The unbearable lightness of clitics

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The questions that we pose are probably premature, if not meaningless. In short, this is all crazy, so let's do it.

Idan Landau
Introduction to Syntax
MIT
Fall 2003

Contents

Acknowledgements

Doing my PhD was not particularly easy for me (if it ever is for anyone) and finishing it was only possible because of the constant support, guidance, and encouragement of all the incredible people who were sharing the road with me for the past 4 years.

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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) | host | | clitic | → | 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. | host | $[_{[E]} \dots$ | clitic | $\dots]$
       b. | host clitic | $[_{[E]}$ $\dots$ $]$

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.
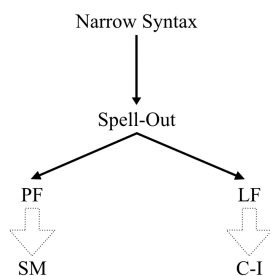
Figure 1.1: *The architecture of the grammar*

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): $\{\alpha, \beta\}$

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).
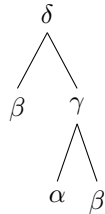
(7)   The Copy Theory   (8)   The Multidominance
      of Movement: account of Movement:

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)

Agr⁰ tree diagram:

```
                    Agr⁰
                   /    \
                 T⁰      Agr⁰
                /  \     [2SG]
              V⁰    T⁰
          [+trans] [past]
```
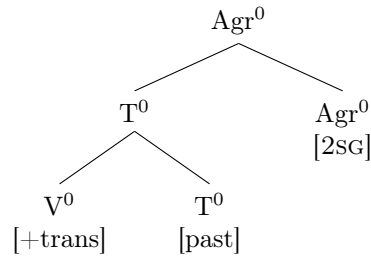
After Spell-Out, syntactic structure is transformed into morphological structure at PF (see, for example, Embick & Noyer 2007):

```
        Narrow Syntax
             │
             ▼
         Spell-Out
          ↙      ↘
      MS            LF
      │
      ▼
      PF
```
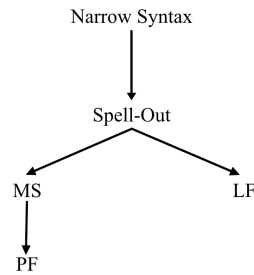
Figure 1.2: *Morphological structure (MS) in the architecture of the grammar*

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 ↔ [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 po-
        sition if the item matches all or a subset of the features specified in
        that position. Insertion does not take place if the Vocabulary Item con-
        tains 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 con-
dition on its insertion. In English, for example, the node with the feature [pl]
also have exponents -*en*, $\varnothing$, and -*ta*, among others. (12) illustrates a list of Vo-
cabulary 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] $\leftrightarrow$ -en/ $\{\sqrt{\text{CHILD}}, \sqrt{\text{OX}}, \dots\}$___
        [pl] $\leftrightarrow$ -$\varnothing$/ $\{\sqrt{\text{FISH}}, \sqrt{\text{DEER}}, \dots\}$___
        [pl] $\leftrightarrow$ -ta/ $\{\sqrt{\text{SCHEMA}}, \sqrt{\text{STIGMA}}, \dots\}$___
        . . .
        [pl] $\leftrightarrow$ 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 -$\varnothing$.

The PF branch of derivation is responsible for the mediation between syn-
tax 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 transfor-
mation:

   1. Linearization

   2. Vocabulary Insertion

   3. Prosodic Structure formation

It is standardly assumed that the syntactic structure contains no informa-
tion 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 trans-
formed into a prosodically organised utterance: an Intonational Phrase (ι) con-
sisting 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	$\rightarrow$	ι
XP	$\rightarrow$	φ
X: N,V,A	$\rightarrow$	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 & Jack-
   endoff 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 [$_S$ 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 pro-
> ceeds exactly as that of a nonelliptical one, that is, via a composi-
> tional, 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 $\overline{[_{TP}}$ ~~she was talking about]~~.

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)
          she talked   about something.PREP but I forgot about
          čëm.
          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 $\mid_{\overline{\text{TP}}}$
          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*, uQ*]

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

    c. The semantics of E_S: $[[E]] = \lambda p$: 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 [E]$_S$ 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)
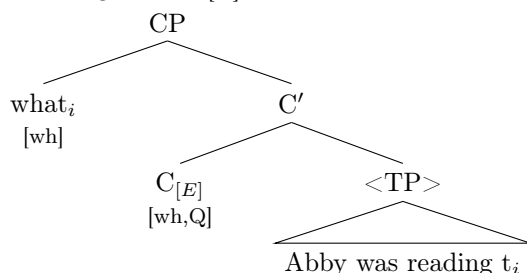
With respect to the timing issue, it is important to point out that under this account only the licensing of ellipsis happens in syntax so the syntactic structure itself is not affected by ellipsis in any way. In Merchant's own words (the emphasis is mine):

> 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

```
                        CP
                   ╱         ╲
              which₂         C′
                          ╱   ╲ ╲ ╲ ╲ .
                        C        TP
                      ╱  ╲    ╱    ╲
                    ╱    *t″₂      TP
                  ╱            ╱      ╲
                ╱           they       vP
                                    ╱      ╲
                                  *t′₂       vP
                                         ╱       ╲
                            want to hire [_DP someone [_CP who speaks t₂]]
```
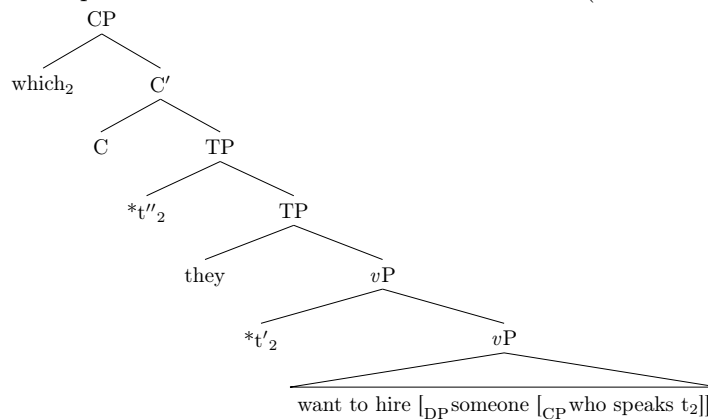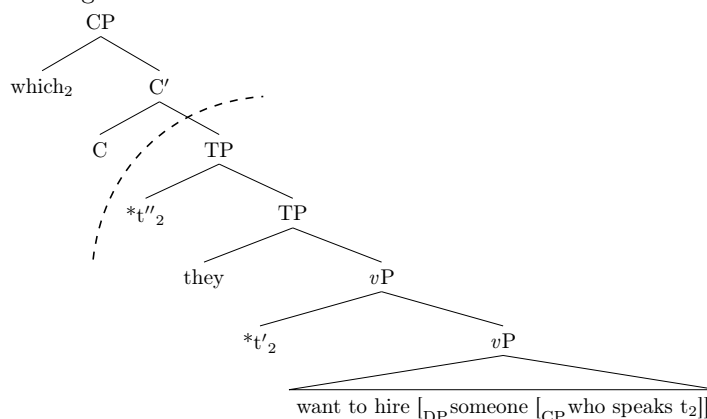
An alternative to PF ellipsis is what I will call *derivational ellipsis*, following Aelbrecht (2010). The *derivational ellipsis* approaches claim that ellipsis affects syntax, either by deleting formal features inside the ellipsis site (Baltin 2007, 2012), or by making the ellipsis site inaccessible 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)

```
              ╱╲
             ╱  ╲
            L    ...
         licensor ╱╲
                 ╱  ╲
                XP
               ╱╲
              ╱  ╲
              X′
             ╱╲ ╱ ⌒ ╲
            ╱  ╲ ╲   ╲
            X   ellipsis site
           [E]   ╱╲
                ╱──╲
                 ...
```
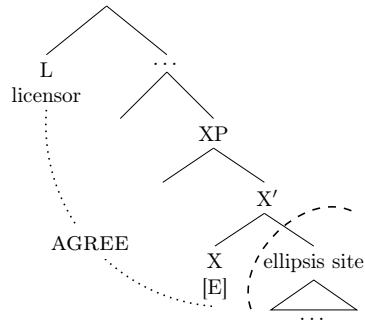
Crucially, no movement is possible out of the ellipsis site after the licensor agrees with the [E]-feature and ellipsis happens. The structure in (35) illustrates the mechanism: as soon as the licensing head L merges into the structure, it checks the uninterpretable inflectional (INFL) feature of [E], 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)

```
         ZP
        ╱╲
       ╱  ...
      ╱   ╱╲
     ╱   ╱  ╲
    ╱        LP
   ╱        ╱╲
  ╱        ╱  ╲
 ╱         L   ...
 ↑      [CAT[F]] ╱╲
 ╱             ╱  ╲
 ╱            XP
 ╱           ╱╲
 ╱          ╱  ╲
 ╱          X′
 ╱         ╱╲ ╱ ⌒ ╲
 ✗         ╱  ╲╲   ╲
  ╲        X   ellipsis site
   ╲    E[INFL[uF]]  ╱╲
    ╲             ╱──╲
     ╲            ...
      ╲_____╱
```
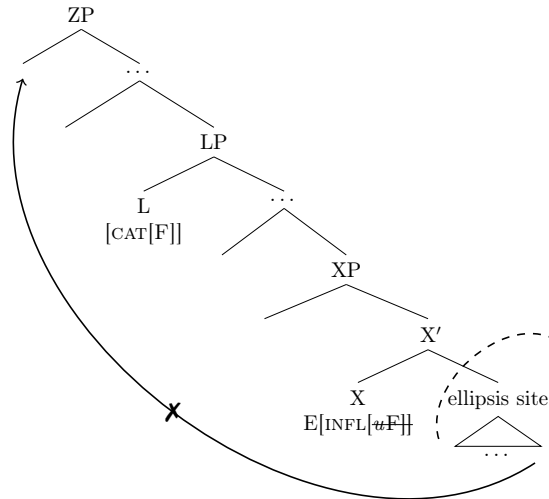
Sailor (2018) applies the derivational approach of Aelbrecht (2010) to explain the absence of V-to-C movement under VP-ellipsis in Mainland Scandinavian. The examples in (36) demonstrate the issue: Danish is a verb-second

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[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)
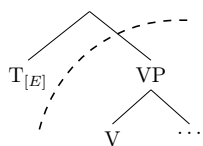
(38)   **Step 2**: Merger of $C_{[V*]}$ looks for a verb to attract but is unable to
       probe inside the VP   (Sailor 2018:10)
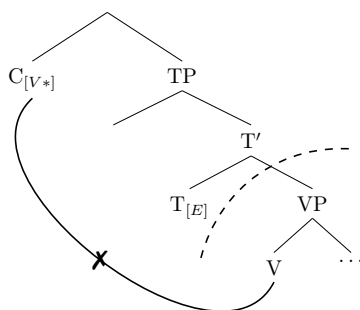
To summarise, the problem of the timing of ellipsis is a multidimensional one. As I discuss earlier, first, the types of ellipsis differ with respect to the timing of their licensing. I suggest that there are two general kinds of ellipsis in this respect:

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.

CHAPTER 2

Types of clitics: prosody and syntax

The focus of this dissertation is the interaction of phonologically weak items, or clitics, and ellipsis. This chapter discusses some problematic aspects with respect to the definition of clitics and introduces different types of clitics, both in syntax and prosody, with special focus on second position clitics in Serbo-Croatian and Slovenian.

2.1 Defining clitics

The term "clitics" has been used to refer to a vast and highly diverse group of elements, and it is challenging to provide a definition that will encompass all the properties of different classes of clitics. This raises a question of whether there is a uniform class of clitics as such. Using the words of Spencer & Luis (2012), "...the notion [of clitic] is often a useful one in description but it's difficult to justify setting up any universal category of clitic or clitichood" (ibid.:321).

   While I am not aware of any formal and definitive definition of clitichood, the literature on cliticisation contains many observations on what clitics are, or, rather, what they are not:

(1) Spencer & Luis (2012:i):
    In most languages we find 'little words' which resemble a full word, but which cannot stand on their own. Instead they have to 'lean on' a neighbouring word...

(2) Franks (2016:91):
    Yet however elusive any comprehensive definition of clitics may be, one

thing is clear: clitics are defective. That is, clitics are different from other words in that they cannot do something other, 'normal' words can do.

(3) Anderson (2005:13):
When phonological material does not have enough prosodic structure to be integrated into the prosodic structure of the whole utterance on its own (by virtue of not being organized into a prosodic word), it must be dependent on some adjacent material that can provide the necessary bridge between lower- and higher-level prosodic categories. This sort of incorporation into an adjacent word is just the behaviour we associate with clitics (in the phonological sense), which we can thus propose to treat as *prosodically deficient* forms.

(4) Tomić (1996:811):
Clitics have traditionally been defined as elements forming accentual units with the preceding or following word and, more recently (cf. Crystal 1980), as elements "that are structurally dependent on neighboring words".

(5) Zec (2009:139):
What emerges from this vast body of work is that clitics are more easily characterized by what they are not, than by what they are. Elements referred to as clitics systematically defy the general distributional and other principles that otherwise hold in the grammar. But while the phonology and syntax of clitics appears to be unlike the phonology and syntax of other linguistic elements, there are no obvious phonological or syntactic properties that uniquely characterize the class of clitics.

2.1.1 Kinds of deficiency

The most prominent property of clitics is their deficiency. Most often this deficiency is attributed to the phonological status of clitics: clitics are defective in their phonological representation and therefore have to prosodically combine with an adjacent non-clitic word.

It has been proposed by various authors that it is not only prosodic deficiency that is responsible for the special status of clitics. In fact, phonological deficiency can be a mere reflex of special syntactic or morphological properties of clitics. Franks (2016) suggests that clitics are special with respect to sounds, meaning, and syntax and are minimal vocabulary items in a sense that on every level they only have a minimum amount of structure:[1]

---

[1]The properties of clitics introduced by Franks (2016) do not differentiate between clitics and affixes: affixes are phonologically, semantically, and syntactically minimal in the same sense. The differences between clitics and affixes, however, are of no particular concern in this dissertation; for details see Zwicky & Pullum (1983) and the discussion in Anderson (2005).

1. phonologically, clitics lack prosodic structure above the syllable (i.e. they are not prosodic words);

2. semantically, clitics only have purely grammatical (but not lexical) meaning;

3. syntactically, clitics are non-projecting heads.

Neither phonological, semantic, or syntactic properties of clitics appear to be defining on closer inspection.

Phonological deficiency of clitics results in their inability to bear stress or being targeted by rules of stress assignment (Franks 2016). It has been noticed, however, that in some cases clitics can end up bearing stress. Consider the example in (6) from Macedonian, a language where clitics (such as pronouns and auxiliaries) have to be adjacent to the verb. In some environments, in particular under negation, when a clitic cluster occurs between negation and the verb, one of the clitics can carry stress if it happens to be the antepenultimate syllable, which almost always carries stress in Macedonian. This pattern can be explained if it is not a clitic by itself that carries stress; rather, the whole verbal complex, including negation and the clitic cluster, becomes the domain for the stress assignment.

(6) Stressed clitics in Macedonian   (Spencer & Luis 2012:89)

  a. Ne *mu*   *gó* dade.
    NEG to.him it he.gave
    'He didn't give it to him.'

  b. Ne *će* *sé*   venča.
    NEG FUT REFL marry
    'They won't get married.'

A more problematic case comes from Slovenian, a language with second position clitics. Slovenian clitics are famous for their ability to be either enclitics or proclitics, which is not typical cross-linguistically. But more surprising is the fact that Slovenian clitics can occur with no phonological support at all, as in the answer to a yes-no question in (7). Obviously, in these cases the clitics are not phonologically defective: they become 'normal' words, bearing their own stress. Note that in cases like (7) a clitic form (*ga*) of the pronoun should be used, not a strong form (*njega*).[2]

(7) Q: Ali ga   poznaš?
      Q   him.ACC know.2SG
      'Do you know him?'

    A: ***Ga.***
      him.ACC
      'I do'. (Lit: 'Him.')

---

[2]The usage of clitics in yes-no answers in Slovenian is discussed in detail in Chapter 4.

A: * Njega.
    him.ACC

    Int: 'I do'. (Lit: 'Him.')

Semantic deficiency is a necessary but not sufficient condition on clitichood, as Franks (2016) noticed. It seems true that only functional elements can be clitics, which Franks formulates as (8).

(8)   The Semantic Deficiency   (Franks 2016:108)
    Clitics cannot instantiate lexico-conceptual features.

Not all functional elements are clitics, though. Consider the pronominal clitic *ga* 'him' and its strong counterpart *njega* from the example above: both pronouns are identical semantically and only differ with respect to the prosodic environments where they can appear in (a focused pronoun must be realised as a strong form). There are no reasons to assume that strong forms of pronouns instantiate more "lexico-conceptual features" than their clitic counterparts.

Syntactic deficiency of clitics also does not seem to be a defining characteristic and does not hold for all types of clitics. For the difference between pronominal clitics and their strong counterparts, Franks (2016) suggests the following. While clitics are syntactic elements ambiguous between heads and maximal projections, as proposed in Chomsky (1995a), their non-clitic counterparts have more complex structure:

(9)   a. Clitic pronouns: b. Strong pronouns:
        K^0/K^0_{Max} K_{Max}

        | K^0 N^0/N_{Max}

        ga   nje+ga   ~~nje~~
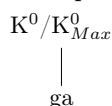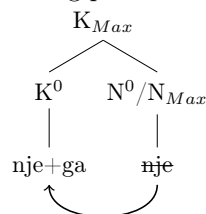
                                            (Franks 2016)

While this account can be easily implemented for pronominal clitics, it is more questionable whether other clitic elements which are normally assumed to be branching should be analysed in the same way. One example is auxiliary clitics in languages like Slovenian and Serbo-Croatian. Auxiliaries are usually analysed as heads taking an XP as their complements. To overcome this problem and to be able to analyse auxiliaries as non-branching elements, Bošković (2002) proposes that they are located in the specifier position instead, as schematised in (10).

(10)   Clitic auxiliaries in Spec   (Bošković 2002)

```
                    XP
                   /  \
                  /    \
        Aux⁰/AuxP      X′
             |        /  \
             |       /    \
            AUX     ∅     VP
                          /\
                         /  \
                        /____\
```
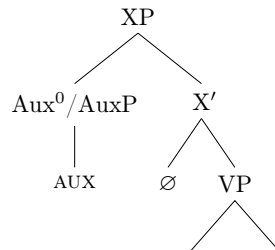
It remains as a question whether other branching elements that can be clitics, such as negation and prepositions, should be reanalysed as non-branching as well. As mentioned before, the class of clitics is diverse and possibly not all clitics share the same properites. The next section introduces different types of clitics.

2.1.2   Special and simple clitics

In his seminal work, Zwicky (1977) formulates a number of properties in which words are distinguished from affixes and classifies some "exceptional cases", which fall in between words and affixes, i.e. clitics. In Zwicky's classification, there are three types of clitics:

1. *Special clitics*, which are unaccented variants of independent accented words, and which often show special syntax. Zwicky's examples include Romance and Slavic pronouns, such as French clitic pronouns *me* 'me' and *le* 'him', versus their accented counterparts *moi* and *lui*, or Serbo-Croatian *im* 'to them' and *ti* 'to you' as opposed to the strong forms *njima* and *tebi*. The phonological relation between special clitics and the corresponding strong forms is not obvious: special clitics are not created simply by applying general rules of phonological reduction operating in the language.

With respect to the special syntax of special clitics, it mainly concerns the word order. For example, French pronominal clitics, according to Zwicky, show special syntax since they occur before the verb, as in (11), while ordinarily an object comes after the verb in a French sentence, as in (12).

(11)   Special clitics in French   (Zwicky 1977:5)

    a.   Je **le**   vois.

           I   him Jean

           'I see him.'

    b.   * Je vois le.

(12) a.   Je vois Jean.
           I   see Jean
           'I see John.'
      b.   * Je Jean vois.

Second position clitics, such as the ones in South Slavic languages, are yet another example of clitics that show special syntactic behaviour (however, as we will see in this dissertation, it is not always a matter of syntax).

2 *Simple clitics* are a result of the phonological reduction of independent words. The category of simple clitics is a broad one, since "any word that can appear unaccented has a potential to cliticize to a neighbouring word" (Zwicky 1977:9). Zwicky provides a list of categories that can appear unaccented in various languages, which includes auxiliaries, personal pronouns, determiners, complementizers, and prepositions. An example of simple clitics would be the English pronouns. The full, unreduced form of a pronoun appears in isolation or under emphasis: in (13a) only the stressed form [hím] can be used, not the reduced forms [ɪm] or [m̩]. In other environments, the clitic, subordinated form of a pronoun is used: in (13b), the pronoun *him* cliticizes to the preceding word and is realised as as a syllabic [m̩].

(13)   Simple clitics in English   (Zwicky 1977:9)
       a. (Who is it?) Him.
           [hím / *ɪm / *m̩]
       b. She met him.
           [ʃɪ mɛ́ɾm̩]

Contrary to special clitics, simple clitics do not show any special syntax (i.e. they occur in the same position as the corresponding independent words) and are created by ordinary rules of phonological reduction.

3 *Bound words* are morphemes that are always unaccented and phonologically subordinated but show more syntactic freedom in comparison to typical morphemes (primarily with respect to selection). Bound words are usually semantically associated with a syntactic constituent while phonologically they cliticise to one word (usually to the one located at the edge, not necessarily the head of the constituent). Examples of bound words are the English possessive suffix *'s*, which is phonologically attached to the final word of a NP but is associated with the entire constituent, or the Latin conjunction *-que*, which can be used to coordinate words, phrases, or clauses (as in (14)) but cliticizes to the first word of the second conjunct.

(14) Bound words in Latin   (Zwicky 1977:6)

two-and there legions enrols
'and (he) enrols two legions there'

In this dissertation, I examine two distinct classes of phonologically weak items, one of which represents special clitics, while the other one comprises simple clitics. The first class, discussed in more detail in section 2.3 below, is the so-called second position clitics. While arguably not all second position clitics are special clitics in Zwicky's sense, I focus on those which certainly are: pronominal and auxiliary clitics in the South Slavic languages (Serbo-Croatian and Slovenian). According to most accounts, second position clitics indeed differ from their accented counterparts syntactically, and those syntactic differences are responsible for their special placement in a sentence. In chapters 3 and 4, I compare the behaviour of these special clitics in elliptical environments in the two languages.

The second class consists of phonologically light prepositions (I focus on Russian prepositions), which are simple clitics in Zwicky's classification. Russian prepositions are traditionally divided into two categories: "small", phonologically light preposition, which are clitics (e.g. *pro* 'about' in (15a)), and heavier prepositions, which carry an accent and are therefore phonologically independent (e.g. *nakanune* 'on the eve of' in (15b)).

(15)   a. Ja pišu statju **pro**   klitiki.
          I write article about clitics

          'I am writing an article on clitics.'

       b. Moju statju opublikovali **nakanune**   prazdnikov.
          my   article published   on.the.eve.of holidays

          'My article was published on the eve of the holidays.'

Of course, prepositions normally do not occur in isolation, but some of them can be contrasted, in which case the strong, accented from of a preposition is used, which obviously occurs in the same syntactic position and is transparently related to the clitic form the phonological point of view. In (16), the preposition *pod* 'below' occurs in its reduced form [pət], while in (17) both contrasted prepositions occur in their strong form (without vowel reduction) and carry stress. Light prepositions are therefore undoubtedly simple clitics.

(16)   pod   [pət] škafom
       below   cupboard
       'below the cupboard'

(17) ne pod   [pót], a   nad   [nát] škafom
      not below   but above   cupboard
      'not below but above the cupboard'

In chapter 5, I take a closer look at Russian prepositions and propose a distinction between them on the basis of their prosodic properties. I conclude that in fact there are three prosodic types of prepositions, and the type of a preposition is relevant for the possibility of its omission under sluicing.

The two classes of clitics discussed here (simple and special clitics) behave differently. It is worth mentioning again that I do not try to find a common definition for clitics in this dissertation. However, it is true that (in most cases) both simple and special clitics are phonologically weak, meaning that they do not project enough prosodic structure to be independent words from the phonological point of view. The next section discusses how exactly clitics can be represented in a prosodic organisation of a sentence, what it means for a clitic to "lean on" an adjacent word in more formal terms, and how different properties clitic complexes with different prosodic structures have.

2.2   The prosodic hierarchy and the phonological types of clitics

As mentioned in the beginning of this chapter, clitics are informally described as defective elements that have to lean on a neighbouring word and consequently form one prosodic unit together with it. This section explores possible ways of clitic incorporation into the prosodic structure of a sentence, which is built on the basis of the output of syntax.

2.2.1   Syntax-prosody interface

Recall that, as discussed in chapter 1, in this dissertation I adopt the Minimalist approach of Chomsky (1993), and hence the inverted Y model of grammar with Narrow Syntax being the central system which generates syntactic structures, which are then shipped to the interfaces, PF and LF. The input for both interfaces is therefore a structure consisting of hierarchically organised nodes, which are bundles of syntactic features. The interfaces are able to transform these structures into phonological and semantic structures, respectively. The two interfaces do not interact with each other, and since we are concerned here with the phonological structure, in the rest of the section I concentrate solely on PF and the mech-

anisms that translate an abstract syntactic structure into a potentially pronounceable prosodically organised string of phonological elements.

This translation is produced via a number of operations that are active at the PF branch of the grammar. It is not precisely clear, however, what these operations are and how they are ordered. As Scheer (2011:20) phrases it, "there is an ill-defined, minimalism-born intermundia between spell-out and vocabulary insertion on the upper and phonological computation on the lower end".

The amount of operations assumed to be active at the PF branch partly depends on the theory of the syntax-phonology interface that one adapts. There are two main groups of such theories: the *Direct Reference* approaches on the one hand and the *Indirect Reference* approaches, also called *Prosodic Hierarchy* approaches on the other (see Elordieta 2008 and Scheer 2012 for the overview). According to the Direct Reference theory, some syntactic information, such as c-command relationships, is accessible for phonological operations. The Prosodic Hierarchy Theory (Selkirk (1978/81, 1980), Nespor & Vogel (1983, 1986) *et seq*) postulates a distinct level of representation – Prosodic Structure – which is built on the basis of syntactic structure. Phonological processes thus operate on prosodic rather than syntactic constituents and cannot refer to any syntactic information since it is not directly accessible at the level of prosodic structure.

In this dissertation, I adopt the latter approach, also called Indirect Reference theory, which is introduced in more detail in the remainder of this section.

The Prosodic Hierarchy Theory

In the Prosodic Hierarchy Theory of the syntax-phonology interface, phonological rules and operations cannot access syntactic structures directly. Instead, the syntactic structure is transformed into prosodic structure by means of syntax-prosody mapping algorithms: it is assumed that for each level in a prosodic structure (starting with a prosodic word) there is a corresponding syntactic constituent, and prosodic constituents are defined in relation to syntactic constituents.

The original Prosodic Hierarchy, introduced in Selkirk (1978/81), consists of six categories:

(18)   The Prosodic Hierarchy   (Selkirk 1978/81)
       υ Utterance
       ι Intonational phrase
       φ Phonological phrase
       ω Prosodic word
       _____
       F Foot
       σ Syllable

The categories in (18) are hierarchically ordered and are organised into layers, creating a phonological structure exemplified in (19): an Utt consists of ιs, ιs consist of φs, and so on.

(19)   Hierarchical representation of prosodic constituents   (based on Selkirk 1986:384)

(—————————————————————————————)	υ
(—————————————) (—————————————)	ι
(—————————) (———————) (———)	φ
(———————) (———) (———————) (———)	ω
(—) (———) (———) (—) (———————) (———)	F
(—)(—)(—)(—)(—)(—)(—)(—)(—)(—)(—)	σ

The lowest levels of the Hierarchy, the syllable and the foot, are the the word-internal rhythmically defined categories, which are not mapped from syntax. The higher level categories (prosodic word, phonological phrase, intonational phrase, and utterance) are *interface* categories (Ito & Mester 2012), which are derived from syntactic constituents on the basis of a set of mapping rules (discussed further in this section).

While there is general agreement among researchers about the amount and nature of the categories in the lower range of the Hierarchy (syllable, foot, prosodic word) and its upper range (utterance, intonational phrase), the mid range remains a matter of debate (Ito & Mester 2007). It has been repeatedly suggested that a single category of phonological phrase is not enough to account for the data from individual languages.

Many works have posited the necessity of distinguishing two domains in the mid-range of the Hierarchy instead of one level of phonological phrase: either a Major Phrase and a Minor Phrase (McCawley 1968, Poser 1984, Kubozono 1989, Selkirk & Tateishi 1988), or an Accentual phrase and an Intermediate phrase (Beckman & Pierrehumbert 1986, Pierrehumbert & Beckman 1988). such approach is criticised by Ito & Mester (2007, 2009a,b, 2013):

> [T]he proliferation of prosodic categories, each empirically well-
> founded in specific cases, has resulted in a dissolution of the
> original tightly organised universal hierarchy into an ungainly

collection of a large number of prosodic types, each instantiated here and there in different languages but never simultaneously realised within a single language. We go on to argue that the problematic proliferation can be avoided if many of the empirically necessary levels (such as Minor vs. Major Phrase) are understood *not* as additional categories existing in their own right, but rather as *prosodic subcategories* of recursively deployed basic categories.

<div align="right">Ito & Mester (2013:22)</div>

Ito & Mester suggest that even though MaP and MiP are domains for distinct phonological processes, they can still be reduced to one category. This is possible by assuming that a basic category, φ in this case, can be recursive, and phonological processes can refer to different layers of that category. A recursive category has minimally two layers (the maximal and minimal projections):[3]

(20) α_{max} and α_{min} Ito & Mester (2007, 2009a,b, 2013)
    a. maximal (projection of) $\alpha =_{def} \alpha$ not dominated by α
    b. minimal (projection of) $\alpha =_{def} \alpha$ not dominating α

Another additional phrase-level prosodic category that has been postulated in the literature is the Clitic Group (Hayes 1989, Nespor & Vogel 1986), which is directly relevant to the discussion in this dissertation. A Clitic Group (CG) was proposed as a constituent above the level of ω and below the level of φ, which contains an ω and adjacent clitics, as defined in Nespor & Vogel (1986):[4]

(21)   Clitic Group   (Nespor & Vogel 1986)
    The domain of CG consists of a PW *plus* a) a DCL (directional clitic), or b) a CL (plain clitic) such that there is no possible host with which it shares more category memberships.

Differentiating between an ω and a CG allows us to account for some phonological phenomena in a variety of languages. Hayes (1989) discusses the difference between the forms *visited* and *visit it* in English: the [t] of *visit* can be aspirated in the former but not the latter. Hayes proposes that this can be explained by postulating Prosodic Word, but not Clitic Group, as the domain of syllabification in English:

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[3]For more evidence for the recursion in prosodic structure see Féry (2010), Elfner (2015).
[4]Nespor & Vogel (1986) differentiate between directional clitics (DCL), which are strictly either proclitics or enclitics, and plain clitics (CL), which can in principle cliticise to their left or to their right.

(22)   Syllabification in English   (based on Hayes 1989)
   a. [$_\omega$ vɪ-zɪ-təd]
   b. [$_{CG}$ [$_\omega$ vɪ-zɪ-t] [$_\omega$ ɪt]]

Following the same logic as above, Ito & Mester (2009a) argue that postulating a new prosodic category can (and should) be avoided by allowing the category prosodic word to be recursive, and to incorporate function words where needed (the prosodic status of function words is discussed in section 2.2.2 below).

In this dissertation, I follow the approach of Ito & Mester (2007, 2009a,b, 2012, 2013) and assume that there are only three basic interface categories: ω, φ, and ι, which can all be recursive, creating recursion-based subcategories, as illustrated in (23).[5]

(23)   Recursion-based subcategories   (based on Ito & Mester 2013)
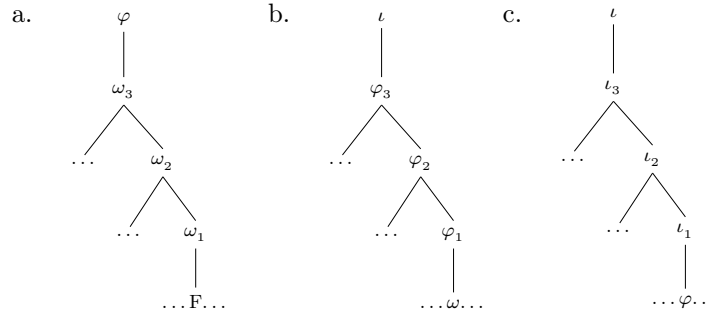
An important aspect of restricting the interface categories of the hierarchy to the three basic universal categories of ω, φ and ι is the straightforwardness of the syntax-prosody mapping that follows from it, where for every type of syntactic category (i.e. a head, a maximal projection, and a clause) there is a corresponding prosodic category, and just as he recursive outline of syntactic phrase markers, prosodic constituency can be recursive.

The Syntax-Prosody mapping

The theory of the syntax-prosody correspondence adopted in this dissertation is Selkirk's *Match Theory* (Selkirk 2005, 2009a, 2011b), with a simple and straightforward set of basic rules for mapping of syntactic structure into prosodic structure:

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[5]Not that in this case, the category of utterance is also eliminated; the topmost prosodic constituent is thus the maximal projection of ι.

(24) Match rules (Selkirk 2011b)

    a. MATCHWORD:
       A word in syntactic constituent structure must be matched by a constituent of a corresponding prosodic type, call it ω, in the phonological representation.

    b. MATCHPHRASE:
       A phrase in syntactic constituent structure must be matched by a constituent of a corresponding prosodic type, call it φ, in the phonological representation.

    c. MATCHCLAUSE:
       A clause in syntactic constituent structure must be matched by a constituent of a corresponding prosodic type, call it ι, in the phonological representation.

Therefore, the Match rules predict a one-to-one correspondence between syntactic and prosodic structure:

(25) Syntax-prosody mapping (Ito & Mester 2013)

CP	$\rightarrow$	ι
XP	$\rightarrow$	φ
X: N,V,A	$\rightarrow$	ω

The rules in (24) are *faithfulness* rules, which create prosodic structure directly corresponding to the syntactic one.

The examples in (26) illustrate how the *Match* algorithms apply: the simplified syntactic structure of (26a) would be mapped into the prosodic structure in (26b) following the Match rules. The whole clause corresponds to an ι, each phrase corresponds to a φ and each word corresponds to an ω. Note that (26b) naturally contains recursive φs due to the hierarchical nature of syntactic structure.[6]

(26)   a. $[_{CP}[_{DP}\text{Lena}]\ [_{VP}\text{defended}\ [_{DP}\text{her}\ [_{NP}\text{dissertation}]]]]$.
       b. $(_{\iota}(_{\varphi}(_{\omega}\text{Lena}))\ (_{\varphi}(_{\omega}\text{defended})\ (_{\varphi}\text{her}\ (_{\varphi}(_{\omega}\text{dissertation})))))$.

It is well-known, however, that prosodic structure is not always isomorphic to the syntactic structure. One example comes from Italian, where a modifier and a head it modifies can end up appearing in different φs (Ghini 1993). Consider (27): the modifier *molto* is parsed together with the verb and separately from the rest of the noun phrase.

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[6]Note that the pronoun *her* is not mapped into a prosodic word; the reasons for that are discussed in the next section.

(27)　($_\varphi$ Cucina molto) ($_\varphi$ pesce di lago.)　　　(Ghini 1993:60)
　　　　　cooks　much　　　fish　of lake
　　　'He cooks much lake fish.'

Mismatches between syntax and prosody occur as a result of readjustment of the prosodic structure that is faithful to syntax, which is triggered by the rules of prosodic *wellformedness*. The wellformedness conditions can change the prosodic structure, for instance, by regulating the size of a prosodic constituent (requiring it to be maximally or minimally binary), banning recursivity or requiring a certain composition of a constituent (e.g. a φ must begin with minimally an ω), see Selkirk (2011a).

It has even been proposed that wellformedness constraints on prosodic structure can force the rearrangement of elements within an utterance. A striking example of that comes from Irish: as proposed in Bennett et al. (2016), a STRONGSTART constraint of Selkirk (2011b) is active in Irish:

(28)　STRONGSTART　　　　　(as formulated in Bennett et al. 2016)
　　　　Prosodic constituents above the level of the word should not have at their left edge an immediate sub-constituent which is prosodically dependent. For our purposes here, a 'prosodically dependent' constituent is any prosodic unit smaller than the word.

What (28) means in practice is that a φ in Irish cannot start with a syllable which is not a part of an ω. However, given the peculiarities of Irish syntax, it often happens that a clitic object pronoun, not parsed as a prosodic word, occurs at the left edge of a φ, as demonstrated in (29). The boldfaced weak pronoun *é* violates STRONGSTART.

(29)　STRONGSTART violation in Irish　　　(Bennett et al. 2016:200)
　　　　(faithful prosodic structure)

　　　　($_\varphi$ Thug　　mo mháthair) ($_\varphi$ **é**　　fhad le　teach na scoile　).
　　　　　brought my mother　　　him as-far-as house the school

　　　　'My mother brought him as far as the school.'

There are three possible options for repairing the structure in this case, as Bennett et al. argue:

(30)　Bennett et al. (2016:200)
　　　a. Option A
　　　　Postpose the pronoun so that it appears at the right edge rather than at the left edge of a φ.

    b. Option B

      Leave the pronoun in its syntactically expected position, but cliticize it to a preceding word or phrase, there by removing it from the left edge of the φ and avoiding a violation of STRONGSTART.

    c. Option C

      Parse the pronoun as a prosodic word, in which case it is accented, no violation of STRONGSTART is incurred, and no repair is motivated.

All three options appear available in Irish: (31) shows three possible prosodic realisations of (29). (31a) shows the repair of the STRONGSTART violation by displacing the pronoun to the right edge of its φ; (31b) by cliticizing it to the preceding phrase; (31c) by parsing it as a prosodic word. In all the cases, there is no weak pronoun at the left edge of a φ, therefore no STRONGSTART violation occurs.

(31)   Repair of STRONGSTART violation   (Bennett et al. 2016:200)

    a. ($_\varphi$ Thug mo mháthair) ($_\varphi$ fhad le teach na scoile **é**).

    b. ($_\varphi$ Thug mo mháthair [ə]) ($_\varphi$ fhad le teach na scoile).

    c. ($_\varphi$ Thug mo mháthair) ($_\varphi$ [eː] fhad le teach na scoile).

As has been shown in this section on the example of Irish, clitics often receive special treatment by the phonological component of grammar, as (31) illustrates. Clitics behave differently from other elements due to their "defective" prosodic status and often violate prosodic constraints, which can be repaired via some additional operations, such as displacement.

The next section discusses how exactly clitics can be represented in prosodic structure.

2.2.2 Clitics in prosodic structure

From the prosodic point of view, clitics are defective in the sense that they lack structure at the level of a prosodic word. Being functional elements, clitics are not incorporated in the first parse of prosodic structure (see the Lexical Category Condition of Truckenbrodt 1999 below). They therefore have to be incorporated into an adjacent prosodic domain in some way (Selkirk 1996, Anderson 2005, Zec 2005, Werle 2009, a.o.). An unincorporated clitic would be disconnected from the rest of the prosodic structure. To capture this assumption, Anderson (2005) formulates the rule in (32).

(32) Full Interpretation   (Anderson 2005:39)
      In order to be well-formed at PF (i.e., pronounced), phonetic con-
      tent has to be incorporated into prosodic structure.

Two questions can arise with respect to the prosodic defectiveness of clitic
and the wellformedness of phonetic content:

(a) Why do clitics fail to project enough structure to be independent
    prosodic elements?

(b) How exactly can clitics be incorporated into prosodic structure?

With respect to the first question, the answer lies in the distinction be-
tween lexical and functional syntactic categories. Functional categories
and their projections have been claimed to be invisible to the rules and
constraints of mapping from syntax to prosody, which is captured by the
Principle of of Categorial Invisibility of Function Words of Selkirk (1984)
and the Lexical Category Condition of Truckenbrodt (1999):

(33) Lexical Category Condition   (Truckenbrodt 1999:226)
      Constraints relating syntactic and prosodic categories apply to
      lexical syntactic elements and their projections, but not to func-
      tional elements and their projections, or to empty syntactic ele-
      ments and their projections.

As can be noticed, there is no explicit distinction between functional
and lexical projections in the Match rules as cited in (24) above. As it
is actually shown in Elfner (2012) on the example of Irish, functional
projections (such as TP) are visible for MatchPhrase and therefore
relevant for the creation of prosodic structure. However, Elfner argues
that even if lexical and functional projections are equal with respect to
the correspondence between syntactic and prosodic phrases, the distinc-
tion between functional and lexical *words* still has to be maintained.[7] She
argues that functional items (such as, for example, pronouns, which are
D heads) are not parsed as prosodic words and therefore are not 'heavy'
enough from a prosodic point of view to project a distinct prosodic cat-
egory. Elfner even proposes that function words do not create a distinct
level of a recursion-based prosodic subcategory:

(34) Function Word Adjunction Principle   (Elfner, 2012:145)
      When a function word α, defined as a non-prosodic word, is ad-
      joined to a prosodic category of type β, the prosodic (sub)category
      of the dominating node in the prosodic structure is identical to
      that of β.

---

[7]However, Tyler (2019) argues that MatchWord does not discriminate between lexical
and functional heads either.

