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*Prosodic differences among function words**

Draga Zec
Cornell University

Function words in standard Serbian fall into two classes: prosodically free functional elements on the one hand, and prosodically bound functional elements, or clitics, on the other. The two classes have overlapping syntactic distributions, yet exhibit clear prosodic differences. Free functional elements may become prosodic words if they are minimally disyllabic, or if focused, and in this they crucially differ from clitics, whose only prosodic option is to be included into the host prosodic word. It is argued that the prosodic properties of the two classes of function words cannot be captured by a single set of ranked constraints, and that one of the classes, the class of clitics, needs to be encoded lexically, by virtue of prosodic prespecification.

A crucial facet of the morphology/prosody interface is the inclusion of morphosyntactic elements in the prosodic hierarchy. Optimally, a morphosyntactic element is included in the prosodic hierarchy by assuming the status of a prosodic word. But while words of lexical categories strongly correlate with prosodic word status, forming a uniform prosodic class, members of functional categories exhibit a much more erratic pattern cross-linguistically, generally corresponding to more than one prosodic type, as noted in Selkirk (1984, 1995b), Inkelas & Zec (1993), Peperkamp (1997), among others. The central problem to be addressed here is the formal characterisation of prosodic distinctions within the class of functional categories.

A relatively simple and straightforward response to this problem is presented in Selkirk (1995b), where all prosodic differences among English words, including those among distinct prosodic types within the functional class, are analysed by positing a single set of ranked constraints. Under this analysis, different prosodisations of functional elements directly follow from differences in their morphosyntactic properties and language-specific constraint rankings. However, what is proposed to be a straightforward correlation between a function word's prosody and its

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morphosyntax does not hold generally. No such correlation is found in the case that serves as a basis of our study, that of standard Serbian, in which function words correspond to two prosodic classes, free function words on the one hand, and bound function words, or clitics, on the other.[1] While both free and bound function words exhibit a measure of prosodic deficiency, only members of the former class can, under certain conditions, have prosodic word status. In contrast, the class of bound function words is characterised by a complete absence of prosodic salience: the only prosodic status which members of this class can assume is that of a prosodic affix. Significantly, the two classes of function words in standard Serbian exhibit a considerable overlap in their syntactic distributions that precludes any differentiation rooted in morphosyntax. This case thus calls for an analysis that differs in crucial ways from that presented in Selkirk's (1995b) account of the prosody of function words in English.

In this paper I argue that the two prosodic asymmetries in standard Serbian, the asymmetry between words of lexical and functional categories, and that between the two prosodic classes of functional elements, cannot be captured by a single set of ranked constraints. One of the two functional classes will need to be lexically designated, and the natural candidate is the class of bound function words, which are laden with idiosyncrasies, and exhibit affix-like properties. This solution, I will argue, is superior to alternatives which involve constraints sensitive to subclasses of function words, or even individual morphemes. We first identify the subset of the phenomenon that does exhibit unified prosodic behaviour: the prosodic properties of lexical elements and those belonging to the class of free function words can be captured by a single set of ranked constraints which draw upon the morphosyntactic differences among these classes. The class of bound function words, however, will be construed as purely prosodic, and as such, will be represented directly in the lexicon, by invoking prespecification, in the spirit of Inkelas *et al.* (1997).

The account to be presented is cast in Optimality Theory (McCarthy & Prince 1993a, Prince & Smolensky 1993), and the paper is organised as follows: §1 presents the general prosodic framework, and the prosodisation of lexical elements, while §§2 and 3 deal with the prosodic characteristics of the free and bound functional elements respectively. §§4 and 5 provide further arguments for the prosodic classification into free and bound function words, coming from the distribution of pitch accent and its interactions with focus. §6 contains concluding remarks, and includes a comparison of the proposed account with that of Selkirk's.

[1] Standard Serbian corresponds to what used to be the eastern standard of Serbo-Croatian, which is subsumed under the Neo-Štokavian dialect. This general dialect, subdivided into a number of regional idioms, overlaps with both the Serbian and Croatian speech areas (cf. Ivić 1958). More particularly, the idiom described here is that spoken in Belgrade (cf. Miletić 1952), and is one of several standard Serbian idioms. This detailed characterisation is necessary because any discussion of prosody requires a narrow delimitation of the linguistic idiom.

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1 Preliminary remarks

The prosodic status of morphosyntactically independent elements, i.e. terminal elements in syntax (under the lexical integrity hypothesis of Chomsky 1970), is regulated by the following constraint, which belongs to the alignment family (Selkirk 1986, 1995b, McCarthy & Prince 1993b; MWord stands for morphological word, and PWord for prosodic word):

(1) MWORD=PWORD

For any MWord, there exists some PWord, such that the left edge of MWord is aligned with the left edge of PWord, and the right edge of MWord is aligned with the right edge of PWord.

