

Suspended Morphology in Serbian: Clitics vs. Affixes

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Abstract

This article offers a case study of what appears to be an instance of “suspended affixation” in Serbian. The phenomenon in question is particularly interesting and potentially theoretically significant since it occurs in a language in which suspended affixation is generally impossible. The account I am led to suggest, however, that what is being “suspended” is not an affix but a second position clitic disguised as an affix. This is not a surprising outcome, since Serbian second position clitics, unlike ordinary affixes, can be elided quite easily. The phenomena examined in this paper provide further support to certain aspects of the theoretical model developed in Embick (2007; 2010) and offer new insights into the interaction between linearization, ellipsis and Local Dislocation. In particular, I show that the forms which allow ‘suspended affixation’ are formed in a special way, namely, via Local Dislocation, which affixes a second position enclitic to its host at PF under linear adjacency. Forms which are created by regular head movement, on the other hand disallow suspended affixation, on the assumption that elements that form complex heads (i.e., Subwords) cannot be elided.

Keywords: Second position clitics, affixes, Local Dislocation, coordination, ellipsis.

1 Introduction

In this paper I investigate the clitic-affix distinction in Serbian by looking at a phenomenon of Serbian morphology which in many respects looks like an instance of “suspended affixation”. The phenomenon in question is particularly interesting and potentially theoretically significant since it occurs in a language in which suspended affixation is generally impossible.

The term ‘suspended affixation’ was originally used by Lewis (1967: 35) to describe situations in Turkish in which “one grammatical ending serves two or more parallel words” (see also Kornfilt 1996; Kabak 2005; Broadwell 2008 etc.). For example, in Turkish example (1a) the plural suffix semantically modifies both nominal conjuncts (not just the one to which it is linearly suffixed), while in (1b) 1st person plural past suffixes modify both verbs in the coordination phrase:

- (1) (Broadwell 2008: 202)
a. Ev ve dükkan-lar
house and shop-PL
‘Houses and shops.’

b. (Broadwell 2008: 209)

Çalış-acak ve başar-acak-tı-k

work-FUT and succeed-F.PST.1PL

‘We were going to work and succeed.’

Suspended affixation is also often characterized in the literature as a situation in which an affix “takes scope” over conjoined phrases. However, from the perspective of the clitic-affix distinction, this terminology could be somewhat misleading, as discussed in Spencer and Luis (2012). They point out that in general “one of the prototypical properties of affixes compared with (many) function words is that they cannot take wide scope over conjoined phrases” (Spencer and Luis 2012: 196). For example, although *the* in *the [cats and dogs]* applies to both *cats* and *dogs* in English it is not possible to say *the [cat and dog]s* in an interpretation under which both *cat* and *dog* are plural. At the same time, *clitics* pattern with function words with regard to scope over coordinated phrases and can take wide scope. Given this general cross-linguistic tendency one might be led to think that the property of being able to take wide scope could be used as a reliable criterion to distinguish affixes from clitics/function words. This is, however, not entirely accurate because (i) there are languages (e.g., Turkish) in which it seems to be possible for certain affixes to take scope over coordinated phrases (i.e., both *-lar* and *-tik* in (1) take scope over the preceding conjoined phrases), and (ii) there are clitics/function words that can fail to take wide scope (e.g., in Portuguese, monosyllabic function words such as articles and prepositions (which are often phonological clitics) generally have to be repeated on each conjunct).

Constructions like (1) can be analyzed in multiple different ways, as shown by Spencer and Luis (2012: 1997). I illustrate this below on the basis of (1a):

- (2) a. [[ev] & [dükkan]]-lar
b. [[ev] & [dükkan-lar]]
c. [[ev-∅] & [dükkan-lar]]
d. [[[ev-∅] & [dükkan-∅]]-lar]
e. [[ev-ler] & [dükkan-lar]]

In (2a) *-lar* is attached to the coordinated phrase, just like a function word might be, taking scope over both members of the coordinated phrase. In (2b), an inflected word *dükkanlar* is coordinated with a non-inflected conjunct which is interpreted as though it were inflected itself. In (2c) the first conjunct bears some type of zero inflection which is identified with the overt inflection on the second conjunct. In (2d) *-lar* is taken as being moved to a position outside the phrase (and the zero markers could then be traces of movement).¹ Finally, in (2e) the first

¹ In a copy theory of movement (2d) would be represented as [[[ev-ler] and [dükkan-lar]]-lar].

conjunct is inflected for plural at some stage but the plural marked is elided/deleted later under identity with the plural marker in the second conjunct.

In this paper I examine a case of what appears to be suspended affixation in Serbian, a language in which suspended affixation is generally disallowed. Consider a future tense construction like (3a) below, in which something like suspended affixation seems to be happening. In particular, the future inflection/auxiliary *-će*, present in the form *pogledaće* ‘see.AUX.3.S.FUT’ in (3b), may be “suspended” as in (3a), the result of which is a simple infinitive *pogledati* ‘to see’.

- (3) a. Otići će i pogledati novi film.
go.INF AUX.3.S.FUT and see.INF new.ACC film.ACC
‘He will go and see the new movie.’
- b. Otići će i pogledaće novi film.
go.INF AUX.3.S.FUT and see.AUX.3.S.FUT new.ACC film.ACC
‘He will go and see the new movie.’

Before I introduce the relevant facts in more detail (see section 2), I will briefly summarize some of the main point of the phenomenon and my analysis. There are many important differences between the Serbian phenomenon in question and standard cases of suspended affixation. First, what is being suspended in Serbian is not a typical affix but an element which exhibits properties of both clitics and affixes.² Second, the base to which this element is suffixed takes different forms depending on whether or not suspended affixation takes place. I will ultimately argue that what is being suspended is not an affix but a (second position) clitic “disguised” as an affix. In particular, I will propose a variant of the ellipsis analysis in (2e) (but where the marker in the second conjunct is elided: [[cat-s] and [dog-s]]), arguing that what gets deleted is in fact a clitic at a stage of derivation where it is still not suffixed to the verb. Serbian has a set of well-documented and thoroughly studied second position clitics, which are easily distinguishable from standard affixes in many ways (e.g., Zwicky 1977; Radanović-Kocić 1996; Franks and Holloway-King 2000; Bošković 2001 etc.). One of the main differences between them is that only second position clitics can be suspended/elided; i.e., Serbian follows the general tendency noted above in that it disallows affixes to “take scope” over conjoined phrase. The analysis I propose is therefore fully consistent with this general property of Serbian. On the other hand, an account that would permit genuine affix-suspension/ellipsis just in the case of this one special element, without making a connection with its clear second position clitic properties, would simply miss a generalization.

² Even in Turkish there are affixes that cannot be suspended, which raises the question of what exactly is the nature of this difference between the two classes of affixes and how it should be formulated (see Kornfilt 1996; Good and Yu 2000; Keleşir 2001; Zanon 2014 etc.)

Now, the challenge for the type of analysis I will pursue in what follows lies in explaining the affixal nature of the suspended element, given that affixes cannot be omitted. The set of facts examined in this article therefore raise a number of interesting questions about the organization of the grammar and the order of various operations. They indicate that there are (at least) two ways of forming complex morphological words and that ellipsis can precede only one of them. I believe that they also provide further support to certain aspects of the theoretical model developed in Embick (2007; 2010) and offer new insights into the interaction between linearization, ellipsis and Local Dislocation.

The paper is structured as follows: in section 2 I present the facts and the main puzzle, and briefly go over some basic properties of second position clitics in Serbian. In section 3 I spell out the details of my proposal. I present main points of Embick's (2007; 2010) theory, on which certain crucial aspects of my analysis are based, and the general framework of Distributed Morphology (DM), which I will be adopting. There I also clarify the formal distinction between what I have been calling clitic and affix. Then I show how the theory I adopt accounts for the Serbian facts introduced in Section 2. Section 4 discusses some loose ends regarding the nature of word-part ellipsis and offers some speculations and directions for further research. Section 5 concludes the paper.

2 Suspended affixation in Serbian

2.1 Some background

Suspended affixation of the type illustrated in Turkish examples in (1) is impossible in Serbian. For example, (4a) can only mean 'one professor and young men', but not 'professors and young men', while (4b) is simply ungrammatical and certainly cannot mean 'I sing and I read':³

- (4) a. *Profesor-(~~ī~~) i mladići
 professor-(M.PL) and young-M.PL
 'Intended: Professors and young men.'
- b. *Čita-(~~m~~) i pevam
 read-(1.S.PR) and sing-1S.PR
 'Intended: I read and I sing'

The result is equally unacceptable if instead of the first suffix the second one is unexpressed:

³ Note that the form *čita* in (4b), created by omitting the first person singular present suffix *-m*, is homophonous with the 3rd person singular present form of 'read'. Coordinating two verbs with different subject agreements in this way, however, also leads to ungrammaticality.

- (5) a. *Profesori i mladić-(i)
 professor-M.PL and young-(M.PL)
 ‘Intended: Professors and young men.’
 b. *Čita-m i peva-(m)
 read-1.S.PR and sing-(1.S.PR)
 ‘Intended: I read and I sing’

These constructions are, of course, fine when both suffixes are expressed:

- (6) a. Profesor-i i mladić -i
 professor- M.PL and young- M.PL
 ‘Professors and young men.’
 b. Čita-m i peva-m
 read-1.S.PR and sing-1.S.PR
 ‘I read and I sing’

In addition to regular affixes, Serbian has a number of well-known second position enclitics (hereafter 2P clitics). These are prosodically weak elements, which can never serve as an independent prosodic domain; they must become part of some other adjacent domain for stress assignment purposes. In other words, they must attach to a nonclitic element to form a valid utterance. After attaching to its host, the clitic becomes a part of the prosodic constituency of that host. Since the clitics in question are dependent on the element to their left they are called enclitics.⁴ In addition to their prosodic/phonological requirement, enclitics also gravitate toward the so-called second position, hence the name second position (2P) clitics. The precise definition of “second position” is a complex matter which I cannot go into in this article (the literature on 2P clitics and their phonological and syntactic properties is extremely rich; see, for instance, Franks and Holloway-King 2000 and Bošković 2001 for excellent, comprehensive overviews of different types of approaches to 2P clitics). Here it suffices to give the standard definition according to which the second position is roughly either after the first phrase or after the first word of the sentence (e.g., Browne 1975). Locating clitics in any other position leads to ungrammaticality: for instance, 2P clitics *si* ‘AUX.2.S.PR’ and *ga* ‘him.ACC’ cannot be sentence-final as in (7b):

- (7) a. Ti si ga video juče.
 you.S AUX.2.S.PR him.ACC seen yesterday
 ‘You saw him yesterday.’

⁴ Serbian also has proclitics (which are dependent on the element to their right), such as prepositions and conjunctions, but I ignore them here since they are not relevant for the purposes of this article.

- b. *Ti video juče si ga.
 you.S seen yesterday AUX.2.S.PR him.ACC
 ‘You saw him yesterday.’

2P clitics in Serbian are the question particle *li*, short form of auxiliary verbs, short forms of personal pronouns and the reflexive particle *se*.⁵ In this paper I will focus on the *future 2P auxiliary clitic*, which unlike other 2P clitics (question particles, pronouns etc.), displays affix-like properties in certain contexts (in the sense presented below).

2.2 The future auxiliary in Serbian

There are two situations with 2P *auxiliary* clitics in which the first position in the sentence can be occupied by a verb: (i) in past tense the past participle can be sentence-initial, directly preceding the auxiliary 2P clitic, as in (8b), or (ii) in future tense, the infinitive can occupy the first position, directly preceding the future 2P clitic (9b). Thus, in both (8a) and (9a) the subject is in the first position, while in (8b) and (9b) the subject is *pro*-dropped (Serbian is a *pro*-drop language), and the verb serves as the host for the 2P clitic⁶:

- (8) a. Ti si došao.
 you.S AUX.2.S.PR arrived.M.PS.PRT
 ‘You arrived.’
 b. Došao si.
 arrived.M.PS.PRT AUX.2.S.PR
 ‘You arrived.’
- (9) a. Ti ćeš doći.
 you.S AUX.2.S.FUT come.INF
 ‘You will come.’
 b. Doći ćeš.
 come.INF AUX.2.S.FUT
 ‘You will come.’

Now, infinitives in Serbian come in two classes: (i) ones that end in *-ći* (*doći* ‘come’, *naći* ‘find’, etc.), as in (9), and (ii) ones that end in *-ti* (*pevati* ‘sing’, *raditi* ‘work’, *učiti* ‘study’ etc.). When a *-ti* infinitive occupies the first position immediately preceding the future auxiliary clitic it becomes morpho-phonologically integrated with the auxiliary clitic in a unique way. First, the *-ti*

⁵ 2P clitics cluster together in a particular order which is strict and cannot be violated: li-AUX-DAT-ACC-GEN-REFL-je (*je* here is the third person singular auxiliary, which unlike other auxiliary clitics, appears at the end of the cluster).

⁶ A note on orthography: ‘ć’ represents the voiceless alveolo-palatal affricate /tɕ/ and ‘š’ the voiceless palato-alveolar fricative /ʃ/.

ending of the infinitive gets reduced, as shown in (10b); this is in traditional grammars called ‘truncated’ infinitive (*okrnjeni infinitiv*; e.g., Stevanović 1962: 209; Stanojčić and Popović 1992: 114).⁷ My data and the analysis will in this respect be based on the Standard Serbian throughout the paper (as described in traditional grammars referred to above), unless I indicate otherwise.

- (10) a. Ti ćeš raditi.
 you.S AUX.2.S.FUT work.INF
 ‘You will work.’
 b. Radićeš.
 come.AUX.2.S.FUT
 ‘You will work.’

An important property of this truncated infinitive (e.g., *radi* in (9b)) for the purposes of this paper is that it is a *bound* element/base; i.e., it cannot stand alone as an independent word. This makes it *prima facie* very similar to bases of inflectional *affixes*, which are quite often also bound. The 2P clitic hosts, on the other hand, are always free elements/independent words, which can appear in a number of different sentential positions and do not require any particular clitic or affix to be attached to them. Consider a verb like *držati* ‘to hold’ in (11): both the base *drž-* to which present tense suffixes are attached in (11a) and the truncated infinitive form *drža-* in (11b) are bound elements.⁸

- (11) a. present tense: *držati* ‘to hold’
- | | SINGULAR | PLURAL |
|----------|---------------|----------------|
| 1 | <i>drž-im</i> | <i>drž-imo</i> |
| 2 | <i>drž-iš</i> | <i>drž-ite</i> |
| 3 | <i>drž-i</i> | <i>drž-e</i> |

⁷ In traditional grammars of Standard Serbian it is usually assumed that truncation is a two-step process. First, only the final *-i* is reduced, which seems to be the dominant case in Standard Croatian (e.g., Franks and King 2000):

- (i) Radit ćeš.
 come AUX.2.S.FUT
 ‘You will work.’

Second, in standard Serbian final *-t* is also deleted in front the affricate /tʃ/, because it’s already “contained in it” (see Stevanović 1962: 45; 209; Stanojčić and Popović 1992: 57; 114). Deletion of /t/ and /d/ in front of /tʃ/ and other affricates is quite common in Serbian and occurs in different morpho-phonological contexts (e.g., Stevanović 1962: 45; Stanojčić and Popović 1992: 57).