The contrast between functional and lexical words with respect to adjunction is illustrated in (35). Following Elfner, adjunction of a lexical word ω to a minimal projection of φ creates a recursive structure with a non-minimal projection of φ, φ_{NonMin}. In contrast, adjunction of a function word σ, which is not parsed as a prosodic word, does not create an additional level of φ: the dominating φ is still considered minimal for prosodic operations.

(35) Lexical vs. function word adjunction   (based on Elfner 2012)
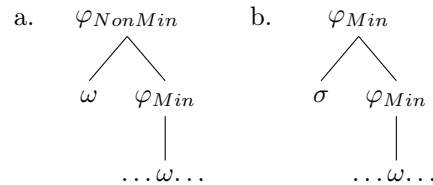
Therefore, function words are invisible for the creation of prosodic structure, which does not mean that they are invisible at the syntax-prosody interface at all. On the contrary, being prosodically too 'weak', function words (or clitics) often violate wellformedness constraints on prosodic structure, as shown on the example of STRONGSTART in the previous section and therefore have to be incorporated into prosodic structure.

There are several options of how a clitic can be incorporated by combining with an adjacent word into one ω or φ. Selkirk (1996) distinguishes 3 types of clitics based on the way they incorporate into the structure, which are listed in (35). A clitic can simply combine with the following or preceding ω into one φ, as in (36a), thus skipping the level of prosodic word. Another option is for a clitic to be directly incorporated into the adjacent ω, as in (36b). Finally, a clitic can create a recursive prosodic structure with an adjacent word, not being completely incorporated in its domain but still constituting one ω with it, as in (36c).[8]

(36) Prosodic types of clitics   (Selkirk 1996)
     a. $(clitic\ (word)_{\omega}\ )_{\phi}$ free clitic
     b. $((clitic\ word)_{\omega}\ )_{\phi}$ internal clitic
     c. $((clitic\ (word)_{\omega}\ )_{\omega}\ )_{\phi}$ affixal clitic

The representations in (35) can be differentiated from each other by means of different phonological processes. For example, Selkirk (1996) shows that non-final function words cannot be internal clitics with the

---

[8]As demonstrated in the previous section by the Irish example in (31), clitics can also be incorporated into existing prosodic structure by being promoted to the level of prosodic word, in which case they are not considered prosodic clitics anymore.

representation in (36b) since the combination of a functional and lexical word would show identical behaviour to that of a simple lexical word, but this prediction is not borne out. It is known that in English a maximum of one unstressed syllable can occur at the left edge of a lexical word; if the primary stress falls on the third syllable, the first syllable receives a secondary stress (the unstressed vowels are underlined in (37a)). However, this does not happen in case the first syllable is a function word with cliticizes to the lexical word, as shown in (37b). Therefore, the words in (37a) and (37b) must have different prosodic representations, and the function word in (37b) cannot be a part of the ω of the lexical word.

(37)   Based on Selkirk (1996:(19)–(21))

    a.   m<u>a</u>sság<u>e</u>   Màss<u>a</u>chúsetts, *M<u>a</u>ss<u>a</u>chúsetts

    b.   <u>a</u> méssage   <u>a</u> m<u>a</u>sság<u>e</u>

Selkirk further shows that English non-final function words are not affixal clitics either. The difference between affixal clitics in (36c) and free clitics in (36a) is that affixal clitics are ω-initial. In English, aspiration of voiceless stops is an ω-initial effect, which occurs even when the initial syllable does not carry stress, as in (38a). Importantly, aspiration does not occur in non-final weak function words: the boldfaced consonants in (38b) are non-aspirated. Thus function words cannot be affixal clitics: the absence of aspiration shows that they do not initiate an ω.

(38)   Selkirk (1996:(22)–(23))

    a.   grow $\mathbf{t}^h$omatoes
        grow $\mathbf{p}^h$etunias
        grow $\mathbf{c}^h$alendula

    b.   They grow **t**o the sky.
        So **c**an delphiniums.
        Take Grey **t**o London.

Therefore, Selkirk concludes that non-final function words in English are free clitic. A free clitic is, as the name suggests, structurally the most independent clitic type: it is dominated directly by a φ, without forming any ω together with an adjacent word. As can be seen from (39), in this case the function word is not ω-initial, therefore aspiration is not expected, and they are not included in the ω of the following word, and therefore they do not affect its stress pattern.

(39) Prosodic status of non-initial function words in English:

```
        φ
       / \
      σ   ω
      to  London
      a   massage
```
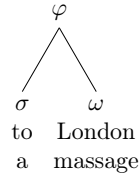
Clitics are also distinguished with respect to the directionality of cliticization. If a clitic occurs between two ωs, it can, in general, attach to any of them. Clitics that attach to the following word are *proclitics*, while clitics that attach to the preceding word are *enclitics*:[9]

(40) Directionality of cliticisation:
   a. Proclitics   b. Enclitics

```
      ω                ω
     / \              / \
    σ   ω            ω   σ
```
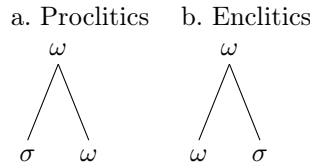
In most cases the directionality of cliticization is predetermined by either the idiosyncratic properties of a particular clitic (also see Tyler 2019) or by the prosodic structure. Some clitics are specified for the directionality of attachment. Serbo-Croatian second position clitics (as discussed in the next section), for example, are always enclitics, therefore they never occur ɩ-initially. Consider the contrast in (41), where the initial noun phrase can optionally be parsed as an ɩ. In case when it is not, the clitic *su* directly follows it and, being an enclitic, cliticizes to the preceding word, as in (41a). However, if the initial noun phrase is a separate ɩ, the clitic has to be displaced to the right (similarly to the displacement of pronouns in Irish), since it neither can cliticize to the left through the ɩ boundary nor, crucially, cliticize to the right, as shown in (41b), where the direction of cliticisation is indicated with "=" (the φs are not shown).[10]

(41) Directionality of cliticization in Serbo-Croatian
      (based Bošković 2001:67-68)
   a. [ɩ [ω Tvome] [ω [ω prijatelju] =**su**]   prodali knjigu]
           your.DAT   friend.DAT AUX.3PL sold   book

       'To your friend, they sold the book.'
   b. [ɩ Tvome prijatelju] [ɩ [ω (***su**=) [ω prodali] (=**su**)] knjigu].

---

[9]Note that both proclitics and enclitics can bee free, affixal, or internal clitics across languages, giving six options of prosodic positioning of clitics.

[10]Prosodic parsing in (41) and (42) is mine; it is based on the descriptions in Bošković (2001) and Franks (2016).

In contrast, second position clitics in Slovenian can be either enclitics or proclitics. The clitics in (42) can be combined either with the preceding or with the following word, with speakers differing in their preferences in this respect.

(42)   Directionality of cliticization in Slovenian
       (following Franks 2016:96)

    a. Včeraj   [$_\omega$ **se**= **je**=   [$_\omega$ Janez]] cel   dan praskal
        yesterday   REFL AUX.3SG   Janez   whole day scratched

        po   rokah.
        over hands

        'Janez scratched his hands yesterday all day long.'

    b. [$_\omega$ [$_\omega$ Včeraj] =**se** =**je**] Janez cel dan praskal po rokah.

As Franks (2016:fn.10) discusses, in cases like (42), the directionality of cliticization can be affected by the syntactic and therefore prosodic structure of a sentence. If the initial adverb is viewed as a topic and parsed as an independent ι, the clitics would have no possibility to be incorporated into its domain, just like in the Serbo-Croatian example (41b) above. The difference between Slovenian and Serbo-Croatian is that Slovenian clitics do not have to be displaced to the right since they can be proclitics.

Second position clitics in general received quite extensive attention in linguistic research due to their special properties, some of which are introduced in the next section.

2.3   The syntactic and prosodic properties of second position clitics

The second position (2P) clitics are a particularly peculiar type of clitics, since their positioning within a clause is strictly fixed. As the name suggests, they have to appear in the 'second position' within some domain. Second position clitics are also sometimes referred to as Wackernagel clitics, after Jacob Wackernagel, who noticed that in Greek and a number of other Indo-European languages clitic elements appear after the initial word of a sentence as a cluster (Wackernagel 1892). In (43), for example, the two Greek enclitics *te* and *min* are located in the second position.

(43)   polees =**te**   =**min** ērēsanto hippēes phoreein
       many =and =it   prayed riders carry

     'And many riders prayed to carry it.'

                      (*Iliad* 4.143, cited from Anderson 1993)

According to Bošković (2016), there are 52 languages with 2P clitics, which include Pama-Nyungan, Uto-Aztecan, Romance, and Slavic languages. Here, I focus on Slavic languages, and in particular on Serbo-Croatian and Slovenian, which are claimed to have similar (though not identical) systems of 2P clitics in previous literature.

As mentioned in the beginning of this chapter, second position clitics are special clitics in the classification of Zwicky (1977), which show 'special syntax'. Consider (44) from Serbo-Croatian: with the standard word-order being SVO, a default position for an object is post-verbal; however, if the object is realized as a clitic, it has to appear in the second position of a sentence.

(44)   a.   Milorad je   poljubio **Anu**.
            Milorad AUX.3SG kissed   Ana
            'Milorad kissed Ana.'

          b.   Milorad **ju** je poljubio (***ju**).
            Milorad her AUX.3SG kissed her
            'Milorad kissed her.'

Discussions of second position cliticisation normally address the following questions, both of which still remain debatable:

(a) What counts as the second position?

(b) Why do clitics, but not other elements, have to appear in the second position, and when exactly during the derivation are they placed there?

The first question is difficult to answer for a number of reasons. To start with, it is debatable if the second position should be defined in syntactic terms (for example, as the position directly following the first syntactic constituent) or in phonological terms (for example, as the position directly following the first prosodic word). It is also unclear what counts as the first position: a word or a phrase. In combination, that gives us four possibilities of what counts as the second position:

		nature of the 2P	
		syntactic	**phonological**
first element	**word**	after the first head	after the first ω
	phrase	after the first phrase	after the first φ

Table 2.1: *Potential types of second positions*

To determine which of the options in Table 2.1 holds is challenging for two reasons. First, as we have seen from the syntax-prosody mapping rules, morphological words (i.e., syntactic heads) often correspond to prosodic words, and syntactic phrases to phonological phrases. Second, there is a lot of variation, both cross-linguistically and sometimes within one language.

Consider (45) from Serbo-Croatian: the second position clitic *je* can be placed either after the first (morphological/phonological) word, as in (45a), or after the first (syntactic/phonological) phrase of a sentence, as in (45b).[11]

(45) Bošković (2001)

    a. [Taj $_{\omega/X^0}$] **je**   čovjek volio Milenu.
        that   AUX.3SG man   loved Milena

    b. [Taj čovjek $_{\varphi/XP}$] **je**   volio Milenu.
        that man   AUX.3SG loved Milena

       'That man loved Milena.'

There are two ways of explaining the variation in Serbo-Croatian:

  (a) Clitics can be freely placed either after the first word or after the first phrase;

  (b) The two placements shown in (45) can actually be reduced to one.

Slovenian, in contrast, has been reported to only allow the placement of second position clitics after the first constituent:

---

[11] As discussed in Chapter 3, arguably even in (45a) the first position is actually a phrase.

(46) (Franks & King, 2000:39-40)

    a.   ... in   [moje srce] **je**   bilo veselo.
             and my   heart AUX.3SG been happy

       '...and my heart was happy'

    b.   * ...in moje **je** srce bilo veselo.

The variation between Serbo-Croatian and Slovenian can have potentially different causes:

(a) Clitics in the two languages differ with respect to their requirement to follow the first word or the first phrase;

(b) There are structural differences between the two languages, not related to the second position cliticisation (for example, the possibility of left branch extraction);

(c) The systems of cliticisation are different in the two languages (for example, syntactic vs. phonological).

The following two chapters explore clitic placement in Serbo-Croatian and Slovenian in more detail and determine which of these options account for the facts more accurately.

With respect to the question of what makes clitics special with respect to their placement and when during the derivation they are placed into the second position, in syntax or in phonology, there are no definite answers, either.

It has been extensively argued that what makes second position clitics special is their syntactic structure. The difference between clitics and their non-clitic counterparts or lexical noun phrases is that only clitics are ambiguous between an XP and an X^0, and hence have properties of both heads and maximal projections (Bošković 2002, Franks 2016). Recall that Franks (2016) proposes the following structural difference between the Slovenian second position clitic *ga* 'him.ACC' and its accented counterpart *njega*: *ga* is a non-branching element, while *njega* has a more complex internal structure, with its root *nje-* being categorically an N, as shown in (47).

(47)   a. Clitic pronouns: b. Strong pronouns:

$$K^0/K^0_{Max}$$ $$K_{Max}$$

$$K^0 \quad N^0/N_{Max}$$

ga   nje+ga   ~~nje~~
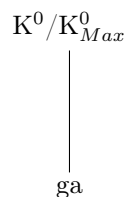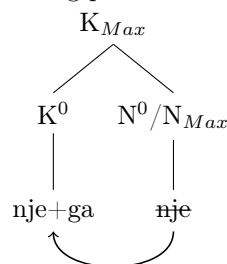
(Franks 2016)

Presumably, it is exactly the special syntax of clitics that is responsible for their placement into the second position: while clitics are ambiguous between heads and phrases, their non-clitic counterparts are not. I refer readers to Franks (2012, 2016) for details.

As for the motivation for clitic movement to the second position, such accounts postulate that clitics move to the higher structural position (Agr, for example) for feature-checking.

An alternative types of accounts propose that clitics are placed into the second position post-syntactically. The differences between clitics and strong pronouns come from their lexical specifications: clitics have a requirement to appear in the second position. The details of how such a requirement can be implemented are discussed in the next chapter.

2.4   Summary

The discussion in this chapter shows that clitics are defective elements, which are often receive treated differently from other, phonologically independent, items. The necessity to incorporate clitics, which do not project their own prosodic word, into the prosodic structure of a sentence can result in reorganisation of the structure. Clitic displacement is an ultimate instance of such reorganisation.

In the beginning of the dissertation, I raise some questions about the interaction of cliticisation and ellipsis, and what we can learn about the timing of ellipsis from this interaction. The next chapters discuss the matter in more detail and show that, first, clitics behave differently in elliptical environments, and, second, some types of ellipsis are sensitive to the prosodic status of the elements targeted by deletion.

CHAPTER 3

Second position clitics in Serbo-Croatian

In this chapter, I examine second position cliticisation in Serbo-Croatian and address the challenging question of the timing of clitic placement, which has been a subject of much debate in the literature on the topic. Up to this point there is no consensus on whether it is an instance of syntactic movement or postsyntactic prosodic alignment.

I use VP-ellipsis as a diagnostic for the timing of clitic placement. Assuming that pronominal clitics originate inside VP and there is syntactic structure inside the ellipsis site, there are two hypothetical options with respect to the interaction of clitic placement to the second position and ellipsis:

(a) clitic placement precedes VP ellipsis

(b) VP ellipsis precedes clitic placement

If the first option is true, it is expected that clitic placement cannot be affected by ellipsis in any way. However, if the second option is true, the clitics originating within VP are supposed to be trapped inside the ellipsis site. In this chapter, I show that the second option is correct and account for this pattern by making a case for the claim that clitic placement into the second position in Serbo-Croatian is postsyntactic in its nature.

3.1   The second position and the clitic cluster in Serbo-Croatian

Serbo-Croatian (SC) is an articleless pro-drop language with a quite free word order (the unmarked word order being SVO). It uses an auxiliary verb and a participle in the past and future tense, which have strong and clitic forms, as do object pronouns. A clitic form is used in unmarked environments (in the absence of focus or contrast) and have to appear in the second position in a sentence.

This section introduces the basic facts about second position (2P) clitics in Serbo-Croatian, such as the order of clitics within a cluster, the relationship between clitics and their strong counterparts, the positioning of a clitic cluster and two types of second position in SC. In particular, the following properties of SC clitics are discussed:

- the clitics are strictly ordered within a cluster, with the exceptional 3SG auxiliary clitic appearing at the end of the cluster;
- 2P clitics have corresponding strong forms which are obligatorily used in certain environments;
- the clitics cluster appears either after the first word or the second constituent of a sentence;
- the clitic cluster can appear further to the right if the initial constituent of a sentence is phonologically heavy.

As mentioned in chapter 2, Serbo-Croatian is one of the languages that exhibit second position cliticisation, with some clitics (including pronouns and auxiliaries) appearing strictly in the second position of a sentence, as illustrated in (1) for the pronominal clitic *mu* and the auxiliary clitic *je* (2P clitics are italicised throughout the dissertation), which appear as a cluster after the first word of a sentence. Placing the clitics into any other position would make the sentence ungrammatical, see (1b,1c).[1] Note that the second position itself can be defined differently in different languages and even occasionally in one language (an example being Serbo-Croatian), as discussed below.

(1)   a.   Nedavno *mu*   *je*   neko   u snu   pevao
              recently him.DAT AUX.3SG someone in dream sung
              jednu pesmu.
              one   song
              'Recently someone in one of his dreams sang him a song.'

---

[1]The original sentence is taken from "Hazarski rečnik" by Milorad Pavić, the judgements are given by my informants.

b. * Nedavno neko   u snu   *mu*   *je*   pevao
     recently   someone in dream him.DAT AUX.3SG sung
     jednu pesmu.
     one   song

c. * Nedavno neko   u snu   *je*   pevao *mu*
     recently   someone in dream AUX.3SG sung   him.DAT
     jednu pesmu.
     one   song

A clitic cluster in Serbo-Croatian can consist of several 2P clitics, which are strictly ordered with respect to each other, as schematised in (2). A clitic cluster starts with a question particle *li*, if present, followed by auxiliaries (except for the 3 person singular auxiliary *je*), followed by pronominal clitics in dative, accusative, and genitive, followed by a reflexive clitic, and ends with the exceptional 3SG auxiliary clitic *je*.

(2)   Q < AUX (except 3SG) < DAT < ACC < GEN < REFL < AUX.3SG

The ordering of clitics within a cluster is illustrated in (3). Note that in (3a) the auxiliary precedes the pronominal clitics, while in (3b) the exceptional 3SG auxiliary follows them.

(3)   Franks (2010:6)

     a. Da *li ste*   *mi*   *ih*   danas kupili?
        C   Q AUX.2PL me.DAT them.ACC today bought
        'Did you buy me them today?'

     b. Da *li mi*   *ih*   *je*   danas kupio?
        C   Q me.DAT them.ACC AUX.3SG today bought
        'Did he buy me them today?'

In this dissertation, I do not discuss the ordering within a clitic cluster and the mechanisms responsible for it. Furthermore, in my examples, I mostly use the auxiliary clitics which is used to form the past tense and the pronominal clitics in dative and accusative. In SC, these clitics have corresponding strong forms, which do not have to appear in the second position. The full forms are obligatorily used in the following contexts, according to Radanović-Kocić (1988):

(a) when focused

(b) when contrasted

(c) in sentence-initial position

(d) after prepositions

(e) when conjoined

The examples in (4) illustrate one of the cases when clitic pronouns are banned: it is not possible to use the clitic forms of pronouns in the second position as the pronouns are contrasted; instead, the strong forms must be used (the non-clitic forms of pronouns are not italicised).

(4)   Radanović-Kocić (1988:44-45)

    a.   Kupi čokoladu njoj,   ne njemu.
            buy   chocolate her.DAT not him.DAT

            'Buy chocolate for her, not for him.'

    b.   * Kupi *joj*   ne *mu*   čokoladu.
            buy   her.DAT not him.DAT chocolate

The following tables contain the paradigms for the second position clitics and their strong counterparts most often used in this dissertation: the past tense auxiliary (Table 3.1) and the accusative (Table 3.2) and the dative (Table 3.3) forms of pronouns.

	SG		**PL**	
	clitic	**strong**	**clitic**	**strong**
1	*sam*	jèsam	*smo*	jèsmo
2	*si*	jèsi	*ste*	jèste
3	*je*	jest(e) / je	*su*	jèsu

Table 3.1: *The paradigm of the past tense auxiliary in SC*

	SG		**PL**	
	clitic	**strong**	**clitic**	**strong**
1	*me*	mene	*nas*	nas
2	*te*	tebe	*vas*	vas
3	*ga* (nj) / *je* (ju)	njega / nju	*ih*	njih

Table 3.2: *The paradigm of the accusative pronouns in SC*

	SG		PL	
	clitic	**strong**	**clitic**	**strong**
1	*mi*	meni	*nam*	nama
2	*ti*	tebi	*vam*	vama
3	*mu / joj*	njemu / njoj	*im*	njima

Table 3.3: *The paradigm of the dative pronouns in SC*

With respect to the positioning of a clitic cluster, SC exhibits two interesting properties. First, it seems that there are two kinds of second positions in SC: one after the first word and one after the first syntactic constituent. Consider the examples in (5): in both cases, the 2P clitic appears in the second position, however, in different places: after the first word in (5a) and after the first constituent in (5b).

(5) Halpern (1995:16)

    a. Taj *je* čovjek svirao klavir.
        that AUX.3SG man played piano

        'That man played the piano.'

    b. [Taj čovjek] *je* svirao klavir.
        that man AUX.3SG played piano

The second property, which has been called delayed clitic placement, or clitic third, appears to reflect the sensitivity of the 2P clitics in SC to the prosodic environment. When an initial constituent of a sentence is phonologically heavy enough to form an Intonational Phrase (ι) of its own and thus be prosodically separated from the rest of the clause, the clitics are placed further to the right than expected (in the third rather than in the second position), as discussed in Radanović-Kocić (1988), Bošković (2001). Thus, the domain of defining the second position in SC is an ι (which is not the case, for example, in Slovenian, as discussed in Chapter 4). The environments that cause delayed clitic placement are phonologically heavy fronted (A'-moved) constituents, parentheticals, and appositives. As (6) shows, the default position of the 2P clitics in a subject-initial sentence would be directly following the subject, as in (6a). However, in (6b), an appositive triggers delayed clitic placement, forcing the clitic to appear in the third position, after the verb, and making it impossible to place the clitics after the subject with an appositive, as in (6c). This pattern directly follows from the prosodic properties of 2P clitics in SC: they are obligatorily enclitics, hence they cannot follow a pause (under the assumption that the environments listed above are separated by pauses from the rest of the utterance).

(6)   Radanović-Kocić (1996:437)

a.   Ja *sam ti*   obećala   igračku.
     I   AUX you promised toy

     'I promised you a toy.'

b.   Ja, tvoja mama, obećala   *sam ti*   igračku.
     I   your mother promised AUX you toy

     'I, your mother, promised you a toy.'

c.   * Ja, tvoja mama, *sam ti*   obećala   igračku.
       'I   your mother AUX you promised toy.'

Regardless of how many intonationally separated constituents there are
in an utterance, the clitics will always appear in the second position of
the ι where they originate, as (7) demonstrates (intonational breaks are
marked by #): the 3SG auxiliary clitic *je* does not "climb out" of its ι
(the assumption here is that every one of the fronted constituents inside
the embedded clause are parsed as separate ιs).

(7)   Franks (2010:44)

Javili   *su*   nam   da # prije nekoliko dana # na toj
announced AUX.3PL us.DAT C   ago several   days   on that

liniji # voz *je*   kasnio   tri   sata.
line   train AUX.3SG was-late three hours

'They announced that, several days ago, on that line, the train
was 3 hours late.'

These peculiarities of 2P clitic placement in SC as well as attempts at
accounting for them have given rise to a number of approaches to second
position cliticisation, briefly introduced in the next section.

3.2   Previous approaches to 2P cliticisation

2P clitics in SC has received quite meticulous attention in the previ-
ous literature; however, a consensus on how this phenomenon should be
analysed has not been reached so far. In order to account for the phe-
nomenon of the second position cliticisation, two main questions have to
be answered:

(a) How is the second position defined?

    i. Is it a syntactic or phonological notion?

    ii. What counts as the first position (a word or a phrase)?

(b) How do clitics come to occur in the second position?

    i. Are they based generated there or do they move there?

    ii. If they move, what type of movement do they undergo and when exactly during the derivation does it take place?

It will not be an overstatement to say that all imaginable answers have been given to these questions in the literature. The current section provides a quick summary of the previous accounts of 2P cliticisation in SC and the arguments for the syntactic or prosodic nature of the phenomenon that are relevant for further discussion.

3.2.1 Previous approaches: syntax or phonology?

The most detailed overview of the existing approaches to 2P cliticisation (in SC and other languages) is given in Bošković (2001). According to him, there are 4 types of approaches, which I summarise in Table 3.4. The approaches differ with respect to what they treat as the second position (a position after the first syntactic or phonological unit) and to when clitics are assumed to be placed there (in syntax or postsyntactically).

		the second position	
		syntactic	**phonological**
positioning	**syntactic**	the strong syntax approach	the weak phonology approach
		the weak syntax approach[1]	
	phonological		the strong phonology approach

[1] The weak syntax approach allows some postsyntactic reordering, see below. There are no approaches that assume that the second position is defined syntactically but clitics are placed there in PF (without undergoing any syntactic movement before).

Table 3.4: *Types of approaches to 2P cliticisation in SC*
(based on Bošković 2001)

As can be seen from the table, most approaches assume that clitics are placed into the second position in syntax. Two of the approaches also

suggest that the second position itself is a syntactic notion, which implies that there is a particular syntactic position (e.g. C^0 or I^0) that attracts all the 2P clitics or where clitics are based-generated. These are *the strong syntax approach* (Progovac 1996, 2000, Wilder & Ćavar 1994a) and *the weak syntax approach* (Halpern 1995, Zec & Inkelas 1990, Zec 2005, Diesing & Zec 2017). The difference between the two is mostly in the way they explain the possibility for clitics to appear after the first word of a sentence, seemingly breaking a syntactic constituent. *The weak syntax approach* allows some postsyntactic reordering in this case, *Prosodic Inversion*.

Recall that in SC, 2P clitics can either follow the first syntactic constituent or break it up, appearing after its first element, as in (5), repeated here as (8). Following Halpern (1995), I refer to the first option as 2D (for the "second daughter") and to the second option as 2W (for the "second word").

(8)   a. Taj čovek *je*   voleo Mariju.   (2D)
          that man   AUX.3SG loved Marija
          'That man loved Marija.'
      b. Taj *je* čovek voleo Mariju.   (2W)

Under Halpern's approach, 2P clitics are always adjoined to IP. According to him, 2D environments involve fronting of the initial constituent to a higher position, as shown in (9): the subject NP moved from its original position in Spec,IP to Spec,CP. In 2W environments, no constituent is fronted, and clitics remain the highest elements of the clause in the output of the syntax, as shown in (10).

(9)   2D: (10)   2W:
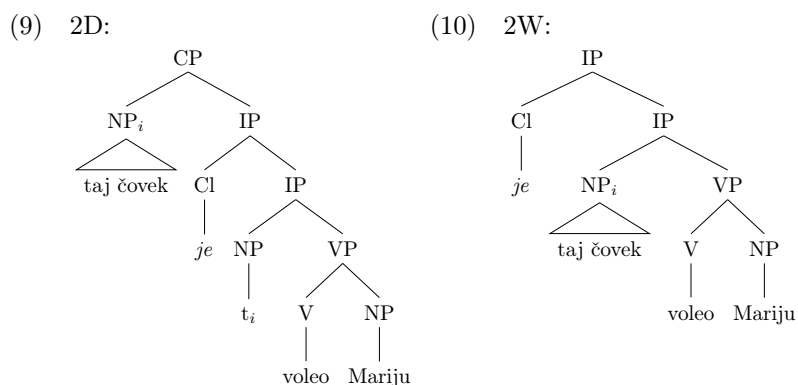
However, SC does not allow clitics in the sentence-initial position. Halpern (1995) suggests that when clitics lack phonological support to their left,

they can "trade places" with the following word by means of Prosodic Inversion, as illustrated in (11). If a 2P clitic is in the initial position in the output of syntax, it "skips" to the second position, deriving the 2W clitic placement.[2]

(11) Halpern (1995:19)

    a. Output of syntax:

        Je   taj čovek voleo Mariju.
        AUX.3SG that man loved Marija
        'That man loved Marija.'

    b. Prosodic Inversion:

        Taj *je*   čovek voleo Mariju.
        that AUX.3SG man loved Marija

The strong syntax approach, however, does not allow any postsyntactic reordering of clitics and claims that clitic placement is a syntactic phenomenon which is regulated by standard rules of narrow syntax. In the works of Progovac (1996), Franks & Progovac (1994) it is proposed that 2P clitics in SC undergo syntactic movement to C^0, and the unit that precedes the clitics is always a constituent that can be shown to be able to undergo movement independently, even in cases of 2W placement. For example, the clitic in (12a) can split the first constituent; importantly, the element hosting the clitic, *u veliku*, can be shown to undergo movement independently of the rest of the PP even in the absence of clitics, as in (12b).

(12) Franks & Progovac (1994)

    a. U   veliku *je*   sobu Jovan ušao.
        into big   AUX.3SG room Jovan walked
        'Into the big room walked Jovan.'

    b. U   veliku ulazi sobu Jovan.
        into big   walks room Jovan
        'Into the big room walks Jovan.'

Therefore the claim is that there is nothing special about the ability of 2P clitics to separate constituents. As Franks & Progovac argue, 2W cases like the one in (12a) the element preceding the clitics in fact undergoes phrasal movement to Spec,CP and therefore there is no need in postulating a separate operation of Prosodic Inversion.

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[2]Prosodic Inversion thus can be analysed as a way to repair the STRONG START violation, similar to the displacement of Irish weak pronouns, discussed in chapter 2.

To sum up, the difference between the weak and strong syntax approaches is that the former allows phonological reordering as a repair mechanism for a phonological violation, whereas in the latter this violation never arises in the first place.

The two 'phonological' approaches are more different from each other than the 'syntactic' ones among each other. *The weak phonology approach* (Bošković 1995, 2000, 2001, 2009b, Stjepanović 1997, 1998, 1999, Franks 1997) is similar to the strong syntax approach with respect to its view on clitic placement: it is still assumed to be a strictly syntactic operation with no reordering involved at PF. The difference is in how the two types of approaches treat the second position itself: under the weak phonology approach, the second position is a phonological notion and is defined in phonological terms, as a second position within an Intonational Phrase. However, phonology does not play a role in clitic placement per se: it just filters out sentences that violate the 2P requirement, i.e. those where clitics are not located in the second position of an ι. Under the weak phonology approach, 2P clitics undergo movement in syntax as any other syntactic element.

According to Bošković (1995), Serbo-Croatian 2P clitics have the following properties:

(13)   *Lexical properties of SC 2P clitics*   Bošković (1995:263)
      a. #_ (where # is an ι-boundary)
      b. Suffix

The requirements in (13) require 2P clitics to be left-adjacent to an ι-boundary (13a) but at the same time to be enclitics, or suffixes (13b). This is possible, according to Bošković, if the clitics are able to merge at PF under PF adjacency with the first ω or the head of the first φ of the ι they occur in (for the details of how exactly it satisfies the requirements in (13) see Bošković 2001:2.3.2).

If a clitic cannot satisfy the properties in (13), it gives rise to a PF violation. Note that Bošković does not see Prosodic Inversion as a rescue operation for sentence-initial clitics, since he argues that Prosodic Inversion cannot properly account for the data (see Bošković 2001:2.2.1 for his criticism of the weak syntactic account).

The strong phonology approach (Radanović-Kocić 1996, 1988) places the phenomenon of second position cliticisation completely in the domain of PF. Within this approach, the second position is a phonological notion (i.e. the position after the first ω or the first φ within an ι), and importantly clitics move there from their original positions postsyntactically. Radanović-Kocić emphasises that it is a phonological feature of clitics that affects their placement, since the class of 2P clitics includes

elements that have nothing in common from the perspective of syntax. Under her account, the 2P clitics are created by the following operations:

(14) Cliticisation (Radanović-Kocić 1996:433)
Assign the feature [+clitic] to pronouns and auxiliaries in all positions except when they carry phrasal stress or when not preceded by an unstressed element.

(15) Clitic Movement (Radanović-Kocić 1996:433)
Move all [+clitic] elements into the second position.

I refer curious readers to the discussion in Bošković (2001) and the original works for more detailed arguments for or against particular approaches. The purpose of the rest of this chapter is to shed light on how particular approaches analyse the behaviour of 2P clitics under ellipsis.

3.2.2 Previous approaches: arguments from ellipsis

Bošković (2001) uses the behaviour of 2P clitics under VP ellipsis as an argument for the phonological nature of the second position in SC. First, consider the following contrast: in (16a), a non-elliptical version of the sentence, the clitic *ga* appears in the second position in the second conjunct, while it can "disappear" from the second conjunct under VP-ellipsis, as in (16b).

(16) a. Marija *ga*   nije   poljubila, a   Ana *ga*
      Marija him.ACC AUX.3SG.NEG kissed   and Ana him

      jeste   poljubila.
      AUX.3SG kissed

      'Marija didn't kiss him, but Ana did kiss him.'

   b. Marija *ga*   nije   poljubila, a   Ana jeste.
      Marija him.ACC AUX.3SG.NEG kissed   and Ana AUX.3SG

      'Marija didn't kiss him, but Ana did.'

Under the assumption that the ellipsis site contains silent syntactic structure, the pronominal clitic is located within it in (16b), as illustrated in (17). This means that the pronominal clitic *ga* in the second conjunct is definitely not located in the second position in syntax, (which would be after the subject *Ana*), whether it precedes or follows the verb in the ellipsis site.

(17) Bošković (2001:82)

Marija *ga*   nije   poljubila, a   Ana jeste
Marija him.ACC AUX.3SG.NEG kissed   and Ana AUX.3SG

~~poljubila~~ *ga*   / *ga*   ~~poljubila~~ .
kissed   him.ACC   him.ACC kissed

'Marija didn't kiss him, but Ana did.'

The fact that (16b/17) is still grammatical suggests that, at least at a
certain stage, it is not important for the syntax whether a clitic is located
in the second position or not. Thus, the second position requirement can-
not be a syntactic one. However, the grammaticality of (16b/17) can
be easily explained if the requirement is phonological. Under Bošković's
account, PF acts as a filter, which filters out sentences violating phono-
logical requirements. Since ellipsis in (16b/17) triggers non-pronunciation
of the clitic, the clitic becomes invisible for PF and never violates the 2P
requirement. In other words, a 2P clitic has to be *pronounced* in the sec-
ond position (i.e. left-adjacent to an ι-boundary). The 2P requirement is
phonological in nature and the syntactic position of a clitic is irrelevant
for it. The non-elliptical counterpart of (17), with the clitic pronounced
in the corresponding position before or after the verb is ungrammatical,
since it violates the 2P requirement, as (18) shows. Note that syntactically
the two sentences are assumed to be identical.

(18)   * Marija *ga*   nije   poljubila, a   Ana jeste
       Marija him.ACC AUX.3SG.NEG kissed   and Ana AUX.3SG

       poljubila *ga*   / *ga*   poljubila .
       kissed   him.ACC   him.ACC kissed

       Int: 'Marija didn't kiss him, but Ana did.'

Another argument from ellipsis also comes from supporters of the weak
phonology approach. Stjepanović (1997, 1998, 1999) uses elliptical ex-
amples to prove that 2P clitics do not all cluster together in the same
syntactic position.[3]

(19) Stjepanović's judgements:

       a. Mi *smo*   *mu*   *ga*   dali, a   i   vi [*ste*
          we AUX.1PL him.DAT it.ACC given and also you AUX.2PL

          ~~[mu~~   ~~[ga~~   ~~[dali]]]~~, (takodje).
          him.DAT it.ACC given   too

---

[3]Stjepanović (1999) (but not Stjepanović 1998) marks (19a) with one question mark. She
says that there is variation among speakers concerning the acceptability of the sentence,
which may be due to a phonologically weak element preceding a gap (Stjepanović 1999:fn.6).

    b. Mi *smo*   *mu*   *ga*   dali, a   i   vi [*ste*
       we AUX.1PL him.DAT it.ACC given and also you AUX.2PL
       [*mu*   [~~*ga*~~   [~~dali~~]]]], (takodje).
       him.DAT it.ACC given   too

    c. Mi *smo*   *mu*   *ga*   dali, a   i   vi [*ste*
       we AUX.1PL him.DAT it.ACC given and also you AUX.2PL
       [*mu*   [*ga*   [~~dali~~]]]], (takodje).
       him.DAT it.ACC given   too

    'We gave it to him, and you did, too.'

Since it is possible to elide only one part of the clitic cluster, it must be the case that each clitic is located in a separate projection, at least at the point when ellipsis applies, otherwise every sentence in (19) would involve non-constituent deletion. Stjepanović also argues that (19) is evidence that clitics can be located fairly low in the structure (contra syntactic approaches), since they are able to be affected by VP-ellipsis.

The approach of Stjepanović (1998, 1999) is illustrated in (20). Ellipsis can target VP or any of the Clitic Phrases (ClPs), where pronominal clitics are located.[4]

(20)   Stjepanović (1998, 1999)
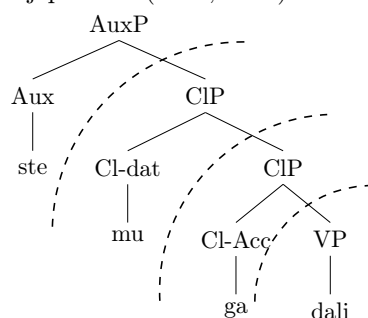
However, the situation is complicated by the fact that not everyone shares Stjepanović's judgements about the sentences in (19). Bošković (2001:58) remarks that (19b) is "at least somewhat degraded" for him (he does not comment on (19c)). For Progovac (1998), only (19a), in which all the pronominal clitics are elided and the auxiliary clitic survives ellipsis, is grammatical. Stranding one or both pronominal clitics, as in (19b) and (19c), is not possible for her. Her judgements are summarised in (21).

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[4]Stjepanović (1998) leaves open the question of what projections precisely host the clitics. She agrees with Bošković that one possibility is Agr_{IO} and Agr_{DO} and argues for that view in Stjepanović (1999).

(21) Progovac's judgements:

　　a.　Mi *smo*　　*mu*　　*ga*　　dali, a　i　vi *ste*,
　　　　we AUX.1PL him.DAT it.ACC given and also you AUX.2PL
　　　　(takodje).
　　　　too

　　b.　* Mi *smo*　　*mu*　　*ga*　　dali, a　i　vi *ste*
　　　　we AUX.1PL him.DAT it.ACC given and also you AUX.2PL
　　　　mu,　　(takodje).
　　　　him.DAT too

　　c.　* Mi *smo*　　*mu*　　*ga*　　dali, a　i　vi *ste*
　　　　we AUX.1PL him.DAT it.ACC given and also you AUX.2PL
　　　　mu　　*ga*,　　(takodje).
　　　　him.DAT it.ACC too

　　'We gave it to him, and you did, too.'

She argues that sentences like (21a) involve no surface deletion process
at all but rather the generation of a null VP as a complement of AuxP.
Pronominal clitics, according to her, are normally generated in the argu-
ment positions within VP, while auxiliary clitics are generated in a func-
tional projection above VP. Therefore, pronominal clitics cannot surface
in cases like (21a) because they are not present in the structure in the
first place, while auxiliary clitics are always present due to their being
generated above the null VP. Progovac's proposal is illustrated in (22).

(22) Progovac (1998, 2000)
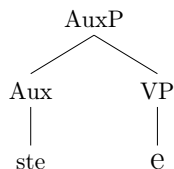
The discrepancies between various judgement patterns reported in the
previous literature necessitate a study representing more data collected
from native speakers. Section 3.3 of this chapter introduces the design
and the results of the survey I used to collect judgements of native SC
speakers, which serve as a basis for the prosodic account of 2P cliticisation
presented in Section 3.4, where I also argue that neither of the analyses
in (20) or (22) can be correct.

3.3 Interaction of ellipsis and clitic movement: a case study

As Franks (2010:73) phrases it, "there are serious and on-going data debates between her [Progovac] and Stjepanović", which were discussed in the previous section. The survey presented in the current section is aimed at collecting the data from a larger amount of SC speakers and at possibly shedding some light on the possibility of clitic stranding under ellipsis in SC.[5]

Recall also that the original hypothesis put forward in the beginning of this chapter is that ellipsis can help us detect the timing of clitic movement in SC. In this thesis, I follow the common assumption that pronominal clitics originate in argumental positions within VP, and they move out from there to the "second position", whatever it might be. Assuming that, there are two hypothetical options when it comes to the interaction of ellipsis and clitic movement and their relative timing: (i) VP-ellipsis applies before pronominal clitics move out of the VP, in which case clitics are trapped inside the ellipsis site, as in (23a), and (ii) the clitics move out of the VP prior to ellipsis and hence they escape the ellipsis site and appear in the second position, as in (23b). Note that auxiliary clitics always survive ellipsis.[6]

(23) *Hypothetical options*
    Mi *ih*   nismo   videli, a   oni *su*   rekli...
    we them.ACC AUX.1PL seen   and they AUX.3PL said
    'We didn't see them, but they said...'

    a. da jesu   [videli *ih*]
        that AUX.3PL seen   them.ACC
        '...that they did.'

    b. da *ih*   jesu   [videli]
        that them.ACC AUX.3PL seen
        '...that they did.'

Based on what has been reported in the literature, two types of speakers are predicted to be represented: speakers of type A would share Stjepanović's judgements and allow both (23a) and (23b), while speakers of type B would be consistent with Progovac and would only allow (23a).

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[5]Stjepanović (1999:fn.6) consulted only six native speakers, one of which did not accept any sentences with a clitic preceding the ellipsis site.