The most direct indicator of prosodic word status in standard Serbian is the realisation of a MWord's pitch accent. Each morphological element is associated with pitch accent. As an indicator of prosodic prominence, pitch accent is realised solely within prosodic words. The head of the prosodic word, i.e. its most prominent foot, is invariably marked by pitch and stress, the two prosodic components of pitch accent.[2]

The constraint in (1) has in its domain of influence all morphosyntactically independent elements, i.e. members of both the lexical and the functional classes. However, while a lexical element invariably abides by this constraint, and is thus always granted prosodic word status, elements belonging to the functional class exhibit a more varied pattern: they may violate (1) due to higher prosodic pressures, as detailed in §§2 and 3. It is thus necessary to single out lexical elements as recipients of prosodic word status. This is expressed by the following, undominated, constraint, which belongs to the same constraint family as (1); here $\text{MWord}_{\text{Lex}}$ stands for the class of lexical elements:

(2) $\text{MWORD}_{\text{LEX}}$=PWORD

For any $\text{MWord}_{\text{Lex}}$, there exists some PWord, such that the left edge of $\text{MWord}_{\text{Lex}}$ is aligned with the left edge of PWord, and the right edge of $\text{MWord}_{\text{Lex}}$ is aligned with the right edge of PWord.

Constraint (2), which is a special case of constraint (1), mandates prosodic word status only for lexical MWords. Crucially, these two constraints make no reference to function words, honouring the function word invisibility requirement, as proposed in Selkirk (1995b); see also Truckenbrodt (1999). But constraint (1) does make reference to the entire class of MWords, which includes function words, and this is where my approach crucially differs from that of Selkirk's. Under Selkirk's approach, constraints are explicitly stated to make reference only to lexical categories, yet this is not the case with the constraints posited here. As will be shown, constraints (1) and (2) provide for the necessary asymmetry between

[2] For the distribution of pitch accent within words, and its interactions with morphological constituency, see Zec (1993, 1999).

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functional and lexical elements, which is essential for a proper treatment of word prosodisation in standard Serbian.

Moreover, constraints (1) and (2) are in a stringency relation: constraint (2) targets a proper subset of elements that are the target of constraint (1) (McCarthy 2002: 20 and the references therein). By virtue of this, constraints (1) and (2) are responsible for the potential asymmetry between the lexical and functional elements. The interaction of these constraints with other constraints in the grammar captures the special relation between lexical categories on the one hand and functional categories on the other. In standard Serbian, the lexical/functional asymmetry is captured by the following ranking, in which $\mathbb{C}$ stands for any constraint that places special conditions on prosodic words:

(3) $\text{MWord}_{\text{Lex}}=\text{PWord} \gg \mathbb{C} \gg \text{MWord}=\text{PWord}$

This ranking ensures that any constraint interactions leading to diversity in prosodic status will only affect functional categories. In standard Serbian, the constraint $\mathbb{C}$ that performs this role is a minimal size requirement, as will be shown in §2.

In sum, any MWord that corresponds to a PWord will be included in the prosodic hierarchy as a participant in prominence relations within utterances. We will briefly characterise the prominence relations in standard Serbian, which are fully compatible with the patterns already established in the literature; in particular, the pattern of interactions between nuclear prominence and focus (Chomsky & Halle 1968, Jackendoff 1972, Hayes & Lahiri 1991, Selkirk 1995a, Truckenbrodt 1995).

The locus of prominence relations is the prosodic constituency, given in (4) (Selkirk 1980, 1981, Nespor & Vogel 1986, Hayes 1989, Inkelas & Zec 1995).

(4) *The Prosodic Hierarchy*

utterance
intonational phrase
prosodic phrase
prosodic word

According to Selkirk (1995b: 443), prosodic constituency is regulated by a set of architectural constraints on prosodic structure, listed in (5), where C^n = some prosodic category:

(5) *Constraints on prosodic domination*

a. Layeredness
No C^i dominates a C^j, $j > i$

b. Headedness
Any C^i must dominate a C^{i-1}

c. Exhaustivity
No C^i immediately dominates a constituent C^j, $j < i-1$

d. Non-recursivity
No C^i dominates C^j, $j = i$

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Two of the architectural constraints, LAYEREDNESS and HEADEDNESS, which prohibit prosodic level reversals and level skipping respectively, serve to define the nature of this representation. LAYEREDNESS is an undominated constraint, and may well be part of Gen. Despite its essential role, HEADEDNESS can be violated in the special case of recursive prosodic configurations, as shown in §4 below. EXHAUSTIVITY and NONRECURSIVITY, on the other hand, capture those aspects of the prosodic constituency that are subject to variation, and thus may be violated; cases of violations of these constraints will be presented in §§2–4.