⁸ Note that the truncated infinitive *drža-* in this particular case happens to be homophonous with the 3rd person singular aorist form, which does not affect the main point.

b. truncated infinitive: *držati* ‘to hold’

	SINGULAR	PLURAL
1	<i>drža-ću</i>	<i>drža-ćemo</i>
2	<i>drža-ćeš</i>	<i>drža-ćete</i>
3	<i>drža-će</i>	<i>drža-će</i>

Thus, in the standard Serbian orthography the truncated infinitive and the future auxiliary are written as one word (with no spacing between them), indicating that a truncated infinitive like *radi-*, or *drža-* is not an independent, free word. I will follow this convention throughout the paper: combinations of a truncated infinitive and a future auxiliary will be written as single words, while a standard (non-truncated) infinitive and a future auxiliary will have spacing between them. So, the first affix-like property of the future auxiliary in this particular context is that the element to which it is attached is a type of a bound form. This association with bound forms is in general a property of Serbian affixes, not 2P clitics. That is, the truncated infinitive must be accompanied by a particular element (i.e., the future auxiliary), which is similar to roots/stems to which affixes attach. Host of 2P clitics, on the other hand, do not have these requirements – they are independent forms, which do not need any particular type of element to be attached to them.

Second, the complex form in (11b) undergoes phonological changes that are typical of stem-affix combinations but not of clitic-host combinations. In other words, (11b) shows properties of a close phonological unit, which are not characteristic for a group consisting of a 2P clitic and its host. In particular, when the truncated infinitive ends in /s/ (i.e., when the final *-ti* is removed from infinitive forms that end in *-sti*, like *jesti* ‘eat’ or *plesti* ‘knit’, by the processes mentioned above), the final /s/ changes to /ʃ/ in front of the /tɛ/-initial future auxiliary, as shown in (12). This is a result of a more general place assimilation rule, which affects /s/ and /z/ in front of (post)alveolars /ʃ/, /ʒ/, /tʃ/, /dʒ/, /tɛ/, /dz/, as well as palatals /ɲ/ and /ɲ/, producing /ʃ/ or /ʒ/, respectively (see Stevanović 1962: 42; Stanojčić and Popović 1992: 44)

- (12) a. *Ješ-ćeš* /**Jes-ćeš*.
 eat-AUX.2.S.FUT
 ‘You will eat’
 b. *Paš-ćeš* /**Pas-ćeš*.
 fall-AUX.2.S.FUT
 ‘You will fall.’

However, when the 2P future auxiliary clitic is preceded by some other /s/-final element (i.e., when the element ending in /s/ occupying the first position is not a truncated infinitive) it does not trigger obligatory change of /s/ to /ʃ/. For example, when the pronoun *vas* ‘you.PL.ACC’ or the noun *pas* ‘dog’ are in the first position, as in (13), the final /s/ is not obligatorily affected by

the following clitic ([] marks the the host-clitic domain, where the host must be at least a prosodic word):

- (13) a. [Vas će] videti.
 you.PL.ACC AUX.3.PL.FUT see.INF
 ‘She/He will see you(PL).’
 b. [Pas će] doći.
 dog AUX.3.S.FUT come.INF

However, typical affixes obligatorily trigger this type of place assimilation.⁹ Compare (13b), for instance, with a minimally different (14) in which *pas* ‘dog’ combines with the diminutive suffix *-će* which is phonologically very similar to the 2P clitic *će* in (13). Here place assimilation is obligatory:

- (14) *Pas-će /✓Paš-će
 dog-DIM
 ‘Small dog’

In (15a) the noun *list* ‘leaf’ combines with the mass/plural suffix *-je*. This suffix first triggers a form of palatalization (i.e., ‘iotation’) of the root-final /t/, which changes to /tʃ/, after which /tʃ/ triggers place assimilation of /s/. Again, place assimilation is obligatory. The same process occurs in (15b), but here the alternation is between the voiced /z/ and /ʒ/, which happens after iotation changes /d/ to /dz/ in front of the suffix *-je* (see Stevanović 1962: 54 and Stanojčić and Popović 1992: 49 for more examples). Finally, in (15c), the final /t/ of *čast* ‘honor’ changes to

⁹ Note that the important difference here is whether this alternation is obligatory or not. For example, Radanović-Kocić (1996: 440) observes that place assimilation is sometimes possible even across a word boundary, as in (i) below:

- (i) Ovaj njihov pas čuva kuću.
 this their dog.NOM guards.3.S.PR house.ACC
 ‘That dog of theirs is guarding the house.’

Here it is possible for the word final /s/ of *pas* ‘dog’ to change to /ʃ/ in front of another word beginning with an affricate, namely *čuva* ‘guards’. This is not always the option, however, as discussed in Radanović-Kocić (1996), which depends on a number of different factors: placement of intonational phrase boundaries, heaviness of the relevant constituent, speech rate etc. Thus, place assimilation might take place for some speakers in fast, spontaneous speech even in cases like (13), but this is definitely not obligatory (nor standard), unlike in (12) and (14). One clear indication of this is Serbian orthography, which certainly shows some general tendencies in this respect and should not be ignored here. In particular, the fricative in examples like (12) or (14) is always written as ‘š’, indicating that place assimilation is obligatory; on the other hand, the fricative in examples like (i) above or (13) is written as ‘s’, never as ‘š’, which shows that place assimilation in such cases is at best optional. It would be certainly interesting to try to measure experimentally to which extent place assimilation might be happening in (13) or (i) and compare those results to cases like (12) and (14), but I leave an exploration of this question for future work.

/tɛ/ in front of the instrumental suffix *-ju*, via iotation. /tɛ/ then triggers obligatory place assimilation of /s/ to /ʃ/ (see Stevanović 1962: 42).

- (15) a. list-je → lisće → lišće (*lisće) ‘leaves’
 b. grozd-je → grozđe → grožđe (*grozđe) ‘grapes’
 c. čast-ju → časću → čašću (*časću) ‘with honor’

Despite the rich literature on 2P clitics in Serbian, the phonological changes in (12) and their relevance for understanding the nature of these constructions haven’t been discussed in much detail or even explicitly noticed. Thus, the important observation is that in one particular context 2P future auxiliary clitics start displaying properties of affixes. When they are preceded by a *-ti* infinitive they (i) attach to a bound host (i.e., truncated infinitive), which other 2P clitics do not do, and (ii) become morpho-phonologically integrated with their host in a sense that they trigger phonological changes (e.g., place assimilation) typical of Serbian affixes. Full paradigms are given in (16):

- (16) a. *-ti*-infinitive in the first position: *jesti* ‘eat’
- | | SINGULAR | PLURAL |
|---|---------------|----------------|
| 1 | <i>ješću</i> | <i>ješćemo</i> |
| 2 | <i>ješćeš</i> | <i>ješćete</i> |
| 3 | <i>ješće</i> | <i>ješće</i> |
- b. *-ti*-infinitive not in the first position: *jesti* ‘eat’
- | | SINGULAR | PLURAL |
|---|------------------|-------------------|
| 1 | <i>ću jesti</i> | <i>ćemo jesti</i> |
| 2 | <i>ćeš jesti</i> | <i>ćete jesti</i> |
| 3 | <i>će jesti</i> | <i>će jesti</i> |

At the same time, the auxiliary forms in (16a) display properties of 2P clitics as well. First, the morpho-phonological unit they form with the truncated infinitive must be sentence-initial; thus, effectively they still have their second position requirement, where the host like *ješ-* in (16a) plays the part of the element in the first position. Locating this complex in any other position leads to ungrammaticality:

- (17) a. **Pevaće** Milan sutra.
 sing AUX.3.S.FUT Milan tomorrow
 ‘Milan will sing tomorrow.’
 b. **Pevaće** sutra Milan.
 c. ?*Milan **pevaće** sutra.
 d. ?*Sutra **pevaće** Milan.

e. ?* Milan sutra pevaće.

f. ?*Ja radiću.

I work AUX.1.S.FUT

‘I will work.’

No other verb formed by regular affixation has a similar requirement. For instance, present tense verb can occupy a variety of positions in a sentence:

(18) *Present*

a. Milan peva sutra.

Milan sing.3.S.PR tomorrow

‘Milan sings tomorrow.’

b. Sutra peva Milan.

c. Milan sutra peva.

d. Ja radim.

I work.1.S.PR

‘I am working.’

This clearly shows that 2P cliticization is involved in the formation of complex units in (16a) in a way that is crucially absent in the formation of present tense verbs in (18).

Second, unlike typical Serbian affixes, the future auxiliaries in (16a) *never* trigger any lexical allomorphy on their host; and vice versa, their hosts *never* trigger any lexical allomorphy on the auxiliaries. Compare this, for instance, to present tense verbs in Serbian: there are a number of verbs in Serbian whose roots undergo irregular/idiosyncratic (phonologically unpredictable) changes in present tense. Consider present tense forms of verbs like *kovati* ‘to forge’ and *moći* ‘to be able/can’ in (19) and compare those to present tense forms of regular verbs like *pevati* ‘to sing’ in (20).

(19) a. Present tense: *kova-ti* ‘forge’

SINGULAR PLURAL

1 *kuje-m* *kuje-mo*

2 *kuje-š* *kuje-te*

3 *kuje* *kuj-u*

b. Present tense: *moći* ‘to be able, can’

SINGULAR PLURAL

1 *mog-u* *može-mo*

2 *može-š* *može-te*

3 *može* *mog-u*

(20) Present tense: *peva-ti* ‘sing’

	SINGULAR	PLURAL
1	<i>peva-m</i>	<i>peva-mo</i>
2	<i>peva-š</i>	<i>peva-te</i>
3	<i>peva</i>	<i>peva-ju</i>

In the case of *kovati*, the allomorph of the root *kova-* is *kuj-* in present tense, while in the case of *moći* the allomorph of the 1st person singular present tense suffix *-(e)m* is *-u*.¹⁰ In addition, the root *moć-* takes the form *mog-*.¹¹ All of these changes are quite idiosyncratic and it is difficult to see how they could be derived through any kind of productive phonological changes (note also that /g/ of *mog-* changes to /ž/ in front of /e/ as a result of first palatalization). The complex forms in (16a), on the other hand, are in this sense always perfectly transparent and never undergo irregular morpho-phonological changes. For example, in the case of *kovati* ‘to forge’ the future auxiliary attaches to the truncated infinitive as predicted; e.g., *kova-ću* ‘I will forge’. This lack of irregular morphology/lexically conditioned allomorphy is a hallmark of clitics and not affixes.

The past tense forms also display idiosyncratic behavior, although in a somewhat different way from present tense verbs. This can be illustrated for aorist forms (but other past tense forms behave similarly as well). In many cases, the final consonant of the stem/root to which the aorist suffix attaches is unpredictable. (21) presents a set of 1st person singular aorist verbs whose infinitive forms end in *-ći*: observe the choice of the consonant preceding the 1st person singular suffix *-oh* (this is, however, true throughout the aorist paradigm):

(21)

Infinitive		1 st person singular aorist
a. <i>Leći</i>	‘lie down’:	<i>Leg-oh</i>
b. <i>Moći</i>	‘be able’:	<i>Mog-oh</i>
c. <i>Dići</i>	‘raise’:	<i>Dig-oh</i>
d. <i>Peći</i>	‘bake’:	<i>Pek-oh</i>
e. <i>Seći</i>	‘cut’:	<i>Sek-oh</i>
f. <i>Teći</i>	‘flow’:	<i>Tek-oh</i>
g. <i>Reći</i>	‘say’:	<i>Rek-oh</i>
h. <i>Doći</i>	‘come’	<i>Dođ-oh</i>
i. <i>Ući</i>	‘go in’	<i>Uđ-oh</i>
j. <i>Ići</i>	‘go/walk’	<i>Id-oh</i>

¹⁰ Other verbs that show similar lexically conditioned root allomorphy in present are *bra-ti* (1st person singular present *ber-em*), *zva-ti* ‘to call’ (1st person singular present *zov-em*), *kle-ti* ‘to curse’ (1st person singular present *kun-em*) etc.

¹¹ A similar type of root-allomorphy occurs with the verb *leći* ‘to lie down’ (*leg-*), but without the 1st person singular suffix allomorphy (*lež-im*, **leg-u*). Other verbs whose infinitives end in *-ći* (*naći* ‘to find’, *doći* ‘to come’, *preći* ‘to cross’ etc.) typically have roots ending in /d/ (which palatalizes via iotation to /dz/ in front of the suffix; e.g., *dođ-em* ‘come.1PL.PR’).

Thus, the aorist stem can end in *-k*, *-g*, *-đ*, or *-d*, and there is no productive synchronic phonological process that makes this predictable; compare, for instance, *leći* (21a) with *peći* (21d) – they are minimally different, yet their aorist stems end in different consonants (*-g* and *-k* respectively). *Dići* (21c) and *ići* (21j) are also quite similar but their aorist stems end in *-g* and *-d*, respectively. Note also that the same type of idiosyncrasy appears in other past forms, e.g., past participle: *legao* ‘lie.PST.PRT.’ vs. *pekao* ‘bake.PST.PRT’ etc.

Consider also for instance aorist verbs with the *-ti* infinitive ending, directly preceded by /s/ – these are particularly relevant here. As shown in (22), there is substantial allomorphy in their aorist forms as well, again with respect to the choice of the stem-final consonant:

(22)	Infinitive	1 st person singular aorist
	a. <i>Rasti</i> ‘grow’:	<i>Rast-oh</i>
	b. <i>Krasti</i> ‘steal’	<i>Krad-oh</i>
	c. <i>Sresti</i> ‘meet’	<i>Sret-oh</i>
	d. <i>Tresti</i> ‘shake’	<i>Tres-oh</i>
	e. <i>Plesti</i> ‘knit’	<i>Plet-oh</i>
	f. <i>Sesti</i> ‘sit’	<i>Sed-oh</i>

The choice of the stem-final consonant is unpredictable here as well. But, no such idiosyncratic allomorphy exists in their truncated infinitive + future auxiliary forms; they all have the same predictable *-šć-* sequences (*krašće* ‘steal.AUX.3.S.FUT’, *sešće* ‘sit.AUX.3.S.FUT’, *srešće* ‘meet.AUX.2.S.FUT’ etc.), which, as shown above, are directly derivable by a productive phonological place assimilation process. Now, one might argue that the lack of allomorphy doesn’t necessarily mean the absence of true affixation, but that kind of analysis would miss a generalization. There is a meaningful empirical contrast here in need of explanation: while all verbal forms which unquestionably involve true affixation show some type of allomorphy, exactly the one verbal form whose true nature is unclear (i.e., truncated infinitive + future auxiliary) shows no allomorphy. An analysis that would treat this potentially significant contrast as a mere accident would in terms of empirical coverage be weaker than the one which can derive it in a principled manner, from independently needed assumptions.

In sum, the future auxiliaries in (16a) are less like clitics and more like affixes in that they (i) are attached to a bound element (i.e., the truncated infinitive), and (ii) trigger phonological changes on the truncated infinitive that are typical of affixes. On the other hand, they are more like clitics and less like affixes in that they (i) have second position requirement, and (ii) never trigger (or undergo) irregular allomorphy.

2.3 The future auxiliary and suspended affixation

Now, the future auxiliaries that combine with the truncated infinitive (e.g., (16a)), which I will for convenience call here “suffixed”, can be “suspended”, unlike regular affixes (e.g., (4)-(5)), despite the fact that they have some affix-like properties.