[6]For now, I leave open the question of why this is the case, with two possibilities being i) auxiliary clitics originate above the projection targeted by VP-ellipsis and ii) movement of auxiliary clitics out of the ellipsis site is triggered by a different mechanism (with different timing) than movement of auxiliary clitics.

3.3.1   Design of the experiment

The survey consisted of sentences similar to those in (23), embedded in small dialogues. Participants were instructed to judge the answer (A) on a scale from 1 (bad) to 7 (good).[7] An example of an experimental dialogue is given in (24).

(24)   An example of an experimental dialogue

   Q: Ko *je*   šta   dao   Milanu za rodjendan?
        who AUX.3SG what given Milan for birthday
        'Who gave what to Milan for his birthday?'

   A: Jelena *mu*   *je*   dala knjigu, a   Ana *mu*
        Jelena him.DAT AUX.3SG given book   and Ana him.DAT
        šolju.
        mug
        'Jelena gave him a book and Ana a cup.'

There were six types of elliptical environments used in the survey:

(a) VPE:
     Two coordinated clauses without any contrast, with the verb elided from the second clause and the subject stranded.

(b) VPE$_{contrastive}$:
     Two coordinated clauses with contrast in polarity, with the verb elided from the second clause and the subject stranded.

(c) VPE$_{embedded}$:
     Two coordinated clauses, the second of which contains an embedded clause with polarity contrasting to the first clause, with the verb missing from the embedded clause and the subject stranded.

(d) VPE$_{wh-mvnt}$:
     Two coordinated clauses with contrast in polarity, the second of with contains an embedded question with a moved internal argument *wh*-phrase and the subject stranded.

(e) Gapping:
     Two coordinated clauses with contrast, with the verb and the auxiliary elided from the second clause and the subject and another element (such as an object or an adjunct) stranded.

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[7]The Likert scale, as opposed to a simple yes / no (grammatical / ungrammatical) answer form, was chosen because it allows us to analyse the data in more detail and detect conditions causing variation in the data, which was expected based on the previous literature.

(f) Right Node Raising (RNR):
     Two coordinated clauses with contrast in polarity, with the verb
     elided from the first clause and the subject stranded.

This particular set of elliptical constructions was chosen to create the
baseline for the interaction of 2P cliticisation and ellipsis, and therefore
it mostly consists of fairly simple sentences with one auxiliary and one
pronominal clitic (clusters containing more clitics are not tested at this
stage). It is important to collect data on VPE in coordination from more
native speakers considering the disagreement on the judgements presented
in the literature before. VPE with *wh*-movement was tested to check the
possibility of extraction out of the ellipsis site. VPE in other environ-
ments (contrastive, embedded) can shed light upon the conditions of the
observed variation in the data, while other elliptical constructions (gap-
ping and RNR) can reveal more details on the behaviour of 2P clitics
under ellipsis.

Moreover, gapping has been argued to involve VP-ellipsis (Coppock 2001,
Toosarvandani 2013), deletion of a constituent of any category (Boone
(2014)), or no ellipsis but Across the Board movement (Johnson (2009)).
A similar debate holds for RNR: it has been analysed as derived by ellip-
sis in the first conjunct (Wexler & Culicover 1980, Levine 1985, 2001, **?**,
Wilder 1997, Hartmann 2000) or by rightward Across the Board move-
ment (Ross 1967, Bresnan 1974, Hudson 1976, Maling 1972, Sabbagh
2003). Behaviour of 2P clitics in these environments can indicate which
of these accounts are on the right track: if gapping is VP-ellipsis, 2P clitics
are predicted to behave similarly to other environments with VP-ellipsis;
if gapping and RNR both involve Across the Board movement and no el-
lipsis, they should pattern together with respect to their interaction with
2P clitics.

To illustrate the different environments listed above, Table 3.5 provides
the English translations of examples for each of the environments (the
whole list of Serbo-Croatian examples used in the survey can be found in
the Appendix).

Type of ellipsis	Target sentence
VPE	We saw them, and they did, too.
VPE$_{contrastive}$	Sandra didn't kiss him, but Jelena did.
VPE$_{embedded}$	Maja didn't meet him but Nada said that she did.
VPE$_{wh-mvnt}$	I know what her friends gave her, but I don't know what her parents did.
Gapping	Ana gave him a book and Nada a cup.
RNR	Ana didn't but Nada did kiss him.

Table 3.5: *Examples of target sentences (translated to English)*

The examples in (25)–(30) illustrate the corresponding types of ellipsis with the sentences in SC used in the survey. The pronominal clitics in brackets were either present or absent from a target sentence.

(25)   VPE

   Mi *smo*   *ih*   videli, a   i   oni *su*   (*ih*),
   we AUX.1PL them.ACC seen   and also they AUX.3PL them.ACC
   takodje.
   too

   'We saw them, and they did, too.'

(26)   VPE$_{contrastive}$

   Sandra *ga*   nije   poljubila, a   Jelena (*ga*)
   Sandra him.ACC AUX.3SG.NEG kissed   but Jelena him.ACC
   jeste.
   AUX.3SG

   'Sandra didn't kiss him, but Jelena did.'

(27)   VPE$_{embedded}$

   Maja *ga*   nije   srela, a   Nada *je*   rekla
   Maja him.ACC AUX.3SG.NEG met   but Nada AUX.3SG said
   da   (*ga*)   jeste.
   that him.ACC AUX.3SG

   'Maja didn't meet him but Nada said that she did.'

(28) VPE$_{wh-mvnt}$

Znam   šta   *su*   *joj*   prijateli dali, ali ne
know.1SG what AUX.3PL her.DAT friends given but not

znam   šta   *su*   (*joj*)   rodjaci.
know.1SG what AUX.3PL her.DAT parents

'I know what her friends gave her, but I don't know what her parents did.'

(29) Gapping

Ana *mu*   *je*   dala knjigu, a   Nada (*mu*)   šolju.
Ana him.DAT AUX.3SG gave book   and Nada him.DAT cup

'Ana gave him a book and Nada a cup.'

(30) RNR

Ana (*ga*)   nije,   a   Nada *ga*   jeste
Ana him.ACC AUX.3SG.NEG and Nada him.ACC AUX.3SG

poljubila.
kissed

'Ana didn't but Nada did kiss him.'

Every types of ellipsis was represented by two different target sentences, each of which occurred with the pronominal clitic elided or appearing in the second position. Therefore, there were 12 conditions, as can be seen in Table 3.6. Since each condition was represented by two different examples, the survey comprised 24 target sentences in total.[8]

Type of ellipsis	Clitic	
	stranded	**elided**
VPE	1	2
VPE$_{contrastive}$	3	4
VPE$_{embedded}$	5	6
VPE$_{wh-mvnt}$	7	8
Gapping	9	10
RNR	11	12

Table 3.6: *Design of the survey on SC clitics: conditions*

The sentences were grouped into 6 lists in a pseudo-random order and separated by fillers. Each list contained 4 experimental sentences with

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[8]The list of all target sentences can be found in Appendix 6.2.

different elliptical environments (with or without the pronominal clitic) and 2 fillers. The fillers were also small dialogues but involved either no pronominal clitics or no ellipsis at all. Each participant gave judgement to all the sentences in the survey, but the order in which the experimental lists were presented to participants varied. The two variants of a particular example (with or without the pronominal clitic) never appeared in the same experimental list. The survey was distributed using Qualtrics Survey Software.

3.3.2   Participants

43 native speakers of SC (of the age $17 - 57$ with a median of 27 years old) participated in the survey, the majority of which (86%) were born in the territory of present-day Serbia. 25,6% of the participants of the survey identified themselves as linguists.

3.3.3   Results

The results of the survey are presented in Table 3.7, which provides the median for each condition. As can be seen from the table, the sentences with elided pronominal clitics are considered acceptable by speakers, while pronunciation of a pronominal clitics in the second position leads to the ungrammaticality or degraded judgements in most cases.

Type of ellipsis	Clitic	
	stranded	elided
VPE	2	6
$\mathrm{VPE}_{contrastive}$	3	6
$\mathrm{VPE}_{embedded}$	2	7
$\mathrm{VPE}_{wh-mvnt}$	3	6
Gapping	1	7
RNR	5	6

Table 3.7: *Results of the survey on SC clitics: medians (range: 1–7)*

A paired-samples sign test indicated that the difference between pronounced and elided clitics is statistically significant for each environment (p = .000).

In sum, the results suggest that most speakers share Progovac's judgements and eliding pronominal clitics together with the verb is a strong

preference for the consulted speakers. In other words, out of the two hypothetical options in (23), only the one with the elided pronominal clitics is grammatical, as is illustrated in (31).

(31) Mi *ih* nismo videli, a oni *su* rekli. . .
we them AUX seen and they AUX said

'We didn't see them, but they said. . . '

    a.   da jesu [~~videli~~ ~~ih~~]
        that AUX seen them

        '. . . that they did.'

    b. * da *ih* jesu [~~videli~~]
        that them AUX seen

        '. . . that they did.'

The exception from this tendency is RNR: while still significant, the difference between medians in the case of elided and stranded clitics is much smaller under this condition. It is fair to say that under RNR, pronominal clitics can be either pronounced or elided.[9]

One point that is worth mentioning is the variation among speakers. The standard deviation values are generally quite large for each conditions, as can be seen in table 3.8.

Type of ellipsis	Clitic	
	stranded	**elided**
VPE	1.70	1.90
VPE$_{contrastive}$	1.87	1.57
VPE$_{embedded}$	1.92	1.56
VPE$_{wh-mvnt}$	2.09	1.92
Gapping	2.11	0.49
RNR	1.90	1.76

Table 3.8: *Results of the survey on SC clitics: standard deviation*

Such great degree of variation certainly needs to be discussed. The easiest way is to assume that this is reflecting dialectal variation. However, in Section 3.4.6 I argue that it is not the case.

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[9]While I present the RNR results here, I do not provide an account for the differences between RNR and VP-ellipsis in this dissertation. It is necessary to collect more data and determine if the contexts used in the survey indeed involve RNR.

3.4 Accounting for the data: late clitic movement

In this section, I present my account of the interaction of 2P clitic and VP-ellipsis in SC, in particular of the bleeding effect of ellipsis on clitic movement to the second position.[10] The results of the survey presented in table 3.7 suggest that when the verb is elided, the 2P pronominal clitic must be elided with it. At least, this is a strong preference for most speakers participating in the survey. Before introducing my account, in Section 3.4.1, I discuss how previous accounts fail to explain the new data obtained as a result of my survey.

3.4.1 Problems with the previous accounts

Recall that there are two main approaches to the interaction between 2P cliticisation and VP-ellipsis in SC, discussed in Section 3.2.2 and repeated here in (32) and (33). According to Stjepanović's account, 2P clitics are located in separate projections, any of which can be targeted by ellipsis. In Progovac's intuition, pronominal clitics cannot survive ellipsis, and she accounts for that by proposing that in these cases we are dealing with a null VP.

(32) Stjepanović (1997):   (33) Progovac (1998):
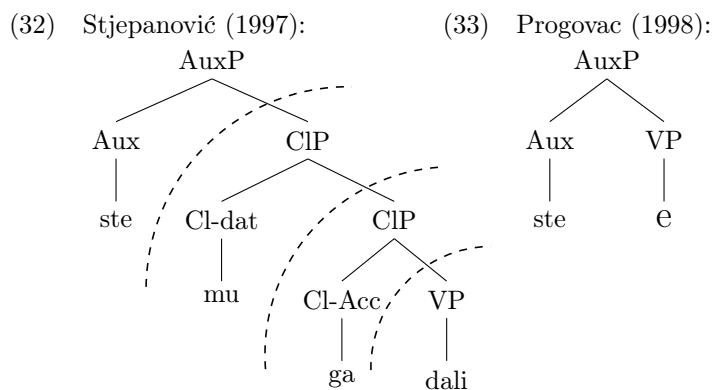
The results of the survey suggest that most speakers agree with Progovac's judgements. However, there is also a great deal of variation, meaning that at least some speakers allow stranding of pronominal clitics under ellipsis under some conditions. Nevertheless, the account of Stjepanović (1997) involving different elliptical sites still appears to be too permissive: it allows for much more variation than is actually found in the data.

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[10]The discussion in this chapter only involves VP-ellipsis; gapping is discussed in chapter 4.

According to the results of the survey, speakers cannot freely elide any of the functional projections that presumably host 2P clitics. The variation is discussed in more detail in Section 3.4.6.

The null VP account of Progovac (1998) cannot be correct either simply because extraction out of the VP is possible under ellipsis: in (34), the *wh*-phrase has clearly moved from the argument position inside the VP, which would not be possible if the VP were null (see Merchant 2013).

(34) Znam koga *je*   Marija poljubila, ali ne znam koga$_i$ *je*   Ana
      know who AUX Marija kissed   but not know whom AUX Ana
      ~~poljubila t$_i$~~].
      kissed

      'I know whom Marija kissed but I don't know whom Ana did.'

As discussed in Stjepanović (1999), the constructions in question (i.e. sentences with a stranded auxiliary and an elided VP) clearly involve VP-ellipsis and not a null VP since it has typical characteristics of VP-ellipsis.

The missing VP requires a linguistic antecedent and cannot be pragmatically controlled: the verb in (35a) cannot be elided due to the absence of any linguistic antecedent, while VP-ellipsis is perfectly fine in (35b) since a linguistic antecedent is provided in the preceding clause. Thus, we are dealing with a surface anaphor in the sense of Hankamer & Sag (1976).

(35) Stjepanović (1999:33)

   a. Context: *John is just about to jump from a cliff into the ocean.*
       A group of people are trying to dissuade him from his intent.
       Peter comes by and says to the crowd:

       * Nemojte *se*   brinuti, on neće ~~skočiti~~.
         don't   REFL worry   he won't jump

       Int: 'Don't worry, he won't.'

   b. Ivan *će* skočiti, a   Petar neće ~~skočiti~~.
       Ivan will jump   and Petar won't jump

       'Ivan will jump, but Petar won't.'

Hankamer & Sag (1976:418–419) formulate the following differences between deletion anaphora (i.e. VP-ellipsis) and non-deletion anaphora (i.e. null VP):

> We have shown that it is necessary to distinguish between two classes of anaphoric processes: deletion anaphora, which

allows missing antecedents,[11] generally gives other evidence
of syntactic dependence on intermediate and superficial struc-
tures, and cannot be pragmatically controlled; and nondele-
tion anaphora, which does not allow missing antecedents, gives
no indication that the anaphorized constituent was ever syn-
tactically present, and can be pragmatically controlled.

The constructions with missing VPs in SC are an instance of deletion
anaphora and do not involve null VP generation, since they give evidence
of syntactic dependence, such as extraction out of the ellipsis site (34),
and cannot be pragmatically controlled (35).

Thus the null VP analysis of Progovac (1996) cannot account for the data
even though most speakers who participated in the survey described in
Section 3.3 share her intuition when it comes to the acceptability judge-
ments concerning the data. The explanation of Stjepanović (1997) is not
plausible either since it is not the case that ellipsis can freely target either
VP or the functional projection where the clitic is located, as her account
predicts. According to the results of the survey, stranding pronominal
clitics under VP-ellipsis is not allowed, as in (36).

(36) Maja *ga*   nije   srela, a   Nada *je*   rekla
      Maja him.ACC AUX.3SG.NEG met   but Nada AUX.3SG said
      da   (*ga*)   jeste.
      that him.ACC AUX.3SG
      'Maja didn't meet him but Nada said that she did.'

Therefore, a different explanation of the interaction of 2P cliticisation and
VP-ellipsis in SC is needed. I introduce my approach in the next section.

3.4.2   The bleeding effect: possible explanations

First, recall that Bošković (2001) uses the example in (17), repeated here
as (37), as an argument for the phonological nature of the 2P requirement.

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[11]Stjepanović (1999) shows that the SC construction under discussion licenses the missing
antecedent effect, see (i).

(i)   Stjepanović (1999:36)

(ii) Ja nikad nisam   jahala kamilu, Ivan jeste, i   kaže da pro *je*
      I never AUX.1SG.NEG ridden camel   Ivan AUX.3SG and says that   AUX.3SG
      šepala.
      lame

      'I've never ridden a camel, John has, and he says it was lame.'

However, as discussed in Merchant (2013), the missing antecedent effect is not a reliable test
for deletion anaphora since *do so* constructions are also able to give rise to the effect.

Since the clitic *ga* in the second clause is definitely not located in the second position in syntax (assuming that it would be linearized after the subject if it were) in (37a) and the sentence is still grammatical, the syntactic component must not be concerned with the 2P clitics (at least not with the pronominal ones). It is the pronunciation of the clitics in any other position rather than in the second position that triggers the violation of the 2P requirement, as shown in (37b).

(37) Bošković (2001:82)

    a.   Marija *ga*   nije   poljubila, a   Ana
            Marija him.ACC AUX.3SG.NEG kissed   and Ana

            jeste   ~~poljubila *ga*~~   / ~~*ga*~~   ~~poljubila~~ .
            AUX.3SG kissed   him.ACC   him.ACC kissed

            'Marija didn't kiss him, but Ana did.'

    b.   * Marija *ga* nije poljubila, a Ana jeste poljubila *ga* / *ga* poljubila.

However, placing the clitic into the second position does not save (37b). According to the results of the survey, (38) is ungrammatical and it is not obvious what causes the ungrammaticality under the weak phonology account, where 2P clitics move in syntax to various Agr positions for Case and and ϕ-feature checking.[12]

(38)   * Marija *ga* nije   poljubila, a   Ana *ga*   jeste ~~poljubila~~.
          Marija him AUX.NEG kissed   and Ana him AUX kissed

          'Marija didn't kiss him, but Ana did.'

A lower copy of a clitic can be realised at PF if a higher one violates the 2P requirement. For example, the delayed clitic placement can be accounted for by assuming lower copy pronunciation (see Franks 1999 a.o.). Consider (39).

(39)   a.   Ja, tvoja mama, (*sam ti) obećala   (*sam ti*) igračku.
            I   your mother AUX   you promised AUX you toy

            'I, your mother, promised you a toy.'

    b.   Ja, tvoja mama, ~~*sam ti*~~ obećala *sam ti* ~~obećala~~ igračku.

SC clitics cannot appear right after an appositive parsed as a separate ι but rather have to be placed further to the right (39a). Franks (1999) proposes that in this case the lower copy of the chain created by clitic

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[12]In particular, Bošković assumes that accusatives clitics move to Agr$_{do}$, dative clitics to Agr$_{io}$, and auxiliary clitics to Agr$_s$. Moreover, clitics are non-branching elements and are thus ambiguous XP/X^0 elements, which can move to either Agr$_o$ or SpecAgr$_o$P.

movement is pronounced (39b), since the pronunciation of the higher copy is impossible (2P clitics in SC are enclitics and cannot follow an ι-boundary).

Under Franks's account, there is no explanation for why the pronominal clitic cannot appear in the second position under VP-ellipsis since there is no violation which would force the pronunciation of another (lower) copy. In should be noticed that the non-elliptical version of (38) is perfectly fine:

(40) Marija *ga*   nije   poljubila, a   Ana *ga*
      Marija him.ACC AUX.3SG.NEG kissed   and Ana him.ACC
      jeste   poljubila.
      AUX.3SG kissed

      'Marija didn't kiss him, but Ana kissed him.'

In order to account for the interaction of 2P cliticisation and VP ellipsis in SC, we need to account for the contrast between the cases in Table 3.9, in particular, for the bleeding effect of VP-ellipsis on 2P cliticisation.

		clitic in 2P	
		no	**yes**
ellipsis	no	*…a Ana jeste (*ga*) poljubila (*ga*). (37b)	*ᵒᵏ*…a Ana *ga* jeste poljubila. (40)
	yes	*ᵒᵏ*…a Ana jeste. (37a)	*…a Ana *ga* jeste. (38)

Table 3.9: *The interaction of VP-ellipsis and 2P cliticisation in SC*

There are two possible ways to account for the observed bleeding effect:

(a) VP-ellipsis bleeds *syntactic* movement of clitics to the second position out of the ellipsis site.

(b) VP-ellipsis blocks *postsyntactic* movement of clitic to the second position.

First, let us consider the possibility of *syntactic* clitic movement and the blocking thereof. It is known that ellipsis can bleed syntactic movement, in particular, verb movement. It is well known that sluicing bleeds auxiliary movement in English. As standardly assumed, auxiliaries move to C^0 in questions, as shown in (41b). Since sluicing is IP deletion, the auxiliary is expected to be outside the ellipsis site in (41c), which is actually

ungrammatical. It is only logical to presume that sluicing bleeds (syntactic) T-to-C-movement, as Merchant (2001), Lasnik (1999) do. Lipták & Van Craenenbroeck (2008) also show that sluicing bleeds verb movement in Hungarian and Turkish and provide evidence that sluicing can bleed phrasal movement as well.

(41) a. Max has invited someone.
      b. $[_{CP}$ Who $[_{C'}$ has $[_{IP}$ Max $[_{I'}$ t_{has} invited]]]]?
      c. Who (*has) $[_{IP}$ ~~Max invited~~]?

Lasnik (1999) notices the same for pseudogapping, as shown in (42): in (42a), he claims, the verb remains in situ in V^0, while normally its raising is obligatory, as the ungrammaticality of (42b) shows. Lasnik proposes that the strong feature, which normally forces the verb to move, is carried by the verb itself. In case the verb does not move and the feature remains unchecked, the derivation would crash at PF. However, if ellipsis applies, the verb is deleted in PF together with its features, and the derivation succeeds. Therefore, pseudogapping (which results from VP-ellipsis, see Jayaseelan 1990, Lasnik 1995) can also bleed verb movement.

(42) a. You might not believe me but you will Bob.
      b. *You will Bob believe.

Sailor (2018) argues that VP-ellipsis bleeds (syntactic) verb movement to the second position in Mainland Scandinavian because the head that licenses ellipsis (T^0) merges earlier than the head which attracts the verb (C^0) and ellipsis makes the content of the ellipsis site inaccessible for further operations, following the derivational account ellipsis proposed in Aelbrecht (2010), as discussed in Chapter 1. In the Norwegian example in (43a), the verb cannot escape the ellipsis and appear in the second position; instead, a dummy verb *gjorde* occurs under VP-ellipsis, as in (43b).

(43) a. * Johan leste   ikke *Lolita*, men Marie leste.
          Johan read.PAST not *Lolita*, but Marie read.PAST
          Int: 'Johan didn't read *Lolita*, but Marie did.'
      b.   Johan leste   ikke *Lolita*, men Marie **gjorde**.
          Johan read.PAST not *Lolita*, but Marie do.PAST
          Int: 'Johan didn't read *Lolita*, but Marie did.'

The analysis of Sailor (2018) is based on the timing differences between two syntactic operations.

Another solution involving timing is to assume that ellipsis bleeds *post-syntactic* movement. This type of analysis is pursued for pseudogapping

in Boeckx & Stjepanović (2001), who take the absence of verb movement
in pseudogapping as an argument for head-movement being a PF op-
eration. In their approach, ellipsis and verb movement, both being PF
operations, compete with each other, and the verb either moves or gets
deleted. There is still a trigger for the verb movement, but is "not fea-
tural, but may well be morphological, or prosodic, or a mixture of the
two" (Boeckx & Stjepanović 2001:352), making sentences with the verb
staying *in situ* ungrammatical in English, as demonstrated in (44).

(44)   * Debbie ate chocolate, and Kazuko milk$_i$ drank t_i.

The approaches mentioned above differ in the timing of the application
of ellipsis and head-movement that they assume, as summarised in table
3.10.[13]

	ellipsis	head-movement
Lasnik (1999)	syntax	syntax (but lack of obligatory movement results in PF crash)
Sailor (2018)	syntax	syntax
Boeckx & Stjepanović (2001)	PF	PF

Table 3.10: *Views on the timing of ellipsis and head-movement in the light of attested bleeding effects of ellipsis*

I argue that the approach under which ellipsis blocks movement at PF
(in the spirit of Boeckx & Stjepanović 2001) accounts for the behaviour
of 2P clitics in SC under ellipsis the best.

3.4.3   2P cliticisation is phonological

Recall that auxiliary and pronominal clitics in SC have strong counter-
parts, which are identical in their feature composition and only differ in
their phonological properties. Table 3.11 illustrates this once again for
the 3SG masculine pronoun and the 2SG pronoun.

---

[13]The accounts listed in table 3.10 exhaust the logical possibilities, since an account with
ellipsis happening at PF and head-movement in syntax would predict no bleeding effect of
ellipsis on head-movement.

	+ **clitic**	**-clitic**
pronoun 3SG.MASC.ACC	*ga*	njega
pronoun 3SG.MASC.DAT	*mu*	njemu
pronoun 2SG.ACC	*te*	tebe
pronoun 2SG.DAT	*ti*	tebi

Table 3.11: *Clitics and strong forms of pronouns: an example*

Radanović-Kocić (1996) argues that clitics and strong forms belong to the same syntactic category and have the same underlying source, since they represent identical syntactic features and never co-occur in the same clause. This "underlying source", which is actually just a strong form, occupies a position in the structure according to its grammatical function and can become clitics via a process of cliticisation, repeated in (45).[14]

(45)   Cliticisation (Radanović-Kocić 1996:433)
    Assign the feature [+clitic] to pronouns and auxiliaries in all positions except when they carry phrasal stress or when not preceded by an unstressed element.

All the elements marked as [+clitic] are placed into the second position in PF. An important aspect of this approach is that clitics and full forms are the same elements syntactically, and as a matter of fact there are no clitics in syntax (although it is not completely clear at what point of the derivation (45) applies).

I adopt the spirit of this approach here. I follow Radanović-Kocić in arguing that clitic and strong forms of pronouns and auxiliaries are not distinct elements from the syntactic point of view. In other words, a pronominal or auxiliary element in syntax is not marked as [+clitic] and does not carry any information about its future prosodic status.

Let us consider the derivation of a simple sentence with 2P clitics, such as (46).

(46)   Ana *ga*   *je*   poljubila.
    Ana him.ACC AUX.3SG kissed

    'Ana kissed him.'

---

[14]Radanović-Kocić (1996) does not say explicitly when the [+clitic] feature is assigned, but it must be a postsyntactic operation if it depends on stress placement.

The simplified structure in (47) illustrates the status of pronouns and auxiliaries: in syntax, there is just a 3SG auxiliary and a 3SG.MASC.ACC pronoun. The pronoun is located inside VP, where it is generated as an argument of the verb, and the auxiliary presumably moves to T^0 from Aux^0 to check its features. (other elements are represented as lexical items in their surface positions).

(47)   Stage 1: Syntax

```
                      TP
                  ╱       ╲
               DP            T'
               Ana       ╱       ╲
                        T           AuxP
                      AUX.3SGᵢ    ╱      ╲
                              Aux          VP
                              tᵢ        ╱      ╲
                                      V          DP
                                  poljubila   PRON.3SG.MASC
```
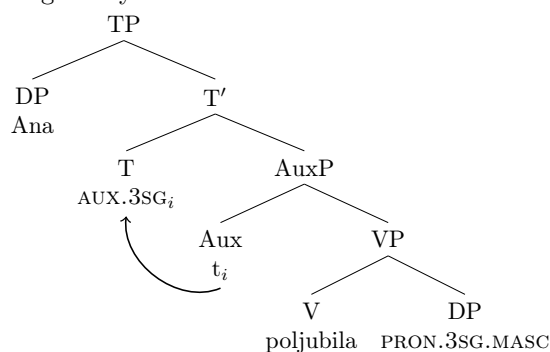
Nothing is marked as a clitic in the structure in (47). The prosodic status of pronouns and auxiliaries must be decided upon later in the course of derivation. I suggest that the "decision" takes place at the stage of Vocabulary Insertion. For example, there are two Vocabulary Items that can be associated with the morpheme AUX.3SG: the clitic form *je* or the strong form *jeste*. The latter is chosen in a limited number of configurations (when the element is focus-marked or contrasted, when conjoined or when it follows a preposition (for pronouns). In all the other cases the clitic form is inserted. Therefore, clitics forms are default, while strong forms only appear in specific environments. (48) demonstrates the Vocabulary Items for the strong and clitics forms of the accusative pronoun *ga/njega* 'him'. Recall that according to the Subset Principle of Halle (1997), the item that matches the greatest number of features must be chosen, therefore a strong form must appear under focus while a clitic form appears elsewhere.[15]

(48)   a. njega <–> [D; 3SG; M; uACC; +F]
       b. ga <–> [D; 3SG; M; uACC]

For example, (47) does not meet the condition for insertion of strong forms (i.e. has no focus feaures), therefore both the auxiliary and the direct argument are spelled out as clitics, as shown in (49).

---

[15]Other Vocabulary Items must be specified for some other environments where non-clitic forms of pronouns appear, such as after a preposition.

(49) Stage 2: Vocabulary Insertion

Ana *je*   poljubila *ga.*
Ana AUX.3SG kissed   him.ACC

'Ana kissed him.'

I propose that postsyntactic clitic movement is triggered by the requirement of the clitics themselves to appear in the second position. Therefore only after Vocabulary Insertion (and after the prosodic structure is created) all the elements spelled out as 2P clitics move to the second position within their ι, as illustrated in (50).

(50) Stage 3: Clitic movement at PF

(ιAna *ga*   *je*   poljubila).
  Ana him.ACC AUX.3SG kissed

'Ana kissed him.'

This approach to 2P cliticisation has a number of advantages. First, there is no need to syntactically unify the 2P clitics to account for their movement. It is not necessary to stipulate the non-branching status of auxiliaries just to explain their positioning. In the approach proposed here, pronominal clitics can be ambiguous between X^0 and XP, while an auxiliary clitic can still take VP as its complement. Similarly, there is no need to look for a mysterious syntactic head that would attract syntactically different elements. Finally, it is reasonable to put the phenomenon of 2P cliticisation entirely into phonology, since syntax, as argued for by Bošković (2001) among others, imposes no restrictions or requirements for pronouns and auxiliaries in SC. It is phonology that demands that clitics appear in the second position within their ι (i.e., after the first φ). There is no reason why syntax should be involved at all or why there should be any syntactic differences between clitics and their strong counterparts.

Some differences in behaviour of strong and clitic pronouns in SC are discussed in Despić (2011), based on the classification of pronouns proposed in Cardinaletti & Starke (1999). Despić shows, for example, that clitic pronouns can have both human and non-human referents (51a), in contrast to strong pronouns (51b):

(51) Despić (2011:240)
   a. Čuo *sam*   *je.*
       heard AUX.1SG her
       'I heard her'   <+hum> / <-hum>

  b. Čuo *sam* nju.
   heard AUX.1SG her

   'I heard her' $<$+hum$>$ / *? $<$-hum$>$

Furthermore, clitics can function as bound variables, as opposed to strong forms of pronouns:

(52) Despić (2011:243)

  Svaki predsednik$_i$ misli da ga_i/??njega$_i$ svi vole.
  every president thinks that him   everyone love

  'Every president$_i$ thinks that everybody loves him$_i$.'

However, the differences are not always present. A strong pronoun can have a non-human referent or be a bound variable in focus environments, for example, when modified by a focus operator *čak* 'even' (53a) or ' *samo* 'only' (53b).

(53) Despić (2011:243-246)
  a. Čuo sam čak i   **nju**.
    Heard am even and her

    'I heard even her.' $<$+hum$>$ / $<$-hum$>$
  b. Svaki predsednik$_i$ misli da samo **njega**$_i$ svi vole.
    Every president thinks that only him everyone love
    'Every president$_i$ thinks that everybody loves only him$_i$.'

Despić proposes that in cases like (53), the strong pronoun is in fact a "camouflaged" clitic, which is realised as a strong form in order to be associated with prosodic prominence. Note that this account is similar to the one proposed in this dissertation, with the difference being that I argue that in all cases pronouns are underlyingly neither clitics nor strong forms, and pronouns are realised as strong forms in the environments when they have to be associated with prosodic prominence.

Consider the sentences in (54): (54a) involves a clitic pronoun in a neutral environment, (54b) involves a strong pronoun with an intensifier *sam*, and (54c) involves a strong pronoun in a neutral environment.

(54) Despić (2011:247)
  a. Svaka kupola$_i$ se sastoji od 3 dela koji je_i
    Every dome reflexive consists from 3 parts which her
    podržavaju.
    support
    'Every dome$_i$ consists of 3 parts that support it$_i$.'

b. Svaka kupola$_i$ se   sastoji od   3 dela koji
Every dome   reflexive consists from 3 parts which
podržavaju nju$_i$ samu.
support   her INTENS

'Every dome$_i$ consists of 3 parts that support it$_i$ itself.'

c. * Svaka kupola$_i$ se   sastoji od   3 dela koji
Every dome   reflexive consists from 3 parts which
podržavaju nju$_i$.
support   her

Int: 'Every dome$_i$ consists of 3 parts that support it$_i$.'

Under Despić's account, (54a) is grammatical since the bound pronoun with a non-human referent is a clitic. In (54b), according to him, the pronoun is a "camouflaged" clitic modified, which is realised as a strong pronoun since it is in the focus domain of the intensifier. Ungrammaticality of (54c) is caused by the fact that a strong pronoun (which is not a "camouflaged" clitic) cannot be bound by a non-human referent.

There is an alternative explanation, though, consistent with the rule (55) proposed by Cardinaletti & Starke (1999).

(55) Choice of a pronoun (Cardinaletti & Starke 1999:48)
Choose the most deficient form possible.

Under my account, the pronouns in each sentence in (54) are the same underlyingly. Note that (54a) and (54c) are the same except for the form of the pronoun. Since the pronoun occurs in a neutral environment, at the stage of Vocabulary Insertion, a default clitic form is chosen. Therefore (54c) is ungrammatical since it does not meet the conditions for insertion of a strong form. On the other hand, in (54b), such condition (a focus environment) is created by the intensifier.

The next section discusses how postsyntactic movement on clitics interacts with VP-ellipsis and why pronominal clitics cannot be stranded under ellipsis.

3.4.4 The interaction of ellipsis and 2P cliticisation

As discussed in Section 1.3, one of the approaches towards ellipsis is the non-insertion approach, under which ellipsis is considered as lack of insertion of Vocabulary Items into the nodes marked for ellipsis at the stage of Vocabulary Insertion (Bartos 2001, Kornfeld & Saab 2004, Aelbrecht 2010, Saab 2019 a.o.). Saab (2019:10) formulates it as follows:

(56) Any syntactic object that is syntactically marked as elliptical in the syntax is excluded of the LI <Lexical Insertion> procedure.

This view allows us to understand why pronominal clitics cannot survive ellipsis in most cases and why there is no violation of the 2P requirement when the clitics are elided. The core of my account is very simple: as proposed in the previous section, clitics in SC move to the second position postsyntactically, after a vocabulary item with the requirement to appear in the second position is chosen and inserted (in other words, after an auxiliary or a pronoun becomes a clitic at the stage of Vocabulary Insertion). If ellipsis blocks Vocabulary Insertion, insertion of a clitic form never happens: any element inside the ellipsis site that could potentially become a 2P clitics never receives a phonological realisation. Since the requirement to appear in the second position is a property of a vocabulary item and not of a syntactic node, an elided pronoun can not move to the second position.

Put differently, in cases like (57) the choice between a clitic form and a strong form of the pronoun inside the ellipsis site is never made, and it never becomes a 2P clitic with a requirement to move to the second position within its ι.

(57) Marija *ga*   nije   poljubila, a   Ana jeste
      Marija him.ACC AUX.3SG.NEG kissed   and Ana AUX.3SG
      ~~poljubila~~ {~~GA~~ / ~~NJEGA~~} .
      kissed   3SG.MASC.ACC
      'Marija didn't kiss him, but Ana did.'

Let us consider the derivation of the second conjunct of (57) with respect to ellipsis and clitic movement. In syntax, according to the approach developed here, the auxiliary and the pronoun are not specified for being a clitic (or not) and do not appear in the second position (unless they are there incidentally):

(58) *Stage 1: Syntax*

      . . . a   Ana { JE / JESTE } poljubila {GA / NJEGA}.
            and Ana   AUX.3SG   kissed   3SG.MASC.ACC
      '. . . but Ana kissed him.'

The syntactic structure of (58) is similar to the non-elliptical (47) discussed above.[16] The VP is marked for ellipsis, as (59) shows (the structure is simplified).

---

[16]The difference might be in the position of the auxiliary: since there is polarity contrast in (57), the auxiliary might be located in a different projection (and hence realised as a strong form).

(59)   *Stage 1: Syntax*
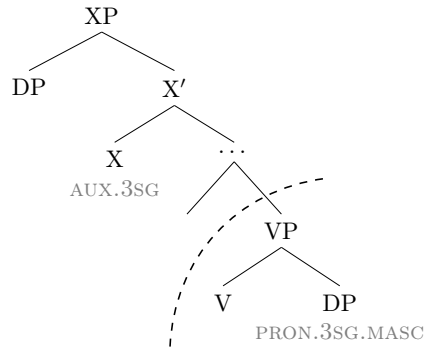
The structure in (60) shows the sentence at the stage of Vocabulary Insertion: the auxiliary is realised as a strong form as it is contrastive to the auxiliary in the antecedent, while the elements inside the ellipsis site do not receive any phonological material since VP-ellipsis blocks insertion of vocabulary items. Note that there is no violation of the 2P requirement not because the pronominal clitic is unpronounced but rather because the sentence contains no 2P clitics at all. Note that (60) represents the absence of VI, or, alternatively, insertion of null morphemes, not the generation of a syntactically empty (null) VP.

(60)   *Stage 2: Vocabulary Insertion*
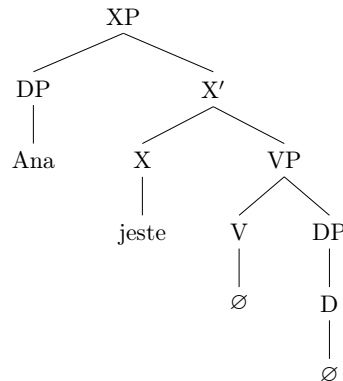
The account sketched above explains why pronominal clitics cannot survive VP-ellipsis: because the corresponding arguments never become 2P clitics and therefore have no motivation to move out of the ellipsis site.

However, recall that there is a great deal of variation in the data obtained as a result of the survey described in Section 3.3. This means that at least for some speakers in certain environments the extraction of arguments out

of the ellipsis site is possible. The next section introduces a possible way
to account for this variation.

3.4.5   Why not syntax

It is still possible to pursue an approach in which 2P clitics cannot extract
out of the ellipsis site since ellipsis makes all the material in it inaccessible
for further syntactic operations, but there are several counterarguments
to this account.

First, recall that an auxiliary clitic always survives VP-ellipsis:

(61)   Oni *su*   kupili novine,   a   čujem   da   *(
       they AUX.3PL bought newspapers and hear.1SG that AUX.2PL
       ste)   i   vi takodje.
       also you too
       'They bought newspapers and I heard that you did too.'

In principle, there are two ways to explain the behaviour of auxiliary
clitics. It can be that auxiliaries are generated above the projection tar-
geted by VP-ellipsis in SC to begin with, as in the approach of Progovac
(1998, 2000) and in this case there is nothing surprising about the fact
that auxiliaries survive VP-ellipsis while pronominal clitics do not. How-
ever, it is plausible that auxiliaries are generated inside the future ellipsis
site. Bošković (2001) follows den Dikken (1994) in arguing that agree-
ment projections are generated above the VP headed by an auxiliary. In
Bošković's approach, the pronominal clitics are hosted by those agree-
ment projections, and auxiliaries move to a position above, namely to
Agr_s or T, which hosts auxiliaries in sentences like (62), as argued in
Bošković (1995), Stjepanović (1997).

(62)   Boeckx & Stjepanović (2001:351)

       Ivan *je*   kupio automobil, a   i   Marija *je*
       Ivan AUX.3SG bought car   and too Marija AUX.3SG
       kupila ~~automobil~~.
       bought car

       'Ivan bought a car, and Marija did too.'

An auxiliary therefore moves from a position below pronominal clitics to
a position above them (pronominal clitics are also generated within the
VP and move out to the agreement projections):

(63)   Bošković (2001:128)
       je_i [$_{Agr_{io}}$ dative clitic [$_{Agr_{do}}$ accusative clitic [$_{VP}$ je_i ...]]]

Assuming that ellipsis targets a projection below the agreement projections, it is difficult to explain why ellipsis bleeds movement of the pronominal clitics out of the ellipsis site but not movement of the auxiliary clitics under this approach. The type of analysis that Sailor (2018) suggests for the absence of verb movement to the second position in Mainland Scandinavian is also difficult to maintain here. Assume that in SC, predicate ellipsis targets the complement of some head X, which carries the [E]-feature, as schematised in (64).

(64)   Predicate ellipsis
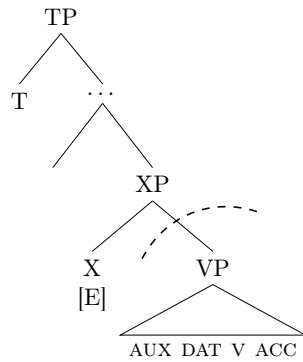
Under Aelbrecht's derivational ellipsis approach, there are 2 scenarios:

(a) The licensing head is X itself, which means that only the elements moving to Spec,XP escape ellipsis.

(b) The licensing head is higher, namely T, which means that the ellipsis site becomes inaccessible for further syntactic operations when T agrees with X.