Prominence is expressed by virtue of a head relation within the prosodic constituency. Given the prosodic hierarchy in (4), a prosodic constituent's head is characterised as an alignment relationship: the head of a prosodic constituent, henceforth the PHead, is generally aligned with one of its edges. In standard Serbian, it is the right edge that is relevant, as stated in (6), following McCarthy & Prince (1993b) and Truckenbrodt (1995: 26).

(6) PHEADALIGNMENT

Align(PConstituent-R, H(PConstituent)-R)

Prominence relations within prosodic constituents will be expressed by metrical grids (Prince 1983). A PWord, or rather, its most prominent syllable, the bearer of pitch accent, is associated with a gridmark (*x*), and the prominence of a prosodic head is designated by its having the highest grid column within its domain. Phonetically, each prosodic head bears the highest degree of stress in its domain. While pitch accent is characterised by both pitch and stress, its latter component is crucially responsible for prominence relations.

In (7), which contains only words of lexical categories, each prosodic word is marked for pitch accent, using the traditional accent diacritics.[3] A vowel may be accented as short falling (ˇ), long falling (ˆ), short rising (ˋ) or long rising (ˊ).[4]

(7)

		x				x	
		x				x	
x		x		x		x	
[[[jèdna]$_{PW}$		[lásta]$_{PW}$]$_{PPh}$		[[ne čini]$_{PW}$		[pròleće]$_{PW}$]$_{PPh}$]$_{IPh}$	
one		swallow		not make		spring	

'A swallow does not a spring make.'

The prominence structure in (7) satisfies HEADEDNESS at each prosodic level. Each prosodic word has a gridmark associated with its head, i.e. its

[3] Note that the form *ne čini* in (7) corresponds to a single morphological word; it contains the negative prefix *ne*, which is traditionally separated in the orthography.

[4] Arguments for decomposing the traditional diacritics are presented in Browne & McCawley (1965). In Inkelas & Zec (1988) and Zec (1993, 1999), the traditional diacritics are decomposed into tone and stress. However, the traditional diacritics will suffice for the present purposes, since all that is relevant is the locus of pitch accent in a prosodic word.

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pitch-accented syllable. Higher prosodic heads are designated by higher grid columns. This structure also satisfies PHEADALIGNMENT: in each prosodic phrase, the rightmost prosodic word, which acts as its head, has the highest *x* level. And the extra gridmark on the rightmost prosodic word designates the head status of the rightmost prosodic phrase within the intonational phrase. I have not marked the utterance level, which includes a single intonational phrase.[5]

The presence of focus has immediate consequences for prominence relations in utterances. Focus is introduced in the syntax, as a marking on syntactic constituents (Jackendoff 1972, Selkirk 1995a, Rooth 1996 and the references therein). Crucially, the focused constituent includes the highest prominence, as stated in (8) (Truckenbrodt 1995: 97), and by virtue of this, becomes the prosodic head. In all cases to be considered here, the focus domain, DF, will correspond to the entire sentence.

(8) FOCUS

If F is a focus and DF is its domain, then the highest prominence in DF will be within F.

In (9), the focused constituent bears the highest level of prominence within the entire intonational phrase as well.

(9)
x
x x x x
x x x x
[[[**jèdna**$_{F}$]$_{PW}$ [lásta]$_{PW}$]$_{PPh}$ [[ne čini]$_{PW}$ [pròleće]$_{PW}$]$_{PPh}$]$_{IPh}$
one swallow not make spring
'*One* swallow does not a spring make.'

The tableau in (10) shows that FOCUS ranks higher than PHEADALIGNMENT: a focused constituent, rather than the rightmost one, satisfies PHEADALIGNMENT by bearing highest prominence.

(10)

[[**jèdna**$_{F}$]$_{PW}$ [lásta]$_{PW}$]$_{PPh}$	FOCUS	PHEADALIGNMENT
☞ a. x x x [[**jèdna**$_{F}$]$_{PW}$ [lásta]$_{PW}$]$_{PPh}$		*
b. x x x [[**jèdna**$_{F}$]$_{PW}$ [lásta]$_{PW}$]$_{PPh}$	*!	

In this section we have presented the basic principles for characterising prominence relations in Serbian utterances. As long as the utterance contains only prosodic words which correspond to MWord$_{Lex}$, as is the case in (9), those prominence relations are of the sort standardly observed

[5] Additional constraints need to be posited: one that prevents gratuitous assignment of gridmarks, and penalises any candidate which has more gridmarks than (7); and alignment constraints responsible for the prosodic phrase constituency.

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in the literature. Function words introduce two types of departures from this pattern. In §2 we turn to the prosodic properties of free function words, and in §3 to the bound class.