- (23) a. Otići će i pogledati novi film.
go.INF AUX.3.S.FUT and see.INF new.ACC film.ACC
‘He will go and see the new movie.’
- b. Otići će i pogledaće novi film.
go.INF AUX.3.S.FUT and see.AUX.3.S.FUT new.ACC film.ACC
‘He will go and see the new movie.’
- c. *Otići će i pogleda novi film.
go.INF AUX.3.S.FUT and truncated.INF new.ACC film.ACC
‘He will go and see the new movie.’

(23a) is grammatical, even though the future marker in the second conjunct is missing. If the future marker were expressed, it would have to be suffixed to the verb as in (23b).¹² Note, however, that when the suffixed version of *će* is missing as in (23a), the main verb must take the regular infinitive form *pogledati*, not the truncated form *pogleda* to which *će* is otherwise attached, hence the ungrammaticality of (23c). In (23a) in which the suffixed auxiliary is omitted, the future marker in the first conjunct is expressed as a 2P clitic.

Now, in order to present the full range of possibilities, we need to consider the following four coordination combinations of the future auxiliary and the infinitive. In (24), [INF_{TR} + FUT] represents the “suffixed” version of the future auxiliary: here the auxiliary (FUT) combines with the truncated infinitive (INF_{TR}). [INF + FUT], on the other hand, represents the 2P enclitic version of the auxiliary, since the auxiliary combines with the regular, full infinitive, marked as INF (‘&’ marks coordination). INF in [INF + FUT] and INF_{TR} in [INF_{TR} + FUT] must occupy the first position of their conjuncts so that the 2P requirement of FUT are satisfied (see the discussion in section 3.2 for more details).

- (24) a. [INF + FUT] & [INF_{TR} + FUT]
b. [INF_{TR} + FUT] & [INF + FUT]
c. [INF_{TR} + FUT] & [INF_{TR} + FUT]

¹² The future marker cannot be expressed as a clitic in (23b): (i) is ungrammatical because the particle *i* ‘and’ due to its prosodic weakness cannot serve as a host for the 2P clitic (see also discussion in the next section).

(i) *Otići će i će pogledati novi film.
go.INF AUX.3.S.FUT and AUX.3.S.FUT see.INF new.ACC film.ACC
‘He will go and see the new movie.’

d. [INF + FUT] & [INF + FUT]

(23b) illustrates the option in (24a). (23a) illustrates what happens when the auxiliary is omitted in the second conjunct; note again that the result of this omission is the full *-ti* infinitive. (24b-c) are also allowed, as shown in (25)-(27); here the future auxiliary is omitted in the second conjunct in the a. examples (the auxiliary is overt in both conjuncts in the b. examples). The most interesting cases are (23a) and (26a), corresponding to (24a) and (24c), because these examples show that the “suffixal” auxiliary (which combines with the truncated infinitive) can be omitted/suspended in the second conjunct.

(25) [INF_{TR} + FUT] & [INF + FUT]

a. Pogledaće novi film i otići.

see.AUX.3.S.FUT new film and go.INF

‘He will see the new movie and leave.’

b. Pogledaće novi film i otići će.

see.AUX.3.S.FUT new film and go.INF AUX.3.S.FUT

‘He will see the new movie and leave.’

(26) [INF_{TR} + FUT] & [INF_{TR} + FUT]

a. Ostaće i pogledati novi film.

stay.AUX.3.S.FUT and see.INF new film

‘He will stay and see the new movie.’

b. Ostaće i pogledaće novi film.

stay.AUX.3.S.FUT and see.AUX.3.S.FUT new film

‘He will stay and see the new movie.’

(27) [INF + FUT] & [INF + FUT]

a. Otići će i reći šta se dogodilo.

go.INF AUX.3.S.FUT and say.INF what REFL happened.PST. PRT

‘He will go and say what happened.’

b. Otići će i reći će šta se dogodilo.

go.INF AUX.3.S.FUT and say.INF AUX.3.S.FUT what REFL happened.PST. PRT

‘He will go and say what happened.’

I argue in this paper that what looks like some type of “suspended affixation” in examples like (23a) is in fact a simple ellipsis of the future auxiliary in the second conjunct of a coordinate structure. 2P auxiliary clitics can be elided easily in general (see (28a-b)) and the element that is missing is always in the second conjunct, which is typical of ellipsis.

- (28) a. Došao sam i otišao sam.
 arrived.PST.PRT 1.S.PR and left 1.S.PR
 ‘I came and (I) left.’
- b. Milan je došao a Marko je otišao.
 Milan 3S.PR arrived.PST.PRT and Marko 3S.PR left
 ‘Milan arrived and Marko left.’

Even non-auxiliary clitics (i.e., pronouns) can be elided in appropriate contexts. In particular, ellipsis of the object is allowed in certain situations¹³:

- (29) Dejan prodaje polovne automobile, a Ivan kupuje [~~polovne automobile~~].
 Dejan sell3.S.PR used cars and Ivan buy 3.S.PR used cars
 ‘Dejan sells used cars, while Ivan buys used cars.’

In such contexts, pronominal object clitics can be omitted in a similar fashion; compare (29) with (30), in which the object noun phrase is replaced with the pronominal 2P clitic *ih* ‘them’:

- (30) Dejan ih prodaje a Ivan ih kupuje.
 Dejan them sell3.S.PR and Ivan them buy3.S.PR
 ‘Dejan sells them, while Ivan buys them.’

Thus, Serbian 2P clitics can be omitted to the exclusion of their host without much difficulty, regardless of whether they are auxiliary or pronominal 2P clitics. Serbian affixes are, however, fundamentally different from clitics in this respect, as already shown in (4)-(5). Now, since the future auxiliary which has both affix-like and 2P clitic-like properties can be elided (e.g., (23a)), it seems reasonable to assume that this element is underlyingly a clitic. If so, then we need to explain the source and nature of its affix-like properties in a manner consistent with the fact that affixes in general cannot be elided and the fact that the result of ellipsis is never the truncated infinitive (e.g., (23c)). I will ultimately argue that the future auxiliary under investigation (e.g., (16a)) is underlyingly a 2P clitic, which acquires its affix-like properties in a very specific context via a post-syntactic operation called Local Dislocation very late in the derivation. This will explain its dual clitic-affix properties from above but also provide some insight into the interaction between Local Dislocation and ellipsis, on the assumption that ellipsis also applies at PF. The main goal of this paper is to spell out the details of this Local Dislocation operation and to show how it interacts with other post-syntactic processes responsible for allomorphy, place assimilation etc. This is the focus of section 3. But first I need to show that the phenomenon in

¹³ For instance, verbs in the two conjuncts seem to require contrastive interpretation. It has therefore been argued that Serbian has V-stranding VP ellipsis, where the verb moves out of the VP, which is followed by VP ellipsis (see Stjepanović 1998; Todorović 2015 etc.)

question is indeed ellipsis and that it should not be analyzed in any other way; e.g., as coordination of phrases below a single auxiliary.

2.4 Suspended affixation in Serbian is ellipsis

The examples in (23)-(27) are simple enough to illustrate the main phenomenon, but they do not necessitate the auxiliary ellipsis analysis. In all of these examples both conjuncts share the same subject (*on* 'he') which is pro-dropped. In general, conjuncts of a coordinate structure in Serbian count as separate prosodic domains/intonational phrases (see Bošković 2001) for second position requirements of 2P clitics. In other words, if a 2P clitic is present in any of the conjuncts it must be in the second position. This in turn means that the complex morphological units from (16a), which we are interested in here, must be initial in their respective conjuncts, in order to satisfy the 2P requirement of the future auxiliary; recall that the truncated infinitive base counts as the clitic host occupying the first position. But, if both conjuncts of the coordinate structure had their own separate subjects expressed overtly they would under most natural interpretation be in conjunct-initial positions and thus effectively block the complex/synthetic future forms; i.e., the auxiliary would then have to follow the subject as a regular 2P clitic. However, this particular combination of factors raises the following issue for the constructions in (23)-(27): since there is only a single subject for the whole coordinate structure, one could ultimately argue that examples like (23a) involve not ellipsis of the auxiliary, but a simple VP coordination under a single auxiliary, as in (31) (this would be an analysis along the lines of (2a)).

(31) AUX [VP and VP]

What must be shown is that both conjuncts can overtly express their subjects, which would then indicate that what we are dealing here with is (at least) TP-coordination, involving two auxiliaries, one of which is deleted. This requires somewhat more complicated examples for two reasons: (i) the subjects of conjuncts need to be different, since expressing a single subject overtly in each conjunct is pragmatically very odd, and (ii) the subject in the second conjunct must not be expressed in the first position (because of the 2P requirement), which automatically requires somewhat special context and intonation. Consider then the following example:

(32) Polufinalni program će otvoriti Juventus i Real Madrid, a zatvoriti ga
semi-final program AUX.3.S.FUT open.INF Juventus and Real Madrid and close.INF it
Barcelona i Bajern.
Barcelona and Bayern.

'Juventus and Real Madrid will open the semi-final program, and Barcelona and Bayern
(will) close it.'

(<http://www.srbijadanas.com/clanak/ls-pocinje-rasplet-stara-dama-ceka-kraljevski-klub-05-05-2015>)

The subject of the second conjunct ('Barcelona and Bayern'), which is in the sentence-final position, is contrasted with the subject of the first conjunct ('Juventus i Real Madrid'). At the same time, the types of events expressed in two conjuncts ('opening' and 'closing') are also contrasted against each other. A sentence like (32) needs a special context and intonation, but it is perfectly grammatical, even though the second conjunct lacks the auxiliary; contrastive interpretation and intonation are crucial for these constructions, as discussed at the end of this section (see also Arsenijević 2011). Of course, the second conjunct cannot be used on its own as an independent sentence:

- (33) *Zatvoriti ga Barselona i Bajern.
 close.INF it Barcelona and Bayern.
 'Barcelona and Bayern will close it.'

When the auxiliary is expressed in the second conjunct, it forms a complex unit of the kind given in (16a).

- (34) Polufinalni program će otvoriti Juventus i Real Madrid, a zatvoriće
 semi-final program AUX.3.S.FUT open.INF Juventus and Real Madrid and close.AUX.3.S.FUT
 ga Barselona i Bajern.
 it Barcelona and Bayern
 'Juventus and Real Madrid will open the semi-final program, and Barcelona and Bayern
 will close it.'

Here, the second conjunct can function as an independent sentence:

- (35) Zatvoriće ga Barselona i Bajern.
 Close. AUX.3.S.FUT it Barcelona and Bayern .
 'Barcelona and Bayern will close it.'

When we control for these factors we see that all four possibilities given in (24) are perfectly fine (although they require special contexts and intonation). (32) and (34) illustrate the option in (24a) (i.e., [INF + FUT] & [INF_{TR} + FUT]), with the auxiliary FUT 'suspended'/'elided' in (32). Examples in (36)-(38) the other three possibilities:

- (36) [INF_{TR} + FUT] & [INF + FUT]
 Ostaće Zoran a otići (će) Milan.
 leave.AUX.3.S.FUT Zoran and leave.INF AUX.3.S.FUT Milan.
 'Zoran will stay and Milan (will) leave.'

(37) [INF_{TR} + FUT] & [INF_{TR} + FUT]

Otvori**će** program Dejan i Sanja, a zatvoriti ga Milan i Marija.
open.AUX.3.S.FUT program Dejan and Sanja and close.INF it Milan and Marija
'Dejan and Sanja will open the program, and Milan and Marija (~~will~~) close it.'

(38) [INF + FUT] & [INF + FUT]

Otići **će** Zoran a doći (**će**) Milan.
leave.INF AUX.3.S.FUT Zoran and come.INF AUX.3.S.FUT Milan
'Zoran will leave and Milan (~~will~~) come.'

At the same time, this kind of auxiliary deletion is possible with other kinds of 2P clitics:

(39) Milan **je** došao a Marko (**je**) otišao.

Milan AUX.3.S.PR come.PST.PRT and Marko AUX.3.S.PR left PST.PRT
'Milan came and Marko left.'

Ellipsis is possible even when the elided clitic auxiliary doesn't match its antecedent in ϕ -features:

(40) a. Ti **si** došao a ja (**sam**) otišao.

you.S AUX.2.S.FUT come PST.PRT and I AUX.1.S.FUT left PST.PRT
'You(S) came and I left.'

b. Ti **ćeš** doći a ja (**ću**) otići.

you.S AUX.2.S.FUT arrive.INF and I AUX.1.S.FUT leave.INF
'You (S) will come and I will leave.'

The ϕ -feature mismatch is also possible when the omitted element is the suffixed future auxiliary of the kind we are interested in here: compare (41) to (37).

(41) [INF_{TR} + FUT] & [INF_{TR} + FUT]

?Otvori**ćemo** program ja i Sanja, a zatvoriti ga Milan i Marija.
open.AUX.1.PL.FUT program I and Sanja and open.INF it Milan and Marija
'I and Sanja will open the program, and Milan and Marija (~~will~~) close it.'

Here the auxiliary in the first conjunct takes 1st person plural form, which doesn't match in ϕ -features the omitted 3rd person plural auxiliary in the second conjunct (i.e., *zatvoriće*).¹⁴ This

¹⁴ Note that this example is somewhat marked compared to (37) for some speakers, which might be a processing issue. As already mentioned (see also the discussion below), constructions of this type require contrast between the fronted verbs, as well the post-verbal subjects, both in terms of interpretation and intonation, which involves a

strongly suggests that what we are dealing with here is ellipsis, since this kind of phonological identity is not required in ellipsis (e.g., Merchant 2016). For example, the elided VP in (42) is not surface-identical to the past form of the verb in the antecedent VP:

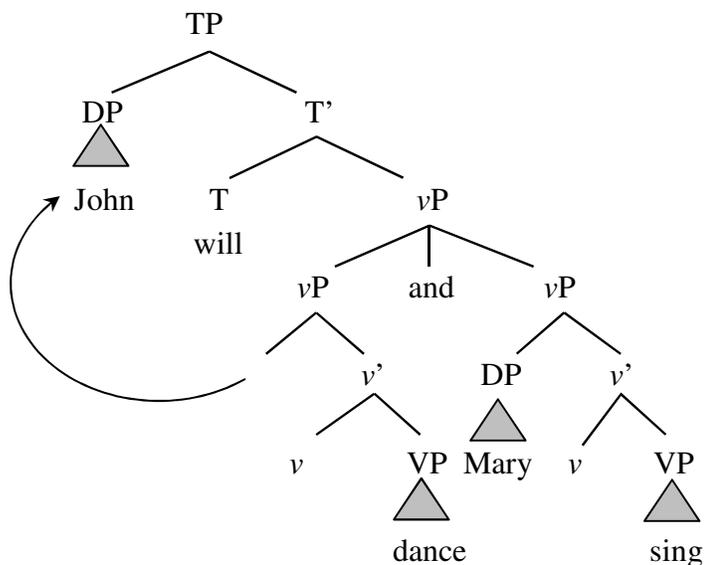
(42) John ate the sandwich but Mary didn't (~~eat the sandwich~~)

At the same time, such facts raise serious problems for alternative analysis based on movement (2c) or coordination (2a).

Despite these facts, one still might be led to analyze constructions in (32)-(41) as “low coordination reduction” instead of ellipsis. For instance, Johnson (2009) (see also Siegel 1987) proposes that similar English constructions involving “auxiliary Gapping” could be characterized with the structure in (44). Thus it could be argued that there is no ellipsis in (43); instead, the auxiliary embeds coordinated vPs from which the subject *John* moves to SpecTP:

(43) John will dance and Mary (~~will~~) sing.

