The unbearable lightness of clitics

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CHAPTER 1

Introduction

1.1 The scope

This dissertation is an investigation of the behaviour of phonologically weak elements (i.e., clitics) in elliptical sentences, a study that sheds light at both the nature of cliticisation and the timing of ellipsis.

The timing of ellipsis is a tricky topic. On the surface, ellipsis is merely non-pronunciation of a redundant part of an utterance: the only difference between (1a) and (1b) is that the latter avoids repetition of the material that can be easily understood without being phonetically realised (that is, the VP *thinks I can finish my dissertation*).

(1) a. Lisa thinks I can finish my dissertation and Anikó thinks I can finish my dissertation.
b. Lisa thinks I can finish my dissertation and Anikó does, too.

As discussed in more detail below, it is widely held that elliptical sentences like (1b) contain an unpronounced syntactic structure:

(2) Lisa thinks I can finish my dissertation and Anikó does ~~think I can finish my dissertation~~, too.

Under that assumptions, it is clear that ellipsis affects phonological form of an utterance: it somehow instructs the grammar to bend the rules and not to phonologically realise a part of a sentence. A question is whether ellipsis also exists in other components of the grammar. This is what is meant by the

timing of ellipsis: does ellipsis only happens in the phonological component or is it triggered earlier, in syntax? Do different types of ellipsis differ in this respect? Do languages differ in this respect?

Another process the timing of which is a matter of dispute is cliticisation. Clitics are elements that, informally speaking, cling to other, more independent, words. Most often they are defined in prosodic terms: clitic are words that do not bear their own stress and are forced to combine with an adjacent word (its host) into one prosodic entity. Similar to ellipsis, in this case it is undeniable that cliticisation "exists" in phonology. Again, the question is whether cliticisation is also present in syntax: are elements that are phonologically clitics also have some special syntactic properties? Do different types of clitics differ in this respect? Do languages differ in this respect?

Ellipsis is a particularly challenging topic for investigation because elided material is unpronounced and therefore invisible. How can an invisible phenomenon be investigated? A logical, if not the only, way is to explore its interaction with visible (and pronounced) material. Since it is known that cliticisation exists (at least) in phonology and ellipsis affects (at least) the phonological representation of a sentence, their interaction can provide more insight into the timing of both processes.

In this dissertation, I explore the interaction of ellipsis and cliticisation from two sides. The first one involves special second position clitics. The schemes in (3) and (4) illustrate the line of reasoning. First, it is a common assumption that a clitic and its host originate as separate elements that blend together during the derivation (at least phonologically):

(3) $\boxed{\text{host}}\ \boxed{\text{clitic}} \rightarrow \boxed{\text{host clitic}}$

If we consider some elliptical process that targets a part of a sentence that contains a clitic, but not its host, there are two alternatives with respect to the timing. If ellipsis happens before cliticisation, when the clitic has not cliticised to its host yet, the clitic will be elided, as schematised in (4a), where [E] marks the ellipsis site. If ellipsis happens after cliticisation, it is expected that the clitic will survive ellipsis because it has already become one element with its host, as in (4b).

(4) a. $\boxed{\text{host}}$ $[_{[E]}\ \ldots$ $\boxed{\text{clitic}}$ $\ldots]$

b. $\boxed{\text{host clitic}}$ $[_{[E]}$ $\ldots$ $]$

The other side of the investigation is the sensitivity of ellipsis to the prosodic status of elided elements. If a particular type of ellipsis is somehow affected by the prosodic organisation of a sentence, it clearly indicates its late timing: it must occur at least after the formation of the prosodic structure, which is by itself a late operation (details and assumption about the timing of different operations during the derivation of a sentence are discussed below).

The languages under investigation in this dissertation are Slavic languages, mostly Serbo-Croatian, Slovenian, and Russian. While both Serbo-Croatian and Slovenian have second position clitics, it is shown that they behave diametrically differently to each other when it comes to the interaction of clitics and ellipsis, which reveals that the two seemingly similar systems of the second position cliticization in fact fundamentally differ in their nature and timing. The Russian part of the study focuses on a different class of phonologically weak items – prepositions – and formulates prosodic restrictions on a particular type of ellipsis (sluicing), showing that the possibility to elide a preposition under sluicing depends on its prosodic status and involves a late deletion process.

1.2 The architecture of grammar

In this thesis, I follow the Minimalist approach outlined in Chomsky (1993, 1995b) and subsequent work and adopt a derivational view on language with a traditional inverted Y model of the grammar. In the Minimalist program, human language is viewed as a perfect mechanism relating sound and meaning, as the Strongest Minimalist Thesis states:

(5) *The Strongest Minimalist Thesis* (Chomsky 2000:p.96)
Language is an optimal solution to legibility conditions.

The Legibility Conditions, or the Interface Conditions, are imposed on language by external performance systems, with which language interacts: the Sensorimotor system (SM) and the Conceptual-Intentional system (C-I) system. Each of the systems has access to a distinct interface level: language communicates with SM by means of *Phonological form* (PF), while C-I gets information through *Logical Form* (LF). Grammar consists of three parts, with the central one being *Narrow Syntax*, which is the "generative engine" of language (Chomsky 2001a:6). The operation of Spell-Out transfers the output of syntactic computation to the PF and LF interfaces, which do not interact with each other under this model, as figure 1.1 illustrates.