Under the first scenario, pronominal clitics survive ellipsis but the auxiliary does not, assuming that pronominal clitics escape VP for feature-checking reasons and move to AgrOs. Under the second scenario, both pronominal and auxiliary clitics survive ellipsis. Neither scenario accounts for the facts correctly.

It is also possible to assume that ellipsis simply targets $\mathrm{Agr}_{IO}\mathrm{P}$, as in (65), eliding the pronominal clitics but leaving the auxiliary in T.

(65)   AgrP ellipsis

```
              TP  _ _ _
             /  \      \
            /    \      \
           T  '   AgrP   '
          [E]     /  \
                 /    \
                 ⋯
                /  \
               /    \
              /    VP
                  /____\
```
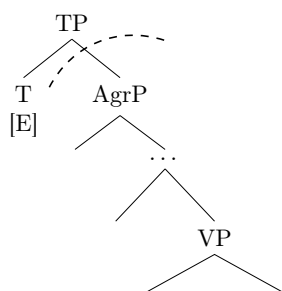
The problem with this account, however, is that it would not explain why *wh*-extraction can proceed out of VPs: at the point when T$_{[E]}$ licences ellipsis, only the subject is outside of the VP (in Spec,TP), while all the internal arguments are "frozen" in the ellipsis site.

Moreover, neither of the scenarios discussed above leave any space for variation. I discuss this problem in Section 3.4.6 and show that the kind of variation that is observed in the data from the survey is not of a dialectal nature since there is a great deal of not only inter- but also intra-speaker variation. This makes it difficult to account for the variation by assuming that different processes can be involved for different groups of people (for example, that ellipsis can target different projections for different types of speakers or even for the same speaker).

Finally, placing the movement of SC clitics into the syntactic component of grammar raises a number of conceptual questions. As Embick & Noyer (2001:556) put it:

> In some cases the question that was posed was whether or not syntactic movement could possibly account for patterns of clitic placement, or in particular second-position phenomena. We take this question to be ill formed. Syntax is a generative system, and assuming that one is willing to loosen many of the constraints on syntactic movement, the ability of such a system to capture certain linear orders should never have been in question. Rather, the question that we take to be central is whether or not it is desirable to have syntax perform such operations.

The most challenging aspect for the syntactic accounts of 2P cliticisation is establishing the motivation for movement and the syntactic position (or positions) where clitic move to. It does not seem feasible to postulate that one particular head attracts multiple elements of different syntactic

classes to satisfy some requirement. For the same reason, it is also not plausible that all clitics move to a particular position to satisfy a requirement of their own. If clitics move to different syntactic positions to check their features, it is too coincidental that they always form a cluster, especially in a language with a highly flexible word order. Why is it the case that the clitic forms have to appear in the second position, but not the non-clitic forms of pronouns and auxiliaries or arguments realised as full noun phrases and lexical verbs may appear in nearly any position in a sentence?

To explain this discrepancy, proponents of the syntactic movement of clitics have to come up with additional assumptions about the syntactic properties of clitics. While it is quite standard to follow Chomsky (1995a) in defining clitics as non-branching element ambiguous between X^0 and XP, it is not always easy to implement this assumption. For example, auxiliaries cannot be viewed as heads taking VP as its complement since it would make them branching. Bošković (2002) suggests that auxiliary clitics are located in a specifier position of a phrase headed by a null element, resulting in a structure as in (66a) instead of the traditional (66b).

(66)　　a.　$\ldots [_{XP} [_{AuxP} \mathbf{AUX}^0] [_{X'} \varnothing [_{VP} \ldots V^0 \ldots]]]$
　　　　b.　$\ldots [_{AuxP} [_{Aux'} \mathbf{AUX}^0 [_{VP} \ldots V^0 \ldots]]]$

These complications can be avoided by eliminating clitic movement from syntax. After all, the only thing that unites the second position clitics is their phonological deficiency. Given that the second position itself is also a phonological notion in SC, as Bošković (2001) argues, it is only reasonable to suggest that the syntax plays no role in positioning the clitics, and these phonologically weak items are placed into the phonological second position, i.e. the second position within an ι, in the phonological component of the grammar.

3.4.6　Variation: taking a closer look at the data

In order to account for the variation found in the data it is necessary to establish what can be a possible source of this variation: does it reflect differences between dialects, diachronic changes, or something else? To answer this question, we need to take a closer look at the data.

As discussed above, I expected to find two types of speakers, based on the discussion in the previous literature: the speakers of the first type would share Progovac's judgements and disallow stranding of pronominal clitics under VP-ellipsis, as in (67a); the speakers of the second type would share Stjepanović's judgements and allow stranding of pronominal clitics, as in (67b).

(67)   Two expected types of speakers:

   a.   Type 1:

Mi *smo*   *ih*   videli, a   i   oni *su*
we AUX.1PL them.ACC seen   and also they AUX.3PL

(*ih),   takodje.
them.ACC too

'We saw them, and they did, too.'

   b.   Type 2:

Mi *smo*   *ih*   videli, a   i   oni *su*
we AUX.1PL them.ACC seen   and also they AUX.3PL

(ih),   takodje.
them.ACC too

The data are more complicated, though. Table 3.12 illustrates types (T) of
SC speakers according to their judgements of the two sentences with VP-
ellipsis (VPE$_1$ and VPE$_2$ in the table), shown in (68), with pronominal
clitics stranded (*str*) or elided (*el*).[17]

(68)   a.   VPE$_1$:

Mi *smo*   *ih*   videli, a   i   oni *su*
we AUX.1PL them.ACC seen   and also they AUX.3PL

(*ih*),   takodje.
them.ACC too

'We saw them, and they did, too.'

   b.   VPE$_2$:

Mi *smo*   *mu*   *ga*   dali, a   i   oni *su*
we AUX.1PL him.DAT it.ACC given and also they AUX.3PL

(*mu*   *ga*),   takodje.
him.DAT it.ACC too

'We gave it to him, and you did, too.'

---

[17]Note that Table 3.12 is presented for illustrative purposes only; individual cases that do
not match any type are not included in the table. The table is based on the results of the
survey described in section 3.3; ok = 6-7, ? = 3-5, * = 1-2.

	T1	T2	T3	T4	T5	T6	T7	T8
VPE$_1$*str*	*	?	*	*	*/?	ok	?	*
VPE$_1$*el*	ok	ok	ok	ok	*/?	ok	ok	*/?
VPE$_2$*str*	*	?/*	*	*	*	*	ok	*
VPE$_2$*el*	ok	ok	*	?	ok	ok	?	*/?
%	20%	6.7%	13%	8.8%	15.4%	4.4%	4.4%	13.2%

Table 3.12: *Illustration of the observed types of speakers*

As can be concluded on the basis of Table 3.12, the situation is quite complex. First, it is definitely not the case that we only have speakers of two types. Second, there are no speakers (among those participating in the survey) who would share Stjepanović's judgement and consistently allow both stranding and ellipsis of pronominal clitics (that is to say there is no type with "ok" in all four rows in the table). Third, there are groups of speakers with contradicting judgements across the types (for example, speakers of Type 3 and Type 4 vs. speakers of Type 5).

To summarise, the biggest group of speakers (T1) are the "ideal" speakers for whom pronominal clitics must be elided in the case of VP-ellipsis. There is also a smaller group of people (T2) for whom deletion of pronominal clitics is still a preference but their stranding is not completely ungrammatical. For a considerable group of people it is also obligatory to elide pronominal clitics, but for some reason they judged one of the sentences with elided clitics ungrammatical or degraded as well (T3, T4, and T5). There is a small group of speakers who allow clitic stranding in one of the cases (T6 and T7). Finally, there is a type of speakers who found all the variants ungrammatical or degraded (T8). Note that in this case there is still an asymmetry between the variants with elided and stranded clitics: only sentences with elided clitics were judged as degraded and not entirely ungrammatical.

Therefore it is not tenable to try to explain this variation by virtue of dialectal diversity. The variation can be instead accounted for by assuming that the difference lies in the structure of elliptical sentences with pronominal clitics stranded and elided. I propose that when clitics survive ellipsis, they are in fact scrambled out of the ellipsis site prior to ellipsis.

As discussed in Bošković (2007), Serbo-Croatian is a language that has Japanese-style, semantically vacuous scrambling, in addition to topicalization and focalization. As (69) demonstrates, any word order is possible (in simple cases like this), with SVO being the default option.

(69) Progovac (2005:12)

    a. Ana kupuje knjigu.
        Ana buys   book

        'Ana is buying a book.'

    b. Ana knjigu kupuje.

    c. Knjigu Ana kupuje.

    d. Knjigu kupuje Ana.

    e. Kupuje Ana knjigu.

    f. Kupuje knjigu Ana.

Assuming that scrambling is a syntactic operation, I suggest that in cases when pronominal clitics survive VP-ellipsis, they are scrambled out of the ellipsis site prior to ellipsis. Note that it is not a special clitic movement but rather a standard operation that can apply to any argument. Therefore, in order for a pronominal clitic to survive ellipsis, the argument it realises has to be located higher in the structure (as a result of movement) than it would be when the clitic is elided.

Thus, sentences with clitics elided would have the neutral word order (70a), while sentences with clitics surviving ellipsis would have the direct object scrambled out of the ellipsis site (70b). It will be realised as a clitic at the stage of Vocabulary Insertion and the clitic will subsequently move to the second position within its ι.

(70) a. ... a   Ana nije   [~~poljubila~~ ~~{GA / NJEGA}~~].
        and Ana AUX.NEG   kissed   3SG.MASC.ACC

    b. ... a   Ana {GA / NJEGA}$_i$ nije   [~~poljubila t$_i$~~].
        and Ana 3SG.MASC.ACC AUX.NEG   kissed

      '... but Ana didn't (kiss him).'

The variation then can be accounted for by postulating that speakers differ in their preferences with respect to the word order and their interpretation of the context as sufficient for scrambling. Although numerous word orders are possible for a given sentence, not all of them are felicitous in every context. Among the sentences in (69), only (69a) is felicitous in a neutral all-new context, such as an answer to a question "What's happening?" (Progovac 2005). Some of the factors that are relevant for determining if a certain word order is appropriate are the information structure of a sentence and its prosodic properties (Stjepanović 1999).

3.5 Apparent syntactic effects of clitic placement

In his critique of the purely phonological placement of 2P clitics in SC, Bošković (2001) deploys several arguments that I address in the current section in order to show that a phonological placement approach can deal with them.

3.5.1 Prosodic phrasing and clitic placement: the 1W / 1D dichotomy

The first objection Bošković raises against the account of Radanović-Kocić (1996), under which clitics are derived from the corresponding full forms and move to the second position postsyntactically, is the variability of clitic placement with respect to the noun phrases with modifiers. As discussed in the beginning of this chapter, 2P clitics in SC can be placed either after the first constituent of a clause (71a), the so-called 1D placement, or after the first word (71b), seemingly breaking up a constituent, the 1W placement.

(71) Bošković (2001)

    a. Taj čovjek *je*   volio Milenu.
        that man   AUX loved Milena

    b. Taj *je*   čovjek volio Milenu.
        that AUX   man   loved Milena

        'That man loved Milena.'

Radanović-Kocić proposes that 2P clitics are always placed after the first φ and in cases like (71), two phonological phrasings are possible: either the determiner and the noun form a φ together, which results in 1D clitic placement, as in (71a), or a determiner forms a φ of its own, which results in 1W placement, as in (71b), the possibility which Bošković finds questionable.

In the strictly syntactic accounts, the 1W placement is accounted for via syntactic movement. Serbo-Croatian is a language that allows left-branch extraction (LBE) (Ross 1986, Bošković 2005). Progovac (1996), Wilder & Ćavar (1994a) propose that it is that mechanism that is responsible for 1W placement. They observe that only elements that can independently undergo movement can host 2P clitics in 1W environments, which includes possessives, determiners (both being morphologically adjectival) and other adjectives. These elements can undergo left-branch extraction and thus be syntactically separated from the head noun, as shown in (72).

(72)   Progovac (1996:415)

      Anina / mladja / ova dolazi sestra.
      Ana's   younger   this comes sister

      'Ana's/the younger/this sister is coming.'

Recall that under syntactic accounts, 2P clitics move to a particular syntactic position (C^0, for example). The difference between (73a) and (73b) then is in what moves to the specifier of that position: the whole noun phrase or the modifier which undergoes left-branch extraction. The two possibilities are illustrated in (73), with the examples taken from Progovac (1996:414).

(73)   a. $[_{NP}$ Anina sestra $]$ $[_{C'}$ *im* $]$ nudi čokoladu.
              Ana's sister   them   offers chocolate

    b. $[_{AP}$ Anina $]_i$ $[_{C'}$ *im* $]$ $[_{NP}$ t_i sestra $]$ nudi čokoladu.
              Ana's   them   sister   offers chocolate
        'Ana's sister is offering them chocolate.'

In (73b), I adopt the analysis of LBE as movement of AP out of NP, but the account proposed below holds under other analyses of LBE as well. An important point is that under all the analyses (at least those that I am aware of) LBE involves phrasal movement, and thus the extracted possessor is or is realised as the only member of the moved constituent. This is true for i) the analysis of Corver (1990, 1992) and Bošković (2005, 2008), where AP adjoins to NP (or N) and can move out of that position in non-DP languages, as in (74a); ii) the analysis of Franks & Progovac (1994), Franks (1997), who adopt the structure where A takes NP as a complement, involving movement of the remnant AP after NP extracts out of the AP, as (74b) illustrates; iii) the scattered deletion analysis of Ćavar & Fanselow (2000), represented in (74c).[18]

(74)   a. $[_{AP}$ Crveno $]_i$ on je kupio $[_{NP}$ t_i $[_{NP}$ auto $]]]]]$.
              red   he is bought   car
        'He bought a red car.'

    b. $[_{AP}$ Crveno t_i $]_j$ je on kupio t_j $[_{NP}$ auto $]_i$.
              red   is he bought   car

    c. $[$ Crveno ~~auto~~ $]$ je on $[$ ~~crveno~~ auto $]$ kupio.
           red   car   is he   red   car   bought

Going back to the 1D versus 1W clitic placement, if a modifier and the head noun can optionally form one syntactic constituent (see (73)), they

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[18]The structures in (74) are based on Bošković (2005).

should be able to optionally form a φ as well. As discussed in Chapter 1, prosodic structure reflects syntactic structure, since it is being built on the output of syntax using the rules of syntax-prosody correspondence. Therefore, the differences in syntactic structures between (73a) and (73b) should be reflected in the mapping from syntax to prosody as well. Consider the faithfulness constraints of Match theory (Selkirk 2009b, 2011b), which require syntactic constituency to be faithfully reflected in prosodic phrasing:

(75) Match Phrase   (Selkirk 2011b)
      A phrase in syntactic constituent structure must be matched by a constituent of a corresponding prosodic type, call it φ, in phonological representation,

After the application of Match Phrase, the two sentences in (73) will have different prosodic structures, shown in (76): either the possessive adjective and the head noun form a single φ ($=\varphi$), or the adjective forms a separate φ (76a), if it is separated from the head noun syntactically (76b).

(76) a. ($_\varphi$ Anina sestra) *im*   nudi čokoladu.
             Ana's sister   them offers chocolate

          'Ana's sister is offering them chocolate.'

      b. ($_\varphi$ Anina) *im*   ($_\varphi$ sestra) nudi čokoladu.
             Ana's   them   sister   offers chocolate

Going back to (71b), the possibility of a determiner forming a φ of its own depends on the possibility of left branch extraction: if a determiner can be the only element of the fronted constituent, it can (and must) be parsed as a separate φ by the matching rules.[19] Both accounts therefore capture the same set of data, and it is still possible to postulate that 2P clitics are required to follow the first φ of their ι in that case.[20]

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[19]It is questionable whether a determiner is ever *pronounced* as a separate φ. This is regulated by the rules of prosodic readjustment, which operate on the prosodic structure created based on the output of syntax, see chapter 1. Clitic placement is sensitive to the "original" prosodic structure. In fact, clitic placement itself might be viewed as a process of prosodic readjustment.

[20]The situation is somewhat more complicated by the fact that clitics also seem to be sensitive to the type of the prosodic boundary preceding the host, as discussed in Bošković (2015): while both 1W and 1D placements are possible after an utterance boundary (or a ι_{max} boundary, using the terminology adopted here), only 1W placement is acceptable (or at least highly preferred) after an intonational boundary that is not an utterance boundary (a boundary of a non-maximal ι), for example, in an embedded clause. I leave this pattern for future investigation.

3.5.2   The Leo Tolstoy argument

Another well-known example of Franks (2010), Bošković (2001, 2009a) regarding the 2P clitic placement in SC involves complex names, with one case being Leo Tolstoy. The pattern is as follows. In SC, both parts of a complex name (in this case, *Lav Tolstoj*) normally bear case inflection, as in (77a). However, it is possible to inflect only the first or the last name, as in (77b)–(77c).[21]

(77)   Bošković (2001:77)

    a.   Lav-a   Tolstoj-a   *sam*   čitala.
          Leo-ACC Tolstoy-ACC AUX.1SG read

          'I read Leo Tolstoy.'

    b. ? Lav-a   Tolstoj *sam*   čitala.
          Leo-ACC Tolstoy AUX.1SG read

    c.   Lav Tolstoj-a   *sam*   čitala.
          Leo Tolstoy-ACC AUX.1SG read

Importantly, SC also allow extraction of the first part of a complex name, but only when both parts are inflected:

(78)   Bošković (2009a:100)

    a.   Lav-a   čitam Tolstoj-a.
          Leo-ACC read   Tolstoy-ACC

          'I read Leo Tolstoy.'

    b. * Lav-a   čitam Tolstoj.
          Leo-ACC read   Tolstoy

    c. * Lav čitam Tolstoj-a.
          Leo read   Tolstoy-ACC

As expected based on the discussion above, 2P clitics can separate a complex name only when the first name is able to undergo movement, i.e. when both parts are inflected:

(79)   Bošković (2009a:100)

    a.   Lav-a *sam*   Tolstoj-a   čitala.
          Leo-ACC AUX.1SG Tolstoy-ACC read

          'I read Leo Tolstoy.'

---

[21]This pattern is subject to variation, however. As mentioned in Bošković (2009a), the speakers differ in what names in particular and under which conditions they are allowed to appear in an uninflected variant. The judgements reported in the literature are not consistent, either: examples with only the first name inflected (77b) are marked as degraded in Bošković (2001) and Franks (2010) but presented as grammatical in Bošković (2009a).

    b.   * Lav-a   *sam*   Tolstoj čitala.
            Leo-ACC AUX.1SG Tolstoy read

    c.   * Lav *sam*   Tolstoj-a   čitala.
            Leo AUX.1SG Tolstoy-ACC read

The clitic placement in (79) is explained through the ability of the host to undergo movement. Bošković (2009a) proposes the following structures for the complex names. If the first name is inflected, it is located in the specifier of the second name, as in (80a) and (80b) , while if the first name remains uninflected, it forms a complex head with the second name, as in (80c). According to Bošković, extraction out of the configuration in (80a) is just an instance of left branch extraction, while extraction in the case of (80b) is not possible because left branch extraction requires case agreement between the remnant and the moved element. Clearly, a part of a complex head cannot undergo left branch extraction.

(80)   a. $[_{XP}$ Lava $[_{X'}$ Tolstoja $]]$

        b. $[_{XP}$ Lava $[_{X'}$ Tolstoj $]]$

        c. $[_{XP}$ $[_{X'}$ $[_{X^0}$ Lav Tolstoja $]]$

Bošković (2001:77–78) finds the pattern in (79) difficult to explain under the PF clitic movement account for the same reasons as discussed in the previous section: it is dubious that *Lava* forms a separate φ in (79a) but not in (79b). But the argument about the syntax-prosody correspondence from the previous section also holds here.

If we consider Match Theory, it is obvious that the parts of a complex name in the configuration like (80c) will never form separate φs (or even separate ωs, see (81c)), so clitics can never intervene. In the case of (80b), a complex name will again form one φ since both parts are located within the same XP, as shown in (81b). Finally, if both parts of a complex names are inflected, they will be parsed as one φ if the first name is in the specifier of the second name or as two separate φs if the first name undergoes left branch extraction, see the two variants in (81a). Since 2P clitics follow the first φ of their ι, they can only separate the complex name when the two parts form separate φs, which is only possible in (81a).

(81)   a. $(_{\varphi}$ $(_{\omega}$ Lava $)$ $(_{\omega}$ Tolstoja $))$ or $(_{\varphi}$ $(_{\omega}$ Lava $))$ $(_{\varphi}(_{\omega}$ Tolstoja $))$

        b. $(_{\varphi}$ $(_{\omega}$ Lava $)$ $(_{\omega}$ Tolstoj $))$

        c. $(_{\varphi}$ $(_{\omega}$ Lava Tolstoj $))$

In sum, Match Theory predicts that only when both parts of a complex name are inflected, they can optionally form two independent φs, given

the syntactic structures in (80), proposed by Bošković (2009a), are true.[22] Then, if 2P clitics have the requirement to follow the first φ of their ι, it is expected that they can intervene between the parts of a complex name only in the case of a standard inflection pattern.

3.5.3 Participle movement over an auxiliary

The last counterexample to the strict phonological account from the previous literature discussed in this chapter involves participle movement over an auxiliary, which is possible only if the auxiliary is realised as a clitic, as shown in (82).

(82) Bošković (2001:76)
    a. Poljubili *su*   Mariju.
        kissed   AUX.3PL Marija
        'They kissed Marija.'
    b. * Poljubili jesu   Mariju.
        kissed   AUX.3PL Marija
        Int: 'They did kiss Marija.'

Sentences like (82a) are standardly analysed as involving long head-movement of the participle (Rivero 1991, Lema & Rivero 1992, Wilder & Ćavar 1994b) over the finite auxiliary.

Bošković (2001:76-77) uses the contrast in (82) to criticise the postsyntactic clitic movement account with the following argument. If a clitic auxiliary *su* and its non-clitic form *jesu* are the same element syntactically and semantically, the ungrammaticality of (82b) indicates that (82a) cannot be analysed as involving movement of the particle over the auxiliary. The only way to derive (82a) is then to assume that it involves preposing of the whole VP [$_{\text{VP}}$ *poljubili Mariju*] (just as in (83) with a non-clitic auxiliary) with subsequent movement of the auxiliary clitic *su* to the second position.

(83) Poljubili Mariju jesu.
     kissed   Marija AUX.3PL
     'Kiss Marija, they did.'

Then, according to Bošković, the ungrammaticality of (84a) is a problem for the postsyntactic clitic movement account: (84a) is expected to be

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[22]It seems, however, that (81b) with the second name uninflected requires more clarification, since it is not clear why it can bear the default nominative instead of the required case and why this option is only available for foreign names (see Bošković 2009a:fn.2). These questions lie outside the scope of topics discussed here, however.

grammatical since movement of the VP out of the complement clause is allowed, as (84b) shows. Bošković concludes that the grammaticality of participle-auxiliary constructions like (82a) cannot be properly accounted for under the assumptions that clitics move postsyntactically.

(84)   Bošković (2001:77)

    a.   * Poljubili *si*   Mariju tvrdio   da   nisu.
            kissed   AUX.2SG Marija claimed that AUX.NEG.3PL

           Int: 'Kiss Marija, you claim that they didn't.'

    b.   ? Poljubili Mariju *si*   tvrdio   da   nisu.
            kissed   Marija AUX.2SG claimed that AUX.NEG.3PL

The above argument is based on the assumption that if clitic and non-clitic auxiliaries are the same element syntactically, they occupy the same position in both sentences in (82). Under my account, the auxiliaries in (82a) and in (82b) have to occupy different positions in syntax in order to be realised differently (as a clitic and a non-clitic form, respectively).

Note that (83) has emphasis on polarity, hence it is reasonable to assume that the auxiliary in that case occupies the head position of the Polarity Phrase (PolP) and is focused.[23] Therefore, during the VI, the item matching the [+F] feature will be chosen, which is the strong, not the clitic form of the auxiliary.

Therefore, even under the phonological account of 2P cliticisation in SC, the contrast between the sentences in (82) can be explained in syntactic terms, since the auxiliaries in them occupy different syntactic positions, as illustrated in (85).[24] The difference between the strict phonological account and the other accounts in this case is just in the fact that the syntax does not "know" if the auxiliaries in (85a) and (85a) are clitics or not.

(85)   a.   Poljubili [$_\text{T}$, SU / JESU] Mariju.
            kissed   AUX.3PL   Marija

           'They kissed Marija.'

     b.   * Poljubili [$_\text{POL}$, SU / JESU] Mariju.
           kissed   AUX.3PL   Marija

           'They did kiss Marija.'

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[23]In fact, this is exactly what Bošković (1995) proposes for non-clitic auxiliaries (he uses Σ of Laka (1990), which represents negation and affirmation).

[24]I put the auxiliary in (85a) into T, while according to Bošković (1995) it stays *in situ* in Aux. The details about the exact position of the auxiliary are not important for the issues discussed here.

The exact account of why participle movement is possible in (85a) but not in (85b) is not important here. What is important is that the auxiliaries in these sentences occupy different syntactic positions and therefore are realised differently. The claim that they are the same element syntactically means that they are identical in their morphosyntactic features but they (or rather it, since there is only one element) can still occupy different syntactic position in different structures.

I argue that an auxiliary in Pol^0 is always realised as a strong form, while an auxiliary in T^0 (or another position which auxiliary occupies in neutral, not contrastive or emphatic, cases) is realised as a clitic (which is an elsewhere Vocabulary Item).

My view on clitics is reversed with respect to the one of Bošković (1995) (and many others): while they claim that clitic and non-clitic auxiliaries are different syntactic elements that occupy different syntactic positions (in a way, the syntactic position of an element is dependent on its form), I argue that they are not differentiated in syntax but rather in phonology, based on the position which the auxiliary occupies in a particular sentence (and the form of an element is determined by its syntactic position).

One of the differences not discussed here is the height effects observed with SC clitics: auxiliary clitics can precede subject-oriented adverbs, while (argumental) pronominal clitics cannot, as discussed in Bošković (2001, 2004): the sentential-subject reading of the adverb is available in (86a) but not in (86b).

(86)   Bošković (2004:54)

    a. Oni *su*   pravilno odgovorili Mileni.
       they AUX.3PL correctly answered Milena.DAT

       'They did the right thing in answering Milena.'
       'They gave Milena a correct answer.'

    b. Oni *su*   *joj*   pravilno odgovorili.
       they AUX.3PL her.DAT correctly answered

       '*They did the right thing in answering her.'
       'They gave her a correct answer.'

How this pattern could be accounted for under the current account is not straightforward. However, it is unclear whether the missing reading in (86b) should be ruled out with reference to a structural explanation. As was pointed out to me by B. Arsenijević, the missing reading is available when the participle is followed by more material and the adverb is preceded and followed by intonational breaks (a condition necessary for the availability of the sentential subject reading for this speaker). When both conditions are satisfied, (87b) allows for the exact same meaning as (87a).

(87) a. Oni *su*   # pravilno # odgovorili Mileni.
         they AUX.3PL   correctly   answered Milena.DAT
         'They did the right thing in answering Milena.'

      b. Oni *su*   *joj*   # pravilno # odgovorili u
         they AUX.3PL her.DAT   correctly   answered on
         ponedeljak.
         Monday
         'They did the right thing in answering her on Monday.'

3.6 Summary

The account of 2P cliticisation in SC developed here is based on the post-syntactic clitic movement account proposed in Radanović-Kocić (1996, 1988) and falls into the group of strict phonological approaches in the classification of Bošković (2001).

I propose that 2P cliticisation is a purely phonological process in SC (at least for auxiliaries and pronouns). Under this view, there are no morphosyntactic differences between the clitic and non-clitic forms of auxiliaries and pronouns, meaning that they are identical in their featural composition (in fact, they should not be conceived as distinct items, since there is only one syntactic element corresponding to the clitic auxiliary *je* and its non-clitic counterpart *jeste*, for example). At the point of Vocabulary Insertion, one of the forms is chosen, based on the syntactic environment or the presence of the [+F]-feature. For instance, as discussed in Section 3.5.3, an auxiliary in T^0 is realised as a clitic, while a focused auxiliary in Pol^0 is realised as a non-clitic form. Only after that (and after the creation of the prosodic structure), 2P clitics are aligned following the first φ withing their ι.

While many researchers agree that the second position itself should be defined in phonological terms (as the second position within an intonational phrase), postulating that clitics move to the second position postsyntactically has been viewed as a marginal and undesirable way of analysing the phenomenon of 2P cliticisation. There are two potential downsides of the account developed in this chapter.

One argument against the strong phonological approach, put forward in Bošković (2001:78), is the fact that a postsyntactic rule of clitic movement to the second position, like the one in (88), fails to capture any syntactic effects on clitic placement, like the one that only the elements that can independently undergo syntactic movement (for example, left branch extraction) can host clitics (in addition to those that are base generated in a position preceding the clitics).

(88)   Clitic Movement (Radanović-Kocić 1996:433)
       Move all [+clitic] elements into the second position.

However, as argued in Section 3.5, prosodic structure reflects syntactic
structure since it is built using the rules of syntax-prosody correspon-
dence. Hence, the alleged syntactic effects can also be captured under the
phonological account of 2P cliticisation.

The second potential disadvantage of the approach developed here is in
assuming the existence of postsyntactic movement operations as such.
However, the necessity of having some kind of postsyntactic reordering
(to different extents) in the system has been repeatedly discussed in the
literature and postsyntactic movement of clitics has been proposed for dif-
ferent languages (Roberts 1997 for Pashto, Marušič 2008 for Slovenian,
and Bennett et al. 2016 for Irish). Following the argument of Embick &
Noyer (2001), the question is how desirable it is to put clitic movement
in SC into the syntactic component of the grammar. In my opinion, there
are not enough reasons to do that for Serbo-Croatian, since it is obvious
that clitic placement is sensitive to the prosodic organisation of a sen-
tence, and apparent syntactic restrictions on clitic placement can also be
explained by the syntax-prosody correspondence. The phonological na-
ture of 2P cliticisation in Serbo-Croatian becomes even more prominent
in comparison to Slovenian, which exhibits the strictly syntactic pattern
of clitic placement, as discussed in the next chapter.

CHAPTER 4

Second position clitics in Slovenian

Slovenian (Slvn), like Serbo-Croatian (SC), has 2P clitics, which include pronouns and auxiliaries. However, they have received noticeably less attention in the literature and most often they are only viewed in comparison to Serbo-Croatian. In this chapter, I follow this tradition of comparison but also show that there are more critical differences between the two languages than usually discussed and that these differences indicate that the systems of cliticisation in the two languages are far less alike than it is previously assumed. The evidence comes from i) the contrast between Slvn and SC with respect to the interaction of VP-ellipsis and clitic placement and ii) clitic responses to polarity questions, a peculiar phenomenon which has not received the amount of attention it deserves in previous research.

Below, I first introduce the properties of 2P clitics in Slovenian and discuss the differences between SC and Slvn in this respect. Although at first sight Slovenian 2P clitics are quite similar to the Serbo-Croatian ones with respect to their positioning in a sentence and the ordering of clitics within a cluster, there seem to be many more differences between the systems of 2P clitics in the two languages than there are similarities. Some of the differences, discussed in more detail below, include:

- Slvn clitics can be either proclitics or enclitics;

- Slvn clitics can occur sentence-initially;

- Slvn clitics do not occur further to the right if the initial constituent of a sentence is prosodically heavy (the delayed placement effect);

- Slvn clitics normally occur after the first constituent (and not after the first word) of a sentence;

- a Slvn clitic cluster cannot be broken up by VP-ellipsis;

- Slvn clitics can bear stress in environments with focus on polarity;

- Slvn clitics can occur without any phonological support at all (in the case of clitic polarity answers)

4.1 The second position and the clitic cluster in Slovenian

Slovenian is a South Slavic language which shares many features with Serbo-Croatian. It is an articleless pro-drop language which allows optional scrambling and has second-position clitics. As for SC, I assume that argumental second position clitics in Slvn originate inside the vP and subsequently move to a higher position in the left periphery of a clause. I follow Stegovec (2016) in assuming the following structure for Slovenian ditransitive constructions, although the exact details are irrelevant for the current discussion:

(1) $[_{vP}\ v^0\ [_{ApplP}\ \text{DAT}\ [_{VP}\ \text{V}\ \text{ACC}\ ]]]$

As in SC, Slovenian 2P clitics cluster together in the second position of a sentence, as illustrated by (2). Separating the clitics or putting them in another position is not possible.

(2) a.   Uščipnil *sem*   *jo* v bok.
          pinched AUX.1SG her on side

          'I pinched her on her side.'

     b.   * Uščipnil *sem* v bok *jo*.

     c.   * Uščipnil v bok *sem jo*.

The clitic ordering within a cluster in Slvn is similar to SC, with the only difference being the future tense auxiliary, which is placed in the end of a cluster, as is the exceptional 3SG auxiliary *je*:[1]

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[1] As pointed out in Stegovec (2019), the order between DAT and ACC clitics is actually flexible in Slovenian.

(3) Clitic order in Slovenian
     AUX$_{perf}$ / COND < REFL < DAT < ACC < GEN < *je* / AUX$_{fut}$

The following tables contain the paradigms for the second position clitics and their strong counterparts most often used in this dissertation: the past tense auxiliary (Table 4.1) and the accusative (Table 4.2) and the dative (Table 4.3) forms of pronouns. Note that in many cases (and always for the auxiliary) the clitic and the strong form are identical segmentally, with clitics being simply unstressed counterparts of the strong forms. Negated forms of auxiliaries are not 2P clitics.

	SG		DUAL		PL	
	clitic	**strong**	**clitic**	**strong**	**clitic**	**strong**
1	*sem*	sem	*sva*	sva	*smo*	smo
2	*si*	si	*sta*	sta	*ste*	ste
3	*je*	je	*sta*	sta	*so*	so

Table 4.1: *The paradigm of the past tense auxiliary in Slvn*

	SG		DUAL		PL	
	clitic	**strong**	**clitic**	**strong**	**clitic**	**strong**
1	*me*	mene	*naju*	naju	*nas*	nas
2	*te*	tebe	*vaju*	vaju	*vas*	vas
3	*ga / jo*	njega / njo	*ju*	njiju	*jih*	njin

Table 4.2: *The paradigm of the accusative pronouns in Slvn*

	SG		DUAL		PL	
	clitic	**strong**	**clitic**	**strong**	**clitic**	**strong**
1	*mi*	meni	*nama*	nama	*nam*	nam
2	*ti*	tebi	*vama*	vama	*vam*	vam
3	*mu / ji*	njemu / njej	*jima*	njima	*jim*	njim

Table 4.3: *The paradigm of the dative pronouns in Slvn*

Phonological properties of Slovenian clitics, discussed below, suggest that 2P clitics in Slvn are less "demanding" with respect to their prosodic environment and can adjust to it, as opposed to 2P clitics in SC. For example, Slovenian clitics can tolerate an intonational break to their left, in which case they simply become proclitics instead of enclitics. Clitic-initial sen-

tences, for example, can be created by the deletion of the question particle *ali* (Derbyshire 1993, Franks & King 2000):

(4) a. Ali *ga* *je*   Marija ljubila?
        Q   him AUX.3SG Marija loved
        'Did Marija love him?'
     b. *Ga je* Marija ljubila?

Clitic-initial constructions in Slvn are not restricted to interrogatives. According to Golden & Sheppard (2000), in the spoken language clitics can occur in the initial position in declaratives as well, as in (5) below, which can be an answer to the question *Kakšen se ti zdi Peter?* 'How does Peter strike you?'. Note that in (5) and in (4b) the clitic form (*ga*) of the pronoun is used, as opposed to the strong form *njega*.

(5) *Ga* še nisem   srečal.   Slvn
     him yet NOT.AUX1SG met
     'I haven't met him yet.'

In SC, clitics can never occur in the initial position:

(6) a. * *Ga* još nisam   sreo.   SC
             him yet NOT.AUX1SG met
     b. Još *ga* nisam   sreo.
         yet him NOT.AUX1SG met
         'I haven't met him yet.'

Therefore, as opposed to SC clitics, 2P clitics in Slvn do not have to occur in the second position. Bošković (2000:154) analyses this difference between the two languages as exclusively prosodic:

> This difference between Slovenian and SC is clearly prosodic. While SC clitics are necessarily suffixes, i.e., they are lexically specified as attaching to the right edge of their host, Slovenian clitics are prosodically neutral, they can attach either to the left or to the right edge of their host. In our terms, both Slovenian and SC clitics are lexically required to be right adjacent to an I-phrase boundary. However, in contrast to SC clitics, which are suffixes, Slovenian clitics can be either prefixes or suffixes.

This prosodic neutrality of Slvn clitics can be seen not only in clitic-initial constructions. In (7), according to Golden & Sheppard (2000), the

2P clitics of the embedded clause are enclitics (they cliticise to the initial complementizer *ker*), while the main-clause clitic cluster is proclitic to the participle *ponudil*. This pattern can be explained if each clause forms its own ι and the domian of clitic placement is an ι, so clitics cannot cliticise across an ι-boundary. Therefore, the main clause clitic cluster *mu jo je* cannot be enclitic and has to cliticise to the following word instead.

(7) Golden & Sheppard (2000:194)

[[Ker   ] =ga =je   zeblo], *mu= jo= je=*   ponudil
  because him AUX.3SG cold   him   her AUX.3SG offered
vročo.
hot

'Because he was cold he offered it to him hot.'

There is also some variation with respect to the directionality of attachment of Slovenian 2P clitics. According to Franks (2016), Slvn speakers differ in their preferences: some speakers prefer (8a) with the clitics being proclitics, while for the others the parsing with enclitics in (8b) sounds more natural.

(8) a. Včeraj   *se= je=*   Janez cel   dan praskal   po
    yesterday REFL AUX.3SG Janez whole day scratched over
    rokah.
    hands.
    'Janez scratched his hands yesterday all day long.'
   b. Včeraj   *=se =je*   Janez cel   dan praskal   po
    yesterday REFL AUX.3SG Janez whole day scratched over
    rokah.
    hands.

As Franks suggests, the difference might be due to *včeraj* being treated as a topic in the former case but not in the latter. Then, possibly, the topicalized phrase creates an ι of its, as illustrated in (9a), and is separated from the rest of the utterance by a pause. The clitics are forced to be proclitics since they cannot cliticise through an ι-boundary to the preceding element. In (9b), the initial adverb is not parsed as a separate ι, and therefore clitics can cliticise to the left, which is the default option (Golden & Sheppard 2000).

(9) a. [$_\iota$ Včeraj] [$_\iota$ *se= je=* Janez cel dan praskal po rokah]
   b. [$_\iota$ Včeraj *=se =je* Janez cel dan praskal po rokah]

Importantly, (9a) would not be grammatical in SC, since their 2P clitics cannot follow a prosodic break. As has been repeatedly noted in the literature, the environments which cause so-called delayed clitic placement in SC (see chapter (3) for discussion) do not affect clitic placement in Slvn. Consider the following minimal pairs, with (a) examples from SC and (b) examples from Slvn (cited after Golden & Sheppard (2000)), (10) with a preposed heavy constituent, (11) with an appositive and (12) with a parenthetical. The presumed ι breaks are indicated by |.

(10)   a. SC, Bošković (2000:(57))

Sa   Petrom Petrovićem | srela *se*   samo Milena.
with Petr   Petrović   met REFL only Milena

'With Peter Petrović, only Milena met.'

    b. Slvn, Golden & Sheppard (2000:(13))

Z   Janezom Drnovškom | *se*   *je*   srčala samo
with Janez   Drnovšek   REFL AUX.3SG met   only
Milena
Milena

'With Janez Drnovšek, only Milena met.'

(11)   a. SC, Bošković (2000:(51))

Ja, | tvoja mama, | obećala *sam*   *ti*   igračku.
I   your mother   promised AUX.1SG you.DAT toy

'I, your mother, promised you a toy.'

    b. Slvn, Golden & Sheppard (2000:(14))

Jaz, | tvoja mama, | *sem*   *ti*   obljubila igračko.
I   your mother   AUX.1SG you.DAT promised toy

'I, your mother, promised you a toy.'

(12)   a. SC, Wilder (1996)

Tko (*je*), | za boga, | (**je*)   razbio auto?
who AUX.3SG   for God   AUX.3SG ruined car

'Who, by God, ruined the car?'

    b. Slvn, Golden & Sheppard (2000:(15))

Kdo (*ti*   *je*   ), | za božjo voljo, | (*ti*
who   you.DAT AUX.3SG   for God's sake   you.DAT
je)   razbil auto?
AUX.3SG ruined car

'Who, for God's sake, ruined your car?'

Furthermore, unlike in SC, the second position in Slvn is the one after the first syntactic constituent, which can be of any category or size (including clauses) and a clitic cluster cannot split a constituent:[2]

(13) (Golden & Sheppard, 2000:195)

     a.   Zanimivo pismo *ji*   *je*   napisal.
            interesting letter her.DAT AUX.3SG written

          'He wrote her an interesting letter.'

     b.   [?] Zanimivo *ji je* pismo napisal.