(44)



Although such an analysis might have some plausibility for English I believe it is not tenable for Serbian. First, as already discussed in Johnson (2009), (44) violates Coordinate Structure

significant amount of processing effort. In addition, in (41) the first person pronoun *ja* ‘I’, responsible for the first person agreement, is also coordinated, since the simple pronoun is not heavy enough to bear the contrastive stress. This in turn leads to coordination in the subject of the second conjunct as well. At the same time, different speech act participants (speaker versus 3rd person) are processed as subjects, which overall increases the processing load. But the construction improves if it is pragmatically adjusted and coordination from the subject of the second conjunct is eliminated. According to my informants (i) is better/easier to process than (41) in this respect:

- (i) Otvorićete program tvoja supruga i ti, a zatvoriti ga neko drugi iz vaše porodice.
 Open.AUX.2.PL.FUT program your wife and you.S and open.INF it some else from your family
 ‘Your wife and you will open the program, and someone else from your family (will) close it.’

Constraint (CSC). Also, this approach predicts that coordination structures in which the auxiliary is unexpressed in the second conjunct (e.g., (32)) would have a radically different syntactic structure from those in which the auxiliary appears on both conjuncts (e.g., (34)): the former would coordinate *v*Ps while the latter TPs. There seem to be no syntactic evidence for this (see also the discussion below). At the same time, such an approach makes wrong predictions for Serbian. Consider binding for instance. As in many other languages, A-movement in Serbian affects binding possibilities, which can be illustrated with passivization. In (45) the object cannot bind the reflexive in the adjunct position, but it can in (46) after it has been passivized.

(45) *Policija_i je uhapsila Milana_i zbog svoje_i mačke.
 police AUX.3.S.PR arrest.PST.PRT Milan because self.POSS cat
 ‘The police arrested Milan because of his cat.’

(46) Milan_i je uhapšen zbog svoje_i mačke.
 Milan AUX.3.S.PR arrested.PST.PRT.PASS because self.POSS cat
 ‘Milan was arrested because of his cat.’

On the low *v*P coordination analysis the subject of the first conjunct in (44) moves via A-movement from Spec *v*P to SpecTP from where it c-commands the subject of the second conjunct which stays in Spec *v*P. The subject of the first conjunct should therefore be able to bind the reflexive embedded in the subject of the second conjunct on any definition of locality, given the passive facts above. However this is impossible, as (47) illustrates. Note that this cannot be due to some type of ban on nominative reflexives – the reflexive in (47) is marked with genitive.¹⁵ Furthermore, the subject of the first conjunct can antecede the pronoun in the same position (e.g., (48)). And as these examples show, omitting the future auxiliary in the second conjunct does not affect the binding possibilities, regardless of whether the auxiliary is a regular 2P clitic ((47)-(48)) or a suffix of the type in (16a) (e.g., (49)):

(47) *Marko_i će trčati a prijatelj svoje_i majke (će) plivati.
 Marko AUX.3.S.FUT run.INF and friend.NOM self.POSS mother.GEN AUX.3.S.FUT swim
 ‘Marko_i will run and the friend of his_i mother (~~will~~) swim.’

(48) Marko_i će trčati a prijatelj njegove_i majke (će) plivati.
 Marko AUX.3.S.FUT run.INF and friend.NOM his.POSS mother.GEN AUX.3.S.FUT swim
 ‘Marko_i will run and the friend of his_i mother (~~will~~) swim.’

¹⁵ In fact, nominative reflexives are possible, in particular, in copular constructions:

- (i) Milan je svoj čovek.
 Milan is self.POSS.NOM man.NOM
 ‘Milan is his own man (Milan is an independent person).’

The generalization is that the reflexive is incompatible not with nominative case, but with the subject position.

- (49) Trčaće Marko_i a plivati prijatelj njegove_i /*svoje_i majke.
 run.AUX.3.S.FUT Marko and swim friend.NOM his.POSS / self's.POSS mother.GEN
 'Marko_i will run and the friend of his_i mother (will) swim.'

This is unexpected on any approach to binding which aims to derive the ban on reflexive in subject positions through some type of locality; i.e., if finite sentences are binding domains, then the reflexive will be disallowed in the subject position since there wouldn't be any potential c-commanding antecedent within that domain that could bind it. On such analyses, the facts above are surprising if their underlying structure is as in (44); according to this structure, the reflexive in the subject of the second conjunct *does* have a potential c-commanding antecedent in its domain, namely, the subject of the first conjunct. The low *vP* coordination approach must reject this standard, locality-based approach and assume that some other, independent factors are responsible for the ban on reflexives in subject positions, which ultimately might not be incorrect. But, the facts above would then be a result of an accident, which I believe would undermine the whole analysis in terms of its predictive power.

Further evidence that conjuncts in these examples include structures larger than *vPs* comes for the distribution of adverbs. There is a consensus in the literature on Bosnian/Croatian/Serbian (see Bošković 1997; Stjepanović 1999 etc.) that sentential adverbs like *verovatno* 'probably' (and the other ones given in (50b)) are adjoined to TP (e.g., Watanabe 1993).¹⁶ Consider now the following example:

- (50) a. Šta će Markovići raditi večeras?
 what AUX.3.S.FUT Markovićs do.INF tonight
 'What will the Markovićs do tonight?'
 b. Milan će čitati novu knjigu, a njegova supruga
 Milan AUX.3.S.FUT read.INF new book and his wife
 verovatno/možda/sigurno /nesumnjivo gledati neki film.
 probably / maybe/ certainly/undoubtedly watch.INF some film.
 'Milan will read the new book, and his spouse probably/maybe/certainly/undoubtedly watch some movie.'

¹⁶ This is particularly clear in examples which include negation, like (i). Here the sentential adverb precedes negation, while the manner adverb *brzo* 'fast' follows it. The example in (ib), in which the order of the adverbs is reversed, is, on the other hand, considerably degraded. This clearly indicates that adverbs like *verovatno* 'probably' are high in the structure:

- (i) a. Milan verovatno neće brzo završiti zadatak.
 Milan probably NEG.AUX.3.S.FUT fast finish.INF homework
 'Milan probably won't finish the homework fast,'
 b. *?Milan brzo neće verovatno završiti zadatak.

As shown in (50b), adverbs standardly assumed to be TP-adjoined are grammatical in the second conjunct, even though this conjunct lacks the future auxiliary. If the lack of the auxiliary indicates a simpler syntactic structure, i.e., a simple *vP* without additional projections (as in (44)), the question is then how are these sentential adverbs possible in the second conjunct in (50b)? This is completely unexpected on the low *vP* coordination analysis, while the TP coordination approach predicts exactly this state of affairs.

This example also challenges a modified version of Johnson’s analysis (suggested by a reviewer), on which the sentence initial position of the subject in a sentence like (39) (repeated below as (51a)) would be a result of prosodic inversion and not of syntactic movement. That is, as illustrated in (51b), both subjects would stay low (in *SpecvP*), but the subject in the left conjunct would undergo prosodic inversion with the auxiliary clitic, and end up in the sentence-initial position. That is, the sentence initial position of this subject would not be a result of syntactic movement but prosodic inversion between the clitic auxiliary and the subject. But, again, if (51b) involves coordination of *vPs* under a single auxiliary, where would the sentential adverbs in (50b), generally assumed to be TP-adjoined, be located? Furthermore, such an analysis would also have serious difficulties explaining the ϕ -feature mismatches in (40). (See also the discussion around (83) and (84) in section 3.2 for more arguments against this type of purely prosody-driven analysis).

- (51) a. Milan **je** došao a Marko (**je**) otišao.
 Milan AUX.3.S.PR come and Marko AUX.3.S.PR left
 ‘Milan came and Marko left.’
 b. **je** [_{vP} Milan došao] a [_{vP} Marko otišao].

Finally, the nature of the conjunct used in these constructions supports the ellipsis-based analysis suggested here. In particular, note that in all of the above examples the so-called “oppositive conjunction” *a* is used. The conjunction *i* ‘and’, on the other hand, which contributes the meaning of *additive coordination*, is in general incompatible with these constructions. This is unexpected on the low *vP* coordination analysis, since, as shown in Arsenijević (2011), *i* can coordinate elements of different levels of grammatical complexity and of different categories: adjectives, prepositional phrases, nouns, pronouns, VPs etc. That is, if constructions under discussion involve simple *vP* coordination, it is not clear why *i* would be incompatible with them. On the other hand, Arsenijević (2011) argues convincingly that oppositive coordination in Serbian involves a restricted set of categories: IP/TP and CP; i.e., oppositive coordination of categories that are smaller than IP/TP is not possible. Arsenijević shows that oppositive coordination takes exactly two members and it necessarily requires the presence of a pair of mutually contrasted foci in the two coordinated expressions, as already noted in our discussion of examples in (36)-(41). In particular, the opposition that characterizes *a* comes from the contrast between the elements bearing particular discourse-roles in the two sentences under coordination.

Thus, oppositive coordination operates at a high structural level, responsible for discourse-related properties of the sentence. Arsenijević’s observations and analysis therefore further support the claim that the constructions in question involve (i) coordination of two TPs (or more complex projections) and (ii) ellipsis of the auxiliary in the second conjunct, and directly challenge any approach which assumes coordination of smaller categories under a single auxiliary.

At the same time, all of these facts give us a clue as to how exactly ellipsis might work in these constructions. Note first that one of the primary reasons for analyzing “auxiliary gapping” in English as *vP* coordination under a single auxiliary comes from the difference in interpretation between (52a) and (52b) (Siegel 1984; 1987, see also Johnson 2004; Boone 2014 etc.):

(52) (Siegel 1987: 54)

- a. Warren can’t go out drinking and his wife stay home with the baby.
- b. Warren can’t go out drinking and his wife can’t stay home with the baby.

(52b) can be interpreted as describing two situations at two time intervals; e.g., under this interpretation, Warren can’t go out drinking at some point in time and his wife can’t stay at home with the baby, possibly at a different point in time. Thus, both conjuncts of the coordination contain a modal and a negation and they are plausibly analyzed as two TPs (see Boone 2014: 42). However, the example in (52a), which exemplifies “auxiliary gapping”, describes only a situation which holds at a single time interval. That is, Warren cannot go out drinking *while* his wife stays home with the baby. It is therefore reasonable to analyze English (52a) as *vP* coordination under a single modal and negation – this would explain why there is only one auxiliary and why it takes scope over the whole coordination.¹⁷ But Siegel (1984, 1987) also

¹⁷ Siegel (1984: 524, footnote 3) argues that a similar contrast also holds between examples which include only the modal auxiliary (without negation):

- (i) a. Ward can eat caviar and Sue eat beans.
- b. Ward can eat caviar and Sue can eat/eats beans.

Unlike (ib), the example with the auxiliary gap in (ia) arguably has only the wide scope reading of the modal. Note at this point that Serbian modals are fully inflected verbs (*mo-ći* ‘to be able, *mora-ti* ‘must’ etc.), not enclitics, and are therefore outside of the scope of this paper. But to the extent that it might be relevant here, it is worth mentioning that Serbian coordinate constructions in which the regular clitic auxiliary is omitted in the second conjunct do *not* necessarily describe a situation which holds at a single time interval (in contrast to (ia)). For example, although the future auxiliary is missing in the second conjunct in (iib), there is no requirement that the events described by two conjuncts happen simultaneously or hold at a single time interval; e.g., it is possible that Milan will make hotel reservations on Monday and that Ana will buy plane tickets on Tuesday. In particular, whether the auxiliary is expressed overtly or not does not affect the interpretation in this way at all, which is, of course, completely in line with the TP-level coordination analysis.

- (ii) a. Kako se Milan i Ana spremaju za put?
 how REFL. Milan and Ana prepare3.PL.PRES for trip
 ‘How are Milan and Ana preparing for the trip?’

notes that Gapping constructions like (53) (see also Boone 2014), do not necessarily describe events which hold at the same time.

(53) Ward can't eat caviar and Sue beans.

One of the readings of (53) can be paraphrased as ‘Oh, no, I made caviar and beans for dinner, and then I found out that John can't eat caviar and Mary, beans’. This reading does not entail that there is a single event, which could be taken to mean that at least some gapping constructions in English do not involve low *vP* coordination but rather TP-level coordination combined with ellipsis. For instance, Boone (2014) argues that on this interpretation both conjuncts of (53) are TPs containing a modal and negation, which explains the possibility of the dual event reading. What is elided in the second conjunct is the whole TP from which the subject and the object moved out (see Boone 2014: 45):

(54) [_{TP} Ward can't eat caviar] & [_{TP} Sue_i [_{TP} beans_j [_{TP} t_i can [_{NegP} not [_{VP} t_i eat t_j]]]]].

I suggest that given all the evidence a similar type of ellipsis might underlie the auxiliary gapping in Serbian. These constructions involve oppositive coordination which requires presence of contrastive foci and two conjuncts which are at least the size of TP (e.g., they can contain sentential adverbs, etc.). It is perfectly plausible then that the contrastively interpreted, non-elided elements of the second conjuncts move outside of TP (or whichever projection introduces the auxiliary) to relevant projections in the CP domain, which are responsible for contrastive interpretation (e.g., Rizzi 1997). The auxiliary gap in the second conjunct would then be result of ellipsis of TP containing only the auxiliary.¹⁸

Many details of such an analysis would have to be worked out, of course, but that is a completely separate project which I have to leave for future work at this point. What I hope to have shown in this section is that the absence of auxiliary in the second conjuncts of structures like (32)-(41) is due to ellipsis not coordination of smaller structures under a single auxiliary. The provisional proposal sketched above is, I believe, a good starting point in understanding the nature of ellipsis involved, but is not the main focus of this article.¹⁹ The question that still needs

b. Milan će rezervisati hotel, a Ana (će) kupiti avionske karte
 Milan AUX.3.S.FUT reserve.INF hotel and Ana AUX.3.S.FUT buy.INF plane tickets
 ‘Milan will make hotel reservations and Ana buy plane tickets.’

¹⁸ For example, one could assume that in (51a) the subject *Marko* and the VP including *otišao* ‘left’, both contrastively interpreted in some way with respect to the subject and the VP in the first conjunct, move out of TP prior to TP-ellipsis, which results in the auxiliary gap in the second conjunct.

¹⁹ Note also that constructions like (3a), or (ia) below, with the single subject seem to be structurally ambiguous between VP coordination under a single auxiliary and TP coordination with auxiliary-ellipsis. That is, (ia) may be plausibly analyzed either as VP coordination with the single subject *Marko* in SpecTP, or as TP coordination in which the subject of the second coordinate is pro-dropped and the auxiliary is elided. What is important, however, is that not all cases of this type can be reduced to the VP coordination analysis only; i.e., there are cases like (ib) or (ic),

to be answered, however, is the following: given that the future auxiliary which combines with the truncated infinitive (e.g., (16a)) can be elided in exactly the same way as regular 2P clitics, how can its affix-like properties be explained in a principled manner? In general, Serbian affixes cannot be elided, while Serbian 2P clitics can. Since the future auxiliary in (16a), which has both affix-like and 2P clitic-like properties, can also be elided, it would be counterintuitive to assume that this element is underlyingly an affix. Rather, it seems more promising to assume that its affix-like properties are derivative of and secondary to its 2P clitic nature; i.e., it starts out as a 2P clitic and its affix-like characteristics are attained later in the derivation. Recall also that the result of the future auxiliary ellipsis is always the full, non-truncated infinitive, which has interesting implications for the timing of ellipsis, on the assumption that ellipsis is a deletion process that occurs at PF.