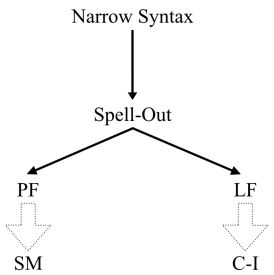


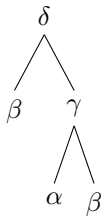
Figure 1.1: *The architecture of the grammar*

Derivation starts with a given set of terminal elements (Numeration), which are manipulated in Narrow Syntax via the recursive structure-building operation *Merge* to derive a syntactic structure. Merge which combines two syntactic objects into a more complex syntactic object, as shown in (6). Importantly, Merge can apply not only to terminal nodes but also to complex syntactic objects which are themselves created by Merge.

(6) Merge (α, β): {α, β}

Chomsky (2001b) distinguishes between External Merge and Internal Merge. While External Merge combines two independent root syntactic objects, Internal Merge combines a root with its subpart. In other words, Internal Merge operates on two objects already introduced in the structure, resulting in what is traditionally called syntactic movement. Internal Merge can be represented in several ways, including creating a copy (7) and involving multidominance (8) (see Larson 2016 for discussion and references).

(7) The Copy Theory of Movement:

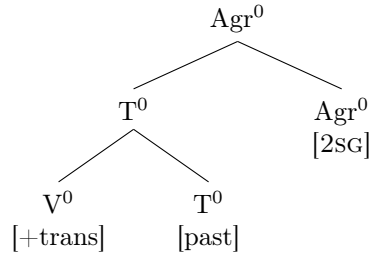


(8) The Multidominance account of Movement:

Following the Distributed Morphology (DM) framework of Halle & Marantz (1993, 1994), I assume that elements manipulated by syntax represent bundles of grammatical features lacking any phonological content (abstract morphemes) and roots.

In DM, word structure is derived by the same generative system as phrase structure, and morphology (as a set of processes that are relevant for word formation) is *distributed* between syntax and the PF branch of derivation. "Words" are formed from roots and abstract morphemes in syntax by syntactic operations (Merge and Move/Internal Merge). Bobaljik (2000) illustrates a syntactic representation of a finite verb in Germanic or Romance by the example in (9). The verb is a complex head which is created by head-movement of V to T to Agr.

(9) An example of a verb in DM (Bobaljik 2000:13)



After Spell-Out, syntactic structure is transformed into morphological structure at PF (see, for example, Embick & Noyer 2007):

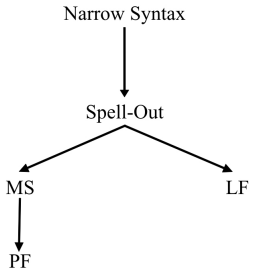


Figure 1.2: *Morphological structure (MS) in the architecture of the grammar*

In the simplest case, the morphological structure is the syntactic structure (like that in (9)) transferred to PF. In more complex cases, additional PF morphological processes can apply to the morphological structure, which can involve reordering of morphemes (via Lowering or Local Dislocation, see Embick & Noyer 2007 for an overview of the morphological operations).

At PF, the abstract morphemes are also supplied by their phonological features via the operation of *Vocabulary Insertion* (VI). VI addresses the Vocabulary, which is a list of Vocabulary Items, the phonological exponents of abstract morphemes paired with grammatical context for their insertion. Consider an example of a Vocabulary Item for the regular English plural marker: (10) instructs VI to add the phonological exponent /z/ to the node with the [pl] feature, and as a result an abstract [pl] morpheme is realised as /z/.

(10) z $\leftrightarrow$ [pl]

An important property of DM is underspecification of Vocabulary Items: a vocabulary item does not need to be fully specified for the syntactic position where it can be inserted. It is common that more than one Vocabulary Items meets the conditions for insertion into a particular node. In this case, the competition is resolved by the Subset Principle:

(11) *The Subset Principle* (Halle 1997:128)
The phonological exponent of a Vocabulary Item is inserted into a position if the item matches all or a subset of the features specified in that position. Insertion does not take place if the Vocabulary Item contains features not present in the morpheme. Where several Vocabulary Items meet the conditions for insertion, the item matching the greatest number of features specified in the terminal morpheme must be chosen.

A Vocabulary Items can also be specified for a particular contextual condition on its insertion. In English, for example, the node with the feature [pl] also have exponents -*en*, ∅, and -*ta*, among others. (12) illustrates a list of Vocabulary Items with additional specification of the roots that they occur with: for example, -*en* will be inserted when the [pl] feature is in a local relationship with the root $\sqrt{\text{CHILD}}$ to form the form *children*.

