copies of *what* are c-commanded. Therefore, a chain may be formed and the copies might be deleted.

It should be clear now that ATB extraction in which clitics stay inside the first conjunct can be captured by this approach. Since there are reasons to believe that the clitics are syntactically outside of coordination (see Section 3.3), it is natural to assume that they can form a chain. Therefore, the copies left after movement can be deleted. Since, following Bošković (2001), the highest copy violates phonological requirements, the lower copy is pronounced. Unlike in Citko (2005)'s approach, the pronunciation of this copy does not lead to a crash.

The problem in Barbara Citko's account is the idea that the constituent that undergoes ATB extraction is non-linearizable inside the coordination where the conjuncts share the constituent. On the other hand, in Nunes (2005)' account, the constituent that is shared by the conjuncts before it undergoes ATB extraction is linearizable,

[9] If the copies are not deleted the resulting word order violates LCA. For details, see Nunes (2005, ch. 1).

once the syntactic requirements are fulfilled (a chain, which requires c-command, must be formed). It is the whole syntactic structure that becomes illicit on the PF side if no movement out of coordination takes place in case of ATB extraction, not the copies themselves. I take it that clitic omission gives us an argument for the latter position.

5. Conclusion

This paper has discussed cases of clitic omission as in (26):

(26) Zavolal **jsem** **ho** a představil známým.
called $\text{aux}_{1\text{sg}}$ him_{acc} and introduced friends
'I called him and introduced him to friends.'

I argued that clitic omission should be analyzed as ATB extraction of clitics. This conclusion seemed problematic because under this analysis, movement of the participle seemed to violate the Coordinate Structure Constraint and Conjunct Constraint. I suggested that once we accept Franks' analysis of clitic placement, examples like (26) can be accounted for without violating the two constraints. This forced upon us the analysis in which clitics are pronounced inside the first conjunct, which can be accommodated in Nunes (2005)'s approach to ATB extraction, but is problematic for Citko (2005).

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