In the following section I spell out details of my proposal. I first briefly go over some main points of Embick's (2007; 2010) theory, on which certain crucial aspects of my analysis are based, and the general framework of Distributed Morphology (DM), which I will be adopting. I also clarify the formal distinction between what I have been calling 'clitic' and 'affix'. Then I show how the theory I adopt accounts for the Serbian facts discussed above.

3 The analysis

3.1 Some background: Embick (2007; 2010)

Embick's (2007; 2010) theory, which my analysis is based on, is couched in the framework of Distributed Morphology (DM). In this theoretical model, morphologically complex words are composed in the syntax out of discrete pieces (morphemes), which do not have phonological content. The phonological material is added to morphosyntactic representations in the PF component of grammar, through the process of *Vocabulary Insertion*. There are two types of morphemes: (i) *Roots* – category-neutral morphemes, members of the open-class vocabulary, and (ii) *functional morphemes* – terminal nodes consisting of grammatical features, such as

which require coordination of TPs (plus ellipsis). In (ia) the second conjunct is modified by adverbs which are standardly assumed to be TP-adjoined. In (ic) the "oppositional conjunction" *a* is used, which as we saw above can coordinate only complex structures like IPs/TPs or CPs:

- (i) a. Marko će čitati knjigu i gledati neki film.
 Marko AUX.3.S.FUT read.INF book and watch.INF some film
 'Marko will read a book and watch some movie.'
- b. Marko će čitati knjigu i verovatno/možda /sigurno gledati neki film.
 MarkoAUX.3.S.FUT read.INF book and probably/ perhaps/certainly watch.INF some film
 'Marko will read a book and probably/perhaps/certainly watch some movie.'
- c. Marko će raditi noću a spavati danju.
 MarkoAUX.3.S.FUT work.INF night and sleep.INF day
 'Marko will work during the night and sleep during the day.'

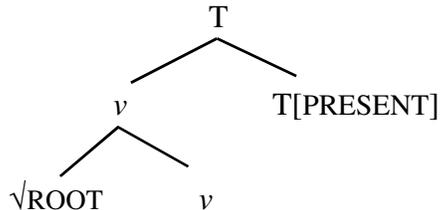
[PLURAL] or [PRESENT]. For instance, (55) illustrates the Vocabulary Items (VI) for the present tense T in English, which are competing for insertion into the T head in (56):

(55) Vocabulary of English (fragment)

a. [3S, PRESENT] \leftrightarrow -s

b. [PRESENT] \leftrightarrow \emptyset

(56)



As discussed in Bobaljik’s (to appear) recent exposition of DM, the formal statements of VI are guided by the following two general principles of rule interaction:

(57) *Rules Apply*

A rule applies wherever its structural description is met.

(58) *Elsewhere Condition*

Where more than one mutually exclusive rule may apply, (only) the most highly specified rule applies.

Thus, if the subject is for instance 1PL, then the features [1 PL, PRESENT] will constitute the input to VI. The item in (55a) may not apply, as its structural description is not met; only (55b) is compatible with this context. On the other hand, where the subject is 3S, both exponents in (55) are eligible for insertion, but as (55a) is more specific, -s must be inserted.

Embick assumes that syntactic structures contain only hierarchical information. That is, a hypothetical structure of the form [X YP] created by the syntax does not include information about the linear order of X and YP. An independent linearization procedure determines the linear order between X and YP in the PF component, on the basis of different type of language-specific generalizations. So, in a head-initial language like English verbs precede their complements, which the linearization procedure encodes in terms of the binary *-operator, which can be read as “is left-adjacent to”:

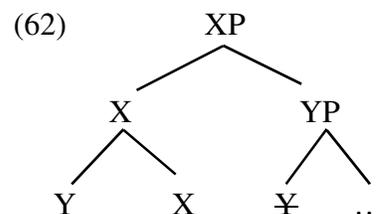
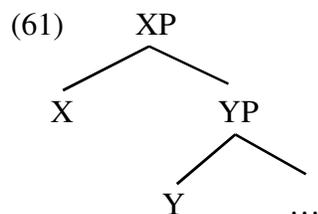
(59) (V * DP)

*-statements are used as a means of stating headedness generalizations, which go beyond the properties of individual terms. Thus, when it is said that V precedes DP (i.e., ‘is left-adjacent to’), this means that V appears to the left of the first element of DP, whatever DP may contain. In addition to the *-statements, which order heads with respect to phrases (and phrases with respect

to phrases), there are also $\widehat{\quad}$ -statements which encode *concatenation*, i.e., exclusively linear representations, which impose order directly on the syntactic terminals. Thus, while * in (59) says that V is next to DP, a constituent containing D and NP, it does not provide information about which head in the DP (D or N) V is immediately adjacent to. The binary operator $\widehat{\quad}$ encodes immediate precedence between syntactic terminals; e.g., for a representation of the form (V * (D * N)) the following concatenation statements may be given (for English):

- (60) a. $V\widehat{\quad}D$
 b. $D\widehat{\quad}N$

Since the theory of Distributed Morphology does not have a primitive notion of “word”, it is important to clarify at this point that for Embick morphologically complex “words” correspond to internally complex heads, which are derived by combining multiple syntactic terminals. (62) illustrates a situation in which two terminals X and Y form a complex head, while in (61) they constitute a two-word or “analytic” expression.

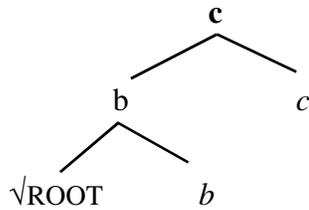


Now, there are two main ways of forming complex heads: (i) the operation of head movement (assumed here to be part of syntax), and (ii) post-syntactic operations which affix terminals to each other in the PF component (e.g., Embick and Noyer 2001; Embick 2007; 2010, etc). I argue that the morphological unit consisting of the truncated infinitive and the future marker *ću* is derived by the latter. Before I provide more details, I need to introduce the distinction between an M-Word and a Subword.

- (63) (Embick 2010: 37)
 a. *M-Word*: (Potentially complex) head not dominated by another head projection.
 b. *Subword*: Terminal node within an M-Word (i.e., either a Root or a bundle of morphosyntactic features).

Thus, in a structure like (64) (produced by a head movement), boldfaced **c** is an M-Word, while italicized *b, c* (and the root) are Subwords.

(64)



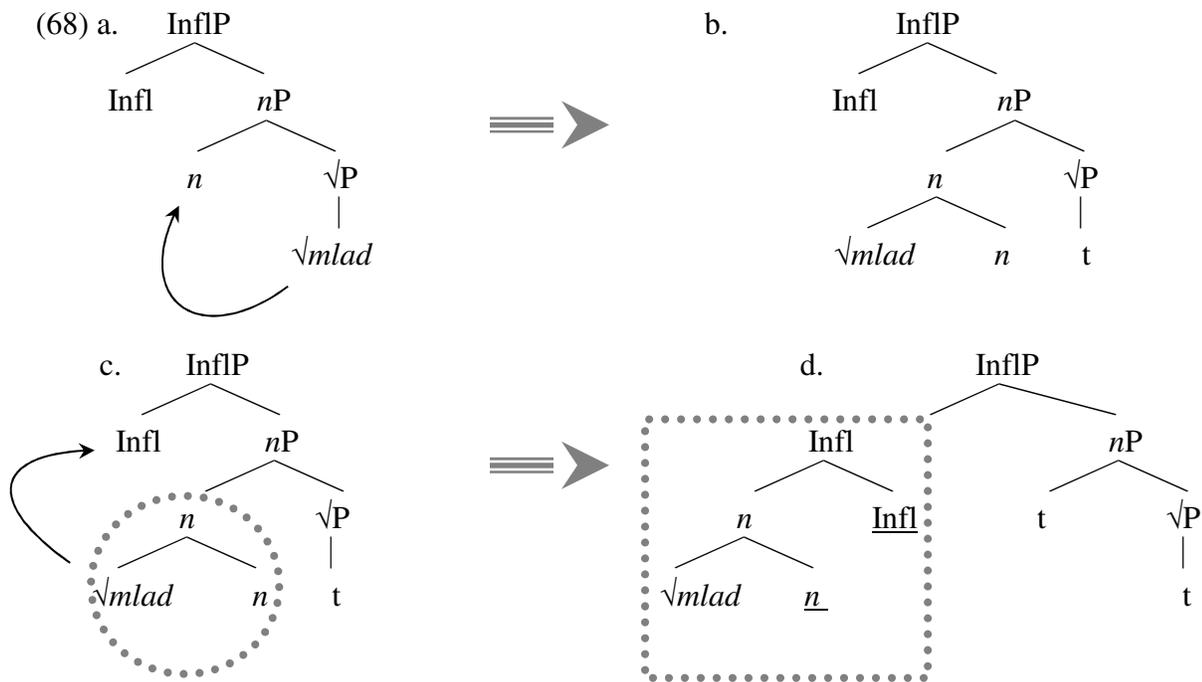
On this approach, M-Words enter relations with respect to other M-Words, and Subwords with respect to other Subwords. The crucial assumption that I will make, and which is not uncommon, is that ellipsis cannot target Subwords; i.e., only M-words can be elided:

(65) Subwords cannot be elided.

One of the important areas of inquiry within DM in recent years has been the issue of locality of morphological interactions (e.g., allomorphy etc.); see for instance Embick 2010; Bobaljik 2012 etc. This research has established that a morpheme X may condition allomorphy of a morpheme Y if they are in a sufficiently local configuration. One such locality domain has been shown to be a morphological word (M-Word)/complex head. For example, Bobaljik (2012), which on the basis of the cross-linguistic distribution of comparative root suppletion provides a strong argument for the general framework of DM, shows that root suppletion is not attested in periphrastic comparative constructions, but only in synthetic comparatives. In other words, the comparative morpheme may condition suppletion of the root within a single complex head of the X^0 category, but not if a maximal projection intervenes (i.e., an XP). At the same time, Embick (2010) argues that there are further locality domains (i.e, cycles, phases) for morphological operations within M-Words, but not across them. For instance, English shows a contrast between so-called *derived/simple* nominals (e.g., *destruction*) and *gerundive* nominals (e.g., *destroying*) in terms of root-sensitive allomorphy of the nominalizing head *n* (e.g., *-ion*, *-al*, *-iage*, \emptyset vs. *-ing*). This can be explained straightforwardly if the *n* head is attached directly to roots in the case of derived nominals, but to *vPs* in the case of gerundive nominals – if *vP* defines a locality domain of a certain kind then it is expected that it would prevent root-sensitive allomorphy in gerundives. So the condition in (65) is perfectly consistent with this line of research, since it states that M-Words and their subparts belong to different kinds of domains. In other words, the claim that M-Words can be elided, in contrast to Subwords, is in spirit very similar to other research within DM that has established consistent differences between M-Words and Subwords. This condition will work for the facts discussed here, but see section 4 for a more detailed discussion. If ordinary affixation in Serbian is created by head movement, as illustrated above, and if (65) is correct, then it follows that ordinary affixes cannot be elided, since they are Subwords (see (64)). (4) and (5), repeated below as (66) and (67) show that this is indeed true. In simple terms, only M-Words, but not their subparts can be elided.

- (66) a. *[Profesor i mladić]-i
 professor and young-M.PL
 ‘Intended: Professors and young men.’
 b. *[Čita i peva]-m
 read and sing-1S.PR
 ‘Intended: I read and I sing’
- (67) a. *Profesori i mladić-(i)
 professor-M.PL and young-(M.PL)
 ‘Intended: Professors and young men.’
 b. *Čita-m i peva-(m)
 read-1.S.PR and sing-(1.S.PR)
 ‘Intended: I read and I sing’

The derivation of *mladići* ‘young men/youngsters’, could be taken to proceed as follows:



The complex head in (68d) is linearized as \sqrt{mlad} -*n*-Infl, where *n* is the head of the category phrase (=noun). Its exponent in VI in this particular example is *-ić* (which is also used as a diminutive marker), but it could have also been for instance *-ost*, generating the noun *mlad-ost* ‘youth’. *Infl* is the head that hosts the agreement features gender, number and case; it represents

one terminal node.²⁰ *-i* is the VI for the combination of features [NOM, M, PL]. What is important for our purposes is that both *n* and *Infl* (underlined in (68d)) are Subwords and cannot be elided according to (65). It is also proposed that complex heads created by affixation show ‘close’ phonological connections; i.e., complex heads “packaged” this way seem to observe standard phonological definitions of wordhood.²¹

Importantly, Embick and Noyer (2001) and Embick (2007; 2010) argue that a complex head (M-Word) may also be formed by a post-syntactic process different from head movement. In particular, a PF-rule called *Local Dislocation (LD)* may affix one element to another under linear adjacency in the PF component of the grammar. As pointed out in Embick (2007: 307-308), “... this operation is a descendant of “merger under adjacency” (Marantz 1984, 1988 and related work) and ultimately of the “affix hopping” transformation of early generative grammar (Chomsky 1957).” Since it is defined in terms of linear adjacency, LD plays one of the central roles in the theory of linearization.

Consider first all the steps that are involved in creating a linear representation from a hierarchical structure (Embick 2007: 316-317):

(69) Phrase Structure → Linear Order

a. SYNTACTIC STRUCTURE: $[_{XP} X [_{YP} Y Z]]$

Hierarchical representation.

b. *; ADJACENCY:

Represented as: $(_{XP} X * YP), (_{YP} Y * Z)$

* = ‘is left adjacent to’; representation of headedness/adjacency of abstract objects (phrases, etc.)

c. $\widehat{\ } / \oplus$; CONCATENATION:

Represented as: $X \widehat{\ } Y, Y \widehat{\ } Z; a \oplus b, b \oplus c$

$\widehat{\ } / \oplus =$ concatenation for M-Words/Subwords respectively

Note that \oplus indicates concatenation of Subwords as opposed to M-Words, which is indicated with $\widehat{\ }$. There are two types of LD - those in which there is reordering of elements, and those in which there is not. In the former case, there are two types of effects: (i) the order of the elements in question is reversed, and (ii) the moving element is pushed one step down in the ontology. In particular, what was an M-Word becomes a Subword. In the case of no reordering of elements, only the second part applies: an M-Word becomes a Subword. In both cases, according to

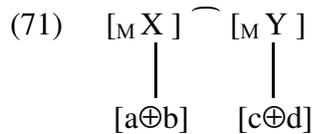
²⁰ For simplicity I assume here that grammatical information such as CASE, NUMBER etc. is represented by one functional head, but it is possible that this terminal node is a product of fusion of different functional heads (e.g., NumP, CaseP etc...).

²¹ Word-level phonology (e.g., tri-syllabic laxing, nasal assimilation, Northern Irish dentalization etc.) would apply to object created this way (see Bermúdez-Otero and McMahon 2006 for an overview). See also the discussion in section 4.