(12) Vocabulary Items with an additional condition on insertion:

[pl]	↔	-en/	$\{\sqrt{\text{CHILD}}, \sqrt{\text{OX}}, \dots\}$___
[pl]	↔	-∅/	$\{\sqrt{\text{FISH}}, \sqrt{\text{DEER}}, \dots\}$___
[pl]	↔	-ta/	$\{\sqrt{\text{SCHEMA}}, \sqrt{\text{STIGMA}}, \dots\}$___
...			
[pl]	↔	z	elsewhere

The last item in the list in (12) is the default, or elsewhere, item. Note that the default item is compatible with every environment where the [pl] feature is present. This is where the Subset Principle comes into play: the word $\sqrt{\text{DEER}}$-[pl] is never realised as **deer-z* because there is another exponent for [pl] which matches more features, namely -∅.

The PF branch of derivation is responsible for the mediation between syntax the sensorimotor systems. Its role is in transforming a hierarchical syntactic structure into a linear object that can be pronounced (or gestured, or written) in real time. There are at least three PF operations involved in this transformation:

1. Linearization
2. Vocabulary Insertion
3. Prosodic Structure formation

It is standardly assumed that the syntactic structure contains no information about the linear order of its elements (Chomsky 1995a). Without going into the detail, for every node T(A,B), the operation of *Linearization* must choose between the order A-B or B-A (see Kayne 1994, Fox & Pesetsky 2004 on linearization).

The linearized structure with phonological exponents of morphemes inserted is not yet completely ready for pronunciation. The structure has to be transformed into a prosodically organised utterance: an Intonational Phrase (ι) consisting of Phonological Phrases (φ) consisting of Prosodic Words (ω). I assume the following correspondence between syntactic and prosodic constituents:

(13) Syntax-prosody correspondence (based on Ito & Mester 2013)

CP	→	ι
XP	→	φ
X: N,V,A	→	ω

The details about the syntax-prosody interface and the motivation for the categories listed in (13) are discussed in chapter 2.

To summarise, here I adopt the derivational approach to grammar where Narrow Syntax creates hierarchical structures out of nodes (roots and abstract morphemes). The output of syntax is transferred to the interfaces, PF and LF. Syntax and LF therefore only have access to morphosyntactic and semantic features without any phonological information. At PF, Vocabulary Insertion adds phonological representations to the terminal nodes of the syntactic structure. The structure is also linearised and transformed into a prosodically organised construction.

Normally, as follows from the description above, the whole syntactic structure receives phonological representation. In some cases, however, a part of the structure can be left unpronounced as a result of ellipsis. The next section discusses the mechanism of ellipsis and how it can affect the syntactic and prosodic structures.

1.3 Ellipsis and unpronounced structure

The main empirical domain of this dissertation is ellipsis. Ellipsis is a sentence-shortening device, which allows speakers to avoid redundancy in their utterances. Elliptical sentences are examples of the discrepancy between the form and the meaning: in a way, a speaker always means more than they actually pronounce when ellipsis is used.

Two main types of ellipsis under consideration here are *predicate ellipsis* (*VP-ellipsis*), which involves deletion of a verb phrase (14a), and *clausal ellipsis* (*sluicing*), which targets TPs (15a). Note that the meaning of the elliptical sentences are identical to the meaning of their non-elliptical counterparts in (14b) and (15b).

(14) a. Ziggy played guitar and Tom did, too.
b. Ziggy played guitar and Tom played guitar, too.

(15) a. David had to phone someone but I don't know who.
b. David had to phone someone but I don't know who he had to phone.

Ellipsis is a phenomenon that violates the usual meaning-form correspondence, where meaning exists without any (visible) form. There are two general types of accounts of how elliptical constructions receive their meaning, as classified in Merchant (2016):

1. The *non-structural* approach (Ginzburg & Sag 2000, Culicover & Jackendoff 2005) treats elliptical structures in a "what you see is what you get" fashion, as in illustrated in (16): the elliptical clause contains only an orphan *wh*-phrase, and no other elements are present in the structure at any point of the derivation.

   (16) The non-structural approach:
   ...I don't know $[_{\text{S}}$ who$^{\text{ORPH}}]$.

2. Under the *structural* approach, elliptical sentences contain more structure that is visible: either some kind of a null anaphoric element, receiving its interpretation at PF (Williams 1977, Hardt 1993, Chung & McCloskey 1995, Lobeck 1995, Depiante 2000), as in (17a), or a fully-fledged syntactic structure (Ross 1969a, Sag 1976, Hankamer 1979, Wilder 1997, Lasnik 2001, Merchant 2001, Johnson 2004, Aelbrecht 2010, Van Craenenbroeck 2010, Baltin 2012, Merchant & Weskott 2013), as in (17b).

   (17) The structural approaches:
   a. Ziggy played guitar and I did [e], too.
   b. Ziggy played guitar and I did ~~$[_{\text{VP}}$ play $[_{\text{DP}}$ guitar $]]$~~.

1.3.1 The PF-deletion approach

The approaches outlined above differ in how much structure is assumed to be in the ellipsis site. In this thesis, I adopt the full syntactic structure approach, often referred to as the *PF-deletion* approach. Under the PF-deletion account, the ellipsis site contains a fully-fledged syntactic structure, which is deleted at PF, and therefore elliptical sentences are interpreted by the standard rules:

> In such a scenario, the interpretation of an elliptical sentence proceeds exactly as that of a nonelliptical one, that is, via a compositional, one-to-one mapping between syntax and semantics.
>
> Van Craenenbroeck (2010:1)

Merchant (2016) remarks that there are more than thirteen sets of facts which have been used in literature to argue for the existence of unpronounced structure inside the ellipsis site, which include:[1]

- case matching effects
- P-stranding effects
- lower origin effects
- locality effects

[1] See Merchant (2016) for the full list, details, and references.