These differences between Slvn and SC have motivated distinct analyses of the phenomenon of 2P cliticisation in the two languages. Golden & Sheppard (2000) propose (contra Bošković 2001) that the differences between them are not only prosodic. Under their analysis, all 2P clitics in Slvn right-adjoin to C^0 of their CP domain. They propose the following properties for 2P clitics in Slvn and SC:[3]

(14) Golden & Sheppard (2000:205)

	domain	dominance	precedence
Slvn:	CP-phrase	Initial	Suffix/prefix
SC:	ι	Initial	Suffix

The difference between Slvn and SC, according to Golden & Sheppard, is that Slovenian clitics appear in a structurally fixed position, i.e. in C^0, and therefore the second position is defined in syntactic terms (as the position after the first syntactic constituent, which appears in Spec,CP). In SC, 2P clitics do not appear in a fixed syntactic position, and the second position itself is defined in phonological terms, as a position after the first prosodic word or the first prosodic phrase.

Therefore, there are two conflicting views on the systems of 2P cliticisation in Slvn and SC:

(a) The two systems are the same, with the only difference being the ability of Slovenian 2P clitics to be either proclitics or enclitics, while Serbo-Croatian 2P clitics must be enclitics (Bošković 2001).

(b) The two systems differ more considerably, with Slovenian 2P clitics being subjects to syntactic restrictions and Serbo-Croatian 2P clitics to prosodic restrictions, at least when it comes to clitic placement (Golden & Sheppard 2000).

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[2]Golden & Sheppard (2000) mark (13b) with one question mark, but say that "there is no first prosodic word/first syntactic constituent alternative." (Golden & Sheppard 2000:p.194–195).

[3]Suffixes are enclitics and prefixes are proclitics.

In the rest of the chapter, I will present some supporting evidence in favour of the second view. I will argue that the interaction of 2P clitics with VP-ellipsis in SC and Slvn confirms the claim that the systems of 2P cliticisation are different in the two languages, being a prosodic phenomenon in SC and a syntactic phenomenon in Slvn.

The fact that Slvn behaves differently from SC with respect to the interaction between VP-ellipsis and clitic placement was noticed but not discussed in any detail by Bošković (2001:fn.57):

> It is worth mentioning here that, for reasons unclear to me, clitic sequences are more resistant to breaking by VP ellipsis in Slovenian than in SC.

I argue that this difference between SC and Slvn is crucial and deserves further attention. The next section introduces the experimental study aimed at determining to what extent Slvn is more resistant to the splitting of a clitic cluster by VP-ellipsis.

4.2 Slovenian clitics and ellipsis: a case study

As discussed in chapter 3 and Ionova (2018), pronominal clitics in SC normally do not survive ellipsis. For example, in (15) pronominal clitic *ga* has to be elided in the second conjunct.

(15) Sandra *ga*   nije   poljubila, a   Jelena (*ga)
      Sandra him.ACC AUX.3SG.NEG kissed   but Jelena him.ACC
      jeste   ~~poljubila~~.
      AUX.3SG kissed
      'Sandra didn't kiss him, but Jelena did.'   SC

Note that the auxiliary in (15) is realised not as a clitic but as a strong form because it is contrastive. Therefore ellipsis does not break up a clitic cluster in (15), since it consists of one clitic. However, even when a pronominal clitic (or a group of pronominal clitics) is part of a cluster, it has to be elided under VP-ellipsis (as opposed to auxiliary clitics), as in (16).

(16) Mi *smo*   *ih*   videli, a   i   oni *su*   (*ih)
      we AUX.1PL them.ACC seen   and also they AUX.3PL them.ACC
      ~~videli~~, takodje.
      seen   too
      'We saw them, and they did, too.'   SC

In the previous literature it has been noticed that in Slvn, as opposed to SC, pronominal clitics can be stranded when the verb is elided:

(17) Slvn, Priestly (1993:429)

Si že končal delo? Predvčerajšnjim še ne,
AUX.2SG already finished work day-before-yesterday still NEG
včeraj *pa sem* *gà.*
yesterday but AUX.1SG it.ACC

'Have you finished the work? The day before yesterday I didn't, but yesterday I did.'

It is not clear, though, whether pronominal clitics in Slvn have to survive ellipsis or can be optionally stranded. The study presented here is aimed at answering this question in order to determine their position in the structure.

4.2.1 Design of the survey

The design of the survey was similar to the one presented in chapter 3. It consisted of two parts, one on VP-ellipsis and the other on clitic polarity answers (the second part is discussed in section 4.4). The experimental sentences were presented in small dialogues (question-answers pairs), to provide the participants with the context, as (18) illustrates. Participants were instructed to judge the answer line (A) of each dialogue on a scale from 1 (bad) to 7 (good).

(18) Q: Ali veš, če *so* glasbeniki že tukaj? Ali
Q know.2SG if AUX.3PL musicians already here Q
jih *je* kdo videl?
them.ACC AUX.3SG anyone seen

'Do you know if the musicians are already here? Has anyone seen them?'

A: Maja *jih* *je* videla in jaz *sem* (*jih*)
Maja them.ACC AUX.3SG seen and I AUX.1SG them.ACC
tudi.
too

'Maja has seen them and I have, too.'

Each example was presented in two variants: with the pronominal clitic stranded (*jih* in (18)) or elided, and in total there were 16 experimental sentences in this part of the survey.[4] The experimental sentences were

---

[4]The list of the sentences used in the survey can be found in Appendix 6.2.

presented in a pseudo-random order and mixed with the sentences from the second part of the survey (discussed in section 4.4.1), which served as fillers. The two variants were always presented separately (on different pages). 26 speakers of Slovenian participated in the survey and each participant gave a judgement to all sentences. The survey was distributed using Qualtrics Survey Software.

The first part of the survey, which focuses on VP-ellipsis, consisted of different types of elliptical sentences. The example of VP-ellipsis (VPE) in a coordinated structure is given in (18), the examples of other types are presented in (19)–(21).

(19)   VPE*embedded*:

Q: Kje   *je*   vse vino? *Ga*   *je*   kdo včeraj
where AUX.3SG all wine him.ACC AUX.3SG who yesterday
spil?
drunk

'Where is all the wine? Has someone drunk it yesterday?'

A: Slišal *sem,*   da (*ga*)   *je*   Ana.
heard AUX.1SG that him.ACC AUX.3SG Ana

'I've heard that Ana did.'

(20)   Gapping:

Q: Ali *so*   vaši učenci včeraj   končali članek?
Q   AUX.3PL your students yesterday finished paper

'Have your students finished the paper yesterday?'

A: Marija *ga*   *je*   končala včeraj,   Ana pa
Marija him.ACC AUX.3SG finished yesterday Ana but
(*ga*)   danes.
him.ACC today

'Marija finished it yesterday but Ana today.'

(21)   Right Node Raising (RNR)

Q: Zakaj *je*   Anton tako srečen? *Ga*   *je*   Maja
why AUX.3SG Anton so   happy him.ACC AUX.3SG Maja
poljubila?
kissed

'Why is Anton so happy? Has Maja kissed him?'

A: Maja (ga)   ni,   Nada pa *ga*   *je*
Maja him.ACC AUX.NEG.3SG Nada but him.ACC AUX.3SG
poljubila.
kissed

'Maja hasn't but Nada has kissed him.'

4.2.2 Results

The results of the first part of the survey are presented in table 4.4, which contains median values for every type of context with elided or pronounced pronominal clitics.

	clitic pronounced	clitic elided
VPE	7	2
VPE$_{embedded}$	7	1.5
Gapping	2	7
RNR	7	4.5

Table 4.4: *Slvn ellipsis survey results: medians*

For comparison, I repeat the result of the relevant part of the survey on SC, presented in chapter 3, in table 4.5.

	clitic pronounced	clitic elided
VPE	2	6
VPE$_{embedded}$	2	7
Gapping	1	7
RNR	5	6

Table 4.5: *SC survey results results: medians*

As can be concluded from the results, Slvn and SC are diametrically opposite in relation to the interaction of 2P cliticisation and VP-ellipsis: while SC pronominal clitics (but not the auxiliary) have to be elided under VP-ellipsis, pronominal clitics in Slvn have to be stranded together with the auxiliary clitic, as demonstrated in (22) and (23).

(22)   2P clitics and VP-ellipsis: Serbo-Croatian

    a.   * Mi *smo*   *ih*   videli, a   i   oni   *su*   ***ih***,
        we AUX.1PL them seen   and also they AUX.3PL them
        takodje.
        too
        'We saw them, and they did, too.'

    b.   Mi *smo*   *ih*   videli, a   i   oni   *su*,   takodje.
        we AUX.1PL them seen   and also they AUX.3PL too

(23) 2P clitics and VP-ellipsis: Slovenian

    a.   Maja *jih* *je*   videla in jaz *sem*   ***jih*** tudi.
           Maja them AUX.3SG seen   and I   AUX.1SG them too

           'Maja have seen them and I have, too.'

    b. * Maja *jih* *je*   videla in jaz *sem*   tudi.
           Maja them AUX.3SG seen   and I   AUX.1SG too

The two languages however behave similarly with respect to gapping, where stranding of pronominal clitics is not allowed, as in (24). As for RNR, both deletion and stranding of clitics is allowed in both languages, although in Slvnthere is a preference for pronouncing the clitics, as shown in (25).

(24)   a. 2P clitics and gapping: Serbo-Croatian

          Ana *mu*   *je*   dala knjigu, a   Nada ***(*mu)***
          Ana him.DAT AUX.3SG gave book   and Nada him.DAT

          (*je)   šolju.
          AUX.3SG cup

          'Ana gave him a book and Nada a cup.'

    b. 2P clitics and gapping: Slovenian

          Marija *mu*   *je*   dala knjigo in Ana ***(*mu)***
          Marija him.DAT AUX.3SG gave book   and Ana him.DAT

          (*je)   skodelico.
          AUX.3SG cup

          'Marija gave him a book and Ana a cup.'

(25)   a. 2P clitics and RNR: Serbo-Croatian

          Ana ***(ga)***   nije,   a   Nada *ga*   jeste
          Ana him.ACC AUX.3SG.NEG and Nada him.ACC AUX.3SG

          poljubila.
          kissed

          'Ana didn't but Nada did kiss him.'

    b. 2P clitics and RNR: Slovenian

          Maja ^?***(ga)***   ni,   Nada pa *ga*   *je*
          Maja him.ACC AUX.NEG.3SG Nada but him.ACC AUX.3SG

          poljubila.
          kissed

          'Maja hasn't but Nada has kissed him.'

I do not discuss RNR in this dissertation because more research needs to be done to establish if the contexts used in the survey indeed involve RNR before jumping to any conclusions. Most of the discussion below

focuses on what I call here VP-ellipsis (but what involves ellipsis of a bigger constituent than only the VP, as I argue further). Gapping is briefly discussed at the end of the chapter.

4.2.3   Interpreting the results: towards an account

In this dissertation I follow the common assumption that, being arguments, pronominal clitics originate within VP and move to the second position later during the derivation. Keeping this in mind, there are several options to explain the difference between SC and Slvn with respect to 2P cliticisation and ellipsis:

(26)   a. Different sizes of ellipsis sites: assuming that the systems of cliticisation are similar in both languages and clitics occupy the same positions, the contrast between (22) and (23) can be explained by postulating different ellipsis sites: in Slvn VP-ellipsis would target a projections below the final position of clitics (whether they cluster in the same position or not), while in SC VP-ellipsis would target a position above pronominal clitics but below the auxiliary clitic:

SC:
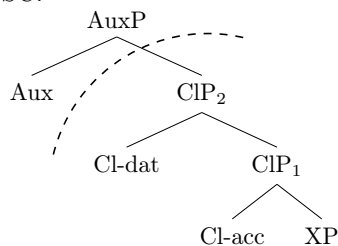
Slvn:
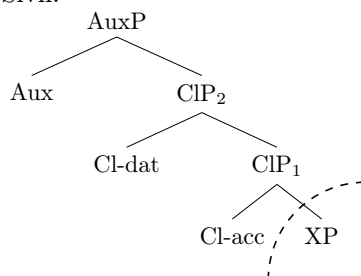
b. Different positions of clitics in syntax: assuming that VP-ellipsis targets the same projection in both languages, the difference between (22) and (23) can be explained by postulating different landing sites for clitics in Slvn and SC: while

in the former case clitics would move to positions / a position above the projection targeted by ellipsis, in the latter case only an auxiliary clitic would move above the projection targeted by ellipsis:

SC:

```
              XP
             /  \
          Aux    YP
                /  \
               Y    ZP
                   /  \
                  Z    EP
                      /  \
                  ... Cl-dat Cl-acc ...
```

Slvn:

```
              XP
             /  \
          Aux    YP
                /  \
            Cl-dat  ZP
                   /  \
               Cl-acc  EP
```
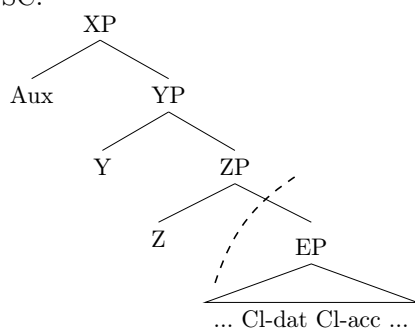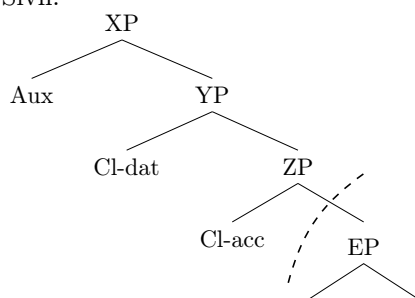
c. Difference in the derivational timing of VP-ellipsis: assuming that the timing of clitic movement out of the VP to the second position in both languages is the same, the contrast between (22) and (23) can be explained by postulating different timing of VP-ellipsis in Slvn and SC: in Slvn VP would happen after clitic movement but in SC before:

$$\text{SC:} \quad \text{VPE} \quad < \quad \text{clitic movement}$$
$$\text{Slvn:} \qquad\qquad \text{clitic movement} \quad < \quad \text{VPE}$$

d. Difference in the derivational timing of clitic movement: assuming that the timing of VP-ellipsis in both languages is the same, the contrast between (22) and (23) can be explained by postulating different timing of clitic movement in Slvn and SC: in Slvn clitics would move to the second position before ellipsis happens while in SC clitic movement would happen (or fail to happen) after VP-ellipsis:

$$\begin{array}{llll}
\text{SC:} & & \text{VPE} < \text{clitic movement} \\
\text{Slvn:} & \text{clitic movement} & < & \text{VPE}
\end{array}$$

The options in (26a) and (26b) therefore explain the differences in the interaction of clitics and ellipsis in SC and Slvn by the relative positions of projections occupied by clitics and the projection targeted by the ellipsis site, while the options in (26c) and (26d) – by the relative timing of ellipsis and clitic movement.

The first, structural type of explanation is schematized in (27): in Slvn ellipsis targets a constituent below the clitics, while in SC the projection hosting the pronominal clitic (or some other projection above it) must be a target of ellipsis, regardless of whether the size of the ellipsis site or the position of clitics is different in the two languages.

(27) a. Slovenian:

... in jaz [$_{ClP}$ *sem*   *jih$_i$*   [$_{VP}$ ~~videla t$_i$~~]] tudi.
      and I   AUX.1SG them.ACC   seen   too

'...and I have, too.'

b. Serbo-Croatian:

... a   i   oni [$_{ClP}$ *su*   ~~[*ih$_i$*~~   [$_{VP}$ ~~videli t$_i$~~]],
      but and they   AUX.3PL them.ACC seen
takodje.
too

'...and they have, too.'

The second, timing-related type of explanation is illustrated in (28): the pronominal clitic *jih / ih* has moved out of the ellipsis site in Slovenian, but not in Serbo-Croatian by the time ellipsis happens, either because of the different timing of ellipsis or clitic movement in the two languages.

(28) a. Slovenian:

... in jaz *sem*   *jih$_i$*   ~~[videla t$_i$]~~ tudi.
      and I   AUX.1SG them.ACC seen   too

'...and I have, too.'

b. Serbo-Croatian:

... a   i   oni *su*   ~~[videli *ih*]~~,   takodje.
      but and they AUX.3PL seen   them.ACC too

'...and they have, too.'

I will develop the idea about late clitic movement in SC proposed in the previous chapter and argue that the option in (26d) is the correct one and the differences in the interaction of VP-ellipsis and 2P cliticisation in Slvn and SC arise from the differences in the relative timing of ellipsis and clitic movement.

There are no reasons to assume that the timing of VP-ellipsis is different in the two languages, which eliminates option (26c). As for options with different ellipsis sites (26a) and with different movement sites (26b), the situation is more complicated. As it'll become clear later, it is true that Slvn and SC clitics occupy different syntactic positions and Slvn clitic stranding ellipsis can at least sometimes target a higher projection than that in SC, I argue that those are consequences of the major differences in the nature of cliticisation in Slvn and SC.

It has been previously noticed that the phenomenon of 2P cliticisation is more "prosodic" in SC than in Slvn since Serbo-Croatian clitics are sensitive to the prosodic organisation of a sentence (see Golden & Sheppard 2000). Slovenian clitics do not seem to have any requirements with respect to their prosodic environment, can carry stress when required and sometimes even appear as a single element of a sentence, as shown below. I argue that the differences in the interaction between VP-ellipsis and 2P cliticisation in the two languages can be fully accounted for by assuming that the timing of clitic movement differs: in Slvn clitics undergo syntactic movement to a particular position within their clause, while in SC clitics are placed into the second position within their ι post-syntactically.

The next section provides further evidence for the syntactic nature of 2P cliticisation in Slvn.

4.3   The clitic cluster and polarity in Slovenian

As has been discussed in the literature, 2P clitics in Slvn can acquire stress under certain conditions. This happens when clitics are left stranded at the right edge of a sentence by ellipsis, as in (29).

(29)   Priestly (1993:429)

Si   že   končal delo? Predvčerajšnjim   še   nè,
AUX.2SG already finished work day-before-yesterday still NEG
včeraj   *pa   sem   gà.*
yesterday but AUX.1SG it.ACC

'Have you finished the work? The day before yesterday I didn't, but yesterday I did.'

A Slovenian clitic cluster can also appear in isolation when it serves as an answer to a polarity question, as in (30) from Franks & King (2000:98).

(30)   Q: Ali *mu ga* daješ?
     Q   him it give
     'Are you giving him it?'

   A: *Mu gà.*
     him it
     'I do.'

Importantly, the form used in these sentences is a clitic (*ga*), not a strong form (*njega*) of the pronoun. A strong form, in fact, cannot be used as an answer to a polarity question:

(31)   Based on Dvořák 2007:210

   Q: Ali ga   poznaš?
      Q   him.ACC know.2SG
      'Do you know him?'

   A: *Gà.*
      him.ACC
      'I do'. (Lit: 'Him.')

  A': * Njega.
      him.ACC
      Int: 'I do'. (Lit: 'Him.')

Note that in both (29) and (30) it is the rightmost clitic in the clitic cluster that bears stress. Franks (2016:99) argues that the default stress on the final element is realised in these cases:

> All these examples clearly demonstrate that clitics can end up bearing stress. What is crucial about them is a lexical fact <..> that they do not project their own prosodic feet thus cannot have any lexically represented stress, nor can they be the target of the regular stress rules of the language. <..> Here it looks like a "lexical" clitic (i.e., an element that lacks word-level prosodic structure as a lexical property) can acquire such structure if forced. I suggest that there is a last resort PF rule in Slvn that, on encountering an I(ntonational)-Phrase which contains no footed syllables, imposes a special prosodic structure, placing default stress on the final element.

This explanation however cannot be applied to cases like (29), where clitics still bear stress even though there are other (non-clitic) elements, which are better candidates for the stress realisation than a footless clitic.

Moreover, Franks's account cannot explain how clitics receive stress when
they are not final elements in a clause and no ellipsis applies. This happens
in the environments with focus on polarity (*verum focus*), which in Slvn
is realised on clitics. Consider (32) from Jasinskaja (2016:12):

(32) Vsak teden *ga* obiskujem.
      every day   him visit.1SG
      'I DO visit him every week.'

Stressing the clitic is obligatory for the realization of verum focus in such
environments. Stressing another element results in a different information
structure, as the following paradigm from Dvořák (2010:149) shows (fo-
cused elements are represented in small caps). Note that using a strong
form of the pronoun instead of the clitic form, as in (33c), results in the
focus on the object instead of on the polarity.

(33) a. Pravi, da JIM   verjame.
          says   that they.DAT believes
          '(S)he says that (s)he DOES believe them.'
      b. Pravi, da jim   VERJAME.
          says   that they.DAT believes
          '(S)he says that (s)he BELIEVES them.'
      c. Pravi, da NJIM   verjame.
          says   that they.DAT believes
          '(S)he says that (s)he believes THEM.'

Another language where verum focus is realised on weak pronouns that
otherwise never receive focal accent is Irish (Bennett et al. 2019). Consider
(34), where the subject pronoun SE 'he' is realised with focal accent even
though it is polarity that is focused, not the subject itself.

(34) (Bennett et al., 2019:81)

      Amharcann siad air   mar fhear a   bhí ag troid
      look.PRS   they on.him as   man COMP was PROG.fight
      ar son   saoirse, agus throid   SÉ ar mhaithe le saoirse
      for.the.sake.of freedom and fight.PRS he for   freedom

      'They look on him as a man who fought for freedom, and he did
      fight for freedom.'

Moreover, weak subject pronouns in Irish can survive ellipsis under verum
focus in elliptical answers (but not in other environments). Again, in (35b)
the weak pronoun SE is stressed.

(35) (Bennett et al., 2019:91)

   a. Siud é an chéad chuid den fheachtas seo – an
      DEM it the first piece of.the campaign DEM the
      agóidíocht seo a tá sibh ag dul
      protest DEM COMP be.PRS you.PL PROG go
      a dhéanamh. Ar oibrigh sé?
      do.NONFIN Q work.PST it

      'This was the first phase of this campaign—this protest that you are mounting. Did it work?'

   b. D'oibrigh. D'oibrigh SÉ.
      work.PST work.PST it

      'It did. It absolutely did.'

Therefore, Slovenian and Irish are similar in the strange behaviour of weak phonological items under focus on polarity: they receive focal accent, creating "a curious phenomenon, at the heart of which is a striking mismatch between interpretive focus on the one hand and the phonological exponent of that focus on the other" (Bennett et al., 2019:80), and can survive ellipsis, creating another curious phenomenon, since given material usually cannot be stranded under ellipsis. Given these similarities, it is reasonable to take a closer look at how Bennett et al. analyze what they call "responsive ellipsis" in Irish. The core of their account lies in the fact that in Irish, which is an VSO language, the verb moves high to the left periphery of the clause. Consider the simplified structures in (37) and (38) that they propose for the question-answer pair in (36).

(36) Bennett et al. (2019:69)

   a. An gcuireann Eoghan suim sa cheol?
      Q.PRS put.PRS Owen interest in.the music

      'Is Owen interested in music?'

   b. Creidim go gcuireann.
      believe.PRS.1SG COMP put.PRS

      'I believe he is.'

(37) The structure of (36a)   (38) The structure of (36b)
                                           (the embedded part)
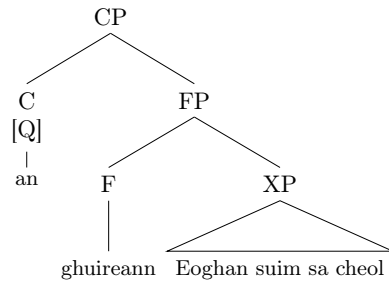
```
            CP                              CP
           /  \                            /  \
          C    FP                         C    FP
         [Q]  /  \                      [-Q]  /  \ ⌐ ⌐ ⌐
          |  F    XP                      |  F    XP
          an |     /\                     go |     /\
         ghuireann  Eoghan suim sa cheol   ghuireann
```
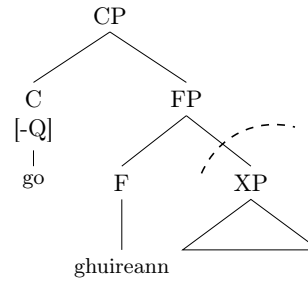
Therefore, responsive ellipsis involves deletion of the complement of the
F head, which is in fact the head of the Polarity Phrase, as they argue
earlier. When the subject pronoun receives stress under verum focus and
survives ellipsis, it gets incorporated into the Pol head.[5] In (39b), the
subject pronoun *sé* gets incorporated into the verb in Pol, while the rest
of the clause (the complement of Pol) undergoes ellipsis, as schematized
in (40).

(39) Bennett et al. (2019:92)

       a. An   gcuireann sé   iontas ort anois
           put.PRS it   wonder on.you now COMP
           gur   fágadh ceithre mhí   gan an   obair
           leave.PST.IMPRS four   month without the work DEM
           seo   a dhéanamh?
           do.NONFIN

           'Does it surprise you now that four months went by without
           this work being done?'

       b. Ó   cuireann SÉ dáiríre.
           oh put.PRS it seriously

           'Oh, it really does.'

---

[5]Subject pronoun incorporation happens due to the subcategorization requirement on a
nominative pronoun which forces it to be contained within a complex category of Pol, see
Bennett et al. (2019:77) for the details.

(40) Subject Pronoun Incorporation in Irish (Bennett et al., 2019:92)
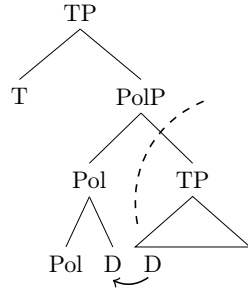
After the incorporation, the subject pronoun becomes part of the complex morphosyntactic (and prosodic) word together with the verbal complex, which moved to the Pol head, as schematised in (41). The focal accent is realised at the right edge of a phonological domain in Irish, and therefore it is the pronoun which bears accent in configurations like (41) even though it is the Pol head which is Focus-marked.

(41) VERUM FOCUS in Irish   (Bennett et al., 2019:86)
      {{   V   *v*   Pol   } **D**   }
                       [FOC]

On the basis of comparison between Irish and Slovenian, I am going to assume that the Polarity head is present in the structure of Slovenian as well, as shown in (42).

(42) Slovenian clausal structure
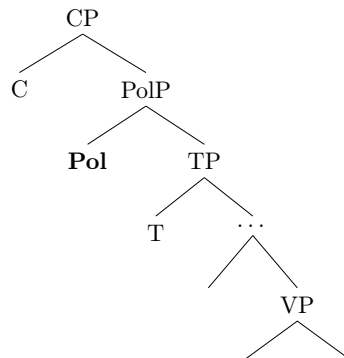
The similarities between Slovenian and Irish in the realisation of verum focus on the pronouns and the possibility to strand pronouns under ellipsis are striking. Compare (43) from Slovenian to (39b) from Irish. In both cases verum focus is realised by focal accent on the pronoun.

(43)   A me slišiš?   (Dvořák 2010:147)
       Q me hear.2SG

       'Do you REALLY hear me?'

The mechanism of responsive ellipsis is also similar in the two languages, with the difference that in Irish it is the verb that gets stranded, while in Slovenian it is the clitic (cluster): compare (44) to (36).

(44)   a. A jo   poznáš?   (based on Dvořák 2010:151)
           Q her know.2SG

           'Do you know her?'

       b. Mislim,   da   jo.
           think.1SG COMP her

           'I think I do.' (Lit: I think that her.)

Considering the facts presented above, I believe that it is reasonable to suggest that the clitic cluster in Slovenian also appears in Pol, either by undergoing movement to that position or via the incorporation of some sort, and the clitic polarity answers in Slovenian involve ellipsis of the complement of Pol, similar to responsive ellipsis in Irish. Compare the potential structures in (45–46) to the ones in (37–38).

(45)   A potential structure of (44a)
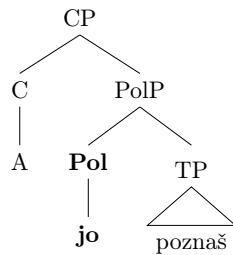
(46)   A potential structure of (44b) (the embedded part)
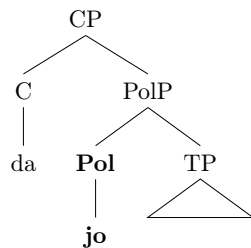
Ellipsis of the complement of the Pol head in Irish is not limited to the responsive function. It occurs in a number of other environments, including coordination:

(47) Bennett et al. (2019:69)

Dúirt siad go dtiocfadh siad, ach ní tháinig
say.PST they COMP come.COND they but NEG.FIN come.PST
ariamh.
ever

'They said that they would come but they never did'

A question arises if clitic stranding VP-ellipsis, discussed in the beginning of this chapter, and clitic polarity answers in Slovenian also involve the same kind of operation, i.e. deletion of the complement of Pol. The study described in the next section was aimed at determining that.

4.4 Polarity answers: a case study

This section describes the second part of the grammaticality judgement survey, aiming at investigating the behaviour of clitics in polarity answers. The main question is if Slovenian 2P clitics behave similarly in clitic polarity answers as they behave under VP-ellipsis, i.e. if the whole clitic cluster always survives ellipsis.

4.4.1 Design of the survey

As in the first part of the survey, the experimental sentences were included into small dialogues (question-answers pairs), to provide the participants with a suitable context. 24 dialogues were presented in a pseudo-random order and were mixed up with the dialogues of the VP-ellipsis part of the survey, which were used as fillers. Participants were instructed to judge the answer line (A) of each dialogue on a scale from 1 (bad) to 7 (good). 26 speakers of Slovenian participated in the survey and each participant gave a judgement to all sentences.

There were 3 types of answers: positive answers (48), negative answers (49), and embedded answers (50). Every sentence appeared in two variants: with the pronominal clitic elided or stranded.

(48)   Q: Ali veš,   če *so*   glasbeniki že   tukaj?
            Q   know.2SG if AUX.3PL musicians already here
            Si   *jih*   videl?
            AUX.2SG them.ACC seen

            'Do you know if the musicians are already here? Have you
            seen them?'

       A: (Yes,) *sem*   (*ih*).
            yes   AUX.1SG them.ACC

            'Yes.' (Lit: 'Am them.')

(49)   Q: Ali veš,   če *so*   glasbeniki že   tukaj?
            Q   know.2SG if AUX.3PL musicians already here
            Si   *jih*   videl?
            AUX.2SG them.ACC seen

            'Do you know if the musicians are already here? Have you
            seen them?'

       A: Nisem   (*ih*).
            AUX.NEG.1SG them.ACC

            'No.' (Lit: 'Am not them.')

(50)   Q: *Si*   videl vino? Ali veš, če *ga*   *je*   Ana
            AUX.2SG seen wine Q   know if him.ACC AUX.3SG Ana
            kupila?
            bought

            'Have you seen the wine? Do you know if Ana has bought it?'

       A: Mislim, da (*ga*)   *je*.
            think   that him.ACC AUX.3SG

            'I think yes.' (Lit: 'I think him is'.)

4.4.2   Results

The results of the experiment are presented in Table 4.6 in the form of
medians.

	clitic pronounced	clitic elided
Positive	7	7
Negative	6	7
Embedded	7	6

Table 4.6: *Answers survey results: medians*

As can be concluded from table 4.6, the results are different from the VP-ellipsis ones: while in VP-ellipsis a pronominal clitic has to be stranded, in polarity answer both variants (with or without the pronominal clitic) are acceptable. Compare (51) with VP-ellipsis and (52) with a clitic answer: the pronominal 2P clitic *jih* must survive ellipsis in the former case but not in the latter.

(51) Q: Ali veš,   če *so*   glasbeniki že   tukaj? Ali
            Q   know.2SG if AUX.3PL musicians already here   Q
            jih   *je*   kdo videl?
            them AUX.3SG who seen

            'Do you know if the musicians are already here? Has anyone seen them?'

      A: Maja *jih* *je*   videla in jaz *sem*   **_jih_** tudi
            Maja them AUX.3SG seen   and I   AUX.1SG them too

            'Maja has seen them and I have, too.'

      A': * Maja *jih* *je*   videla in jaz *sem*   tudi
              Maja them AUX.3SG seen   and I   AUX.1SG too

(52) Q: Ali veš,   če *so*   glasbeniki že   tukaj?
            Q   know.2SG if AUX.3PL musicians already here
            Si   *jih*   videl?
            AUX.2SG them.ACC seen

            'Do you know if the musicians are already here? Have you seen them?'

      A: *Sem*   **_ih_**.
            AUX.1SG them.ACC

            'Yes.' (Lit: 'Am them.')

      A': *Sem.*
            AUX.1SG

            'Yes.' (Lit: 'Am.')

However, it is not possible to use only the pronominal clitic in the answer if there is also an auxiliary in the sentence.

(53) Q: Ali veš,   če *so*   glasbeniki že   tukaj?
            Q   know.2SG if AUX.3PL musicians already here
            Si   *jih*   videl?
             AUX.2SG them.ACC seen

            'Do you know if the musicians are already here? Have you seen them?'

A: * *Jih.*
     them.ACC

     Int: 'Yes.' (Lit: 'Them.')

According to the previous literature, an answer with a single pronominal clitic would be felicitous when there is no auxiliary clitic in the question (for example, in present tense), as in (31), repeated here as (54).

(54) Q: Ali *ga*   poznaš?   (Dvořák 2007:210)
          Q   him.ACC know.2SG
          'Do you know him?'

      A: *Ga.*
          him.ACC
          'I do'. (Lit: 'Him.')

To sum up, if there is an auxiliary clitic in a sentence, it would serve as a clitic answer to a polarity question, optionally with pronominal clitics. If there is no auxiliary, a pronominal clitic can serve as an answer by itself.

Slovenian is thus a problematic case for the definition of clitics as such. If a clitic is a defective element, primarily a phonologically defective one, how can it survive as the sole element of an utterance? Can it still be called a clitic or should we consider it to be a distinct lexical item? To answer these questions exhaustively, much more research on the phenomenon is needed. In the next section, I attempt to give an explanation to some peculiarities of Slovenian clitics.

4.5   Defining the position of Slovenian 2P clitics

The results of the surveys and the discussion presented above come down to several peculiarities in the behaviour of 2P clitics in Slvn, for which I will account in this section:

(55)   a. Slvn clitics can receive focal accent under verum focus;

       b. Slvn clitics can be used as an answer to polarity questions, in which case either the whole cluster or only the auxiliary survives ellipsis;

       c. Slvn pronominal clitics obligatorily survive VP-ellipsis.

4.5.1   Verum focus realization on clitics

Gutzmann et al. (2017:4) give the following definition of verum focus, following Höhle (1992):[6],[7]

(56)   Verum focus (common usage)   (Gutzmann et al., 2017:4)
A special kind of H*L accent that, instead of focusing the accent-bearing expression, is used to emphasise the truth of the propositional content of a sentence.

Consider the dialogue in (57), where verum focus is realised on the clitic pronoun *jim* in (57b).

(57)   a. Mislim,   da *jim*   Marija ne verjame.   Slvn
think.1SG that they.DAT Marija not believe.3SG

'I think that Marija doesn't believe them.'

b. Pravi, da   JIM   verjame.
says   that they.DAT believes

'(S)he says that (s)he DOES believe them.'

If there are more than one clitic in a sentence, the rightmost clitic of the cluster receives accent, regardless of its grammatical function. In (58a), the pronominal 2P clitic *te* receives focal accent in the first clause, while in (58b) it is the auxiliary 2P clitic *je*.

(58)   a. Slišal *sem*   TE,   videl *pa* NE.   (Dvořák 2007:215)
heard AUX.1SG you.ACC seen PA NEG

'I heard you but I didn't see you.'

b. Slišal *te*   JE,   videl *pa* NE.
heard you.ACC AUX.3SG seen PA NEG

'He heard you but he didn't see you.'

Why is verum focus realised on clitics and why is it the rightmost clitic of a cluster that receives focal accent? I propose that the mechanism behind stress placement is the same as in Irish, and clitics are located in Pol in Slovenian.

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[6]Although Gutzmann et al. (2017) do not say it explicitly, it can be concluded from their discussion that this definition holds for English and German. Other languages can use other accents. The crucial aspect is the mismatch between the phonological exponent of the focus (the accent on a verb or an auxiliary or a pronominal clitic, depending on a language) and the interpretation of focus (focus on polarity).

[7]The term focus is descriptive here. Gutzmann et al. (2017) in fact argue that verum focus does not involve any focus at all.

As in Irish, in Slovenian the nuclear stress is normally located at the right edge of ι. Consider the following examples from Jasinskaja (2016). In (59a), with the default word order, the nuclear stress falls on the verb, which results in a broad focus interpretation. In (59b), the pronoun is contrastively focused and therefore has to appear at the right edge of the clause to bear the most prominent accent, resulting in narrow focus on the pronoun (note that it is the accented and not the clitic form of the pronoun that is used in this case). I therefore assume that, in terms of the Prosodic Hierarchy, the rightmost φ is the head of an ι in Slovenian.

(59)   a. [Vsak teden *ga*   OBISKUJEM]$_F$.   (Jasinskaja 2016:11)
             every week   him visit.1SG

           'I visit him every day.'

       b. Vsak teden obiskujem [NJEGA]$_F$.
             every week   visit.1SG   him

           'I visit HIM every day.'

I take the fact that clitics get accented under verum focus as evidence that they are (or at least can be) located in the Polarity head. Since it is the Pol head that is F-marked under verum focus, clitics must either undergo syntactic movement to that position or incorporate into Pol post-syntactically, similarly to subject pronouns in Irish.

(60)   The structure of (57b) (the embedded part)
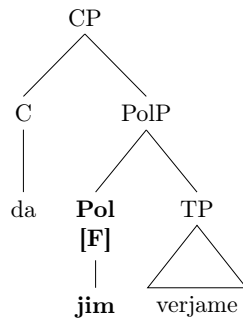
The fact that it is the rightmost clitic of the cluster that receives focal accent under verum focus in turn indicates that Slovenian 2P clitics cluster together in one syntactic position. Under this assumption, the fact that different clitics get accented in (58a) and (58b) can be easily accounted for: the F-marking on Pol must be realised as a focal (the most prominent) accent and since Slovenian heads of prosodic domains are located at the right edge of a corresponding domain, it is the rightmost element of a clitic cluster that carries focal accent.

(61) The structure of (58a)
(the first conjunct)

```
            PolP
           /    \
       slišal    Pol'
               /      \
            Pol        TP
            [F]       /  \
             |       /____\
          sem te
```
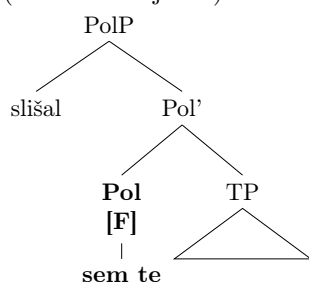
(62) The structure of (58b)
(the first conjunct)

```
            PolP
           /    \
       slišal    Pol'
               /      \
            Pol        TP
            [F]       /  \
             |       /____\
           te je
```
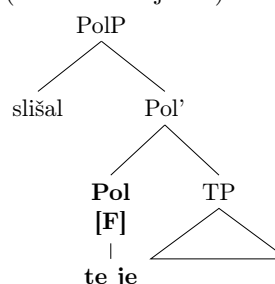
I propose that there is absolutely no structural or lexical differences between "normal" 2P clitics and accented 2P clitics in Slovenian.[8] Clitics receiving accent is a result of the interaction of syntax-prosody interface rules that are responsible for the prosodic realization of focus, and there is nothing special about the clitics themselves, they just appear "at the right place at the right time".

One potential argument against this claim is the fact that clitics do not have to appear in the second position when they bear focus accent under polarity focus (but not in other cases). According to Dvořák (2010), both (63a) and (63b) are grammatical and have no difference in meaning:

(63)   a. Pravi, da   JIM   verjame.
          says   that they.DAT believes
          Dvořák (2010:149)

          'She says that she DOES believe them.'
       b. Pravi, da   verjame JIM.
          says   that believes they.DAT

I argue that it does not mean that *jim* is not a 2P clitic in (63b) or that 2P clitics in Slovenian can occur in different syntactic positions. The fact that the accent on the clitic is interpreted as verum focus indicates that the clitic is located in Pol, following the approach implemented here. In suggest that in fact (63b) involves post-phonological reordering, as a result of the interaction of several prosodic constraints that require the focused constituent to bear the strongest accent in its ι and to appear in its right edge.[9] However, simply placing the accented clitic at the right

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[8]Note that by "accented clitics" I mean clitic forms that receives (focal) accent, not the corresponding strong forms.

[9]In the terms of Optimality Theory, the relevant constraints are formulated in Bennett et al. (2019:84) as following:

edge of its ι violate another constraint, which forbids postsyntactic re-ordering of elements. Therefore both (63a) and (63b) are imperfect from the prosodic point of view,

The fact that clitics do not resist receiving stress is evidence for the syntactic nature of 2P cliticisation in Slvn. In fact, Slovenian 2P clitics seem to be completely insensitive to their prosodic environment. I propose that "the second position" in Slovenian corresponds to a position in syntactic structure of a sentence (even though possibly not always a fixed one), as opposed to the second position in an ι in Serbo-Croatian. The 2P requirement in Slvn is satisfied as long as clitics are located in that position, even if in this case they follow an intonational break, receive stress, or lack phonological support whatsoever.

The next section examines further evidence that 2P clitics in Slvn are or can be located in Pol: clitic polarity answers.

4.5.2   Polarity clitic answers in Slovenian

As has been repeatedly mentioned above, clitics can serve as answers to yes / no questions in Slovenian. In this case, either the whole clitic cluster or only the auxiliary can survive ellipsis, as shown again in (64).

(64)   Q: Ali *vas je*   Marija povabila na večerjo?
            Q   you AUX.3SG Marija invited   to dinner

            'Has Marija invited you to dinner?'

       A: Nas je.
            us   AUX.3SG

            'She have.' (Lit: 'Us has.')