Embick, the operation has a clear phonological effect: it places two M-Words in a structure in which they show close phonological interactions; informally, the moving element ceases to have the phonology of a separate “word”. Thus, the “affixation” step is the essential part of LD. LD is also constrained by (70) (Embick 2007: 319):

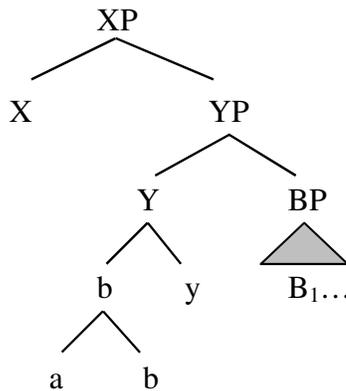
- (70) TYPED LINEARIZATION HYPOTHESIS: Statements of concatenation are typed; i.e., they relate only elements of like type. There are at least two types: M-Words and Subwords. Where upper case X, Y are M-Words and lower case a, b are Subwords, linearization procedures generate two types of concatenation statements, $X \widehat{\ } Y$ and $a \oplus b$. No such statements exist between objects that are not identical in type.

This is graphically represented as in (71):



Linearization of the syntactic structure in (72) is given in (73)-(74) (Embick 2007: 321):

- (72) Structure: Syntax



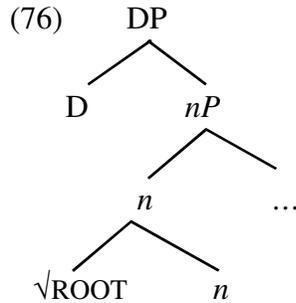
- (73) Linearization: Larger
 a. $[X [Y BP \dots$
 b. $(X * (Y * BP \dots$
 c. $(X \widehat{\ } Y), (Y \widehat{\ } B_1)$

- (74) Linearization: Smaller
 a. $[[[a b] y]$
 b. $(((a * b) * y)$
 c. $(a \oplus b), (b \oplus y)$

An example of LD comes from French. In French, definite articles form a close phonological union with vowel-initial elements which follow them linearly (*l'arbre* versus **le arbre*, cp. *le chat*). In this particular case, Embick argues, LD adjoins D to vowel-initial elements when they are concatenated, as shown (75).

- (75) French Local Dislocation: $D[\text{def}] \widehat{\ } X \rightarrow [D[\text{def}][X]]$, X vowel-initial

After all PF operations apply to the syntactic output in (76), the representation in (77) is created; here we see the effect of the rule in (75), which concatenates D with whatever follows, which in this particular case is *n*. It adjoins D to a vowel initial element, pushing it one step down in the ontology (making it a Subword, which is indicated by the use of \oplus in (77))²²



(77) $[\text{DP} [\text{}_{n\text{P}} [\text{D}[\text{}_n] \dots]]]$
 $(\text{}_{n\text{P}}(\text{}_n \text{D} * n) * \dots)$
 $\text{D} \oplus n$

There are two important consequences of this set of assumptions for the facts under discussion here. First, LD, as a post-syntactic operation, can also create integrated morpho-phonological units/complex heads. Second, as hypothesized by Embick and Noyer (2001), LD takes place after VI, since many LD operations are sensitive to phonological or morphological properties of specific Roots (e.g., (64); see also Embick 2007). These two properties of LD together with some common assumptions about 2P clitics in Serbian enable us to explain the mixed clitic-affix properties of the future marker in the forms in (16a) and the ellipsis phenomena above.

3.2 LD and the Serbian future auxiliary

The literature on 2P clitics in Bosnian/Croatian/Serbian is extremely rich and it is impossible to do here any sort of justice to this large topic and its many intricacies. Roughly, approaches to second position cliticization can be divided into (i) purely phonological/prosodic accounts, which hold that the phonology is strictly responsible for 2P effects (e.g., Radanović-Kocić 1996), (ii) purely syntactic approaches, which take 2P effects to be a strictly syntactic phenomenon (e.g., Franks and Progovac 1994; Wilder and Čavar 1994; Progovac 1996; Tomić 1996; Rivero 1997 etc.), and (iii) mixed approaches, in which both syntactic and phonological/prosodic criteria are

²² Embick and Noyer (2001), for example, also propose that T in Lithuanian always undergoes string-vacuous LD, adjoining to its left neighbor V.

essential in determining clitic placement (e.g., Halpern 1995; King 1996; Embick and Izvorski 1997; Stjepanović 1999; Franks and King 2000; Bošković 2001; Diesing and Zec 2011, etc.). Here I will follow the mixed approach group, which has offered a number of convincing arguments over the years that in order to fully capture the distribution of 2P clitics both syntax and phonology/prosody have to be taken into consideration. In essence, this group of account claims that clitics move in syntax, but that the clitic orders created in syntax can be further regulated at the PF branch, either by filtering prosodically illicit orders, or by applying local PF operations in certain well-defined configurations to create prosodically suitable orders.

Consider then, following this line of reasoning, how the two future forms in (78) can be derived.

- (78) a. *Pas će sešti.*
 Dog.NOM AUX.3.S.FUT sit.INF
 ‘The dog will sit.’
 b. *Sešće.*
 Sit.AUX.3.S.FUT

For (78a), I assume the syntactic structure in (79a), where the subject *pas* ‘dog’ occupies SpecTP, the future auxiliary is in T, and the infinitive in its *v*P complement. It should be noted here that there are a number of strong arguments that 2P clitics are not in a high position like C and that they do not occupy a fixed syntactic position; e.g., Bošković (1995) argues for this on the basis of an interaction between different types of adverbs and clitic placement; see also Stjepanović 1999 for additional arguments.²³ The general conclusion is that in syntax clitics are not in a cluster, adjoined to each other or to the same node; rather, each clitic is in a separate maximal projection in syntax, but at PF their prosodic requirements must be satisfied. As Bošković (2004) points out (see references therein as well), clitic placement and the nature of the 2P effect are largely independent from each other: clitic placement is accomplished in the syntax (where clitics are placed in different maximal projections), while the 2P effect is in essence a phonological phenomenon. Note also that in this respect I follow the version of DM from Arregi and Nevins (2012), who assume that clitics and affixes are actually syntactically different objects

²³ One of Stjepanović’s (1999) arguments is based on VP-ellipsis. In (i) below, VP ellipsis targets VP and the pronominal clitic to the exclusion of the auxiliary clitic, which are both in the second position in the first conjunct. This shows that (a) the auxiliary and pronominal 2P clitics are not adjoined to a single head in syntax, since that would entail ellipsis of a non-constituent in (i), and (b) the pronominal clitic is quite low in the structure, since it is targeted by VP-ellipsis (for arguments on why the auxiliary is not in C, but lower (e.g., in T), see Bošković 1995):

- (i) *Ja sam ga juče video, a i ti si (ga juče video).*
 I.NOM AUX.1.S.PR 3.S.M.ACC yesterday seen and you.S AUX.2.S.PR 3.S.M.ACC yesterday seen
 ‘I saw him yesterday, and so did you.’

(in contrast to Embick and Noyer 2001) and offer a rather thorough analysis of cliticization in Basque within the DM framework (see also Kiparsky forthcoming for discussion).²⁴

After the adjacency and concatenation operations in (69a-b) apply to this syntactic output at PF, the linear order in (79b) is created. In terms of specific vocabulary items, this sequence looks like (79c)²⁵:

- (79) a. [TP [NP N] T [vP ...V...]]
 b. N[̂] T[̂] V
 c. Pas **će** sesti.

Note that in the sequence in (79c) (i) the 2P requirement of the clitic is satisfied, and (ii) /s/ of *pas* does not undergo obligatory place assimilation in front *će*, under the assumption that this rule affects Subwords, not M-Words. (i.e., T is an M-Word).

(78b) produces the same syntactic structure as (78a), but the subject *pas* is *pro*-dropped. After the operations in (69a-b) apply, the sequences in (80) are created.²⁶

- (80) a. N[̂] T[̂] V
 b. **će** sesti.

The problem with it is that the clitic *će* is first in its domain – there is no overt element to serve as its host. I follow Bošković (2001) in assuming that the relevant domain is Intonational-phrase (I-phrase; e.g., Selkirk 1984; Nespor and Vogel 1986 etc.), and that Serbian enclitics must be second in their I-phrase. I propose that at this point the following LD rule applies:

- (81) # T[*fut*][̂] V → [[V][T[*fut*]]]

²⁴ For instance, they assume that pronominal clitics in Basque are elements of category D generated in the specifier position of certain functional layers that dominate argumental DPs (i.e., KP and PartP) (see Arregi and Nevins 2012: Chapter 2 for details). Bošković (2003), for instance, adopts a particular approach to the structural representation of clitics, whereby clitics are syntactically defined as non-branching elements, i.e. ambiguous between X⁰ and XP level categories (as suggested in Chomsky 1994). In any case, the assumption that clitics are syntactically different from affixes is certainly not incompatible with the general architecture of DM (despite what is sometimes believed), as Arregi and Nevins (2012) show. What is crucial for our purposes is that Serbian enclitics are clearly M-Words and can therefore be elided, given (65).

²⁵ I ignore here potential V-to-*v* movement of the infinitive, since its morphological output is still simple (i.e., bare infinitive); in other words, the functional heads inside of the complex head that would be created by such movement would not be overt, and therefore not relevant for the operations under consideration here (see Embick 2010, for detailed discussion of (ir)relevance of non-overt morphemes for phenomena like allomorphy, etc.)

²⁶ I have little to say about the status of the postnominal subjects in (17a), for instance; the status of such subjects in *pro*-drop languages is a notorious issue, which I cannot address here. But I do not see how my proposal would contradict any of the possible accounts (see Bošković 1997 for some discussion).

The rule in (81) specifies that when the future auxiliary directly follows an Intonational-phrase boundary (e.g., Selkirk 1984; Nespor and Vogel 1986 etc.), marked with #, and directly precedes an infinitive, it will undergo LD. Specifically, it will be reordered with respect to the infinitive and it will be pushed one step down in the ontology - it becomes a Subword, forming an M-Word with the infinitive.²⁷

This explains the affix-like properties of the future marker in (78b). After LD in (81) applies, the future marker and the infinitive become Subwords of a single M-Word, and can therefore enter Subword (i.e., affix)-level phonological changes. Thus, if the infinitive is a *ti*-infinitive, the future marker will first trigger *ti*-reduction (e.g., (82)), and if the truncated form ends in /s/ (as in (78b)), /s/ will change to /ʃ/ via place assimilation. Both of these changes are obligatory and apply in that order. Crucially, they do not occur across M-Word boundaries, as shown in the previous section (see also (78a)).

- (82) *ti*-truncation:
 $ti \rightarrow \emptyset / [[V_] [T[*fut*]]]$ (V = *ti*-infinitive)

It is important to note here that I assume that a rule like (81) does not apply in other contexts; i.e., other 2P effects are not derived via similar rules. The auxiliary clitic can be suffixed in such a way only to verbs. There are two types of evidence for this.

First, nothing like *ti*-reduction can happen when the future auxiliary clitic follows a noun (or any other element) ending in *-ti*. That is simply impossible:

- (83) a. *Beti* *će* *doći*.
 Betty.NOM AUX.3.S.FUT come.INF
 ‘Betty will come.’
 b. **Be-će* *doći*.
 Betty.AUX.3.S.FUT come.INF

This clearly shows that rules like (81)-(82) must be specified for a particular category (e.g., infinitive verb) and that other elements do not form complex heads with the 2P clitic, even though they serve as clitic hosts. In (83a) *Beti* is in SpecTP. Furthermore, the future clitic and the verb to which it is suffixed via (81) *must* be members of the same aux-verb complex. That is, this type of suffixation cannot apply to any infinitive verb ending in *-ti*. For example, the verb

²⁷ The rule in (81) is in spirit similar to operations proposed in Halpern (1995); King (1996); Embick and Izvorski (1997), but differs from them in important details. Note that a rule of this sort must include some information about prosodic structure (i.e., I-phrase marks). Different authors invoke prosody in different ways: Radanović-Kocić (1996) and Bošković (2001) characterize the domain of 2P clitics in prosodic terms, while Halpern (1995) uses prosody to characterize the clitic placement after the first word. It seems unavoidable, however, that some prosodic information must be available at this stage (at the minimum as in (81)), if one wants to explain all of the relevant facts.

pobediti ‘to win’ in (84a) below is an independent infinitive in the subject position directly preceding the auxiliary *će* (because it is a nominalized clause functioning as the subject), and if the suffixation of the future 2P clitic blindly applied to any *-ti* infinitive immediately preceding it (i.e., in the first position), we would expect (84b) to be possible, contrary to fact. Note that these facts directly challenge any analysis of *će*-suffixation which is motivated in purely phonological/prosodic terms and which does not take syntactic information into consideration (like the alternative in (51b) considered in section 2.4).²⁸ There is no reason why (84b) (or even (83b)) should be ungrammatical on such a simple prosodic/phonological account: since the 2P future auxiliary is second in its domain, directly preceded by an element (an infinitive or a noun) ending in *-ti*, the suffixation should automatically take place. Although at first sight a rule like (81) might appear unnecessarily complex in that it combines both prosodic and syntactic information in a very specific way, a version of it is exactly required to get the facts right: i.e., it correctly rules in (78b) and correctly excludes (83b)/(84b).²⁹

- (84) a. *Pobediti će biti jako lako.*
 Win.INF AUX.3.S.FUT be.INF very easy
 ‘It will be easy to win.’
 b. **Pobedi-će biti jako lako.*

Second, even *ći*-infinitives may be truncated in colloquial Serbian quite easily, as can be verified by a quick online search. Thus, examples like (85c) are quite frequent, which directly indicates that infinitives which form future tense with 2P clitic future auxiliaries have much tighter connection with them than other clitic hosts do:

- (85) a. *On će doći.*
 he.NOM AUX.3.S.FUT come.INF
 ‘He will come.’
 b. *Doći će*
 come.INF AUX.3.S.FUT

²⁸ Since T and V heads of a single auxiliary-main verb complex are standardly assumed to enter an Agree/feature sharing process with each other in syntax (see Bjorkman (2011) and references therein), it would be rather straightforward to update the rule in (81) to make sure it applied only to T and V heads of a single future tense verbal complex, and not to unrelated infinitives, like the one in the subject position in (84a). It could be assumed, for instance, that both T and V in (81) are specified for a feature like [FUT] (or some other shared feature), as a result of their Agree relationship in syntax, which would then correctly exclude non-future infinitives (e.g., (84b)) from participating in this type of LD. Note that the vocabulary insertion of the infinitive ending with the main verb would not be affected by this change, given that [FUT] has a phonological exponent only when it combines with ϕ -features, which is not the case with the main verb here; either way, it could also be assumed that the rule which inserts the infinitive ending is more highly specified (i.e. ranked higher) than the one inserting the future morpheme.

²⁹ There are perhaps ways in which a purely prosody-driven analysis might attempt to make reference to syntactic information to deal with (83)-(84), but that would certainly not make it more explanatory or simple than the proposal presented here.

c. Do-će

The only thing we need to assume here is that after the future marker is suffixed to the infinitive by LD, a *ti*-infinitive will be truncated for all speakers (via (82)), and a *ći*-infinitive for some speakers (in colloquial Serbian) via (86). Since all truncated forms of *ći*-infinitives end in a vowel, the effects of place assimilation cannot be observed here.³⁰

- (86) *ći*-truncation (*Colloquial Serbian*):
 ći → ∅ / [[V-__] [T[*fut*]]] (V = *ći*-infinitive)

This proposal also explains clitic-like properties of the future marker in (78b). First, the 2P requirement is a direct consequence of the way (81) is formalized. For example, (87) below is ungrammatical because the conditions for the application of the LD rule were not met: it is the subject *pas* ‘dog’ that directly follows I-phrase boundary #, not the auxiliary.

- (87) **Pas sešće.*
 Dog sit.AUX.3.S.FUT
 ‘The dog will sit.’