- agreement effects
- the distribution of complementizers

Here I introduce the first two phenomena, which will be relevant for the discussion in this thesis.

Case matching is one of the connectivity effects between the antecedent and the remnant of ellipsis, which is evidence for unpronounced structure, as has been pointed out for sluicing by Ross (1969b) and fragment answers by Merchant (2004) (see Barros 2014 for fuller and more recent discussion). Consider two examples from Russian, (18) for sluicing and (19) for fragment answers. The remnant of sluicing in (18a), the pronoun *komu*, has to bear the same morphological case as the indefinite pronoun *komu-to* in the antecedent, dative in this particular sentence. This fact can be easily accounted for by assuming that (18a) is derived from (18b) by PF-deletion of the embedded TP. Hence the two sentences have the same syntactic structures, and the case of the sluicing remnant is assigned by the verb which is syntactically present in the ellipsis site.

(18) a. Ja dala etu knigu komu-to, no zabyla, komu / *kto
I gave this book someone.DAT but forgot who.DAT who.NOM
/ *kogo .
who.ACC

'I gave this book to someone but I forgot to whom.'

b. Ja dala etu knigu komu-to, no zabyla, komu$_i$ [ja dala
I gave this book someone.DAT but forgot who.DAT I gave
etu knigu t$_i$].
this book.

'I gave this book to someone but I forgot to whom I gave this book.'

The same holds for fragment answers. The case of the NP in the fragment answer in (19a) has to match the case of the full sentential answer in (19b), which provides evidence for the presence of the case-assigning verb in the syntactic structure of (19a).

(19) Čto ty iščeš?
what you look-for

'What are you looking for?'

a. Moju knigu. / *Moja kniga.
my.ACC book.ACC my.NOM book.NOM

'My book.'

b. Moju knigu$_i$ [$_{TP}$ ja išču t$_i$].
my.ACC book.ACC I look-for

'My book, I am looking for.'

Another phenomenon suggesting the existence of structure in the ellipsis site is the distribution of preposition stranding under *wh*-movement. Merchant (2001) formulates the following generalisation:[2]

(20) *Preposition-stranding generalisation* (Merchant 2001:p.92)
A language L will allow preposition stranding under sluicing iff L allows preposition stranding under regular *wh*-movement.

English, which allows preposition stranding under regular movement, as in (21a), allows prepositions to be omitted from sluiced sentences (21b). This correspondence can be explained if in the prepositionless version of (21b) the preposition is actually stranded inside the ellipsis site, just as what we see in (21a), as illustrated in (21c).

(21) a. What was she talking about?
b. She was talking about something but I forgot (about) what.
c. She was talking about something but I forgot what ~~$\lceil_{\text{TP}}$ she was talking about $\rceil$~~.

Russian, on the other hand, normally does not allow preposition stranding under regular wh-movement, as shown in (22), or preposition omission under sluicing (23a). The difference between English and Russian can be accounted for by assuming that sluiced sentences contain unpronounced syntactic structure, and in the case of Russian, the preposition cannot be stranded inside the ellipsis site, as (23b) shows.

(22) a. * Čëm ona govorila o?
what.PREP she talked about
b. O čëm ona govorila?
about what.PREP she talked
'What was she talking about?'

(23) a. Ona govorila o čëm-to, no ja zabyla, *(o) čëm.
she talked about something.PREP but I forgot about what.PREP
'She was talking about something but I forgot about what.'

[2] As has been noticed for a variety of languages, the Preposition Stranding Generalisation does not always hold. Counterexamples come from Spanish (Vicente 2008, Rodrigues et al. 2009), Brazilian Portuguese (Almeida & Yoshida 2007, Rodrigues et al. 2009), Indonesian (Fortin 2007), Polish (Szczegielniak 2006, 2008), Serbo-Croatian (Stjepanović 2008, 2012), Romanian (Nicolae 2012), Czech (Caha 2011) and Russian (Philippova 2014). Chapter 5 discusses the exceptions from Russian and provides an analysis under which the Generalisation still holds.

b. * Ona govorila o čëm-to, no ja zabyla, čëm ⊢$_{\overline{\text{TP}}}$
she talked about something.PREP but I forgot what
~~ona~~ ~~govorila~~ ~~o~~ ⊣.
she talked about.PREP
'She was talking about something but I forgot what she was talking about.'

These and various other effects indicate the presence of syntactic structure inside the ellipsis site. Under the PF-deletion approach, unlike under other approaches to ellipsis, nothing out of the ordinary is stipulated about the interpretation of elliptical sentences: the meaning is derived from the syntactic structure by the usual mechanisms. What is special about ellipsis is the phonological side: a part of a sentence, marked for ellipsis, is "deleted" at PF.