       A': Je.
            AUX.3SG

       A": * Nas.
            us

(i)   HD-R(ι)
      Assign one violation for each φ-phrase that (i) is the head of a dominating ι-phrase and (ii) is not right-aligned within that dominating ι-phrase.

(ii) FOCUS-TO-PROMINENCE(ιP) (= FOC-PROM(ι))
      Assign one violation for every constituent C[F] that is semantically focused and does not contain the strongest intonational prominence of a dominating ι-phrase.

(iii) NO SHIFT
      If a terminal element α is linearly ordered before a terminal element β in the syntactic representation of an expression E, then the phonological exponent of α should precede the phonological exponent of β in the phonological representation of E.

Elliptical answers to polarity questions are usually analyzed as deletion of the complement of the Pol head in different languages (López & Winkler 2000, Holmberg 2001, 2016, Gribanova 2017, Bennett et al. 2019), providing further evidence that Slvn clitics (can) move to Pol.

What is surprising here is the availability of both (64A), with the pronominal clitic stranded, and (64A'), with the pronominal clitic elided, contrary to what happens under VP-ellipsis. I suggest that the grammaticality of (64A') does not indicate that Slovenian clitics do not cluster together in one syntactic position.

As noticed in Dvořák (2007, 2010), besides clitic answers, Slovenian allows elliptical answers with finite lexical verbs. Both options are available as an answer in (65). However, according to Dvořák, clitics answers are always preferred to verbal answers.

(65) Q: A *ga*   poznaš?   (Dvořák 2007)
         Q him.ACC know.2SG
         'Do you know him?'

     A: *Ga.*
         him.ACC

     A': Poznam.
         know.1SG
         'I do.'

I argue that the variant in (64A'), with only the auxiliary surviving ellipsis, is in a fact a verbal answer, not a clitic answer. In Slovenian, the only thing that distinguishes clitic auxiliaries from strong forms of auxiliaries is stress: the strong form of the 1SG auxiliary *je* would be its stressed counterpart *jé*. Accidentally, in cases like (64A'), when the auxiliary is the only item surviving ellipsis in polarity answers, a clitic form and a strong form are phonetically indistinguishable: a strong form is always accented and a clitic form would receive accent as the rightmost (and, in fact, only), element of the clause. Therefore, the auxiliary in (64A') is not a clitic and is not a part of the clitic cluster (unlike the auxiliary in (64A)): it appears in its strong form in this case. The apparent difference between the behaviour of a Slovenian clitic cluster under VP-ellipsis and in polarity answers is then accounted for.

To sum up, there are two options for the realization of the elliptical polarity answer: the one with a finite verb and the one with a clitic cluster:

	clitic answer	verbal answer
present tense	ga	poznam
past tense	ga je	je

Table 4.7: *Types of elliptical answers in Slvn*

The question that arises is what the position of the verb or the auxiliary in the verbal answers is. If verbal answers are analysed as involving ellipsis of the complement of the Pol head as well, it means that the clitic cluster in Slovenian is not always located in Pol because it would be occupied by the verb, not the clitic cluster. I believe that this is true, and the evidence for it comes from some elliptical environments, discussed in the next section.

4.5.3   Verbal ellipsis and 2P clitics in Slovenian

Consider the following examples from Dvořák (2010). The two sentences have the same meaning, but the second conjuncts are different: (66a) involves the pronominal clitic, the particle *pa* (discussed below), the negative form of an auxiliary, while (66b) has only the particle *pa* together with the bare negation (not a negative auxiliary).

(66) a. Slišal *sem*   TE, videl *te*   *pa* NISEM.
         heard AUX.1SG you saw   you PA NEG.AUX.1SG
         'I heard you, but I didn't see you.'
      b. Slišal *sem*   TE, videl *pa* NE.
         heard AUX.1SG you saw   PA NEG
         'I heard you, but I didn't see you.'

It is not obvious that (66) involves ellipsis at all. It is plausible, however, that the structures of the sentences in (66) are parallel to those in (67A-A'), which obviously do involve ellipsis.

(67) Q: Ali *je*   Marija včeraj   poslala paketa v Ljubljano
         Q AUX.3SG Marija yesterday sent   package to Ljubljana
         in   Zagreb?
         and Zagreb
         'Did Marija send the packages to Ljubljana and Zagreb yesterday?'
      A: V Ljubljano *ga je*,   v Zagreb *pa ga* ni.
         to Ljubljana it AUX.3SG to Zagreb PA it AUX.NEG.3SG
         'To Ljubljana, she did, to Zagreb, she didn't.'

A': V Ljubljano *ga je*,   v Zagreb *pa* ne.
     to Ljubljana it   AUX.3SG to Zagreb PA NEG

Analogous constructions involving contrastive polarity ellipsis in Russian are analyzed as involving the movement of the initial constituent to Spec,PolP in Gribanova (2017) and TP-ellipsis. I adopt her analysis here. The structure of the first conjunct of (67A-A') is shown in (68).

(68)   The structure of (67A-A')   (the first conjunct)
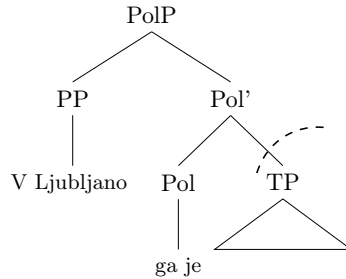
While 2P clitics are located in Pol in the first conjunct of (67A'), there are reasons to think that it is not the case for the second conjunct. First, I discuss the particle *pa* and its interpretation.

Pa forms a cluster together with the 2P clitics and can normally occur either at the left or the right edge of the cluster. I suggest that *pa* is associated with reverse relative polarity (similar to Romanian *ba*, Farkas 2010, Farkas & Bruce 2010), i.e. it marks the change of polarity between the current and the previous proposition.[10] If the polarity changes from negative to positive, it can be marked by *pa* alone, as in (69), in which case it receives accent.

(69)   Dvořák (2010:162)

    a. Petra   ne poznam, Sabino   PA.
        Peter.GEN NEG know   Sabina.ACC PA

        'I don't know Peter but I know Sabina.'

    b. Lačni nismo,   žejni PA.
        hungry NEG.AUX.1PL thirsty PA

        'We are not hungry, but we are thirsty.'

When polarity changes from positive to negative, it can be marked by the combination of *pa* and the negative particle *ne*, as in (66b), repeated here as (70).

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[10]At least in the usage discussed here; *pa* has wider usage in colloquial language.

(70) Slišal *sem*   TE, videl *pa* NE.
      heard AUX.1SG you saw   PA NEG

      'I heard you, but I didn't see you.'

Sentential negation in Slovenian is realised by the negative particle *ne*, which is normally a proclitic attached to the verb (71a). It cannot be separated from the verb (71b) and the verbal complex with negation acts as a constituent and counts as the first constituent for the 2P constraint (71c) vs. (71d), as shown in Ilc & Milojević Sheppard (2003). Note that the negative particle is not a 2P clitic and does not form a cluster with 2P clitics (71e).

(71)   Slvn, Ilc & Milojević Sheppard (2003:273–274)

       a.   Janez *ji*   **ne** piše   pisem.
             Janez her.DAT NEG writes letters.GEN

             'Janez doesn't write letters to her.'

       b. * Janez **ne** *ji*   piše   pisem.
             Janez NEG her.DAT writes letters.GEN

       c.   **Ne** lazi   *mi*!
             NEG lie.IMP me.DAT

             'Don't lie to me.'

       d. * Lazi   **ne** *mi*!
             lie.IMP NEG me.DAT

       e.   Takoj   *mu*   *ga*   resnično **ne** moreš
             immediately him.DAT it.ACC really   NEG can
             odposlati.
             send

             'You really cannot send it to him immediately.'

Ilc & Milojević Sheppard (2003) propose that in Slovenian the verb moves to a functional projection FP directly above NegP, which hosts negation, and the negative particle adjoins to the raised finite verb:[11]

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[11]Alternatively, the verbal complex can be assumed to raise to Neg itself, as Gribanova (2017) proposes for Russian.

(72) Verb raising and negation in Slvn
(following Ilc & Milojević Sheppard 2003:275)
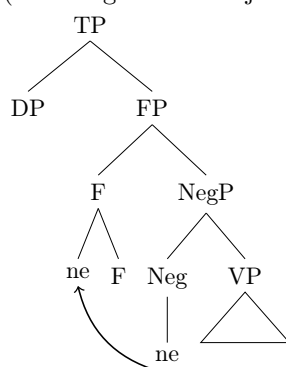
It is then surprising that negation can get disconnected from the verb in contrastive polarity environments. Consider (67), repeated here as (73). It is clear that in (73b) the negation is separated from the auxiliary since the negated form of the 3SG auxiliary is *ni*, as in (73a).

(73) a. V Ljubljano *ga je* ~~poslala~~, v Zagreb *pa ga*
         to Ljubljana it AUX.3SG sent   to Zagreb PA it
         ni   ~~poslala~~.
         AUX.NEG.3SG sent
         'To Ljubljana, she did, to Zagreb, she didn't.'
      b. V Ljubljano *ga je* ~~poslala~~, v Zagreb *pa* ne ~~ga~~
         to Ljubljana it AUX.3SG sent   to Zagreb PA NEG it
         ~~je~~   ~~poslala~~.
         AUX.3SG sent

Two aspects are surprising in the second conjunct of (73b). First, the negation *ne* does not combine with the auxiliary *je* into the negative auxiliary *ni*, as it does in (73a). Second, the clitic cluster is elided, instead of appearing in Pol, as it does in (73a). The negative particle does not cliticise to the verb in contrastive polarity environments even if the verb itself is not elided, as in (74).

(74) **Slišim** *te* **NE**, vidim *pa* TE.   Dvořák (2010:160)
     hear.1SG you NEG see.1SG PA you
     'I don't hear you, but I see you.'

The negative particle can appear without cliticizing to the verb in negative clitic polarity answers as well, as in (75), in which case it is the negative particle which receives the accent, being the rightmost element of the clause.

(75) Q: A *jo*   poznaš?
          Q her.ACC know
          Dvořák (2010:151)

          'Do you know her?'

      A: *Je*   NE.
          her.GEN NEG

          'I don't.' (Lit: 'Her not.')

Following my analysis of polarity answers in Slovenian as the instance of ellipsis of the complement of Pol, (75A) indicates that the negative particle can raise to Pol by itself, without combining with the verb or the auxiliary. Alternatively, if the clitic cluster also appears in Pol, *ne* combines with the auxiliary, as in (73a).

2P clitics can be elided when the particle *pa* alone is present, i.e. when polarity switches from negative to positive:

(76) Dvořák (2010:163)

      Danica ni   razuméla   predpisov,   Lukrécia PA
      Danica NEG.AUX.3SG understood instructions, Lukrécia PA
      ~~jih~~   ~~razuméla.~~
      them understood

      'Danica didn't understand the instructions, but Lukrécia did.'

When *pa* is combined with 2P clitics, the last element of the cluster bears accent. Note from (77) that the position of *pa* with respect to 2P clitics is often flexible; there is no semantic or pragmatic differences between the two sentences.

(77) a. Slišim   *te* NE, vidim   *pa* TE.
          hear.1SG you NEG see.1SG PA you

          'I don't hear you, but I see you.'

      b. Slišim   *te* NE, vidim   *te* PA.
          hear.1SG you NEG see.1SG you PA

          'I don't hear you, but I see you.'

The optionality of clitic movement to Pol in contrastive polarity environments under ellipsis is challenging to account for, as any optionality is under the Minimalist program. One possible analysis is to assume that

clitics move to Pol only under verum focus, i.e. when Pol is F-marked.[12] Then there are several possible featural compositions of Pol, each of which results in the different composition of a clitic cluster:[13]

(a) Clitic cluster in Pol under verum focus:

$$\left[\begin{array}{l} \text{POL: } +/- \\ \text{F} \end{array}\right]$$

The clitic cluster appears in Pol under verum focus, i.e. when the featural inventory of Pol includes the focus feature F.

(78) Pravi, da JIM   verjame.   Dvořák (2010:147)
      says   that they.DAT believes

      '(S)he says that (s)he DOES believe them.'

(b) Clitic polarity answers:

$$\left[\begin{array}{l} \text{POL: } +/- \\ \text{F} \\ \text{E} \end{array}\right]$$

The clitic cluster appears in Pol, which carries the E-feature, which triggers ellipsis of its complement.

(79) A: A *jo* poznaš?   Dvořák (2007:218)
          Q her know.2SG

          'Do you know her?'

---

[12] A similar phenomenon is found in Irish: while subject pronoun incorporation into the verb is obligatory in general, it is optional under ellipsis. Bennett et al. (2019) argue that the subject pronoun is incorporated in elliptical environments only if it is needed for the realisation of verum focus. Compare the two options in (ib): in the former case the subject pronoun is elided, while in the latter it is incorporated into the verb.

(i) (Bennett et al., 2019:91)

     a. Siud é an chéad chuid den   fheachtas seo – an agóidíocht seo a   tá
        DEM it the first piece of.the campaign DEM   the protest   DEM COMP be.PRS
        sibh   ag   dul a dhéanamh. Ar oibrigh sé?
        you.PL PROG go do.NONFIN   Q work.PST it

        'This was the first phase of this campaign—this protest that you are mounting. Did it work?'

     b. D'oibrigh. D'oibrigh **SÉ**.
        work.PST   work.PST it

        'It did. It absolutely did.'

I leave open the question whether the same contrast exists in Slovenian (for example, in (73)).

[13] I follow Gribanova (2017) in assuming different types of Pol heads for different kinds of constructions involving polarity focus and partially adopt the featural compositions of Pol she proposes.

A: Jo.
    her
    'I do.'

(c) Reverse polarity elliptical responses:

$$\begin{bmatrix} \text{POL: } +/\text{-} \\ \text{REVERSE} \\ \text{F} \\ \text{E} \end{bmatrix}$$

The clitic cluster appears in Pol together with the particle *pa*, which
spells out the REVERSE feature; the complement of Pol is elided.

(80) A: Saj *me* ne   slišiš!   Dvořák (2010:162)
          PART me NEG hear.2SG
          'But you don't hear me!'
      B: *Pa te*!
          PA you
          'But I do!'

(d) Contrastive polarity ellipsis, clitics elided:[14]

$$\begin{bmatrix} \text{POL: } +/\text{-} \\ \text{REVERSE} \\ \text{CT,EPP} \\ \text{E} \end{bmatrix}$$

The particle *pa*, which spells out the REVERSE feature; the CT,EPP
triggers the movement of the contrastive topic to Spec,PolP; the
complement of Pol is elided.[15]

(81) V Ljubljano *ga je*   poslala, v Zagreb *pa* ne.
      to Ljubljana it   AUX.3SG sent   to Zagreb PA NEG
      'To Ljubljana, she sent it, to Zagreb, she didn't.'

(e) Contrastive polarity ellipsis, clitics in Pol:

$$\begin{bmatrix} \text{POL: } +/\text{-} \\ \text{REVERSE} \\ \text{CT,EPP} \\ \text{F} \\ \text{E} \end{bmatrix}$$

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[14]I follow Gribanova (2017) in using the CT,EPP feature which attracts the contrastive topic
(CT) to Spec,PolP.
[15]The negative particle *ne* can raise to Pol under negative polarity (POL: -). Possibly, it
raises when Neg, which normally hosts the negative particle, is marked for ellipsis.

The clitic cluster appears in Pol together with the particle *pa*, which spells out the REVERSE feature; the CT,EPP triggers the movement of the contrastive topic to Spec,PolP; the complement of Pol is elided.

(82) V Ljubljano *ga je*   poslala, v Zagreb *pa* ga
     to Ljubljana it AUX.3SG sent   to Zagreb PA it
     ni.
     AUX.NEG.3SG
     'To Ljubljana, she sent it, to Zagreb, she didn't.'

Importantly, if 2P clitics appear in Pol, the whole clitic cluster consisting of an auxiliary and pronominal clitics must undergo movement or incorporation there. Consider the contrast in the interpretation in (83a), with clitics elided, and (83b), with only the pronominal clitic appearing in Pol. The two sentences receive different interpretations: in the former one, the second conjunct is interpreted in the past tense, while in the latter one, only the present tense interpretation is available.

(83) Dvořák (2010:163)
     a. Danica ni   razuméla   predpisov,   Lukrécia PA.
       Danica NEG.AUX.3SG understood instructions, Lukrécia PA
       'Danica didn't understand the instructions, but Lukrécia did.'
     b. Danica ni   razuméla   predpisov,   Lukrécia pa
       Danica NEG.AUX.3SG understood instructions, Lukrécia PA
       JIH.
       them
       'Danica didn't understand the instructions, but Lukrécia does.'
       #'...but Lukrécia did.'

The difference in the interpretation, I suggest, comes from the fact that the ellipsis site in (83b) cannot be interpreted as containing an auxiliary, since it would be incorporated into Pol together with the pronominal clitic.[16] Therefore, only (84a) is a possible underlying structure for (83b), and not (84b). (83a), on the other hand, corresponds to (84b) with all the clitics except *pa* elided.

(84) a.   ... Lukrécia pa *jih*   ~~razúme~~.
           Lukrécia PA them understands

---

[16]This phenomenon can be analysed in different ways. It is possible that since 2P clitics in Slvn cluster together, the change in the temporal interpretation in (83b) is signalled by the absence of the auxiliary clitic. It is also possible that T is in fact outside the ellipsis site and (83b) involves ellipsis not of the complement of the Pol but of a smaller part. I leave distinguishing between these two options for further research.

b.   * ... Lukrécia pa *jih*   ~~je~~   ~~razuméla.~~
          Lukrécia PA them AUX.3SG understood

All the evidence presented in this chapter indicates that Slovenian auxiliary and pronominal clitics cluster together (at least in their final position) and can never be separated by ellipsis. For this reason pronominal clitics in Slovenian must be stranded under VP-ellipsis, as demonstrated again in (85).

(85)   a.   Maja *jih*   *je*   videla in   jaz *sem*   *jih*   tudi
            Maja them AUX.3SG seen   and I   AUX.1SG them too
            ~~videl.~~
            seen

            'Maja has seen them and I have, too.'

       b.   * Maja *jih*   *je*   videla in   jaz *sem*   tudi ~~jih~~
              Maja them AUX.3SG seen   and I   AUX.1SG too them
              ~~videl.~~
              seen

4.6   Conclusion

4.6.1   Slovenian 2P clitics and ellipsis: summary

This chapter discussed several types of elliptical constructions in Slovenian and shows that in every case the behaviour of 2P position clitics differs. Table 4.8 summarizes the data discussed in the chapter.

type of ellipsis	clitics stranded	comments
VP-ellipsis	AUX and pronominal clitics	The whole clitic cluster must survive ellipsis.
clitic polarity answers	AUX and / or pronominal clitics	If AUX survives ellipsis without pronominal clitics, it is a strong form and not a part of a cluster → a clitic cluster is not separated by ellipsis.
contrastive polarity ellipsis	*pa* (*ne*) and / or AUX and pronominal clitics	The only case where clitics survive ellipsis optionally.

Table 4.8: The interaction of 2P cliticisation and ellipsis in Slvn

To sum up, if pronominal and auxiliary clitics survive ellipsis, they survive it as a cluster. The difference between VP-ellipsis and the other two types of elliptical constructions is that clitics must survive in the case of VP-ellipsis.

The fact that clitics do not have to survive ellipsis in two other cases suggests that although clitics can move to Pol in Slvn, they do not necessarily have to under ellipsis. Note that without ellipsis clitics would have to move to the second position and, in the case of contrastive polarity ellipsis, form a cluster together with the particle *pa*.

4.6.2 2P clitics and VP-ellipsis: Slovenian vs Serbo-Croatian

The systems of 2P cliticisation in Slvn and SC are often analysed as being quite similar, with the only difference being in the prosodic requirements of clitics with respect to the directionality of attachment (obligatorily enclitics in SC and freely proclitics or eclitics in Slvn). Bošković (2001) proposes that Slvn and SC clitics have different lexical specifications: SC clitics must be left-adjacent to an ι-boundary but must be suffixes, i.e. enclitics (87), while Slvn clitics just have a requirement to be left-adjacent

to an ι-boundary (87).[17]

(86) *Lexical properties of SC 2P clitics*   (Bošković 2001:95)
    a. $\#\_$ (where $\#$ is an ι-boundary)
    b. Suffix

(87) *Lexical properties of Slvn 2P clitics*   (Bošković 2001:156)
    $\#\_$ (where $\#$ is an ι-boundary)

Franks (2016) supports the idea of the difference between Slvn and SC being prosodic, he argues that it does not come from lexical properties of clitics but rather from the restrictions on the elements that can appear at the left edge of an ι. He proposes that the restriction in (88) is effective in SC but not in Slvn.

(88) *Prosodic Restriction$_{I-phrase}$*   (Franks 2016:99)
    Clitics cannot initiate an I-phrase.

Golden & Sheppard (2000) argue that the difference in clitic placement in the two languages does not originate merely from distinct prosodic restrictions but also from different domains to which the 2P requirement refers. They adopt the properties of clitics that Bošković (2001) proposes for SC, but propose different properties for Slvn. As (89) shows, while in SC the domain of 2P cliticisation is a prosodic one (ι), it is syntactic (CP) in Slvn, which means that in SC clitics are placed after the first element of their ι, while in Slvn after the first element of their CP. In fact, following Golden & Sheppard, 2P clitics in Slovenian clitics move to C^0, and therefore appear after a constituent that moves to Spec,CP.

(89) *Properties of clitics*   (Golden & Sheppard 2000:205)

	domain	dominance	precedence
Slvn:	CP-phrase	Initial	Suffix/prefix
SC:	ι	Initial	Suffix

My analysis of the differences between the systems of 2P cliticisation in Slvn and SC develops the approach of Golden & Sheppard (2000). I propose that while it is true that the domains that clitics select are different(a syntactic clause vs. an intonational phrase), the source of this difference lies in the timing of clitic movement.

In the discussion in chapters 3 and 4 here as well as in the previous literature, 2P clitics in SC are sensitive to their prosodic environment

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[17]Bošković argues that Slvn clitics are not specified to be proclitics or enclitics but rather have no specification for the directionality of attachment, see the discussion in Bošković (2001:156–163) for details.

and find their place with respect to the prosodic structure: they can never immediately follow an ι-boundary and can even be replaced to avoid violating this rule (delayed clitic placement). 2P clitics in Slvn, on the contrary, seem to be indifferent to their prosodic environment: they can appear at an edge of a prosodic domain, be proclitics or enclitics and even receive nuclear stress.

I suggest that this difference in the role of prosodic structure for clitic placement is not arbitrary and does not arise simply from the lexical properties of clitics.

Slovenian clitics ignore prosodic structure because it does not yet exist at the point when clitics move out of their original positions to "the second position": 2P cliticisation in Slvn is a syntactic process. Slovenian clitics must occupy a particular syntactic position high in the structure (at least in some cases they end up in Pol) and they remain there regardless of where they find themselves with respect to the prosodic structure later in the course of derivation. That explains why 2P clitics in Slovenian neither necessarily have to be (phonological) clitics nor appear in the second position.

2P cliticisation in Serbo-Croatian is a phonological phenomenon, as shown in Bošković (2001). However, while under Bošković (1995)'s account phonology merely filters out sentences that violate the second position requirement (that means, sentences where clitics were not placed into the proper position by syntax), I argue that clitics in 2P are placed into the second position post-syntactically. The prosodic effects on clitics placement in SC are obvious, whereas there appear to be no strictly syntactic restrictions on it: the apparent syntactic effects used as an argument against the strict phonological approach to 2P cliticisation in the previous literature can also be accounted for by appealing to the prosodic structure.

Figure 4.1 illustrates the difference in the timing of clitic placement in Slovenian and Serbo-Croatian.
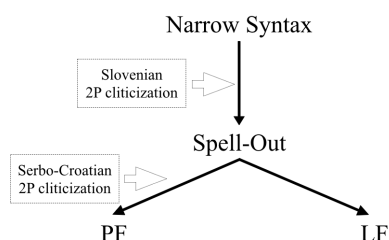

Figure 4.1: *The timing of clitics placement in Slvn and SC*

My main argument for the account presented in this dissertation comes from the interaction of clitics and VP-ellipsis: pronominal 2P clitics must

be elided under VP-ellipsis in Serbo-Croatian but must survive VP-ellipsis in Slovenian, as illustrated again in (90) and (91).

(90) 2P clitics and VP-ellipsis: Serbo-Croatian

    a. * Mi *smo*   *ih*   videli, a   i   oni   *su*   ***ih***,
          we AUX.1PL them seen   and also they AUX.3PL them
          takodje.
          too
          'We saw them, and they did, too.'

    b.   Mi *smo*   *ih*   videli, a   i   oni   *su*,   takodje.
          we AUX.1PL them seen   and also they AUX.3PL too

(91) 2P clitics and VP-ellipsis: Slovenian

    a.   Maja *jih*   *je*   videla in   jaz *sem*   ***jih***   tudi.
          Maja them AUX.3SG seen   and I   AUX.1SG them too
          'Maja saw them and I did, too.'

    b. * Maja *jih*   *je*   videla in   jaz *sem*   tudi.
          Maja them AUX.3SG seen   and I   AUX.1SG too

The contrast between (90) and (91) cannot be accounted for simply by the difference in prosodic requirements of clitics. However, it can be easily explained by the timing of clitic movement. In SC, pronominal clitics are still located inside the VP at the point when it is marked by ellipsis. As I argue in chapter 3, pronouns in SC only become clitics at the point of Vocabulary Insertion. If ellipsis is the absence of Vocabulary Insertion, SC pronouns never receive a clitic status and do not have the requirement to move to the second position. In Slvn, clitics move out of the ellipsis site to a higher position in syntax, and therefore survive ellipsis.

There are two other potential explanations of the contrast between (90) and (91), as Željko Bošković (p.c.) points out. First, a potential interfering factor, independent of other issues discussed here, can be the requirement of *MaxElide*. *MaxElide* would prefer (90b) to (90a) to maximise the size of the ellipsis site, explaining the behaviour of SC clitics under ellipsis. *MaxElide* can also be overridden by stressing the relevant elements surviving ellipsis, which could explain the contrast between Slovenian and Serbo-Croatian. I would like to point out two issues here: i) it has been argued that *MaxElide* does not capture the facts correctly and should be discarded (see, for example, Griffiths 2019); ii) Slvn 2P clitics only receive stress due to being at the right edge of a relevant domain of stress assignment, therefore they receive stress because they survive ellipsis as opposed to surviving ellipsis because of being stressed.

Another explanation for the difference between Slvn and SC could be the proposal that these languages differ when it comes to the phasehood of

their constituents, which in turn can interact with ellipsis in accounts like Bošković (2014). In this account, ellipsis is phase-constrained and extraction out of the ellipsis site is allowed only when ellipsis site corresponds to a phasal complement, as opposed to a whole phase. This proposal is further developed in Sakamoto (2019), where it is argued that phasal ellipsis is implemented by LF copying, while phasal complements are targeted by PF-deletion. Under these accounts, one would have to postulate crucial differences with respect to the phasehood of ellipsis sites and/or the mechanism of ellipsis (LF copying vs. PF-deletion) in (90) and (91). I opt against pursuing such an analysis, as cross-linguistic differences in these domains are notoriously difficult to support with clear evidence. The difference in sensitivity to the prosodic environment between SC and Slvn 2P clitics, on the other hand, has been repeatedly noted in the literature, which makes the account proposed here more coherent than the mentioned alternatives.

4.6.3 Supporting evidence from gapping

Recall that while SC and Slvn clitics behave differently with respect to VP-ellipsis, they show the same behaviour under gapping: all the second position clitics must be elided in both languages:

(92)   a. 2P clitics and gapping: Serbo-Croatian

Ana *mu*   *je*   dala knjigu, a   Nada *(*mu)*
Ana him.DAT AUX.3SG gave book   and Nada him.DAT
šolju.
cup
'Ana gave him a book and Nada a cup.'

  b. 2P clitics and gapping: Slovenian

Marija *mu*   *je*   dala knjigo in   Ana *(*mu)*
Marija him.DAT AUX.3SG gave book   and Ana him.DAT
skodelico.
cup
'Marija gave him a book and Ana a cup.'

Given the differences in clitic behaviour under VP-ellipsis between Serbo-Croatian and Slovenian, the fact that they behave similarly in case of gapping is unexpected. It indicates that gapping is a different process from VP-ellipsis, contra Coppock (2001) and Toosarvandani (2013). The facts however can be easily explained if we adopt the move-and-delete account of gapping introduced in Boone (2014). Boone argues that the remnants of ellipsis move out of the ellipsis site to a high position prior to ellipsis in the case of gapping. Under this account, the sentences in

(92) would have the structures in (93). Note that I assume that clitics in SC remain in their original positions at this point of the derivation, while clitics in Slvn move higher (and probably cluster together), and the remnants move higher than the position of 2P clitics.

(93)   a. 2P clitics and gapping: Serbo-Croatian
           Ana *mu je* dala knjigu, a [$_{DP}$ Nada]$_i$ [$_{DP}$ šolju]$_j$ [$_{XP}$ ~~t$_i$~~ ~~je~~ ~~dala mu t$_j$~~].
       b. 2P clitics and gapping: Slovenian
           Marija *mu je* dala knjigo in [$_{DP}$ Ana]$_i$ [$_{DP}$ skodelico]$_j$ [$_{XP}$ ~~t$_i$~~ ~~mu je dala t$_j$~~].

Regardless of the precise position of clitics in both languages or timing of their movement to the second position, they remain stranded in the ellipsis site. This indicates that the elided constituent is higher than the one in the case of VP-ellipsis.

While gapping itself does not inform us about the site or the timing of clitic movement in SC and Slvn, together with the whole discussion in this and previous chapters it demonstrates how a closer inspection of delicate interactions of cliticisation and ellipsis can reveal crucial differences between similar phenomena in closely related languages, and can potentially shed light into the precise mechanisms of different elliptical processes.

Preposition omission under sluicing in Russian

This chapter focuses on preposition omission under sluicing in Russian, which illustrates a different aspect of interaction of phonologically weak items and ellipsis. It discusses how phonological characteristics of an element (namely, its prosodic status) can affect the possibility of it being targeted by ellipsis, providing evidence for the existence of late, post-syntactic elliptical processes, which is sensitive to the prosodic organisation of a sentence.

To start with, I define *light* prepositions as those prepositions that are clitics, while *heavy* prepositions are those that behave as independent prosodic words. As it will become clear below, there is also an intermediate stage: some prepositions are phonologically "heavier" than the light ones but "lighter" than the heavy ones.

5.1 Sluicing and preposition stranding

As discussed in chapter 1, one of the major arguments for the *move-and-delete* approach towards sluicing is the Preposition Stranding Generalisation (PSG). The PSG, however, is not exceptionless. Cases that fall outside the generalisation, therefore, question the validity of the *move-and-delete* approach. This section focuses on the exceptions and summarises previous proposals which aimed at accounting for them without rejecting the PSG.

5.1.1   Preposition Stranding generalisation

The PSG captures the relation between the possibility to strand a preposition under *wh*-movement and the optionality of its presence in a sluicing remnant. It was first introduced in Merchant (2001) and formulated as follows.

(1)   *Form-identity generalisation II: Preposition-stranding*
      A language *L* will allow preposition stranding under sluicing iff *L* allows preposition stranding under regular *wh*-movement.

      Merchant (2001:92)

English is an example of a language that allows preposition (P) stranding under regular *wh*-movement (2a). As predicted, it also allows preposition "stranding" (omission)[1] under sluicing (2b). According to the *move-and-delete* approach this correlation is explained by the preposition being stranded inside the ellipsis site in a prepositionless version of (2b), as demonstrated in (2c).[2]

(2)   a.   What was she talking **about**?

      b.   She was talking about something, but I don't know (**about**) what.

      c.   She was talking about something, but I don't know what ~~she was talking~~ **about**.

In contrast, in Russian prepositions are normally obligatorily pied-piped by the moved *wh*-phrase, as (3) shows. PSG therefore predicts that P-omission should not be possible under sluicing in Russian and this prediction is borne out for the majority of cases. In (4), for example, the preposition *o* 'about' must be pied-piped and cannot be stranded in the ellipsis site.

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[1]Further I refer to this phenomenon as P-omission, since, as shown below, it does not always involve stranding.

[2]The PSG does not always hold even for English. As noted in Chung & McCloskey (1995) with the reference to Rosen (1976), in English it is sometimes possible to omit a non-strandable preposition under sluicing:

(i)   a.   * What circumstances will we use the force under?

      b.   We are willing to use force under certain circumstances, but we will not say in advance which ones.

(3) a. **O** čëm ona govorila?
          about what she talked

    b. * Čëm ona govorila **o**?
        what she talked   about

      "About what was she talking?"

(4) a. Ona govorila **o**   čëm-to,   no ja ne znaju, **o**
        She talked   about something but I not know about
        čëm   ~~ona govorila~~.
        what she talked

    b. * Ona govorila **o**   čëm-to,   no ja ne znaju, čëm
        she talked   about something but I not know what
        ~~ona govorila **o**~~.
        she talked   about

      "She was talking about something but I don't know about
      what."

5.1.2 Exceptions to PSG

Although PSG accounts for the majority of the data, there are non-P-stranding languages in which it is still sometimes possible to omit a preposition from a sluicing remnant. Such potential counterexamples to the PSG come from Spanish (Vicente 2008, Rodrigues et al. 2009), Brazilian Portuguese (Almeida & Yoshida 2007, Rodrigues et al. 2009), Indonesian (Fortin 2007, Sato 2011), Emirati Arabic (Leung 2014), Polish (Szczegielniak 2006, 2008), Serbo-Croatian (Stjepanović 2008, 2012), Romanian (Nicolae 2012), Czech (Caha 2011), Bulgarian (Abels 2016), and Russian (Philippova 2014).

Consider the following example from Russian. According to Philippova (2014), omission of the preposition in (5) does not lead to ungrammaticality. In her survey, native speakers judged (5a) as acceptable and (5b) as good (Philippova 2014:141) (an underscore represents an omitted preposition).

(5) (Philippova, 2014:141)

    a. ? Maša kupila éto platje **k** kakomu-to prazdniku, no ja
        Maša bought this dress for some.DAT holiday   but I
        ne pomnu   ___ kakogo.
        not remember   which.DAT

      'Maša bought this dress for some holiday but I don't remember which.'

b.   Pëtr sdelal Maše predloženije **nakanune** kakogo-to
Pëtr did   Maša proposal   on.eve.of   some.GEN
prazdnika,   no ja zabyl ___ kakogo.
holiday.GEN but I   forgot   which.GEN

'Peter proposed to Mary on the eve of some holiday but I
forgot which.'

The example in (6) demonstrates the same phenomenon in Polish: according to Szczegielniak (2008), the preposition in this case is optional, even though it cannot be stranded under *wh*-movement.

(6)   (Szczegielniak, 2008:405)

a.   Anna tańczyła z   jednym mężczyzną, ale nie wiem
Anna danced   with one   man   but not know
(**z**)   którym.
(with) which

'Anna danced with one man, but I do not know which.'

b.   * Którym$_i$ Anna tańczyła **z**   t$_i$ mężczyzną?
which   Ann danced   with   man

'Which man did Ann dance with?'

c.   [**Z**   którym]$_i$ Anna tańczyła t$_i$ mężczyzną?
with which   Ann danced   man

'With which man did Anna danced?'

There are two potential explanations of the possibility to omit a non-strandable preposition under sluicing:

(a) The PSG is merely incorrect. P-omission under sluicing cannot be explained by the preposition being stranded in the ellipsis site. Therefore, the *move-and-delete* approach and possibly the entire structural approach to ellipsis are wrong.

(b) The PSG holds and deletion of a non-strandable preposition can be explained by other means: either by postulating a different structure inside the ellipsis site (as in the pseudo-sluicing account of Vicente 2008, Rodrigues et al. 2009) or by assuming that there exists a separate operation responsible for the deletion of a preposition after sluicing (such as a P-omission account of Stjepanović 2008). See section 5.1.3 for details.

In this chapter, I argue for the second option and show that P-omission under sluicing can be accounted for under the structural approach to ellipsis and the assumption that the PSG holds. Ultimately, there is a correlation between P-stranding under *wh*-movement and P-omission under

sluicing: even though non-P-stranding allow P-omission in some cases, it occurs much less regularly in comparison to P-stranding languages. The next section presents existing accounts which explain P-omission under sluicing without rejecting the PSG.

5.1.3 Previous accounts of exceptional cases

There are two main types of syntactic accounts of the exceptions for the PSG:

(a) A source for ellipsis is not isomorphic to the antecedent and does not contain a preposition (e.g., the pseudo-sluicing account):

   (7)   She was talking with someone, but I don't know who ~~it was~~.

(b) Deletion of a preposition outside the ellipsis site (e.g., a discontinuous deletion of the clause or a separate operation of P-deletion):

   (8)   She was talking with someone, but I don't know ~~with~~ who ~~she was talking~~.

The first type of accounts is represented by a so-called pseudo-sluicing account, which was adopted by Vicente 2008 and Rodrigues et al. 2009 for Spanish and Brazilian Portuguese and by Szczegielniak 2006, 2008 for Polish. This type of accounts postulates that P-less remnants in fact involve cleft pivots rather than a full clause that is identical to its antecedent.

Consider (9) from Spanish, another non-P-stranding language that allows P-omission under sluicing in particular cases (when the *wh*-phrase in the remnant is a D-linked phrase such as *which*).

   (9)   (Rodrigues et al., 2009:2)
         a.   * ¿ Qué   chica ha hablado Juan **con**?
                 which girl   has talked   Juan with
              Int: 'Which girl has Juan talked to?'
         b.   Juan ha hablado **con** una chica, pero no sé   cuál.
              Juan has talked   with a   girl   but not know which
              'Juan has talked to a girl but I don't know which.'

Rodrigues et al. (2009) propose that P-less sluices are in fact derived from an alternative source: a cleft structure consisting of a copula followed by a DP with a relative clause, as in (10).

(10)   (Rodrigues et al., 2009:3)

Juan ha hablado con una chica pero no sé   cuál   ~~es la~~
Juan has talked with a   girl   but not know which   is the
~~chica con la que ha hablado Juan~~.
girl   with the that has talked   Juan

'Juan has talked to a girl but I don't know which ~~it is the girl
that Juan talked to~~.'

Szczegielniak (2006, 2008) proposes a similar account for the P-stranding
effect under sluicing in Polish. As in Spanish, sluicing with D-linked rem-
nants can involve P-omission in Polish, which is a non-P-stranding lan-
guage, as mentioned above. Szczegielniak suggests that (11a) is derived
from a cleft-like source (11b).

(11)   a. Anna tańczyła z   jednym mężczyzną, ale nie wiem
            Anna danced   with one   man   but not know
            którym.
            which
            'Anna danced with one man, but I do not know which.'

        b. Anna tańczyła z   jednym mężczyzną, ale nie wiem
            Anna danced   with one   man   but not know
            którym$_i$ ~~to z   t$_i$ mężczyzną (ona) tańczyła~~.
            which   it with   man   she   danced
            'Anna danced with one man but I do not know which man it
            was that she danced with.'

As it has been quite extensively discussed in the literature (see Grebeny-
ova 2007 a.o.), this account cannot be applied to the Russian data: as a
case-marking language, Russian requires the remnant and the correlate
to bear the same case in the context of sluicing, as in (12a), while the
cleft pivot obligatorily appears in nominative, as in (12b).

(12)   Grebenyova (2007):
        a. Ivan budet davat' komu-to   podarki, no ja ne znaju
            Ivan will   give   someone.DAT presents but I not know
            komu   / *kto.
            who.DAT   who.NOM
            'Ivan will be giving someone presents but I don't know who.'
        b. Ivan podaril komu-to   podarok, no ja ne znaju
            Ivan gave   someone.DAT present   but I not know
            kto   / *komu   èto byl.
            who.NOM / who.DAT it was
            'Ivan gave someone a present but I don't know who it was.'

Russian prepositions never assign nominative. However, In Russian, the nominative and accusative forms of the inanimate interrogative pronoun *čto* 'what' are syncretic, so occasionally the case assigned by a putative stranded preposition is syncretic with the case of the cleft pivot. van Craenenbroeck (2012) notices that P-omission under sluicing is more acceptable with such syncretism: (13a) is better than (13b) because it involves the syncretic form of the inanimate pronoun.

(13)   a.   [?] Navernoe, ja sela na čto-to,   no ne znaju,
             maybe   I sat on something.ACC but not know
             čto.
             what.ACC/NOM

             'Maybe I sat on something but I don't know what'.

      b.   * Ona vlubilas'   v kogo-to,   no ja ne znaju,
             she fell-in-love in someone.ACC but I not know
             kogo   / *kto.
             who.ACC / who.NOM

             'She fell in love with someone but I don't know who.'

The contrast between (13a) and (13b) can be explained if the former can be interpreted as derived from a cleft source (this option is not available for the latter):

(14)   a.   Navernoe, ja sela na čto-to,   no ne znaju,
             maybe   I sat on something.ACC but not know
             čto   èto bylo.
             what.NOM it   was

             'Maybe I sat on something but I don't know what it was'.

      b.   * Ona vlubilas'   v kogo-to,   no ja ne znaju,
             she fell-in-love in someone.ACC but I not know
             kogo   èto byl.
             who.ACC it   was

             Int: 'She fell in love with someone but I don't know who it was.'