Second, we can also explain why the future marker in (78b) does not trigger or undergo any lexical/idiosyncratic allomorphy, unlike true verbal suffixes in Serbian. LD is in general assumed to follow VI, since LD is sensitive to phonological or morphological properties of specific Roots. But lexical allomorphy is in DM encoded in the VI rules. Recall that VI is guided by the following two general principles of rule interaction (Bobaljik to appear):³¹

³⁰ It might be possible that an LD rule like the one in (81) applies in the case of 2P present auxiliaries and past participles as well. However, nothing like truncation happens with past participles possibly because, unlike infinitives, these are already morphologically complex forms, inflected for number and gender (see footnote 25). And since all participles end in a vowel, the effect of place assimilation cannot be seen either.

- (i) a. Ja sam došao.
 I.NOM AUX.1.S.PR come.PST.PRT
 ‘I came.’
 b. Došao sam. (no subject)
 come.PST.PRT AUX.1.S.PR

³¹ See Embick (2015: Chapters 4 and 5) for a detailed discussion of properties of VI. To avoid confusion, it is worth mentioning here that during VI a phonological exponent is added to a terminal node; i.e., it does *not* replace or delete it. So a node like T[PAST] in English would after application of the vocabulary insertion rule in (90c) look like T[PAST, -d]. A separate question is whether the syn-sem features referred to in the insertion process (i.e., PAST in this particular example) are still present in a morpheme after VI, or whether they are deleted. I assume here (following Embick 2015; see sections 4.2.2. and 4.6.3) that, as the default case, these features are not automatically deleted after VI, which is a non-trivial point given the way (81) is defined (see also Noyer 1997 and Bobaljik 2000 for further discussion).

(88) *Rules Apply*

A rule applies wherever its structural description is met.

(89) *Elsewhere Condition*

Where more than one mutually exclusive rule may apply, (only) the most highly specified rule applies.

The same elsewhere logic also regulates the competition among lexically conditioned allomorphs and captures the interaction of regular and irregular forms. For instance:

(90) Vocabulary of English (fragment)

a. [PAST] \Leftrightarrow -t /]_V__ ; where $V \in \{dream, dwell \text{ etc.}\}$

b. [PAST] \Leftrightarrow \emptyset /]_V__ ; where $V \in \{run, hit, fly \text{ etc.}\}$

c. [PAST] \Leftrightarrow -d /]_V__

The elsewhere ordering in (90) ensures that the irregular exponents block the regular past tense exponent for verbs that are listed as irregular. This is crucially not limited to affixes – lexically conditioned root allomorphs are regulated in the same way. For example comparative suppletion in English is captured by the rules in (91), where the root symbol and ALL CAPS indicate the abstract root (lexeme) prior to vocabulary insertion (see Bobaljik 2012; 2015 for details).

(91) a. $\sqrt{\text{GOOD}} \rightarrow \text{be(tt)- / __] CMPR}$

b. $\sqrt{\text{GOOD}} \rightarrow \text{good}$

Recall that Serbian verbs like *kovati* ‘to forge’ and *moći* ‘to be able, can’ from the previous section are irregular. In the case of *kovati* the allomorph of the root *kova-* is *kuj-* in present tense, while in the case of *moći* the allomorph of the 1st person singular present tense suffix $-(e)m$ is $-u$. In addition, the root *moć-* takes the form *mog-*. The rules in (92) formally describe the distribution of two root allomorphs of *kovati*, and correctly predict that the root in the past participle and aorist forms, for instance, is as in (92b): *kova-o* (masculine singular past participle) and *kova-h* (first person singular aorist):³²

(92) a. $\sqrt{\text{KOVA}} \rightarrow \text{kuj- / __] PRES}$

b. $\sqrt{\text{KOVA}} \rightarrow \text{kova}$

The rules in (93) and (94) on the other hand capture the behavior of *moći*:

³² Given that present transgressive (*kuj-ući* ‘while forging’) and imperative (*kuj* ‘forge!’) forms have the allomorph in (92a) it is perhaps more accurate to characterize the conditioning feature as $[-\text{PAST}]$ instead of $[\text{PRES}]$. This is also true for other verbs given in footnote 10.

- (93) Vocabulary of Serbian present tense (fragment)
- a. [1, SINGULAR, PRESENT] \Leftrightarrow -u /]_V__ ; where V \in {*moći, hteti* ‘want’ }
- b. [1, SINGULAR, PRESENT] \Leftrightarrow -(e)m
- (94) a. $\sqrt{\text{MOĆ}} \rightarrow \text{mog- /__}$] PRES
- b. $\sqrt{\text{MOĆ}} \rightarrow \text{moć}$

Crucially, *kovati* has a completely transparent future synthetic form: *kova-ću* (*moći* is a *-ći* infinitive, and therefore doesn’t form the synthetic future in standard Serbian). This is completely expected since LD applies after VI on this analysis. The important point here is that the locality domain for rules that trigger allomorphy is the M-Word (e.g., Embick 2010; Bobaljik 2012 etc.). The future marker of the synthetic future form ends up in a structurally licit position to condition allomorphy (i.e., part of a complex head/M-Word) only after VI, which regulates regular and irregular forms, has already applied.

Similar things can be said about allomorphy in aorist (and other past forms) – recall from section 2.2 that aorist stems have unpredictable consonant endings: *-k, -g, -đ, -d, -t* etc. One option would be to treat these along the lines of (94), i.e., as (partial) root suppletion. On the other hand, it could be the case that the consonants in question are exponents of some independent syntactic head X, which doesn’t affect the main point here, since X’s exponents would have to be lexically conditioned depending on the root X combines with (this would then be similar to (90) and (93)).

Finally, on the assumption that Subwords cannot be elided, which was motivated by the fact that affixes in Serbian cannot be ‘suspended’, I conclude that the future auxiliary is elided before it undergoes LD. That is, the future 2P clitic is an M-Word and therefore can be elided, but only before it undergoes LD and becomes a Subword (“suffix”). This is consistent with the lack of true ‘suspended affixation’ in Serbian and it also explains why the result of ellipsis is not the truncated form, but the full *ti*-infinitive: truncation of infinitive applies after LD, while ellipsis targets the clitic before it undergoes LD.³³

Consider now how the existence and properties of the complex element consisting of a truncated infinitive and a future auxiliary like *ješću* ‘I will eat’ would have to be treated in a purely lexicalist framework, as laid out in Williams (2007), for example. According to the *Lexical Hypothesis*, the grammar is organized into modules, such that the system of words in a language is independent of the system of phrases in a language in a particular way. The system of words determines what the words of a language are, as well as what their properties are. This system is independent of the phrase system but it communicates with it through a very narrow channel – the “top-level” properties of words. The system of phrases, on the other hand, determines how words form phrases (based on the properties of words). In such a system,

³³ It is difficult to say on the basis of these facts whether ellipsis precedes or follows VI: see Merchant (2015) and references therein for evidence that ellipsis in fact precedes VI. The general relationship between PF, VI and ellipsis is discussed in more detail in section 4.

something like *ješću* would have to be treated as a word, because *ješ-* by itself cannot be treated as a word in this sense: it is a bound form, which cannot stand alone.³⁴ But a word like *ješću* would be very different from the majority of other words in the “word system” (i.e., lexicon). For one, the system would have to somehow lexically specify that such words must be sentence-initial (or initial in their intonational domain), and that property would then have to be meaningfully related to the fact that the *-ću* part of *ješću* looks exactly like a clitic with 2P requirements. Such lexical specifications can be stipulated, of course, but I am not sure to which extent this type of approach could be constrained in a principled way (e.g., the existence of sentence-second or sentence-final words would have to be excluded). Also, something would have to be said about why *ješću* can be replaced with its infinitive form *jesti* ‘to eat’ (a word as well) in ellipsis contexts; why can’t words like *jedoh* ‘I ate (aorist)’ or *jedem* ‘I eat (present)’ be replaced with their infinitive forms in ellipsis contexts? The only other time we see an infinitive in ellipsis contexts is exactly when *ću* is a 2P clitic: with future forms based on *-ći* infinitives (see (27a)). Thus, the situation with ellipsis would also have to include a way of relating the *-ću* part of the word *ješću* with the 2P clitic *ću*. The trick, of course, is to do it in a way that would make the right cut between what is possible and what is not. Finally, something meaningful should also be said about why exactly this kind of word lacks any kind of unpredictable allomorphy, in contrast to other words (in particular, inflected verbs).

On the analysis proposed in this paper, on the other hand, the existence of *ješću* falls out naturally from the general architecture of grammar assumed in DM and independently motivated principles of Serbian grammar. LD is a PF operation which applies late in the derivation, at the point when the information about linear order and intonational boundaries is available: it is therefore no surprise that the whole complex *ješću* created by LD from the future auxiliary and the full infinitive must be sentence-initial (i.e., initial in its intonational domain). And on the assumption that ellipsis targets only M-Words and can apply before LD/truncation, it is also expected the result of the ellipsis would always have to be the full infinitive.

³⁴ The auxiliary *-ću* (i.e., the 2P clitic) could also not be treated as a word comparable to *ješću*, since unlike *ješću* it cannot be used by itself, for instance, as an answer to a yes/no question. Only the full (non-clitic) form of the auxiliary *hoću* can be used in this way:

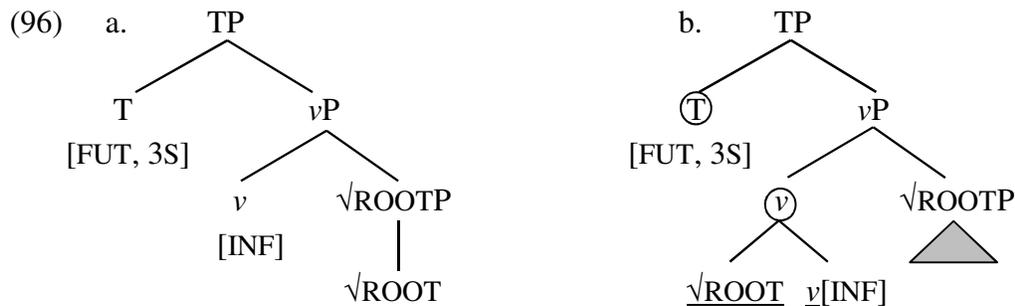
- (i) a. Da li ćeš jesti?
 Q AUX.2.S.FUT eat.INF
 ‘Will you eat?’
 b. Ješču.
 eat. AUX.1.S.FUT
 ‘I will eat.’
 c. *Ću/Hoću.

4 Further questions and implications

In this section I will first briefly summarize all the relevant steps involved in the derivation of (95b) from the underlying structure in (95a), in which the subject is pro-dropped (and which I will ignore here in the interest of clarity). I will then offer some speculations on why a condition like (65), which states that Subwords cannot be elided, should even exist and how it fits into the general framework adopted here.

- (95) a. **će** *sesti.*
 AUX.3.S.FUT sit.INF
 ‘The dog will sit.’
 b. **Sešće.**
 Sit.AUX.3.S.FUT

The initial (simplified) syntactic structure of (95a) is as in (96a). Here I assume that the category-assigning head v is also the infinitive marker; other analyses are possible as well, but my main point would remain the same. (96b) shows the structure in which $\sqrt{\text{ROOT}}$ adjoins to v via head movement, forming a complex head. This structure now has two M-Words: circled T and v , and two Subwords: underlined v and $\sqrt{\text{ROOT}}$.



The syntactic structure in (96b) is linearized at PF. Focusing on M-Words first, *-statements and $\widehat{\quad}$ -statements create the linear order between T and v , as in (97a). Complete linearization also requires linearization of the contents of M-Words (Subwords) as well, as shown in (97b):

- (97) a. T[FUT, 3S,] $\widehat{\quad} v$
 b. $\sqrt{\text{ROOT}} \oplus v[\text{INF}]$

At this point VI applies, as in (98). Note that only Subwords may trigger or condition allomorphy/idiosyncratic behavior among each other – M-Words are crucially different in this

respect. In this particular case, for instance, whether *-ti* or *-ći* is inserted in v [INF] is completely determined by the idiosyncratic properties of the root (which is assumed to be subject to late insertion (e.g., Bobaljik 2012)). The allomorphy in present and aorist verbs discussed above is also determined at this stage. But these are all relationships between Subwords; idiosyncratic properties of a root can never trigger allomorphy of another M-Word. For example, the choice of a vocabulary item for T in (96b) is completely independent from the idiosyncratic properties of the root. This is another indication that clitics in Serbian are indeed M-Words.

- (98) a. T[FUT, 3S, *će*] $\widehat{}$
 b. $\sqrt{\text{SES}} \oplus v$ [INF, -ti]

But now the conditions for application of LD in (81) are created (assuming that at this point of the derivation some information about intonational boundaries is available). T[FUT, 3S, *će*] is reordered with respect to the infinitive and is pushed one step down in the ontology - it becomes a Subword, forming an M-Word with the infinitive. This also triggers truncation of *-ti* in Standard Serbian, as discussed in the previous section. The result of this the sequence $\sqrt{\text{SES}} \oplus$ T[FUT, 3S, *će*]. Since these are now two Subwords they will undergo phonological changes that typically apply across Subwords, but not across M-Words. One such process is the obligatory place assimilation, which then produces the form *seǰće*.

The question now is where does ellipsis fit into this story? I follow here one major type of approach to ellipsis, according to which, generally speaking, syntactic structures are subject to non-pronunciation (this type of analysis can be compared to approaches in which syntactic structures contain null elements, which are then replaced by an operation of structure copying before the structure is interpreted; see Merchant (2016) for an overview of different approaches). As discussed in Merchant (2016), for example, the difference between an elliptical and nonelliptical XP is often analyzed in terms of the presence or absence of a feature (E-feature) in the structure which signals to the phonology that the phonological value of the XP is null or that or that VI of a relevant element does not take place (e.g., Temmerman 2012; Merchant 2015 etc.). Merchant (2015) convincingly argues that ellipsis applies before VI; that is, ellipsis is not the actual deletion of phonological material. Rather, VI does not apply at all in the case of elided element. If this is correct, and if LD, on the other hand, applies after VI (as argued here) then it directly follows that the future auxiliary *će* can be elided only before it undergoes LD. The result of this particular ordering of operations can only be the full non-truncated infinitive (unaffected by LD).

Now, I have proposed in (65) that Subwords cannot be elided in order to account for the fact that affixes in Serbian cannot be ‘suspended’/elided, in contrast to 2P clitics. This is because 2P clitics are assumed to be M-Words while affixes are Subwords. A principle like (65) may appear ad hoc at first, but I believe there is an internal logic to it which is quite consistent with

the general framework of DM, if we agree with Merchant's (2015) proposal that ellipsis is in fact the absence of VI.

As illustrated at many points, one of the key components of VI is that Vocabulary Items compete for application to a given node. This competition is resolved by ordering of Vocabulary Items, such that the one which is most highly specified wins. For instance, in (99) the irregular past tense allomorph $-t$ in English is listed as more highly specified than $-d$, and it wins whenever the conditions for its insertion are met; e.g., in the context of a particular set of roots like *dream* or *dwell*. Importantly, this kind of competition/blocking happens only at the morpheme/Subword level not at the M-Word level. In other words, contextual allomorphy for morphemes/Subwords is determined by properties of other, neighboring morphemes/Subwords, via the process of VI (see Embick 2015: section 7.2.2 for overview of different types of contextual allomorphy). M-Words, on the other hand, do not condition each other in this way.