In most current versions of the PF-deletion approach, no actual operation of deletion is assumed. Phonological exponents are not wiped out at PF to prompt non-pronunciation of the material marked for ellipsis; instead, no phonological features are inserted in the first place, which can be implemented by postulating that ellipsis blocks Vocabulary Insertion (Bartos 2001, Kornfeld & Saab 2004, Saab 2009, Aelbrecht 2010, Saab & Zdrojewski 2012, Temmerman 2012). The operation of VI therefore ignores a part of the structure that has been sent to PF.[3]

In this sense, ellipsis is without doubt a post-syntactic phenomenon. That does not mean, however, that it is *entirely* a post-syntactic phenomenon. The next section introduces the debate on when exactly ellipsis applies in the course of derivation.

1.3.2 The timing of ellipsis

The topic of the timing of ellipsis has been becoming more and more popular within the generative framework over the past two decades. Two questions discussed within this debate are the following:

1. When does ellipsis "happen"?
2. Do different types of ellipsis differ with respect to their timing, or is ellipsis a uniform operation?

I start the discussion here with the second question. One of the obvious diagnostics of the timing of a particular type of ellipsis is its sensitivity to syntactic constituency. While many types of ellipsis (such as clausal ellipsis,

[3]Alternatively, it has been proposed that ellipsis involves insertion of null morphemes as a result of a PF impoverishment rule that deletes all features on a node marked for ellipsis (Murphy 2016). An earlier approach to PF-silencing viewed ellipsis as radical deaccentuation (Tancredi 1992, Chomsky & Lasnik 1993). It has been repeatedly discussed that this view cannot be correct since the domains of ellipsis and accentuation do not always coincide (e.g. Holmberg 2001, Merchant 2001).

predicate ellipsis, NP ellipsis) comply with syntactic constituency, other types can be shown to completely ignore syntactic constituency and to be sensitive to the prosodic structure instead. An example is left-edge ellipsis (Napoli 1982, Weir 2012).

In (24), the operation of left-edge deletion can target strings of different sizes, which definitely do not correspond to syntactic constituents.

(24) Left-edge ellipsis (Weir 2012:117)
   a. Has the professor arrived yet?
   b. ~~Has~~ the professor arrived yet?
   c. ~~Has the~~ professor arrived yet?
   d. ~~Has the pro~~fessor arrived yet?

As I argue in Chapter 5 of this dissertation, another instance of purely phonological ellipsis is preposition omission under sluicing, as illustrated in (25). I argue that while the clausal deletion itself is licensed in narrow syntax, the preposition is deleted only at PF.

(25) Alëna vybežala navstreču komu-to, no ja ne znaju, ~~navstreču~~
   Alëna ran.out towards someone but I now know towards
   komu.
   who
   'Alëna ran out towards someone but I don't know who.'

There are are at least two types of ellipsis with respect to the timing. I will call the instances of purely phonological ellipsis, such as left-edge deletion, as *late ellipsis*. The instances of ellipsis that are somehow sensitive to syntactic constituency, such as clausal and predicate ellipsis, will be referred to as *syntactic ellipsis*, even though it is disputable if it actually "happens" in syntax.

So when (or where) does it happen? To continue with this discussion, it is first necessary to determine what is meant by ellipsis "happening" or "taking place", which is in turn dependent on what we take the operation of ellipsis precisely to be. As Bennett et al. (2019) point out:

> Ellipsis is a very complex phenomenon whose effects are distributed over all aspects of linguistic representation (pragmatics, semantics, syntax, morphology, phonology, the lexicon). It is important, then, not to fall into the trap of presupposing a unitary operation of 'ellipsis'.
>
> Bennett et al. (2019:93)

If ellipsis is not a unitary operation, it is necessary to agree on what aspect of it is being discussed when we talk about timing. The following possible aspects, or sub-operations, of ellipsis have been distinguished within the PF-deletion approach:

1. licensing
2. freezing of the ellipsis site
3. deletion of some features
4. transfer to PF
5. PF-silencing

While licensing and PF-silencing are the necessary components of any instance of the PF-deletion approach, particular accounts differ in what (and when) happens in between.

As far as I am aware, it has never been proposed that licensing (calculating if the syntactic environment allows ellipsis) of ellipsis occurs somewhere outside of the Narrow Syntax for the types of ellipsis that I call *syntactic* above. This means that ellipsis always "begins" in syntax in cases of *syntactic ellipsis*.

The fact that ellipsis is possible only in certain syntactic environments is usually accounted for by postulating that ellipsis requires a *licensing head* (Zagona 1982, 1988a,b, Lobeck 1993, 1995, Merchant 2001, 2004). An example of a licensing head is a null interrogative C, which licenses sluicing (26a-26b). Sluicing is not licensed by other types of C (26c-26d).

(26) Licensing of sluicing (Merchant 2001)

a. One of the linguists was going to the Leap Day party, but no-one told me who [~~was going to the Leap Day party~~].

b. One of the linguists was going to some party, but I don't know which party [~~one of the linguists was going to~~].

c. * One of the linguists was going to the Leap Day party, but no-one told me that [~~one of the linguists was going to the Leap Day party~~].

d. * One of the linguists was going to the Leap Day party, but I didn't know yet whether [~~one of the linguists was going to the Leap Day party~~] when Susan asked me about it.