The pseudo-sluicing account can therefore be applicable only to some but by no means all Russian data. For the rest, an alternative analysis is required.

An example of the second type of accounts of P-omission, under which there is a preposition in the ellipsis site, is a P-omission account of Stjepanović (2008), which was proposed for Serbo-Croatian, another non-P-stranding language that allows P-omission under sluicing in some cases:

(15) Stjepanović (2008:181)

   a. Ana je govorila sa   nekom djevojkom, ali ne znam
       Ana is talked   with some   girl   but not know
       (**sa**) kojom djevojkom.
       with which girl

       'Ana talked to some girl but I don't know (with) which
       girl.'

   b. * Kojom djevojkom je Ana govorila **sa**?
       which   girl   is Ana talked   with

       Int: 'Which girl did Ana talked to?'.

Stjepanović proposes that a preposition in the remnant may be deleted
by some postsyntactic operation, "occurring possibly at PF" (Stjepanović,
2008:188), different from sluicing. Under this account, a preposition first
moves together with the *wh*-phrase out of the ellipsis site, subsequently
getting deleted by a separate operation "P-drop", which is crucially dif-
ferent from sluicing, although dependent on it.[3] Derivation of a P-less
version of (15a) would involve deletion of a pied-piped preposition:

(16) Based on Stjepanović (2012)

      Ana je govorila sa   nekom djevojkom, ali ne znam ~~sa~~
      Ana is talked   with some   girl   but not know with
      kojom djevojkom.
      which girl

      'Ana talked to some girl but I don't know which girl.'

Stjepanović bases her argument on the possibility of P-omission with two
coordinated PPs. Consider (17): both prepositions can be omitted from
the remnant, which cannot be explained by P-stranding in the ellipsis site,
since the coordinated remnant cannot move out of the PPs stranding the
prepositions under any theory of syntactic movement.

(17) Stjepanović (2008:183)

      Petar je glasao za nešto   i   protiv nečega,
      Petar is voted for something.ACC and against something.GEN
      ali ne znam (za) šta   i   (protiv) čega.
      but not I.know for what.ACC and against what.GEN

      'Petar voted for something and against something, but I don't
      know for what and against what.'

---

[3]I refer to P-drop as P-omission to be consistent.

The same, in my judgement, holds for Russian (I use complex *wh*-remnants in the following example because P-omission under sluicing in Russian is more acceptable with this type of remnants, as will be discussed below).

(18) Ksuša progolosovala protiv kakogo-to mužčiny i za
     Ksuša voted against some.GEN man.GEN and for
     kakuju-to ženščinu, no ja ne znaju, (protiv) kakogo
     some.ACC woman.ACC but I not know against which.GEN
     mužčiny i (za) kakuju ženščinu.
     man.GEN and for which.ACC woman.ACC
     'Ksuša voted against some man and for some woman but I don't
     know against which man and for which woman.'

In this chapter, I provide additional evidence for the P-omission account and argue that it is an instance of late ellipsis, which is sensitive to phonological properties. It is already shown in Philippova (2014) that P-omission in Russian is sensitive to the phonological weight of a preposition, which Philippova considers to correlate with the number of syllables. Table 5.1 introduces the results of her grammaticality judgement survey, where 15 'naive' (non-linguists) speakers were asked to judge grammaticality of a sentence containing a P-less sluice on a scale from 1 (bad) to 5 (good). Omitted prepositions varied in size, from non-syllabic to quadrisyllabic. The results show that omission of heavier prepositions is more acceptable than omission of the light ones.

	0 SYLL	**1 SYLL**	**2 SYLL**	**3 SYLL**	**4 SYLL**
mean	2.93	3.06	3.33	3.49	3.59
SD	1.07	1.05	1.08	1.04	0.95

Table 5.1: *Results of the survey conducted by Philippova (2014)*

The number of syllables in a preposition correlates with its morphosyntactic properties (such as morphological complexity or syntactic behaviour, see next section), therefore it is not possible to immediately conclude that P-omission is sensitive to the number of syllables *per se*. The next section introduces the system of Russian prepositions including their morphosyntactic properties and shows that none of them can be an explanation for the behaviour of prepositions under sluicing.

5.2 The system of Russian prepositions

As shown above, only some of Russian prepositions are susceptible to omission under sluicing. It is therefore necessary to introduce the system

of Russian prepositions and determine the parameters in which prepositions can differ.

Example (5), repeated here as (19), demonstrates the contrast between two prepositions, one of which is more susceptible to omission from the sluicing remnant than the other one.

(19)   (Philippova, 2014:141)

  a.   ? Maša kupila éto platje **k**   kakomu=to prazdniku, no ja
         Maša bought this dress for some.DAT   holiday   but I
         ne pomnu   ___ kakomu.
         not remember   which.DAT

         'Maša bought this dress for some holiday but I don't remember which.'

  b.   Pëtr sdelal Maše predloženije **nakanune** kakogo-to
         Pëtr did   Maša proposal   on.eve.of   some.GEN
         prazdnika,   no ja zabyl ___ kakogo.
         holiday.GEN but I forgot   which.GEN

         'Peter proposed to Mary on the eve of some holiday but I forgot which.'

The prepositions in the above examples differ in their phonological, morphological and possibly syntactic properties, some of which might affect their possibility of being omitted under sluicing. This chapter provides an overview of the existing classifications and different properties of Russian preposition which serve as a basis for the discussion of P-omission.

5.2.1   Morphosyntactic properties

Primary and secondary prepositions

Traditionally, Russian prepositions are divided into primary and secondary ones. The Academy Grammar (Švedova 1980) defines primary prepositions as a small and closed class of words that are not connected to any other words of main categories etymologically. Preposition *k* 'to' from (19a) is a primary preposition, while *nakanune* 'on the eve of' from (19b) is a secondary one, derived from the combination of the primary preposition *na* 'on' and the noun *kanun* 'eve'. Table 5.2 provides examples of primary and secondary prepositions, as classified in the Academy Grammar (Švedova 1980).

primary	secondary
za 'behind'	vnutri 'inside'
o 'about'	vokrug 'around'
meždu 'between'	protiv 'against'
bez 'without'	blagodarja 'thanks to'
krome 'besides'	pomimo 'besides'

Table 5.2: *Examples of primary and secondary prepositions*
(Švedova 1980)

Obviously, this classification, which is based on the etymology of a preposition, does not evidently capture any of the synchronic morphosyntactic distinctions among prepositions.

A similar but more formal classification of Russian prepositions is introduced in Yadroff & Franks (1999). They try to include more distinctions between Russian prepositions and also divide them into two groups: functional and lexical, which correspond to the primary and secondary prepositions, respectively. Etymology is just one of the criteria that Yadroff & Franks consider. They claim that the two groups have different phonological, syntactic and semantic properties. Some of the criteria they use are represented in Table 5.3.[4]

Functional Prepositions	Lexical Prepositions
Phonology	
A. Unstressed	A. Stressed
B. Monosyllabic	B. Polysyllabic
Morphology	
C. Monomorphemic	C. Often polymorphemic or compound
...	
Syntax	
E. Object is obligatory	E. Object may be optional
F. Approximative inversion yields N before P	F. Approximative inversion yields P before N
...	
Semantics	

---

[4]In the table, I preserve the terminology originally used by the authors.

L. Meaning abstract (hence polysemous)	L. Meaning concrete (therefore fixed)

Table 5.3: *Properties of functional and lexical prepositions (Yadroff & Franks 1999)*

Let us take two prepositions, *na* 'on', which is classified as a primary one, and *vokrug* 'around', which is a secondary one and analyse them with respect to Yadroff & Franks's classification. The primary preposition *na* 'on' is a clitic which combines into one prosodic word with the following word and does not bear its own stress, it is monosyllabic and monomorphemic. The secondary prepositions *vokrug* 'around' is assumed to bear its own stress, it has two syllables and is composed of two morphemes (a prefix *vo* and a stem *krug*). The primary preposition *na* never occurs without a complement while the secondary preposition *vokrug* can be used as an adverb without a complement:

(20)   a.   Posmotri na étu fotografiju.
            look   at this photo.

            'Look at this photo.'

       b.   * Posmotri na!
            look   na

(21)   a.   Zemlja vraščaetsja vokrug Solnca.
            Earth   revolves   around Sun.

            'The Earth revolves around the Sun.'

       b.   Posmotri vokrug!
            look   around

            'Look around!'

Finally, in approximative inversion contexts[5] the order between a noun and a numeral is flipped and the primary preposition *za* but not the secondary preposition *blagodarja* can appear between the noun and the numeral:

---

[5]Approximative inversion is a phenomenon that reverses the standard word order between a numeral and a noun and creates the semantic effect of approximation:

(i)   a. dve butylki
           two bottles
           'two bottles'

       b. butylki dve
           bottles two
           'approximately two bottles'

(22) a.   časov **za** šest'   (Yadroff & Franks, 1999:8)
            hours in six
            'in about six hours'

      a'   * **za** časov šest'
            in hours six

      b.   **blagodarja** zaprosam desjati
            thanks.to   inquiries ten
            'thanks to about 10 inquiries'

      b'   * zaprosam **blagodarja** desjati
            inquiries thanks.to   ten

It can be concluded with certainty that *na* is a functional preposition and
vokrug is a lexical preposition in Yadroff & Franks's classification.

For some prepositions it is less clear under which category they fall.
As Yadroff & Franks notice, there is some variation: a given preposi-
tion may have properties of both functional and lexical prepositions. For
example, the preposition *skvoz^j* 'through', which is classified as a sec-
ondary preposition in Švedova (1980), is expected to be a lexical preposi-
tion in Yadroff & Franks's classification. However, it is monosyllabic and
monomorphemic and its position in approximative inversion contexts is
flexible:

(23) a.   **skvoz'** sloëv   pjat'
            through layers.GEN.PL five.ACC

      b.   sloëv   **skvoz'** pjat'
            layers.GEN.PL through five.ACC
   'through approximately five layers'

Esjkova (1996) also notices that some prepositions that are considered
to be primary by Russian grammars actually behave similarly to the
secondary ones (such as *krome* 'except', *meždu* 'between', *radi* 'for the
sake of'). One of the diagnostics that she uses to differentiate between
primary and secondary prepositions is the placement of a preposition with
respect to the reciprocal pronoun *drug druga* 'each other'. Esjkova notices
that primary prepositions should always be in the interposition of the two
parts of the anaphor (see (24a)), while secondary prepositions tend to be
preposed (24b) but sometimes can also appear in the interposition. The
disputable prepositions listed above fall into the second group together
with the secondary prepositions (24c), even though they are classified as
primary in Švedova (1980):

(24) a.   (*k) drug (k) drugu
   to   each to other
            'to each other'

    b. (blagodarja) drug (*blagodarja) drugu
       thanks to   each thanks to   other
       'thanks to each other'

    c. (radi) drug (radi) druga
       for   each for   other
       'for the sake of each other'

Yadroff & Franks (1999) propose that functional and lexical prepositions correspond to different syntactic structures, and structures with lexical prepositions being more complex than structures with functional prepositions:[6]
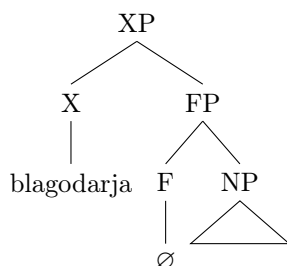
(25) Lexical Ps: (26) Functional Ps:
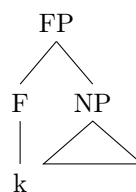
If syntactic complexity associated with a preposition could play a role in P-omission under sluicing, one would expect a categorical contrast between two types of preposition (omission of functional prepositions would be banned and omission of lexical prepositions would be allowed). This prediction is not borne out: as results from Philippova (2014) in table 5.1 above show, there is a gradual difference in acceptability of P-omission, and, for example, the difference in judgements between omission of a monosyllabic functional preposition and a bisyllabic lexical preposition is very small.

Strandability

There is another criterion that can divide Russian prepositions into two groups, presumably the most relevant one for P-omission under sluicing. While Russian is usually described as a non-P-stranding language, some Russian prepositions can be stranded, as shown in (27b). As (27a) illustrates, the strandable prepositions can also appear to the right of their complements, behaving as postpositions (Podobryaev 2009).[7]

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[6]FP is a "generalized Functional Phrase", which is associated with NP and contains functional features such as definiteness, case and θ-role (see Yadroff & Franks 1999:14 for details).

[7]Podobryaev provides the following (possibly, incomplete) list of these ambivalent adpositions: *radi* 'for the sake of', *vopreki* 'contrary to', *nazlo* 'to spite (someone)', *naperekor*

(27) Podobryaev (2009:4)

    a. [**Navstreču** komu] / [Komu **navstreču**] ty   bežal?
       towards   whom whom towards   you ran

    b. Komu ty   bežal **navstreču**?
       whom you ran   towards

       'Towards whom did you run?'

Surprisingly, however, strandability seems to have no effect on P-omission under sluicing, as shown in Philippova (2014). According to her, there is no significant difference in the judgements between the omission of the strandable and non-strandable prepositions in the context of sluicing.

Consider the contrast between (28) and (29). There is a categorical contrast between strandable and non-strandable prepositions in *wh*-questions: stranding of the preposition is grammatical in (28a) and ungrammatical in (28b).

(28)   a.   Komu   on èto sdelal **nazlo**?
           who.DAT he this did   to.spite

           'To spite whom did he do that?'

      b. *Kogo   on sprašival **naščët**?
           who.GEN they talked   regarding

           'Regarding whom did they talk?'

If strandability of a preposition played a role in P-omission, we would expect to see the same categorical contrast in the sluiced equivalents of the sentences in (28). However, it is not the case: the examples in (29) are equal in their acceptability, which can vary among speakers (the judgements indicate average across speakers).[8]

(29)   a. ?On sdelal èto **nazlo** komu-to,   no ja ne znaju,
         he did   this to.spite someone.DAT but I not know
         komu.
         who.DAT

         'He did it to spite someone but I don't know who.

      b. ?On sprašival **naščët**   kogo-to, no ja ne pomnu,
         he asked   regarding someone but I not remember
         kogo.
         who

         'He asked about someone but I do not remember who.'

'counter to', *vsled* 'following after (someone)', *navstreču* 'towards', *spustja* 'after'. While all strandable prepositions arguably fall into the class of lexical prepositions, not all lexical prepositions are strandable.

[8]The examples in (29) were part of the online grammaticality survey presented in section 5.3.

If the derivation of (29a) involved stranding of a preposition in the ellipsis site, as in (30), we would expect it to be perfectly grammatical.

(30)   On sdelal èto **nazlo** komu-to,   no ja ne znaju, komu
       he did   this to.spite someone.DAT but I not know who.DAT
       ~~on èto sdelal~~ **~~nazlo~~**.
       he it   did   to.spite
       'He did it to spite someone but I don't know who.'

The case of P's complement

There is one property of Russian prepositions that received almost no attention in the literature in connection to P-omission, as far as I am aware of: the case that a preposition assigns to its complement. Traditionally, the Russian case system is described as consisting of six cases: nominative, accusative, genitive, dative, instrumental and prepositional[9]. The complement of a preposition can receive any case except nominative.

As discussed above, van Craenenbroeck (2012) notices that P-omission under sluicing improves when the remnant of sluicing (and the complement of a preposition) can be interpreted as nominative:

(31)   van Craenenbroeck (2012:13)

   a. On vystrelil vo čto-to,   no ja ne znau, $^{??}$(vo)
       he shot   at something but I not know   at
       čto.
       what.ACC/NOM
       'He shot at something but I don't know (at) what.'

   b. On vystrelil v kogo-to, no ja ne znau, *(v) kogo.
       he shot   at someone but I not know   at who.ACC
       'He shot at someone but I don't know (at) who.'

To check if other cases affect the possibility to omit a preposition under sluicing, I conducted a pilot online grammaticality judgement survey. The survey included 15 experimental sentences with prepositions assigning different cases to their complements. Table 5.4 demonstrates prepositions used in the survey: there were 3 prepositions for each case: accusative (ACC), dative (DAT), genitive (GEN), instrumental (INST), prepositional (PREP).[10]

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[9]'Prepositional' is a name traditionally used in Russian grammars. Historically, this case originates from locative but have a number of other uses in modern language. As the name suggests, prepositional case always appears with an overt preposition: *v lesu* 'in forest.PREP', *lesu 'forest.PREP'.

[10]One preposition can assign different cases to its complement depending on semantics.

ACC	DAT	GEN	INST	PREP
v 'in'	*k* 'to'	*s* 'from'	*s* 'with'	*v* 'in'
za 'behind'	*po* 'on'	*dlja* 'for'	*za* 'behind'	*na* 'on'
na 'on'	*vsled* 'following'	*do* 'to'	*nad* 'above'	*o* 'about'

Table 5.4: *Preposition used in the survey on case*

16 native speakers of Russian were asked to judge the sentences in the survey on the scale from 1 (bad) to 5 (good). The sentences were presented in small dialogues and the participants were instructed to only judge the reply part of each dialogue. An example of dialogues used is shown in (32).

(32) Q: On sobiraetsja prodolžat' pisat' knigi?
          he going.to   continue   write books

          'Is he going to continue writing books?'

      A: Da, on uže   rabotaet **nad** čem-to.INST, no nikto ne
          yes he already working on   something   but noone not
          znaet, čem.INST.
          know   what

          'Yes, he is already working on something, but no one knows
          what. '

The results of the survey (mean and standard deviation) are presented in table 5.5.

	ACC	DAT	GEN	INST	PREP
MEAN	2.11	2.16	2.38	1.93	1.44
SD	1.23	0.95	1.03	1.18	0.76

Table 5.5: *Results of the survey on case*
(scale 1 – 5)

Note that the preposition used in the survey were non- or monosyllabic, therefore the judgements are quite low, as predicted based on table 5.1.[11] Omission of prepositions that assign prepositional case was judged as the least acceptable. It is expected considering that prepositional case always requires a phonologically realised preposition (see Pesetsky (2012)

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[11]Non- and monosyllabic prepositions were chosen to eliminate the effect of phonological weight of a preposition on the possibility of P-omission.

a.o.). Consider (33): the preposition *na* 'on' can assign either accusative or prepositional case. Example (33a) received relatively high judgements, since it involves a form of the pronoun syncretic between accusative and nominative case, while (33b) received much lower judgements since it involves a pronoun in prepositional case, which never occurs without a preposition.

(33)   a. Remnant in ACC/NOM   mean: 3.00

        Ja sela na čto-to,   no ja ne znaju, $^?$(**na**)
        I   sat on something.ACC but I   not know   on
        čto.
        what.ACC/NOM

        'I sat on something, but I don't know (on) what.'

       b. Remnant in PREP   mean: 1.33

        On ženilsja na kom-to,   no nikto   ne znaet, *(
        He married on somebody.PREP but nobody not know
        na) kom.
        on   who.PREP

        'He married somebody, but nobody knows who.'

Finally, one sentence was excluded from the results because it received much higher judgements than the other experimental sentences. The sentence contained the preposition *vsled* 'following', see (34). Later in this chapter I will argue that even though *vsled* is a monosyllabic preposition, it is phonologically heavier than most of the other monosyllabic prepositions and its omission under sluicing is therefore more acceptable.

(34)   Omission of preposition *vsled* 'following'   mean: 4.33

        Maša prosto ulybalas' vsled   komu-to,   ja daže ne znau,
        Maša just   smiled   following someone.'DAT I even not know
        komu.
        who.DAT

        'Maša was just smiling watching someone go, I don't even know, who.'

I conclude based on the results presented in this section that while case assigned by a preposition should be taken into account and controlled for, it cannot be solely responsible for the differences between prepositions with respect to P-omission, and neither can strandability of a preposition or its morphosyntactic status, as discussed above. Phonological status of a preposition is another aspect that prepositions vary in and that can affect the possibility of P-omission. The next section introduces phonological properties of Russian prepositions.

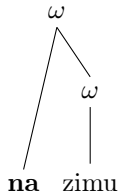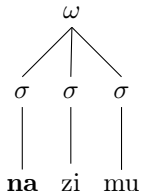### 5.2.2 Phonological properties

From the phonological point of view, Russian prepositions are also divided into two groups: phonologically weak elements that cliticise onto the following ω (light prepositions) and those which are assumed to be independent ωs (heavier prepositions). Previous literature focuses exclusively on the phonologically light and clitic prepositions, paying little attention to the heavier non-clitic prepositions.

Light prepositions

Phonologically lights prepositions in Russian are proclitics: they do not constitute ωs on their own but lean on the following ω. As discussed in chapter 2, according to Selkirk (1996), there are three types of clitics with respect to how they incorporate into the prosodic domain of their host:[12]

(35)   a. $(\textit{fnc } (\textit{lex})_\omega \,)_\phi$ free clitic
       b. $((\textit{fnc } \textit{lex})_\omega \,)_\phi$ internal clitic
       c. $((\textit{fnc } (\textit{lex})_\omega \,)_\omega \,)_\phi$ affixal clitic

Padgett (2012) (following Zubritskaya 1995) argues that Russian prepositions adjoin to the following ω and create a recursive structure. As such, they are affixal clitics in Selkirk's terms, as in (36a). Blumenfeld (2012) and Blumenfeld & Gribanova (2013) suggest that two options are available for Russian prepositions: they can either be adjuncts to the following ω or they can be integrated into it, i.e. to be internal clitics, as in (36b), with adjunction being the default option.[13] For example, the PP *na zimu* 'for winter.ACC' can be parsed in two different ways:

(36)   a.   b.

What is important for the discussion here is the fact that light prepositions normally do not form independent ωs. In the remainder of this section, I summarise the relevant argumentation for the dependent prosodic

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[12]In Selkirk's examples, *fnc* and *lex* stand for the phonological content of functional and lexical words, respectively (e.g. a preposition may be considered as *fnc* and its complement as *lex*).

[13]See Blumenfeld (2012) and Blumenfeld & Gribanova (2013) for the details on how the two options can be distinguished.

status of light prepositions presented in the previous literature. The diagnostics are based on several domain-specific phonological processes, occurring within or at an edge of ωs.

First, ω is a domain of stress: there is normally one beat of stress per ω in Russian. Light prepositions usually do not bear stress but form a single stress domain with the following word. Normally a preposition remains unstressed (37a), but under certain conditions the stress can be shifted to it (37b) (Blumenfeld 2012, Blumenfeld & Gribanova 2013). But stress can never occur on a preposition and its complement simultaneously, as (37c) indicates (unless the preposition is contrastively focused).

(37)   a.   na góru
            on mountain.ACC
            'to the mountain'

       b.   ná goru

       c.   * ná góru

Vowel reduction is another diagnostic used to determine the domain of a ω. In Russian, all unstressed vowels are realised in a reduced form, but the pretonic vowel has a special status (see Gouskova 2011, Bennett 2012 a.o.). While all other unstressed vowels are realised as schwa or in another highly reduced form, the pretonic vowel reduces much less: it is much longer than other unstressed vowels and sometimes it can be even longer than the stressed vowel. For example, the vowel /o/ is realised as [ɐ] in the position immediately preceding stress and reduced to [ə] in all other positions, as (38) demonstrates (Crosswhite 1999 a.o.).

(38)   a.   (d[ó]m) 'house'   b.   d([ɐ]má) 'house.PL'
       c.   d[ə]mo(vój) 'house-spirit'

If a preposition forms one ω with the following word, they are expected to form one vowel reduction domain together, which means that the actual realisation of the vowels of a preposition will depend on the position of stress within its host. The prediction is borne out: the vowel /o/ in the preposition *pod* 'under' is realised as [ɐ] when followed by a stress-initial word (39a) and as [ə] when the following word is not stress-initial (39b). This is exactly the same pattern as we see in (38), which indicates that the preposition does not form an independent ω, but combines with the following word to form one stress domain.

(39)   a.   p[ɐ]d kóškoj   'under the cat.FEM.INST'   (*p[o]d kóškoj)
       b.   p[ə]d kotóm   'under the cat.MASC.INST'   (*p[o]d kotóm)

There are two more phonological rules that confirm that Russian primary prepositions form one ω with their complement: devoicing and voicing assimilation of obstruents. Devoicing occurs at the right edge of ω in Russian (see Padgett 2012, Blumenfeld 2012, a.o.). Since primary prepositions are not independent ωs, their final consonants are not devoiced (40a). Final obstruents of the independent prosodic words are always devoiced, as (40b) demonstrates.

(40) a. nad rozoj 'above the rose.INST' $\rightarrow$ [n**ɐd** rózəj]
      b. sad Rozy   'garden of Roza' $\rightarrow$ [sá**t**] [rózɨ]

Finally, in Russian obstruents agree in voicing with the following obstruent within a ω. If a preposition ends in a voiceless obstruent, it is realised as voiced when followed by a voiced obstruent. Obstruents show their underlying voicing quality before sonorants. (41a) demonstrates that the preposition *ot* 'from' ends with a voiceless obstruent, and (41b) shows that it agrees in voicing with the following voiced obstruent. It can be concluded once again that the preposition forms a single ω with the following word.[14]

(41) a. ot mamy   'from mother' $\rightarrow$ [ɐ**t**] mamy
      b. ot babuški 'from grandmother' $\rightarrow$ [ɐ**d**] babuški

Summing up, the tests discussed in the current section indicate that primary, phonologically light prepositions form one ω with the following word.

Heavy prepositions

Recall that heavier prepositions are generally claimed to bear stress and form independent prosodic words. Blumenfeld (2012) briefly notices that such prepositions (he mentions *okolo* 'near', *meždu* 'between', and *vokrug* 'around') behave like separate prosodic words with respect to the tests discussed in this section. For example, he shows that these prepositions bear their own stress and form a separate domain of vowel reduction. This is illustrated in (42a), in which the final vowel of the preposition is realised as [ə]. If the preposition formed one ω with the following word, this vowel would be pretonic, and hence realised as [ɐ]. These stressed prepositions also undergo final devoicing (42b).

(42) a. ókolo dóma 'near the house' $\rightarrow$ [ókələ] dóma
      b. vokrúg dóma 'around the house' $\rightarrow$ [**v**akrú**k**] dóma

---

[14]I leave the question whether the preposition under discussion is an affixal or internal clitic open here, as it is not crucial for the current discussion.

However, not all polysyllabic prepositions behave in the same way. Gribanova (2008) includes *čerez* 'across' into the class of non-clitic prepositions (along with *skvoz^j* 'through'), although phonetic studies show that it behaves exactly like light prepositions with respect to vowel reduction and obstruent assimilation and devoicing (Kalenčuk & Kasatkina 2013). For example, the final consonant of the preposition *čerez* in (43a) is not devoiced, which means that the preposition does not form a separate ω,[15] as opposed to the preposition *skvoz^j* in (43b).

(43)   a.   čerez rozy   'through (the) rozes' $\rightarrow$ čere[**z**] rozy
        b.   skvoz^j rozy   'through (the) rozes' $\rightarrow$ skvo[**s**^j] rozy

Certain larger prepositions (for example, *krome* 'except, besides' and *meždu* 'between') are sometimes characterised as "weakly stressed" (Yadroff 1999, Švedova 1980). Kedrova et al. (2002) notice that weakly stressed words are usually those that constitute some intermediate stage between lexical and functional categories. It remains unclear, though, what "weakly stressed" means. I leave this question for further experimental studies, but I take that claim to be a reason to believe that at least some larger prepositions do not form "normal" prosodic words and differ in that sense from other larger prepositions and lexical words. Moreover, the preposition listed above are considered to be primary in Švedova (1980) and therefore expected to be clitic, but Kalenčuk & Kasatkina (2013) show that they behave as independent prosodic word.

To sum up, some of the polysyllabic prepositions are sometimes wrongly assumed to be independent ωs, while, in fact, they group together with most primary prepositions and are phonologically weak. On the other hand, some prepositions that are normally classified as primary are in fact independent ωs, and possibly should be treated separately at least concerning their prosodic behaviour. In section 5.4, I propose that such prepositions differ from light primary prepositions on the one hand and from heavy secondary prepositions (such as *nakanune* 'on the eve of') on the other.

Before that, in the following section, I discuss the relevance of a phonological status of a preposition for P-omission under sluicing.

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[15]The same holds for the preposition *pered* 'in front of'. Both prepositions are considered to be primary by Švedova (1980). As we can see, this is an adequate classification at least from the phonological point of view.

5.3 Phonological weight and P-omission: A case study

As mentioned above, Philippova (2014) conducted a study on P-omission under sluicing in Russian and concluded that the acceptance of P-less sluices increases gradually with the increase of the number of P's syllables. Table 5.6 shows the mean values and the standard deviation for the sentences with P-omission grouped according to the number of syllables of the omitted preposition, from non-syllabic prepositions consisting of only one consonant (such as *s* 'with') to quadri-syllabic prepositions (such as *blagodarja* 'owing to').

	0 SYLL	**1 SYLL**	**2 SYLL**	**3 SYLL**	**4 SYLL**
mean	2.93	3.06	3.33	3.49	3.59
SD	1.07	1.05	1.08	1.04	0.95

Table 5.6: *Results of the survey conducted by Philippova (2014)*

As the data shows, the mean judgement for non-syllabic prepositions is actually quite far from strictly ungrammatical. As explained in the original paper, this may be due to the type of the *wh*-element used in the experimental sentences: complex *wh*-phrases are known to allow for P-omission under sluicing easier than simple ones for various reasons in various languages (see Szczegielniak 2006, Nykiel 2013 for Polish and Rodrigues et al. 2009 for Spanish and Brazilian Portuguese), and in Russian even omission of light prepositions are never absolutely unacceptable in this case. All of Philippova's experimental sentences contain complex *wh*-phrases such as *what/whose/which NP* with an elided NP, similar to (44).

(44) (Philippova 2014, p. 139)

Scenu   ubrali   ot-sjuda [$_{PP}$ posle kakogo-to
stage.ACC removed.3PL from-here   after what.GEN-INDF
meroprijatija] no   ja ponjatija ne   imeju **kakogo**.
event.GEN   but I idea   not have what.GEN

'They removed the stage from here after some event, but I have no idea what.'

In the next section, I explore the conditions on P-omission further. To eliminate the confounds connected to the complexity of the *wh*-phrase in the remnant, I conducted another online grammaticality judgement survey, which used simple *wh*-phrases to establish the baseline for the research on P-omission in Russian.

5.3.1   Design of the survey

The prepositions used in the survey varied in their phonological weight, ranging from 0 to 5 syllables, and assigned either genitive or dative case to their complement (to eliminate potential affect of case on P-omission, which is discussed above). See Table 5.7 for the complete list of the prepositions used in the questionnaire.[16]

	GEN		DAT	
0	s	'with'	k	'to'
1	dlja	'for'	po	'along'
	u	'at'	vsled	'following after'
2	protiv	'against'	nazlo	'to spite'
	nasčёt	'concerning'		
3	okolo	'near'	vopreki	'despite'
			navstreču	'towards'
4	po povodu	'regarding'	blagodarja	'thanks to'
5	otnositel^{j}no	'regarding'		

Table 5.7: *Prepositions used in the survey on P-omission under sluicing with simple wh-phrases*

15 experimental sentences with the prepositions from Table 5.7 occurred as a part of a small dialogue as an answer to a question, see (45) and (46).[17] The participants were instructed to judge the second line of the dialog only.

(45)   An example of an experimental stimulus:

    A: Počemu Vladimir Vladimirovič zapersja   v svoëm
            why   Vladimir Vladimirovič locked-himself in own
            kabinete?
            office
            'Why did Vladimir Vladimirovič locked himself in his office?'

    B: On gotovitsja **k** čemu-to,   no my ne znaem,
            He prepares   to something.DAT but we not know
            čemu.
            what.DAT

---

[16]The prepositions *vopreki* 'despite' and *vsled* 'following after' were later excluded from the study after some speakers indicated that the examples with these prepositions are not well-formed for reasons independent of P-omission.

[17]The list of the dialogues used in the survey can be found in Appendix 6.2.

'He is preparing for something but we don't know what.'

(46) An example of an experimental stimulus:

A: Začem Ivanovy priezžali k Maše?
why Ivanovs arrived to Maša

'What did Ivanovs come to Maša for?'

B: Oni sovetovalis' **po povodu** čego-to, no ja ne
they consulted concerning something.GEN but I not
znaju, čego.
know what.GEN

'They consulted about something, but I don't know what.'

All the target sentences were structurally similar: they only contained instances of embedded sluicing, the remnant was always a simple *wh*-phrase (*who* or *what*), and the indefinite pronoun was always final in the antecedent clause.

18 native speakers of Russian participated in the experiment. They were asked to judge the presented sentences on the scale from 1 (bad) to 5 (good). The target sentences were presented in a pseudo-random order with 20 fillers, designed similarly to the target sentences but not containing any prepositions.

5.3.2 Results of the survey

The results of the survey are represented in Table 5.8 (mean and standard deviation). The results demonstrate the same general pattern that was observed for complex *wh*-remnants by Philippova (2014).

	0	**1**	**2**	**3**	**4-5**
mean	2.03	1.91	3.26	3.33	3.78
SD	1.16	0.92	1.26	1.33	1.02

Table 5.8: *Results of the survey on P-omission under sluicing with simple wh-phrases*

The results are similar to those of Philippova (2014), but they differ in the judgements for the omission of light prepositions: while omission of heavy prepositions was judged almost identically in both surveys, there is a crucial difference in the case of non- and monosyllabic prepositions. The omission of small prepositions from the remnant with bare *wh*-phrases results in considerably more degraded judgements.

I believe, however, that the number of syllables is not a precise representation of the phonological weight of a preposition. Some monosyllabic prepositions (such as *vsled* 'following') are arguably phonologically heavier than the others (such as *o* 'about'). For example, Philippova (2014) points out that the omission of the disyllabic preposition *čerez* 'through' receives lower judgements in her survey than the other bisyllabic preposition.

Below I argue that prepositions can be divided not into two but into three prosodic classes and that the possibility to omit a preposition under sluicing depends on its prosodic status.

5.4 Prosodic structures of Russian Ps

In this section, I propose recursive prosodic structure for certain Russian prepositions. Later, in section 5.5, I claim that P-omission under sluicing is sensitive to the prosodic status of a preposition, which leads to the conclusion that P-omission under sluicing is a post-syntactic process.

Based on the facts discussed above, I suggest that there are three phonological types of prepositions in Russian, which differ in their prosodic properties.

I adopt the structures for light and heavy prepositions from the previous literature. Light prepositions do not form ωs of their own but are combined with the following ωs, they can be either internal or affixal clitics, so both structures in (47a) and (47b) are possible, as discussed above.

(47)   a.   *Light P (affixal clitic)*   b.   *Light P (internal clitic)*

ω	ω
σ ω	σ σ
P word	P word

Phonologically heavy prepositions (such as *navstreču* 'towards') form an independent ω, as shown in (48). These prepositions behave as independent prosodic words with respect to stress, vowel reduction, and consonant devoicing.

(48)   *Heavy P (independent ω)*

```
        φ
       / \
      ω   ω
      |   |
      P  word
```
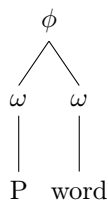
I propose that there is, in addition, an intermediate class of prepositions (such as *vokrug* 'around' and *okolo* 'near'), which have a recursive structure: they constitute ω by themselves, but they are also grouped together with the following ω into yet another, larger instance of ω, which is illustrated in (49).

(49)   *Intermediate P (recursive ω)*

```
        ω
       / \
      ω   ω
      |   |
      P  word
```
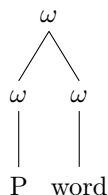
Phonologically it is easy to differentiate between lights prepositions on the one hand and intermediate and heavy prepositions on the other, since the former ones do not form a ω, while the latter ones do. Phonological differences between intermediate and heavy prepositions are more subtle: since they are ωs, they are expected to behave similarly with respect to vowel reduction, final devoicing, and consonant assimilation. The advantage of postulating two different structures for these two classes of prepositions is the possibility of explaining the less independent status of intermediate prepositions. As mentioned above, certain larger prepositions that I call intermediate here (for example, *krome* 'except, besides' and *meždu* 'between') are reported to be "weakly stressed" (Yadroff 1999, Švedova 1980).

The structure in (49) can capture this special quality of intermediate prepositions. The same structure is often proposed for compounds in different languages[18] (see Booij 1995, Ito & Mester 2006 among many others). Compounds are two prosodic words which are known to behave as a single phonological unit with respect to (at least) stress: they have a single main stress and a secondary stress. In Russian the second part of a compound, i.e. the right ω, carries the main stress. Consider (50): the

---

[18]However, see Gouskova (2011) for a different analysis of Russian compounds.

two words *oboróna* 'defense' and *sposóbnost'* 'capability' are connected
into a compound using the linking vowel *o* (which is a common strategy
of compound formation in Russian). While both words normally carry
stress, in the compound the stress of the second word is realised as a
secondary stress.

(50)   oboròn-o-sposóbnost' 'defense capability'   Gouskova (2011:7)

In the case of intermediate prepositions, their complement (the right ω)
carries main stress, while a preposition is "weakly stressed". If the weak
stress of intermediate prepositions and the secondary stress of compounds
are alike (which needs to be tested in future work), the proposed structure
represents it perfectly.

Intermediate prepositions are also the ones that have disputable status
with respect to the primary-secondary distinction. Section 5.2.1 mentions
that some of the prepositions traditionally classified as primary (*krome*
'except', *meždu* 'between', *radi* 'for the sake of') proved to be closer to
the secondary ones in Esjkova (1996). Recall that Esjkova discusses the
placement of a preposition with respect to the reciprocal pronoun *drug
druga* 'each other'. She notices that primary prepositions should always
be in the interposition (see (51a)), while secondary prepositions tend to
be preposed (51b) A closer examination reveals that it is the intermediate
prepositions that allow for both positions (51c).

(51)   a. *Light P: interposition*

            (**k**) drug (**k**) drugu
            to   each to   other

            'to each other'

        b. *Heavy P: preposed*

            (**blagodarja**) drug (***blagodarja**) drugu
            thanks to   each thanks to   other

            'thanks to each other'

        c. *Intermediate P: both*

            (**radi**) drug (**radi**) druga
            for   each for   other

            'for the sake of each other'

The same holds for negative pronouns such as *nikto* 'nobody' and *ničto*

'nothing', as shown in (52).[19,20] This once again indicates that there are three distinct classes of prepositions in Russian.

(52)   a.   *Light P: interposition*
          ***o** nikom   ni **o** kom
          'about nobody.PREP'
     b.   *Heavy P: preposed*
          navstreču nikomu   *ni **navstreču** komu
          'towards nobody.DAT'
     c.   *Intermediate P: both*
          posle nikogo   ni **posle** kogo
          'after nobody.GEN'

To conclude, the division of Russian prepositions into three distinct groups instead of two captures the data more accurately. The next section discusses the connection between the prosodic status of a preposition and its deletion under sluicing.

5.5   Accounting for P-omission in sluicing: Late phonological deletion

In the previous section, I argued that phonological weight reflects the prosodic status of a preposition and that there are not two but three prosodic types of prepositions in Russian. In this section, I propose that the possibility of P-omission under sluicing depends on the prosodic nature of a preposition.

The results of the survey described in section 5.3 can be regrouped to demonstrate this dependency. The mean values of sentences with P-omission in Table 5.9 are grouped with respect to the presumed prosodic status of the omitted preposition. This way three quite distinct groups emerge.

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[19]This may indicate that the position of a preposition with respect to certain pronouns is also affected by its prosodic status. However, it can also be the case that the prosodic status of a preposition reflects its syntactic or morphological characteristics. I leave this question open here.

[20]The morpheme *ni* occurs in the negative concord environments and cannot appear on its own (without clausal negation).

	light Ps $(\text{fnc } (\text{lex})_\omega)_\omega$	**intermediate Ps** $((\text{fnc})_\omega \ (\text{lex})_\omega)_\omega$	**heavy Ps** $(\text{fnc})_\omega \ (\text{lex})_\omega$
mean	1.96	3.13	3.82
SD	1.02	1.29	1.03

Table 5.9: *Mean judgements of sentences with P-omission from section 5.3 regrouped in terms of prosodic structure*

Table 5.10 shows which prepositions used in the survey are categorised as light, intermediate, or heavy.

LIGHT		**INTERMEDIATE**		**HEAVY**	
s	'with'	vsled	'following after'	vopreki	'despite'
k	'to'	protiv	'against'	navstrečku	'towards'
dlja	'for'	nazlo	'to spite'	po povodu	'regarding'
po	'along'	nasčët	'concerning'	blagodarja	'thanks to'
u	'at'	okolo	'near'	otnositel'no	'regarding'

Table 5.10: *Prepositions used in the survey on P-omission under sluicing with simple wh-phrases*

The main question now is: why is it the case that phonologically heavy prepositions can be omitted more easily than light prepositions? If one considers that the PSG holds, P-omission under sluicing is predicted to be ungrammatical regardless the phonological weight of a preposition. However, as the results of the survey show, this prediction is not borne out. For example, the trisyllabic preposition *okolo* 'near' cannot be stranded under regular *wh*-movement (53a) but its omission under sluicing is much more acceptable (53b).

(53)   a.   * Ona sidela **okolo** čego-to,   no ja ne videla,
                she sat   near   something.GEN but I not saw
                čego   ona sidela **okolo**.
                what.GEN she sat   near
                'She was sitting near something, but I didn't see what she was sitting near.'

       b.   ? Ona sidela **okolo** čego-to,   no ja ne videla,
                she sat   near   something.GEN but I not saw
                čego.
                what.GEN
                'She was sitting near something, but I didn't see what.'