(99) Vocabulary of English (fragment)

- a. [PAST] $\Leftrightarrow -t /]_{V_}$; where $V \in \{dream, dwell \text{ etc.}\}$
- b. [PAST] $\Leftrightarrow \emptyset /]_{V_}$; where $V \in \{run, hit, fly \text{ etc.}\}$
- c. [PAST] $\Leftrightarrow -d /]_{V_}$

But this, I believe, has direct consequences for what kind of objects can be elided, if ellipsis is indeed the absence of VI. In the case of Subwords (or “affixes”), the choice of a particular Vocabulary Item is always determined *locally*, on the basis of properties of other, local morphemes, as illustrated in (99). It is therefore possible that the absence of VI (i.e., ellipsis) for a given morpheme with particular grammatical properties cannot be licensed purely on the basis of identity with another, distinct non-local morpheme with the same set of grammatical properties, because each of them might have different *local* VI requirements. To illustrate, consider the ungrammatical example in (100) where the past tense morpheme of the verb *dream* is suspended/elided on the basis of grammatical identity with the past tense morpheme on the verb *play*. Formally, this would mean that VI did not apply to the past tense morpheme [PAST] in the case of *dream*, due to the grammatical identity with another, non-local past tense morpheme, namely, the one on *play*. But this is not how VI works – Vocabulary Insertion is a strictly local operation, driven by properties of local elements. It requires that a particular vocabulary item be inserted in a particular local context. In the case of (100), whether $-t$ or $-d$ is inserted depends on which roots appears in the local domain (*dream* or *play*). It ultimately doesn't matter if exponents of the morphemes end up being identical: the general point is that in the presence of local elements that govern VI, a non-local element cannot suspend it. This may be the reason why “suspended affixation” is not possible in languages like Serbian or English, whose morphologies involve a considerable amount of allomorphy and are driven by VI rules like (99). Importantly, since these kinds of locality considerations do not matter for M-Words and Maximal Projections/Phrases, these objects can, in principle, undergo ellipsis.

(100) *That summer, we played and dream at the same time.
 (Intended: That summer, we played and dreamt at the same time).

Note also that if Subwords were freely allowed not to undergo VI (if Subword Ellipsis was a readily available option), VI of neighboring, local Subwords would be substantially affected since the necessary contextual information related to allomorphy of their exponents would be either completely removed or seriously weakened. Again, such effects would not arise for M-Words and Phrases. Thus, a condition like (65) can be motivated in a principled way within the framework adopted here.

Evidence that this kind of reasoning might be on the right track comes from Turkish, which is usually given as a bona fide example of language with suspended affixation. Turkish also has a very transparent morphology, with very little true, phonologically unpredictable allomorphy. For example, the plural morpheme in (1) has two allomorphs *-lar* and *-ler*, whose distribution is determined by the general rule of vowel harmony. Thus, it seems that VI rules of the type given in (99) are in general not needed for Turkish morphemes, since their exponents do not depend on idiosyncratic properties of the local elements; e.g., the morpheme [PLURAL] in Turkish will always be expressed with either *-lar* or *-ler* (depending on the vowel harmony), regardless of which noun it is suffixed to, while in English, on the other hand, [PLURAL] may be expressed with *-en* in the context of ‘ox’, *-Ø* in the context of ‘deer’, ‘fish’, etc. We can therefore assume that in Turkish, Vocabulary Insertion rules, in general, do not specify any local contextual information, which makes Turkish quite different from English or Serbian in this respect. The expectation is then that the absence of contextual allomorphy would allow Turkish affixes to be elided, similarly to M-Words/Maximal Projections, which is exactly the case. For example, plural markers can be “suspended” on both nouns and pronouns. However, Turkish 1st and 2nd person singular pronouns do show some phonologically unpredictable allomorphy in dative: the pronominal roots take the forms *ban-* (1st person) and *san-* (2nd person), instead of the expected *ben* and *sen*:

(101) Turkish Partial Pronominal Paradigm

	1 st S	2 nd S
NOM:	<i>Ben</i>	<i>Sen</i>
ACC:	<i>Ben-i</i>	<i>Sen-i</i>
DAT:	<i>Ban-a</i>	<i>San-a</i>
ABL:	<i>Ben-den</i>	<i>Sen-den</i>

In general, cases suffixes can be suspended with pronouns, as shown in Kabak (2007), for instance:

- (102) (Kabak 2007: 341)
 Ben ve sen-den nefret ed-iyor.
 I and you-ABL hate AUX-PROG
 ‘S/he hates me and you.’

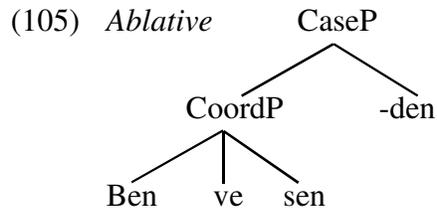
But Kabak (2007: 340) also notices the following contrast: “Overall, Turkish speakers find the suspension of the dative marker on pronouns less acceptable, compared to, for instance, the suspension of the ablative or the locative, although the dative marker can be suspended in nonpronominal noun phrases. A detailed examination, however, reveals that speakers strictly reject the suspension of the dative marker on the 1st or 2nd person singular pronoun (47) while acceptability judgments vary from awkward to acceptable with other personal pronouns (48).” The relevant contrast is illustrated in (103) below:

- (103) Kabak (207: 340)
 a. *Ben ve san-a gel-en paket-ler
 I and you-DAT come-REL parcel-PL
 Intended meaning: ‘The parcels that came to me and you.’
 b. ?Siz ve onlar-a karşı yap-ıl-an suçlama-lar
 You(PL) and they-DAT against do-PASS-REL accusation-PL
 ‘The accusations made against you and them.’

As shown in (103a), suspended affixation is “strictly rejected” exactly in the case that involves locally computed contextual allomorphy; i.e., 1st and 2nd person singular dative pronouns. This particular case strongly suggests that the approach outlined above is on the right track: the effect of the factors that in general prevent Subword ellipsis in languages like English and Serbian can be found even in a language like Turkish. We only need to assume that the VI rules for 1st person singular roots, for instance, are as in (104). Here, the choice of exponent for the pronominal root depends on properties of the local elements (i.e., dative).

- (104) a. $\sqrt{\text{BEN}} \rightarrow \text{ban-} / _ _] \text{ DAT, S}$
 b. $\sqrt{\text{BEN}} \rightarrow \text{ben}/ _ _] \text{ S}$

An influential analysis of suspended affixation in Turkish is that it does not involve word-part ellipsis, but rather coordination under a single morpheme/affix (e.g., Kornfilt 1996). For instance, on such an approach suspended affixation in (102) would involve a structure like (105). However, this is also quite compatible with the proposal outlined here.



One of the major points of Embick (2010) is that contextual allomorphy of the kind given in (104) is sensitive to locality domains/phases. For instance, as already mentioned, English shows a contrast between *derived* nominals (e.g., *destruction*) and *gerundive* nominals (e.g., *destroying*) in terms of root-sensitive allomorphy of the nominalizing head *n*. The derived nominal *n* has many root-sensitive allomorphs (e.g., *-ion*, *-al*, *-iage*, $-\emptyset$), while the gerundive *n* has just one exponent (i.e., *-ing*). Embick argues that this contrast can be explained directly if the *n* head is attached directly to roots in the case of derived nominals, but to *v*Ps in the case of gerundive nominals. On the assumption that *v*P defines a locality domain of a certain kind, then it is expected that it would prevent root-sensitive allomorphy in gerundives. It would certainly not be unreasonable to assume that CoordP defines a locality domain as well, but since Turkish morphemes in general do not display contextual allomorphy, the presence of CoordP would in principle not create any problems. However, 1st and 2nd person pronouns do show contextual allomorphy in dative, which requires the absence of any locality domains/boundaries between the pronominal root and the dative case morpheme; here, CoordP would act as a type of intervener and therefore create the ungrammaticality in (103a).

Thus, the analysis proposed here seems to be able to make a meaningful connection between the general absence of suspended affixation in languages like Serbian and the particular Turkish case in (103a). I do not claim, however, that the mechanism behind contextual allomorphy is the *only* factor that can prevent affix suspension, but just one of potentially many relevant factors; after all, there are affixes in Turkish which cannot be suspended, even though they do not show any contextual allomorphy.

Now, although the statement in (65) that Subwords cannot be elided works for Serbian, there are languages, including English, which seem to allow certain exceptions to this condition. That is, something like Subword ellipsis seems to be possible in certain contexts and with certain type of Subwords. The following examples are from English (Chaves 2008: 261; 291) and Italian (Nespor 1985: 201) (see also Booij 1985 for similar facts from Dutch and German):

- (106) a. Our therapists are trained in pre- and post-natal care.
 b. Most students in my school are either under- or overweight.
- (107) a. *It was deemed inoperable and intolerable.
 b. *The child is awake or asleep?
- (108) a. super- e sottosviluppati
 ‘super and underdeveloped’

b. pre- e poststrutturalismo
'pre- and poststructuralism'

Chaves (2008) observes, for instance, that in English this type of word-part ellipsis is possible only with compounds and certain “affixoids” (affixes that originally came from independent words and often still have the status of a phonological word), but generally not with bona fide “bound” morphemes (e.g., (107)). Also, morphemes that do allow word-part ellipsis do not show contextual allomorphy and have some degree of phonological independence. These generalizations are not insignificant and they show, I believe, that facts like (106) are not incompatible with the general reasoning presented in this section. It could simply be the case that Vocabulary Insertion rules for this particular sub-type of English morphemes do not involve contextual specifications like in (99) and thus allow for the possibility of ellipsis (i.e., the absence of Vocabulary Insertion) under identity with some non-local morpheme. I think that this is a possibility worth exploring.

Word-part ellipsis in Italian has similar properties, as Nespor (1985) shows. In particular, prefixes that allow Subword ellipsis of their stems do not phonologically pattern with other regular affixes that do not allow Subword deletion; rather, they pattern with M-Words in this respect. For instance, Intervocalic Voicing in Italian is obligatory before the derivational suffix in (109a), but does not happen with prefix like *pre-* from (108b) (see (109b)) and across M-Word boundaries:

- (109) a. ca[z]ina ‘little house’ (‘house’ + diminutive)
 b. pre[s]alato ‘pre-salted’
 c. lo [s] apevo ‘I knew it.’

What appears to be the case is that only Phonological Words (ω) may be elided. Now, as observed by Nespor (1985) and others, in some languages the phonological word can be constructed exclusively on the basis on morphosyntactic notions. Thus, given the fact that Serbian lacks examples like (106)/(108), it might be hypothesized that the phonological word in Serbian is in fact based directly on the M-Word, including all of its prefixes and suffixes, but excluding clitics. For this reason it is possible to describe the Serbian facts from previous sections in terms of restricting ellipsis to M-Words (because M-Words are mapped directly to phonological words).³⁵ But the situation is not that simple in languages like Italian, where there

³⁵ Subword ellipsis of the kind given in (106)/(108) seems to be completely impossible in Serbian. For example, perfective aspect in Serbian (and other Slavic languages) is often formed by prefixing preposition-like elements. Thus, verbs *za-ključati* ‘to lock’ and *ot-ključati* ‘to unlock’ are roughly formed by prefixing *za* ‘for’ and *od* ‘from’ to the verb based on the noun *ključ* ‘key’. And while coordinating two verbs is possible as in (ia), coordination with ellipsis of the part to which the prefix is attached is completely out (e.g., (ib)):

is no direct one-to one mapping between M-Words and phonological words. Nespor (1985), for instance, shows that Phonological Word in Italian is based on a morphological word with its suffixes and only one type of prefixes, in particular, ones that are not analyzable as such synchronically. However, prefixes that are analyzable by native speakers as such, fall outside of ω .³⁶ This would then account for why such prefixes allow constructions like (108). The same line of reasoning can then be extended to languages like English and Dutch (see Booij 1985 and Chaves 2008). Now, it seems natural to assume that only affixes whose VI rules do not include contextual specifications (i.e., affixes that do not display contextual allomorphy) could eventually be mapped to independent phonological words. It could be therefore argued that it is not their phonological independence per se that allows these morphemes to be elided; rather, it is the fact that their VI rules do not involve local, contextual specifications. Affixes with contextually specified Vocabulary Items, on the other hand, are typically bound/phonologically dependent.

Alternatively, it could be the case that some type of ellipsis could after all apply post VI and target phonological words. To the extent that examples like (106)/(108) are indeed cases of ellipsis, this would mean that (at least some type of) ellipsis would have to make reference to notions like prosodic hierarchy and phonological word (see Pak 2005 for some relevant discussion). As discussed in Embick (2015: 83), asymmetries in the morphophonological behavior of certain classes of affixes, like those in (108), or so-called “Level 1” and “Level 2” affixes in English, can be approached in a variety of ways consistent with the framework adopted here. On the one hand, this type of asymmetries may reflect important structural difference in how Subwords attach to their host, or whether or not certain morphemes define locality domains/phases (see Newell 2008 for the interaction of morpho-phonology and locality domains/phases). On the other hand, these differences in the phonological behavior may also arise as a consequence of whether or not individual exponents are specified as “cyclic” or “non-cyclic” in the phonological sense (e.g., Halle and Vergnaud 1987). I leave an exploration of these possibilities to future work.

5 Conclusion

I have argued in this paper that the synthetic future forms in Serbian (e.g., in (16a)) are formed via LD, which affixes the 2P clitic to its host at PF under linear adjacency. Ordinary types of

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- (i) a. Ja sam zaključao i otključao sobu.
 I.NOM AUX.1.S.PR locked and unlocked room
 ‘I locked and unlocked the room.’
 b. *Ja sam za- i ot-ključao sobu.

³⁶ With the exception of one prefix (i.e., *dis-*) which falls within ω , despite being a “real” prefix; Nespor argues that this is because *dis-* is a monosyllable ending in a consonant. In other words, prefixes that end in consonant are hypothesized to fall within ω .

affixation, on the other hand, are created by head movement, which forms complex heads/M-Words. I have also proposed that ordinary affixes cannot undergo ellipsis because they are Subwords; i.e., terminal nodes within an M-Word. In fact, ordinary affixes are Subwords at every point of the derivation. The reason why 2P clitics may be elided to the exclusion of their host is because they are not head-adjoined to it (they do not form an M-Word with their host) – they are M-Words on their own. The suffixed future marker is special and can be suspended because at the point of the derivation when ellipsis applies it is still a clitic/an M-Word. Its underlying 2P clitic nature is most clearly revealed by the fact that the whole synthetic future form must be in the sentence initial position – this makes sense if the synthetic future is created by affixing the clitic in the second position to its host in the first position via LD. Finally, the proposed analysis also accounts for why the synthetic future shows properties of a close phonological unit not observed with clitics and their hosts, and why the result of ellipsis of the suffixed future marker is the full infinitive, and not the truncated form. Specifically, after the future marker undergoes LD it becomes a Subword: it undergoes Subword-level phonological processes (i.e., place assimilation), and it cannot be elided, by assumption. For this reason, the result of the future marker omission can be only the regular, non-truncated infinitive.

Abbreviations

1 = 1st person, 2 = second person, 3 = 3rd person, ACC = accusative, AUX = auxiliary verb, DAT = dative, DIM = diminutive, F = feminine, GEN = genitive, M = masculine, NEG = negation, PASS = passive, PL = plural, POSS = possessive, PR = present, PRT = participle, PST = past, Q = question, REFL = reflexive, REL = relative clause, S = singular.

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