Currently, the prevalent implementation of licensing is the [E]-feature introduced in Merchant (2001). Merchant proposes that a licensing head carries the [E]-feature, which in turn carries uninterpretable features itself. In the case of sluicing, the lexical entry of the corresponding feature, $[E]_S$, is as following:[4]

(27) $[E]_S$ (Merchant 2004:670-672)

a. The syntax of E_S: E_S [*u*wh*, *u*Q*]

b. The phonology of E_S: $\varphi_{TP} \rightarrow \varnothing / E\_$

c. The semantics of E_S: [[E]] = λp: e-GIVEN(p) [p]

[4]Merchant (2001) postulates a specific [E]-feature for every kind of elliptical constructions, i.e. $[E]_S$ for sluicing, $[E]_{VP}$ for VP ellipsis, and so on.

The syntactic component of the [E]-feature captures the syntactic licensing conditions on ellipsis. In the case of sluicing, the uninterpretable features of [E] has to be checked by a C head bearing [wh,Q] features, i.e. an interrogative head attracting a *wh*-element, meaning that [E] can only occur on C [wh,Q].

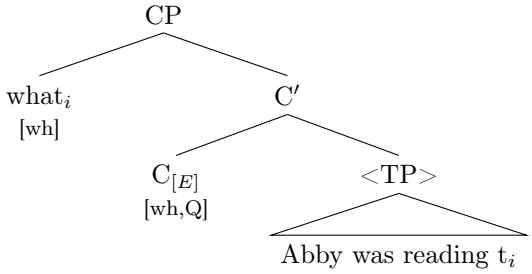
The phonological component of [E] instructs the phonological representation of TP (φ_{TP}) to be null, i.e. the whole TP is not parsed by the PF component and is therefore left unpronounced.

The semantic part of [E] makes sure that the elided material is recoverable, which is implemented through the notion of e-giveness. As (Merchant, 2004:672) puts it, "roughly, an expression E is e-given iff there is an antecedent A which entails E and which is entailed by E, modulo ∃-type-shifting".

The structure in (29) demonstrates the licensing of ellipsis via the [E]-feature for the sluicing example in (28). The uninterpretable [uwh*, uQ*] features of $[\text{E}]_{\text{S}}$ are checked against the [wh, Q] features of the C head.

(28) Abby was reading something, but I don't know what$_i$ [$_{TP}$ ~~Abby was reading t$_i$~~].

(29) Licensing via the [E]-feature (Merchant 2001:670)



With respect to the timing issue, it is important to point out that under this account only the licensing of ellipsis happens in syntax so the syntactic structure itself is not affected by ellipsis in any way. In Merchant's own words (the emphasis is mine):

> In essence, E instructs the post-PF phonological interpretative component not to parse its complement. <...> This is the entirety of 'PF-deletion' – there is no transformation or operation of deletion on this view, no 'Delete α' or other syntactic process of deletion or structure-destruction etc. <...> *Deletion as a notion is completely eliminated from the syntax.*
>
> Merchant (2004:671)

I will refer to this type of approach as *PF ellipsis*. The *PF ellipsis* approaches posit that syntactic computation is not affected by ellipsis. Ellipsis only has an effect on PF, triggering the non-pronunciation of the material inside the ellipsis site. Ellipsis licensing still happens in syntax but does not

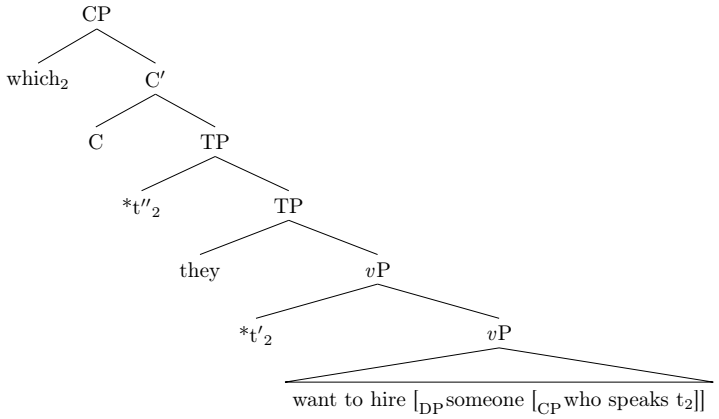
cause the inaccessibility of the material marked for ellipsis. Seemingly syntactic effects of ellipsis, such as the possibility of extraction out of islands under ellipsis or ellipsis blocking head movement, are accounted for by the elimination of PF-uninterpretable features of the terminals inside the ellipsis site, which is in turn based on the idea that islands violations emerge as a result of PF-uninterpretablity causing the derivation to crash at PF (Chomsky 1972, Lasnik 2001, Fox & Lasnik 2003, Merchant 2001, 2004). Ellipsis deletes formal features of the terminals within the ellipsis site, including those PF-uninterpretable features, and no island violation arises. The examples in (30) show that sluicing repairs island violations. Extraction out of a Relative Clause island in a non-elliptical sentence, as in (30a), is impossible, but no violation arises in the case of sluicing, as in (30b).

(30) a. * They want to hire someone who speaks a Balkan language, but I don't remember [which Balkan language]$_i$ they want to hire someone who [speaks t$_i$].