Since I assume that PSG holds, I adhere to the analysis proposed in Stjepanović (2008, 2012) for Serbo-Croatian and assume that P-less sluices such as (53b) do not involve P-stranding in the ellipsis site.

Recall thatStjepanović introduces a separate operation of preposition deletion under sluicing, which comes into effect only after sluicing takes place. In (54), the derivation is demonstrated on a Russian example: (54a) shows the whole PP moving out of the ellipsis site; in (54b) the TP gets elided, and only after that, as can be seen from (54c), the preposition is deleted (indicated by the grey colour).

(54) Stepwise derivation of P-omission under sluicing in Russian:

    a. *Step 1. Wh-movement with the pied-piped preposition*

      Ona sidela okolo kogo-to, no ja ne videl, [$_{CP}$ [**okolo**
      she sat near someone.GEN but I not saw near
      kogo]$_i$ [$_{TP}$ ona sidela t$_i$].
      who.GEN she sat

    b. *Step 2. TP-deletion*

      Ona sidela okolo kogo-to, no ja ne videl, [$_{CP}$ **okolo**
      she sat near someone.GEN but I not saw near
      kogo [$_{TP}$ ~~ona sidela~~]].
      who.GEN she sat

    c. *Step 3. P-omission*

      Ona sidela okolo kogo-to, no ja ne videl, [$_{CP}$ okolo
      she sat near someone.GEN but I not saw near
      kogo].
      who.GEN

    'She was sitting near someone, but I didn't see who.'

Since a preposition cannot be omitted without sluicing, the right conditions for the deletion of the preposition must be created after TP-deletion. Stjepanović finds the reasons for which this P-omission occurs "somewhat mysterious", but believes that it takes place at PF. The data presented here confirms this hypothesis, since P-omission is shown to be sensitive to the prosodic organisation of a sentence.

P-omission cannot delete a unit smaller than a prosodic word: deletion of a preposition adjoined to the next ω, but not forming a ω by itself (light Ps) is generally banned, see (55a). Although degraded, the deletion of parts of a ω is tolerated as long as the domain of deletion is minimally a ω itself (intermediate Ps, (55b)). Deletion of a free ω (i.e. heavy Ps, (55c)) is allowed.

(55)   a. *Ban on deletion of a sub-ω*

        * On ženilsja na kom-to,   no nikto ne znaet,
           He married on somebody.PREP but nobody not know

        (na $(\text{kom})_\omega)_\omega$.
        on   who.PREP

        'He married somebody, but nobody knows who.'

   b. *Degraded deletion of an embedded ω*

        ? Ona sidela okolo čego-to,   no ja ne videla,
          she sat   near something.GEN but I not saw

        ($(\text{okolo})_\omega$ $(\text{čego})_\omega)_\omega$.
        near   what.GEN

        'She was sitting near something, but I didn't see what'

   c. *Deletion of an independent ω*

        Oni sovetovalis' po povodu čego-to,   no ja ne
        they consulted   concerning something.GEN but I not

        znaju, $(\text{po povodu})_\omega$ $(\text{čego})_\omega$.
        know concerning   what.GEN

        'They consulted about something, but I don't know what.'

A condition on P-omission can therefore be formulated as (56).

(56)   *A condition on P-omission under sluicing*
       The domain of P-omission is minimally a ω.

The sensitivity of P-omission to the prosodic structure reveals its late timing and confirms that it operates late at PF, at least after the formation of the prosodic structure of a sentence.

Another question is whether this proposal can be extended to multiple sluicing and other types of ellipsis. As a multiple *wh*-fronting language, Russian naturally allows for sluicing with multiple remnants (see Grebenyova 2009, 2012), but forbids P-omission in these cases.

(57)   Každyj rebënok tanceval s   kem-to,   no ja ne
       every child   danced with someone.INST but I not

       pomnu,   kto *(s) kem.
       remember who with who.INST

       lit: 'Every child danced with somebody but I don't remember who with whom'.

According to my intuition, the omission of a heavy preposition leads to a better result than omission of a light preposition even in multiple sluicing, compare (57) and (58).

(58) Každyj rebënok vybežal navstreču komu-to, no ja ne
    every child ran.out towards someone.DAT but I not
    znaju, kto [?](navstreču) komu.
    know who towards who.DAT

    lit: 'Every child ran out towards somebody but I don't know who towards whom'.

It is important to keep in mind that prosody plays an important role for the acceptability of P-omission. According to some speakers, sentences like (58) with the omitted preposition become much more acceptable while pronouncing it with the longer pause between the two *wh*-remnants (possibly forcing their parsing into separate prosodic units). Stressing the preposition in the antecedent clause also helps to improve sentences with P-omission. The influence of the prosodic pattern of the P-less sluices on their well-formedness remains to be determined.

As for other types of ellipsis, P-omission seems possible under gapping as well. In this case it is subject to the same prosodic restrictions: (59a) with the light preposition missing is much less acceptable than (59b) with omission of the heavy preposition (the judgements are mine).

(59) a. Vanja šël k sestre, a Katja – *(k) bratu.
       Vanja went to sister and Katja to brother

       'Vanja was going to his sister, and Katija (to) her brother.'

   b. Vanja šël navstreču sestre, a Katja – (navstreču)
       Vanja went towards sister and Katja towards
       bratu.
       brother

       'Vanja was going towards his sister, and Katija (towards) her brother.'

A question that remains open is why P-omission cannot occur without sluicing. P-less non-elliptical sentences, such as (60), are ungrammatical.

(60) * Ona sidela okolo kogo-to, no ja ne videl, ~~okolo~~
       she sat near someone.GEN but I not saw near
       kogo ona sidela.
       who.GEN she sat

       int: 'She was sitting near someone, but I didn't see (near) who she sat'.

While an explanation of this connection between P-omission and sluicing is still to be found, the plausibility of the analysis of P-omission under

sluicing in terms of the late phonological deletion of a preposition is supported by the fact that similar ellipsis-dependent instances of omission have been proposed for other languages.

An (2016, 2019) describes what he calls "extra deletion" (ED) in Korean. He shows that in fragment answers and right node raising contexts case markers, postpositions, and sometimes even head nouns can be deleted when adjacent to the ellipsis site. He argues that in these cases, PF-deletion of a constituent (in this case, TP) extends into the remnant. Example (61) demonstrates the way in which a caseless fragment answer is derived: after the remnant moves out of the ellipsis site, the TP is elided by the standard PF deletion process, which extends and deletes "a bit more", in this case the case marker (indicated with bold strikethrough). ED in Korean is therefore a process quite similar to P-omission in Russian.

(61) Q: nwu-ka   John-ul   manna-ss-ni?
          who-NOM John-ACC meet-PAST-Q
          'Who met John?'

      A: Mary- **ka**$_i$ [$_{TP}$ t$_i$ ~~John-ul~~   ~~manna-ss-e~~]
          Mary-NOM   John-ACC meet-PAST-DEC
          'Mary (met John).'

An emphasises that ED operates on a string because the elided material has to be linearly adjacent to the ellipsis site. (62a) is similar to the answer in (61), it shows that the omission of a case marker adjacent to the ellipsis site is allowed. (62b) on the other hand is ungrammatical. According to An, this is precisely because the deleted string is discontinuous: the omitted nominative marker is not adjacent to the material which undergoes ellipsis during the fragment answer formation.

(62) nwu-ka   nwukwu-lul manna-ss-ni?
      who-NOM who-ACC   meet-PAST-Q
      'Who met whom?'

      a.   Cho-ka$_i$ Yang- **ul**$_j$ [$_{TP}$ t$_i$ t$_j$ ~~manna-ss-e~~]
            Cho-NOM Yang-ACC   meet-PAST-DEC
            'Cho (met) Yang.'

      b. * Cho- **ka**$_i$ Yang- **ul**$_j$ [$_{TP}$ t$_i$ t$_j$ ~~manna-ss-e~~]
            Cho-NOM Yang-ACC   meet-PAST-DEC

This is not the case for P-omission in Russian and Serbo-Croatian: the preposition is separated from the ellipsis site by the *wh*-word.[21] Therefore if P-omission and ED have the same restrictions, (63) should be banned, which is not the case.

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[21] This is of course only true under the *move-and-delete* approach to sluicing, adopted here.

(63) ? Ona sidela okolo kogo-to,   no ja ne videl, [okolo
      she sat   near someone.GEN but I not saw   near

      kogo]$_i$ [~~ona sidela t$_i$~~].
      who.GEN she sat

      'She was sitting near someone, but I didn't see who.'

It is still possible that P-omission is an operation of the same type as
the extra deletion proposed by An. It can be the case that the edge from
which the extra deletion is allowed is language-specific: while it is the
right edge of some prosodic domain for Korean, it is the left edge for
Russian. The adjacency to the ellipsis site in Korean might therefore be
a coincidence. [22]

5.6   Conclusion

This chapter explores the interaction of phonologically weak items with el-
lipsis in the case of P-omission under sluicing in Russian. Cross-linguistically,
there are three options why a preposition can go missing from the sluicing
remnant:

(a) the preposition is stranded inside the ellipsis site;

(b) the source of ellipsis is not isomorphic to the antecedent and does
     not include a preposition;

(c) the preposition is deleted by a separate post-syntactic operation.

It is possible that all three options are available for Russian, since i) there
are strandable prepositions in Russian; ii) the possibility to interpret a
sluiced remnant as a cleft pivot makes P-omission more acceptable; iii)
P-omission is still possible for non-strandable prepositions and when the
remnant cannot be interpreted as a cleft pivot, and it is sensitive to the
prosodic status of a preposition.

If P-omission in Russian is sensitive to the prosodic organisation of a
sentence and is thus a late PF process, it can be viewed as a purely
phonological deletion. Stjepanović (2012) observes that conditions on P-
omission under sluicing are the same as conditions on deaccentuation:

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[22] Another deletion operation (potentially similar to P-omission) which is parasitic on el-
lipsis is determiner deletion under gapping, as proposed by Schwarzer (2019). She proposes
that cases like (i) involve gapping followed by the left edge deletion (indicated by the grey
colour).

(i)   John will always kiss all the girls first and ~~kiss~~ all the boys after.

the omitted preposition should be given and it cannot be (contrastively) focused. It can be the case that P-omission is actually a case of radical deaccenting. Ellipsis was analysed as radical deaccenting in Tancredi (1992), Chomsky & Lasnik (1993):

> ...elliptical sentences are formed by a rule of the PF component that deletes the phonologically redundant information that is characterised by a distinguished low-flat intonation.
>
> Chomsky & Lasnik (1993:564)

Being given, a preposition in a sluiced remnant can readily be considered "redundant information". It can only be deaccented, however, if it does not cliticise to the focused *wh*-element.

Separating P-omission from sluicing potentially expands our understanding of elliptical processes: while there are undoubtedly types of ellipsis licensed syntactically (e.g. sluicing, VP ellipsis, NP ellipsis, etc.), there are also instances of ellipsis occurring exclusively at PF, such as P-omission under sluicing in Russian (and potentially in Serbo-Croatian and other non-P-stranding languages) and extra deletion in fragment answers and right node raising environments in Korean.

Conclusion and future prospects

6.1 Summary and conclusions

This dissertation has shed new light on the interaction between ellipsis and clitics in various aspects. The main focus of my work is on what this interaction can reveal about the timing of ellipsis and cliticisation.

In chapters 3 and 4 I explored how VP-ellipsis affects the placement of second position clitics. Surprisingly, although on the surface the systems of second position cliticisation is quite similar in Serbo-Croatian and Slovenian, clitics behave completely differently under VP-ellipsis. My experimental studies show that while in Serbo-Croatian they must be elided, in Slovenian they must remain outside the ellipsis site:

(1) 2P clitics and VP-ellipsis: Serbo-Croatian

    a.   *Mi *smo*   *ih*   videli, a   i   oni   *su*   ***ih***,
          we AUX.1PL them seen   and also they AUX.3PL them
          takodje.
          too
          'We saw them, and they did, too.'

    b.   Mi *smo*   *ih*   videli, a   i   oni   *su,*   takodje.
          we AUX.1PL them seen   and also they AUX.3PL too

(2) 2P clitics and VP-ellipsis: Slovenian

    a.   Maja *jih*   *je*   videla in   jaz *sem*   ***jih***   tudi.
        Maja them AUX.3SG seen   and I   AUX.1SG them too

        'Maja have seen them and I have, too.'

    b.   * Maja *jih*   *je*   videla in   jaz *sem*   tudi.
        Maja them AUX.3SG seen   and I   AUX.1SG too

Based on this and some other factors reported in the previous literature, I conclude that the 2P clitic placement is phonological in nature in SC but syntactic in Slvn. That means that in Serbo-Croatian clitics are placed into the second position post-syntactically. I propose that clitics and their strong counterparts are different Vocabulary Items, and clitics have lexical requirement to appear in the second position. In Slovenian, on the other hand, clitics occupy a high position in the syntactic structure (which I have identified as as the Polarity Phrase).

The main line of my reasoning is as follows. For Serbo-Croatian second position clitics, there is in fact no motivation for postulating any kind of special syntactic properties. While clitics in this language are sensitive to their prosodic environment (such as the Intonational Phrase boundaries), there appears to be no syntactic restrictions on clitic placement that cannot be explained via the rules of syntax-prosody mapping.

In Slvn, on the other hand, second position clitics show no sensitivity to the prosodic organisation of an utterance: they can be either proclitics or enclitics, can appear right after a prosodic break and can even receive stress in some cases (in particular under verum focus). These characteristics, especially the last one, indicate that Slovenian second position clitics appear in a particular syntactic position and can later adjust to their prosodic environment.

Importantly, the comparison between Serbo-Croatian and Slovenian reveals characteristics of second position cliticisation that could remain unnoticed or be misanalysed when considering each language in isolation. Given that the studies that I carried out for both languages are similar and that I keep the theoretical assumptions about ellipsis the same, the fact that SC and Slvn do not behave the same is unquestionably related to the nature of cliticisation in the two languages.

In chapter 5, I explore a different phenomenon: preposition omission under sluicing. As it is clear from the discussion, P-omission in Russian cannot be accounted for by assuming that the omitted preposition is stranded in the ellipsis site since Russian is a non-P-stranding language and the pseudo-sluicing account cannot be applied to it either. After rejecting various morphosyntactic characteristics of prepositions potentially affecting P-omission, based on the results of the survey, I conclude that

P-omission is sensitive to the prosodic status of the omitted preposition and that the preposition is in fact deleted post-syntactically.

I suggest that there are in fact three prosodic types of prepositions in Russian: light ones, which are clitics and do not form independent ωs (3a), heavy ones, which are independent ωs (3c), and intermediate ones, which are ωs embedded under another ω (3b).

Based on the results of my acceptability survey, I formulate the condition on P-omission: the domain of P-omission is minimally a ω.

(3)   a.   *Ban on deletion of a sub-ω*

      * On ženilsja na kom-to,   no nikto   ne znaet,
        He married on somebody.PREP but nobody not know

      (na (kom)$_\omega$)$_\omega$.
        on   who.PREP

      'He married somebody, but nobody knows who.'

   b.   *Degraded deletion of an embedded ω*

      ? Ona sidela okolo čego-to,   no ja ne videla,
        she sat   near something.GEN but I not saw

      ((okolo) $_\omega$ (čego)$_\omega$)$_\omega$.
        near   what.GEN

      'She was sitting near something, but I didn't see what'

   c.   *Deletion of an independent ω*

      Oni sovetovalis' po povodu čego-to,   no ja ne
      they consulted   concerning something.GEN but I not

      znaju, (po povodu) $_\omega$ (čego)$_\omega$.
      know   concerning   what.GEN

      'They consulted about something, but I don't know what.'

Both the cliticisation studies and the Russian P-omission study show the importance of consulting considerable amount of native speakers for grammaticality judgements. To give an example, it has been an open debate for two decades whether Serbo-Croatian clitics can survive ellipsis. Using the methodology of systematic collection of acceptability judgements, my study has shown that even though there is quite a lot of variation in this respect, there also is indisputable strong preference for eliding clitics under VP-ellipsis.

Online grammaticality judgement surveys, however, have their drawbacks. First, it is not always easy to find a required amount of speakers and, more importantly, it is almost impossible to control for the amount of attention they put into filling out the questionnaire. Second, it is also challenging to control for every potentially intervening factor while designing the stimuli, since it would lead to almost identical experimental sentences, which

would in turn lead to the syntactic satiation effect, when ungrammatical sentences appear acceptable to speakers after a number of repeated exposures (Snyder 2000). This problem can potentially be avoided by using a great number of fillers in a survey, but this solution would create a problem of its own if carried out in the (preferred) within-subject design: the survey would become too long and speakers would lose their concentration and possibly would not even complete the questionnaire.

One solution to these issues, as I see it, is going one step at a time and starting with establishing the baseline for a particular phenomenon by first exploring its simplest aspects (such as P-omission with simple *wh*-phrases and prepositions that only assign a particular case to its complement). This is the approach I adopt in my research presented in this dissertation.

6.2   Future prospects

The interaction of phonologically weak items and ellipsis, to my knowledge, has not received proper attention in linguistic research. In this dissertation I have tried to expand our knowledge on this interaction but a considerable amount of issues remain open.

First of all, a logical continuation of the research on the interaction of second position clitics and ellipsis would be to investigate other types of ellipsis more closely. Here I focus mostly on VP-ellipsis but I also provide some initial data for other arguably elliptical processes, such as gapping and right node raising. The results for Serbo-Croatian, for example, show that unlike VP-ellipsis, right rode raising allows both stranding or deletion of pronominal second position clitics:

(4)   Ana (*ga*)   nije,   a   Nada *ga*   jeste   poljubila.
      Ana he.ACC AUX.3SG.NEG but Nada he.ACC AUX.3SG kissed

      'Ana didn't but Nada did kiss him.'

The behaviour of clitics has potential to inform us about the differences between various types of ellipsis unnoticed before, including the differences in their timing. Right node raising has been argued to be a post-syntactic deletion process by Hartmann (2000). That potentially can explain the behaviour of clitics in (4): both being post-syntactic process, clitic placement in SC and right node raising might not be strictly ordered with respect to each other. More data need to be obtained, however, before any conclusions can be made.

Another aspect of the interaction of second position clitics which needs to be explored further is what happens with clusters containing more than

one pronominal clitics. In my research I focus on the most simple cases with one pronominal and one auxiliary clitic. According to Stjepanović (1998), one of the two pronominal clitics can be elided, as long as it is the lower one, compare (5a) and (5b).

(5) Stjepanović (1998:532)

    a.   Mi *smo*   *mu*   *ga*   dali, a   i   vi   *ste*
         we AUX.1PL he.DAT it.ACC given and also you AUX.2PL
         mu   ***ga***   ~~dali~~.
         he.DAT it.ACC given
         'We gave it to him, and you did, too.'

    b. * Mi *smo*   *mu*   *ga*   dali, a   i   vi   *ste*
         we AUX.1PL he.DAT it.ACC given and also you AUX.2PL
         ~~***mu***~~   ***ga***   ~~dali~~.
         he.DAT it.ACC given
         'We gave it to him, and you did, too.'

The results of my study presented in chapter 3 show that stranding of one of the two pronominal clitics (6a) is equally ungrammatical to stranding of both pronominal clitics (6b); both clitics must be elided (6c).[1]

(6) Results of my study

    a. * Mi *smo*   *mu*   *ga*   dali, a   i   vi   *ste*
         we AUX.1PL he.DAT it.ACC given and also you AUX.2PL
         mu   ***ga***   ~~dali~~.
         he.DAT it.ACC given
         'We gave it to him, and you did, too.'

    b. * Mi *smo*   *mu*   *ga*   dali, a   i   vi   *ste*
         we AUX.1PL he.DAT it.ACC given and also you AUX.2PL
         mu   ***ga***   ~~dali~~.
         he.DAT it.ACC given
         'We gave it to him, and you did, too.'

    c.   Mi *smo*   *mu*   *ga*   dali, a   i   vi   *ste*
         we AUX.1PL he.DAT it.ACC given and also you AUX.2PL
         ~~***mu***~~   ~~***ga***~~   ~~dali~~.
         he.DAT it.ACC given
         'We gave it to him, and you did, too.'

Further research is therefore required to determine the nature of the variation. While Serbo-Croatian clitics have been studied studied quite thoroughly in previous works, I am not aware of any research exploring the

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[1] The survey was not designed to investigate complex clitic cluster and therefore only contained one example with two pronominal clitics in a cluster.

variation within the systems of second position cliticisation. As discussed in chapter 3, there is a great deal of variation in the data. The factors affecting the variation in clitic stranding under VP-ellipsis and other elliptical operations are one of the topics that must be investigated further. At this point, it is not quite clear if the variation is caused by dialectal or other factors.

Slovenian second position clitics are also an under-researched topic, despite their unique ability to serve as an elliptical answer to a polarity question. One of the facts that I only briefly mention here but that deserves further exploration is that while normally pronominal and auxiliary second position clitics must survive predicate ellipsis in Slovenian, they only appear optionally when the particle *pa* is present, compare (7a) and (7b).

(7)   a.   V Ljubljano *ga je*   poslala, v Zagreb *pa* ne.
           to Ljubljana it AUX.3SG sent   to Zagreb PA NEG

           'To Ljubljana, she sent it, to Zagreb, she didn't.'

      b.   V Ljubljano *ga*   *je*   poslala, v Zagreb *pa ga*
           to Ljubljana it.ACC AUX.3SG sent   to Zagreb PA it.ACC

           ni.
           AUX.3SG.NEG

           'To Ljubljano, she sent it, to Zagreb, she didn't.'

It is clear from the discussion in chapter 4 that second position clitics are closely connected with polarity in Slovenian. The exact nature of this connection however needs to be established.

Apart from the above, the interaction of clitics and ellipsis has to be researched cross-linguistically, both in other languages with second position clitics (such as Czech, Slovak, and a number of non-Slavic languages)and languages with other clitic systems (such as Bulgarian and Macedonian, for example, in which clausal clitics have to be adjacent to the verb).

With respect to P-omission under sluicing, many questions remain unanswered as well. First of all, experimental phonetic studies are necessary to confirm my hypothesis about the three distinct types of prepositions in Russian. While sometimes descriptively the prepositions that I call intermediate are described as "weakly stressed", I am not aware of any strict definition of what weak stress is or explanations of what its phonetic correlates are and how they are different from "normal" stress. Second, the effect of the prosodic status of a preposition in P-omission has to be tested for other non-P-stranding languages.

More generally, there are various other prospects for future research in the area of relative timing of ellipsis and other processes. Ellipsis can be potentially used as a diagnostic tool for the timing of other types of

movement (besides clitic movement) and reordering or other operations the timing of which is debatable.

Finally, some operations of deletion might need to be re-evaluated with respect to their timing, just like P-omission under sluicing. Explaining P-omission as a separate post-syntactic deletion (instead of a result of sluicing) of a preposition not only accounts for the facts better but also allows us to avoid complicating the operation of sluicing itself. P-omission and left edge deletion together form a group of purely post-syntactic deletion processes; whether or not there are more operations of the same kind and how to constrain such operations remains a subject for further research.

Appendix A: Serbo-Croatian

Listed below are the experimental dialogues used in the survey on Serbo-Croatian second position clitics discussed in chapter 3.

(1) Q: Da li znate da li su Novak i Milan ovde? Da li ih je neko video?
         Do you know if Novak and Milan are here? Have anyone seen them?

     A: Mi smo ih videli, a i oni su (ih), takodje.
         We saw them and they did, too.

(2) Q: Milan me je zvao juče! Ko mu je dao moj broj?
         Milan called me yesterday! Who gave him my number?

     A: Mi smo mu ga dali, a i oni su (mu ga), takodje.
         We gave it to him and they did, too.

(3) Q: Ne mogu pronaci pokloni za baku! Da li je neko ih kupio?
         I can't find gifts for Grandma! Did anyone buy them?

     A: Mi ih nismo kupili, a oni (ih) jesu.
         We didn't buy them but they did.

(4) Q: Zašto je Miloš tako srecan? Da li ga je Ana poljubila na zabavi?
         Why is Miloš so happy? Did Ana kissed him at the party?

     A: Ana ga nije poljubila, a Jelena (ga) jeste.
         Ana didn't kiss him but Jelena did.

(5) Q: Milan me je zvao juče! Ko mu je dao moj broj?
         Milan called me yesterday! Who gave him my number?

     A: Mi (mu ga) nismo, a oni mu ga jesu dali.
         We didn't but they did give it to him.

(6) Q: Zašto je Miloš tako srećan? Da li ga je Ana poljubila na
          zabavi?
          Why is Miloš so happy? Did Ana kissed him at the party?

     A: Ana (ga) nije, a Nada ga jeste poljubila.
          Ana didn't but Nada did kiss him.

(7) Q: Da li je Ana srela Milana na aerodromu?
          Has Ana met Milan at the airport?

     A: Ana ga nije srela, a Nada je rekla da (ga) jeste.
          Ana didn't meet him but Nada said that she did.

(8) Q: Da li znate da li su Novak i Milan ovde? Da li ih je neko video?
          Do you know if Novak and Milan are here? Have anyone seen
          them?

     A: Mi ga nismo videli, a oni su rekli da (ga) jesu.
          We didn't see him but they said that they did.

(9) Q: Da li znate kada su rodjaci i policajci vide lopove?
          Do you know when the parents and the police saw the thieves?

     A: Rodjaci su ih videli ujutro, a policajci (ih) uveče.
          The parents saw them in the morning and the police in the
          evening.

(10) Q: Ko je šta dao Milanu za rođendan?
          Who gave what to Milan for his birthday?

     A: Ana mu je dala knjigu, a Nada (mu) šolju.
          Ana gave him a book and Nada a cup.

(11) Q: Da li znaš kada su deca izgubila ključeve?
          Do you know when the kids lost the keys?

     A: Znam kada smo ih mi izgubili, ali ne znam kada su (ih) deca.
          I know when we lost them, but I don't know when the kids
          did.

(12) Q: Da li znaš šta su gosti dali Mariji za rođendan?
          Do you know what the guests gave Marija for her birthday?

     A: Znam šta su joj prijateli dali, ali ne znam šta su (joj) rodjaci.
          I know what her friends gave to her but I don't know what
          her parents did.

Listed below are the experimental dialogues used in the survey on Slovenian second position clitics introduced in chapter 4.

Predicate ellipsis

(1) Q: Ali veš, če so glasbeniki že tukaj? Ali jih je kdo videl?
         Do you know if the musicians are here already? Have anyone seen them?

     A: Maja jih je videla in jaz sem (jih) tudi.
         Maja has seen them and I have seen them too.

(2) Q: Ali boste obiskali prijatelje, medtem ko ste tukaj?
         Are you going to visit your friends while you are here?

     A: Ja. Marija nas je povabila na večerjo in Ana (nas) je tudi.
         Yes. Marija invited us for dinner and Ana did too.

(3) Q: Kje je vse vino? Ga je kdo včeraj spil?
         Where is all the wine? Did anyone drink it yesterday?

     A: Slišal sem, da (ga) je Ana.
         I've heard that Ana did.

(4) Q: Ali poznaš Janeza? Ne morem verjeti, da ga Mojca ni nikoli srečala!
         Do you know Janez? I can't believe Mojca has never met him!

     A: Ne morem verjeti, da (ga) tudi Ana ni!
         I can't believe that neither did Ana!

(5) Q: Why is Anton so happy? Have Maja kissed him?
     Zakaj je Anton tako srečen? Ga je Maja poljubila?

   A: Maja (ga) ni, Nada pa ga je poljubila.
      Maja didn't but Nada did kiss him.

(6) Q: Ali so vaši učenci včeraj končali članek?
     Did your students finish the article yesterday?

   A: Marija (ga) je, Ana pa ga še ni končala.
      Marija did but Ana didn't finish it yet.

(7) Q: Ali boste obiskali prijatelje, medtem ko ste tukaj?
     Are you going to visit your friends while you are here?

   A: Ja. Marija nas vabi na večerjo in Ana (nas) na kosilo.
      Yes. Marija invited us for dinner and for lunch.

(8) Q: Ali so vaši učenci včeraj končali članek?
     Did your students finish the article yesterday?

   A: Marija ga je končala včeraj, Ana pa (ga) danes. Marija finished it yesterday but Ana today.

Clitic answers

(9) Q: Si videl vino? Ali veš, če ga je Ana kupila?
     Have you seen the wine? Do you know if Ana bought it?

   A: Mislim, da ga je.

   A': Mislim, da ga.

   A": Mislim, da je.
       I think she did.

(10) Q: Si videl vino? Ali veš, če ga je Ana kupila?
      Have you seen the wine? Do you know if Ana bought it?

   A: Ja, ga je.

   A': Ja, ga.
       Yes.

(11) Q: Ali vas je Marija povabila na večerjo?
      Have Marija invited you for dinner?

   A: Nas je.

   A': Nas.

   A": Je.
       Yes.

(12) Q: Ali vas je Marija povabila na večerjo?
   Have Marija invited you for dinner?

   A: Ni nas.

   A': Ni.

   A': Nas ni.
   No.

(13) Q: Ali veš, če so glasbeniki že tukaj? Si jih videl?
   Do you know if the musician are already here? have you seen
   them?

   A: Sem jih.

   A': Sem.

   A": Jih.
   Yes.

(14) Q: Ali veš, če so glasbeniki že tukaj? Si jih videl?
   Do you know if the musician are already here? have you seen
   them?

   A: Nisem jih.

   A': Nisem.

(15) Q: Si ze končal delo?
   Have you finished the work?

   A: Predvčerajšnjim še ne, včeraj pa sem ga.

   A': Predvčerajšnjim še ne, včeraj pa sem.
   The day before yesterday, I haven't, yesterday, I have.

(16) Q: Si mu ga dal?
   Did you give it to him?

   A: Se mu ga.

   A': Mu ga.

   A": Ga.
   Yes.

(17) Q: Ali so vaši učenci končali članek?
   Did your students finish the article?

   A: Marija ga je vceraj.

   A': Marija je vceraj.

   A": Marija ga vceraj.
   Marija did yesterday.

Appendix C: Russian

Listed below are the experimental dialogues used in the survey on P-omission under sluicing in Russian introduced in chapter 5.

(1) Q: A: Objasni mne, otkuda voodšče fokusnik vzjal éti časy?
Explain it to me, where from did the magician get this watch in the first place?

A: Dolžno byt', on nezametno snjal ih s kogo-to, no ja ne videl, kogo.
Probably, he imperceptibly took it off <from> somebody, but I didn't see who.

(2) Q: Počemu Vladimir Vladimirovič zapersja v svoëm kabinete?
Why has Vladimir Vladimirovich locked himself up in his office?

A: On gotovitsja k čemu-to, no my ne znaem, čemu.
He is preparing for something, but we don't know what.

(3) Q: Počemu segonja vse govorjat o Ruslane?
Why is everyone talking about Ruslan today?

A: On kupil kol'co dlja kogo-to, no nikto ne znaet, kogo.
He bought a ring for someone, but nobody knows who.

(4) Q: Tatjana uže dva časa smotrit v okno. Vsë xorošo?
Tatiana has been looking out of the window for 2 hours now. Is everything fine?

A: Ona toskuet po komu-to, no ne govorit, komu.
She misses <on> somebody, but she is not saying who.

(5) Q: Tvoj brat kupil novuju mašinu? Otkuda on vzjal stol'ko deneg?
         Have your brother bought a new car? Where form did he get
         so much money?

     A: Vrode by on zanjal ix u kogo-to, no ja ne znaju, kogo.
         Probably he borrowed it from somebody, but I don't know
         who.

(6) Q: On byl odin, kogda ty k nemu podošël?
         Was he alone when you approached him?

     A: Da, i on mazal vsled komu-to, no ja ne videl, komu.
         Yes, and he was waving to somebody, but I didn't see who.

(7) Q: Počemu tvoego otca uvolili?
         Why was your father fired?

     A: On progolosoval protiv kogo-to, no my ne znaem, kogo.
         He voted against something, but we don't know what.

(8) Q: Počemu segonja vse govorjat o Ruslane?
         Why is everyone talking about Ruslan today?

     A: Govorjat, on ženilsja nazlo komu-to, no ja ne znaju, komu.
         They say he got married to spite somebody, but we don't
         know who.

(9) Q: Začem Ivanovy priezžali k Maše?
         Why did the Ivanovs come to Masha?

     A: Oni sovetovalis' nasčët čego-to, no ja ne znaju, čego.
         The consulted about something, but I don't know what.

(10) Q: Ty ne znaješ, gde Andrej?
         Do you know where Andrej is?

     A: Von on, stoit okolo kogo-to, no ja ne vižu, kogo.
         There he is, standing near somebody, but I don't see who.

(11) Q: Počemu ix svad'ba prošla tajno?
         Why did they marry each other secretly?

     A: Oni ženilis' vopreki komu-to, no ja ne pomnu, komu.
         They married despite somebody, but I don't remember who.

(12) Q: Počemu on v itoge ne stal vydvigat' obvinenija?
         Why didn't he press charges in the end?

     A: On pošël navstreču komu-to, no ja ne znaju, komu.
         He bended before (lit: came towards) somebody, but I don't
         know, who.

(13)   Q: Začem Ivanovy priezžali k Maše?
           Why did the Ivanovs come to Masha?

          A: Oni sovetovalis' po povodu čego-to, no ja ne znaju, čego.
           The consulted about something, but I don't know what.

(14)   Q: Počemu ona pešila stat' balerinoj v Bolšom Teatre?
           Why did she decide to become a ballerina in the Bolshoy theatre?

          A: Iznčal'no ona popala tuda blagodarja komu-to, no ja ne pomnu, komu.
           Initially she got into it because of somebody, but I don't remember who.

(15)   Q: Aleksandr Vladimirovič govoril čto-nibud' vo vremja kruglogo stola?
           Did Alexander Vladimirovich say something during the round table? .

          A: Da, on vyskazalsja otnositel'no čego-to, no ja ne pomnu, čego.
           Yes, he spoke about something, but I do not remember what.

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De ondraaglijke lichtheid van clitics

Dit proefschrift onderzoekt de interactie tussen verschillende soorten fonologisch zwakke elementen (*clitics*) en verschillende vormen van ellipsis (met name *VP-ellipsis* en *sluicing*). De kernvraag is wat deze interactie ons kan vertellen over wanneer ellipsis en cliticisatie plaatsvinden. Er wordt vooral gekeken naar Slavische talen, met name het Servo-Kroatisch, het Sloveens, en het Russisch.

Wanneer ellipsis plaatsvindt is een lastige vraag. Op het eerste gezicht lijkt ellipsis slechts het niet uitspreken van een overbodig onderdeel van een zin te zijn: het enige verschil tussen (1a) en (1b) is dat die laatste herhaling vermijdt van het onderdeel van de zin dat makkelijk begrepen kan worden zonder dat het uitgesproken wordt (dat onderdeel is de deelzin *denkt dat ik mijn proefschrift kan afronden*).

(1) a. Lisa denkt dat ik mijn proefschrift kan afronden, en Anikó denkt dat ik mijn proefschrift kan afronden.
     b. Lisa denkt dat ik mijn proefschrift kan afronden, en Anikó ook.

Over het algemeen wordt er echter aangenomen dat zinnen met ellipsis, zoals (1b), een syntactische structuur hebben die niet uitgesproken wordt:

(2) Lisa denkt dat ik mijn proefschrift kan afronden en Anikó denkt ook [~~dat ik mijn proefschrift kan afronden~~].

Als we dit aannemen, wordt duidelijk dat ellipsis een effect heeft op de fonologische vorm van een zin: op één of andere manier vertelt het de grammatica om zich niet aan de regels te houden, en een onderdeel van

de zin niet uit te spreken. De vraag is nu of ellipsis ook bestaat in andere onderdelen van de grammatica. Dit wordt bedoelt met de vraag wanneer ellipsis plaatsvindt: vindt ellipsis alleen plaats in de fonologie, of gebeurt het al eerder, in de syntaxis? Verschillen in dit opzicht verschillende soorten ellipsis van elkaar? Verschillen talen van elkaar in dit opzicht?

Een ander proces waarvan het niet helder is wanneer het plaatsvindt is cliticisatie. Clitics zijn elementen die zogenaamd 'vastplakken' aan andere, onafhankelijke woorden. Ze worden vaak prosodisch gedefinieerd: clitics zijn woorden die geen eigen klemtoon hebben, en gedwongen worden te combineren met een aangrenzend woord (de 'gastheer') tot een prosodisch geheel. Net als bij ellipsis valt het niet te ontkennen dat cliticisatie een fonologische component heeft. Maar wederom is de vraag of cliticisatie ook plaatsvindt in de syntaxis: hebben fonologische clitics ook speciale syntactische eigenschappen? Verschillen clitics van elkaar in dit opzicht? Verschillen talen van elkaar?

Dit proefschrift verschaft inzicht in de eigenschappen van cliticisatie en het moment waarop ellipsis plaatsvindt, en ziet eruit als volgt.

Hoofdstuk 1 introduceert de belangrijkste concepten die we nodig hebben om de rest van het proefschrift te kunnen begrijpen. Het eerste deel van het hoofdstuk gaat over het grammaticamodel in de Minimalistische benadering (waarbij de syntaxis de centrale component is die een wisselwerking met de interfaces PF en LF tot stand brengt), het Distributed Morphology framework, dat ervan uitgaat dat lexicale elementen pas laat in de derivatie toegevoegd worden, en over de vertaling van de syntactische structuur naar de prosodie. Het tweede deel richt zich op verschillende benaderingen van het moment waarop ellipsis plaatsvindt, en met name op de benadering die uitgaat van PF-deletie, waarin het een volledige syntactische structuur is die verwijderd wordt op PF.

Hoofdstuk 2 bespreekt clitics en de moeilijkheden bij het definiëren van clitics. Het geeft een overzicht van bestaande benaderingen over de wisselwerking tussen syntaxis en prosodie, waarbij ik me met name richt op de *Prosodic Hierarchy* benadering die ik overneem in het proefschrift. De bijzondere status van clitics in de prosodische structuur, en de potentiële problemen waartoe dit leidt, worden besproken. Het laatste deel van het hoofdstuk introduceert de *second position clitics*, ofwel clitics die op de tweede positie staan, wat het onderwerp is van de twee hoofdstukken die volgen.

In **hoofdstuk 3** richt ik me op het fenomeen van de second position clitics in het Servo-Kroatisch, en op het voortdurende debat over de vraag hoe, en belangrijker nog, wanneer clitics op de tweede positie worden geplaatst. Ik heb een online onderzoek gedaan naar grammaticaliteitsoordelen om de verdeeldheid over de data weg te nemen. De resultaten van

het onderzoek laten zien dat pronominale second position clitics in het Servo-Kroatisch niet achter kunnen blijven na ellipsis. Op basis van een analyse van de interactie tussen VP-ellipsis en de plaatsing van clitics in het Servo-Kroatisch beargumenteer ik dat cliticisatie op de tweede positie in het Servo-Kroatisch een fonologisch fenomeen is, en dat pronominale elementen alleen als clitics op de tweede positie terecht kunnen komen tijdens de post-syntactische derivatie.

In **hoofdstuk 4** vergelijk ik second position clitics in het Servo-Kroatisch met die in het Sloveens, en ik laat zien dat de interactie tussen clitics en ellipsis nieuwe verschillen tussen de talen aan het licht brengt. De data laten zien dat pronominale clitics in het Sloveens, in tegenstelling tot die in het Servo-Kroatisch, altijd moeten achterblijven na ellipsis. Bovendien laten andere afwijkende eigenschappen van Sloveense clitics (bijvoorbeeld dat ze een eigen klemtoon kunnen krijgen bij polariteitsfocus) zien dat clitics in het Sloveens een aparte syntactische positie innemen. Op basis van deze gegevens beargumenteer ik dat cliticisatie op de tweede positie in het Sloveens syntactisch is.

Hoodstuk 5 richt zich op een enigzins ander fenomeen, namelijk weglating van een voorzetsel bij sluicing in het Russisch. Het Russisch is één van de talen die zich niet lijkt te houden aan de *Preposition Stranding Generalization* van Merchant (2001). Ik analyseer de beperkingen op voorzetselweglating en ik laat zien dat ze volledig prosodisch zijn. Dit vormt de basis voor mijn conclusie dat voorzetselweglating een geval is van late (post-syntactische) ellipsis. De operatie die leidt tot voorzetselweglating wordt geactiveerd na de standaard TP-ellipsisoperatie, en kan ervoor zorgen dat een voorzetsel ellipsis ondergaat wanneer het een prosodisch woord is (d.w.z. wanneer het geen clitic is).

Tot slot geeft **hoofdstuk 6** een samenvatting van de onderwerpen die in het proefschrift besproken zijn, en oppert vragen voor toekomstig onderzoek.

Curriculum vitae

Anastasiia Ionova (née Ivanova) was born on October 10th, 1992 in Moscow, Russia. After graduating high school in 2010, she started studying at the department of the English language of the Philological faculty of Lomonosov Moscow State University. In 2011, she transferred to the department of Theoretical and Applied linguistics. She obtained her specialist ($\approx$ MA) degree in 2015. From 2015 to 2019 she was a PhD candidate at the Leiden University Centre for Linguistics, conducting her research within the NWO-sponsored project "Ellipsis licensing beyond syntax", awarded to Prof.dr. Lisa Cheng and Dr. Anikó Lipták. In 2018, she spent 3 months as a guest researcher at the Linguistic Research Center of UC Santa Cruz. This dissertation is the culmination of her PhD research.