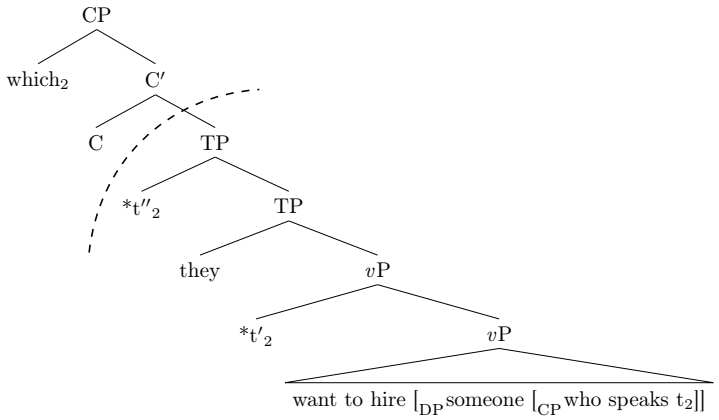
b. They want to hire someone who speaks a Balkan language, but I don't remember which.

The analysis of this contrast suggested in Merchant (2004) is built on the idea that movement of an XP out of an island leaves defective intermediate traces, which have a PF-uninterpretable feature *. Unless eliminated, this feature causes the derivation to crash at PF, which happens in non-elliptical sentences, such as (31), which has two traces with the * feature (*t′$_2$ and *t″$_2$). When ellipsis applies, the defected traces are eliminated from the object interpreted at PF, leading to a successful derivation, as illustrated in (32).

(31) No ellipsis (Merchant 2004:707)



(32) Sluicing



An alternative to PF ellipsis is what I will call *derivational ellipsis*, following Aelbrecht (2010). The *derivational ellipsis* approaches claim that ellipsis affects syntax, either by deleting formal features inside the ellipsis site (Baltin 2007, 2012), or by making the ellipsis site inaccessible for further syntactic operations, either by simply freezing it (Aelbrecht 2010, Sailor 2018) or by transferring it to PF as a phase (Gengel 2007, Gallego 2009, Van Craenenbroeck 2010).

I introduce derivational approaches on the example of the account of Aelbrecht (2010). Aelbrecht uses the [E]-feature in her account as well, but unlike Merchant (2001), she suggests that ellipsis actually affects syntactic derivation by freezing the ellipsis site for syntactic operations. As a result of her study on Dutch modal complements, Aelbrecht proposes the following mechanism of ellipsis:

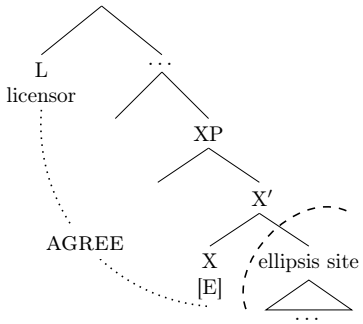
(33) Derivational ellipsis (Aelbrecht 2010:167)

a. Ellipsis is licensed via an Agree relation between an [E]-feature and the ellipsis licensing head.

b. Ellipsis occurs in the course of the derivation, as soon as the licensing head is merged. At this point the ellipsis site becomes inaccessible for any further syntactic operations, and vocabulary insertion at PF is blocked.

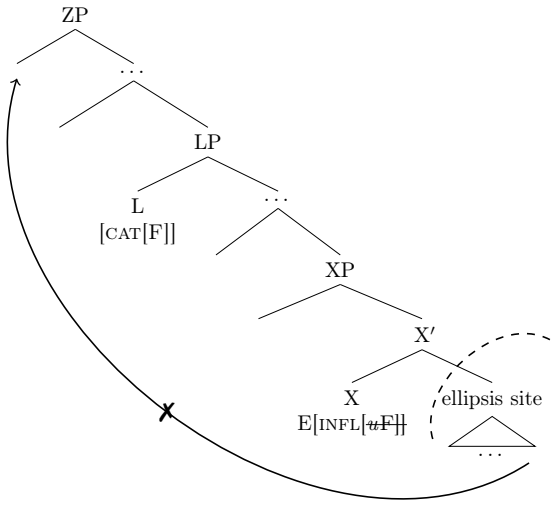
Importantly, under Aelbrecht's account, the licensing head is not necessarily the head bearing the [E]-feature. This is depicted in (34): the [E]-feature is on the head X, the complement of which is elided, while the licensor is the head L, which agrees with the [E]-feature (ellipsis is marked with the dashed line throughout this dissertation).

(34) Agree between the licensor and [E] (Aelbrecht 2010:169)



Crucially, no movement is possible out of the ellipsis site after the licensor agrees with the [E]-feature and ellipsis happens. The structure in (35) illustrates the mechanism: as soon as the licensing head L merges into the structure, it checks the uninterpretable inflectional (INFL) feature of [E], which corresponds to the category (CAT) feature of the licensor. Ellipsis happens, making the ellipsis site inaccessible for syntax. Movement of any element out of the ellipsis site is therefore impossible after this stage.[5]

(35) Freezing of the ellipsis site (Aelbrecht 2010:204)



Sailor (2018) applies the derivational approach of Aelbrecht (2010) to explain the absence of V-to-C movement under VP-ellipsis in Mainland Scandinavian. The examples in (36) demonstrate the issue: Danish is a verb-second

[5]Importantly, movement out of the ellipsis site is still possible, as long as it happens before the licensing head merges and agrees with the [E]-feature, triggering ellipsis.

language, but the verb cannot move to C^0 under VP-ellipsis (36a), as it normally would. Instead, the dummy auxiliary verb *gjorde* is used, as in (36b).

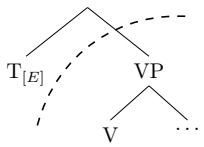
(36) VP-ellipsis in Danish (Sailor 2018:4)

a. * Mona og Jasper vaskede bilen, eller rettere Mona
Mona and Jasper wash.PAST car.DEF or rather Mona
vaskede.
wash.PAST
Int: 'Mona and Jasper washed the car, or rather Mona did.'

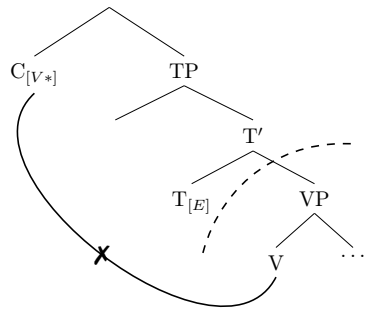
b. Mona og Jasper vaskede bilen, eller rettere Mona
Mona and Jasper wash.PAST car.DEF or rather Mona
gjorde.
do.PART
'Mona and Jasper washed the car, or rather Mona did.'

The contrast between (36a) and (36b) can be easily explained under the derivational approach. VP-ellipsis is licensed by T, and verb movement is triggered by C, not T in Danish. VP-ellipsis is triggered as soon as T merges, as illustrated in (37). The VP becomes inaccessible at this point, and by the time C, which attracts the verb, merges, the verb cannot move out of the VP anymore, see (38).

(37) **Step 1**: Merger of $T_{[E]}$ triggers VPE; VP becomes inaccessible for later operations (Sailor 2018:10)



(38) **Step 2**: Merger of $C_{[V*]}$ looks for a verb to attract but is unable to probe inside the VP (Sailor 2018:10)



To summarise, the problem of the timing of ellipsis is a multidimensional one. As I discuss earlier, first, the types of ellipsis differ with respect to the timing of their licensing. I suggest that there are two general kinds of ellipsis in this respect:

1. *Syntactic ellipsis*, which is licensed in syntax and is therefore sensitive to syntactic constituency and syntactic operations (clausal ellipsis, predicate ellipsis, NP ellipsis).

2. *Late ellipsis*, which is licensed in phonology and is therefore completely insensitive to syntactic constituency and instead operates on phonological domains (left-edge deletion being the prime example).

Accounts of syntactic ellipses differ in their approaches to the actual timing of ellipsis. What is meant by the timing of ellipsis is when ellipsis affects the structure. I recognise two major groups of accounts here:

1. *PF ellipsis* accounts, which assume that although ellipsis is licensed (and triggered) in syntax, it does not affect syntactic computation. The derivation proceeds as usual, and ellipsis is only "visible" at PF when a part of the structure remains unpronounced (Merchant 2001, Van Craenenbroeck & Lipták 2006, Toosarvandani 2009 among many others).
   These accounts therefore assume the late timing of ellipsis.

2. *Derivational ellipsis* accounts, which assume that ellipsis does affect syntactic computation, either by deleting formal features inside the ellipsis site (Baltin 2007, 2012), or by making the ellipsis site inaccessible for further syntactic operations, either by simply freezing it (Aelbrecht 2010, Sailor 2018) or by transferring it to PF as a phase (Gengel 2007, Gallego 2009, Van Craenenbroeck 2010).
   These accounts therefore assume the early timing of ellipsis.

1.4 Outline of the dissertation

In this chapter, I introduced the main concepts which are crucial for understanding the rest of the dissertation, which focuses on the interaction of phonologically weak items with ellipsis. The rest of the dissertation proceeds as follows.

Chapter 2 discusses the concept of clitics (phonologically weak items) and the difficulties with defining clitics as such. It presents an overview of different phonological types of clitics and introduces the notion of second position cliticisation, which is the focus of the further chapters.

In chapter 3, I concentrate on the phenomenon of second position cliticisation in Serbo-Croatian and address the everlasting debate on how and, more importantly, when clitics are placed into the second position. Analysing the

interaction of VP-ellipsis and clitic placement, I argue that Serbo-Croatian second position cliticisation is phonological in its nature.

In chapter 4, I compare second position cliticisation in Serbo-Croatian to that in Slovenian and show that the interaction of clitics and ellipsis uncovers strong differences between the two languages. I argue that the nature of second position cliticisation in Slovenian is syntactic.

Chapter 5 shifts attention to a slightly different phenomenon, preposition omission under sluicing in Russian. I analyse the restrictions on preposition omission and show that they are entirely prosodic, which allows me to conclude that preposition omission is an instance of late ellipsis.

Finally, chapter 6 summarises the issues discussed in the dissertation and raises questions for further research.