2 Free functional elements

Unlike members of lexical categories, which invariably receive prosodic word status, free functional elements do so only under limited circumstances. In standard Serbian, the limiting circumstance is a minimality requirement. Whether a free functional element will become a prosodic word crucially depends on its size: disyllabic function words are matched with prosodic words, but those corresponding to a single syllable are not. As in the case of lexical elements, prosodic word status is diagnosed by pitch-accent prominence. Free function words exhibit yet another prosodic deficiency: they are not eligible for prosodic head status. Both these deficiencies are overridden by the agency of focus.

2.1 Minimal size condition on free function words

Consider the sets of examples in (11) and (12), placed in the same context. The prosodic phrases in (11) contain a functional element in phrase-initial position. Based on the distribution of pitch accent, we see that only the disyllabic function word in (11a) is matched with a prosodic word, while the monosyllabic one in (11b), which lacks pitch accent, remains without prosodic word status, and is directly included in the prosodic phrase.[6] In each case, the head of the prosodic phrase corresponds to the rightmost prosodic word and possesses the highest grid column, in accordance with HEADEDNESS, stated in the previous section.

(11) This blue building is

a.
```
        x          x
  x     x
[[nȁše]PW  [pózorište]PW]PPh   'our theatre'
 our (NEUT) theatre
```

b.
```
          x
[naš      [stûdio]PW]PPh       'our studio'
 our (MASC) studio
```

[6] This phenomenon is observed in the traditional literature, most notably in the descriptions of regional dialects, and is characterised as deaccenting (e.g. Ivić *et al.* 1994). It is also noted in Zec (1997). While monosyllabic words are regularly deaccented, occasional deaccentuation of polysyllabic free function words has also been observed. Deaccenting is further observed in the studies of poetic metre: unlike lexical monosyllables, which are prohibited from strong metrical positions, monosyllabic free function words may occur in both weak and strong metrical positions. Polysyllabic free function words pattern with lexical polysyllables: their pitch-accented syllables are incompatible with weak metrical positions. This pattern, described in Taranovski (1954) and Kojen (1996), is characteristic of both iambic and trochaic verse.

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In (12), the two prosodic phrases include only lexical elements, which invariably become prosodic words by virtue of $\text{MWord}_{\text{Lex}}$=PWord, stated in (2). Thus, the fact that the phrase-initial word in (12b) contains only one syllable, while the one in (12a) contains two, in no way affects the prosodic status of these morphological words. Heads of the prosodic phrases in (12a) and (12b) correspond again to the rightmost prosodic words.

(12) This blue building is

a.
```
        x          x
   [[nȍvo]PW  [pózorište]PW]PPh   'a new theatre'
    new (NEUT)  theatre
```

b.
```
        x          x
   [[nȍv]PW  [stûdio]PW]PPh      'a new studio'
    new (MASC)  studio
```

The contrast in (11) calls for a constraint that favours disyllabic prosodic words over monosyllabic ones, as stated in (13):[7]

(13) PWordSize

A PWord is minimally disyllabic.

This is a standard minimal word constraint of the sort proposed by McCarthy & Prince (1986, 1995), and amply documented in the literature. It requires that a PWord minimally contain a syllabic trochaic foot. However, due to the ranking in (14), in standard Serbian this constraint is operative only in the set of functional elements. This ranking is thus responsible for a bifurcation in the class of free function words into those that do, and those that do not meet the minimal size condition.

(14) $\text{MWord}_{\text{Lex}}$=PWord ≫ PWordSize ≫ MWord=PWord

By ranking PWordSize above MWord=PWord, as in (15), we obtain the right result: function words are promoted to prosodic word status if they possess a certain minimal size, as in (15b). Subminimal function words receive no prosodic status, as in (15a). Since the size of such forms cannot be expanded by virtue of epenthesis, Dep obviously ranks higher than PWordSize.

[7] This disyllabicity requirement for conferring prosodic words status on function words is reminiscent of the situation in Japanese. Itô (1990) establishes a disyllabic minimality requirement for the prosodic word in Japanese which does not, however, hold across the board, but targets only morphologically derived forms. Moreover, disyllabic function words in English, unlike monosyllabic ones, become prosodic words in all syntactic collocations. In particular, disyllabic prepositions regularly bear stress either on the heavy second syllable (*within*, *upon*, *above*) or on the first syllable (*into*, *under*, *over*). Here as well, we have evidence for a minimal size constraint that affects only function words.

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(15)

		PWordSize	MWord=PWord
a.	naš		
☞	i. naš		*
	ii. [nȁš]$_{PW}$	*!	
b.	naše		
	i. naše		*!
☞	ii. [nȁše]$_{PW}$		

And, by ranking MWord$_{Lex}$ above PWordSize, as in (16), we capture the fact that lexical elements are immune to the size requirement; that is, they are invariably granted prosodic word status.

(16)

nov	MWord$_{Lex}$=PWord	PWordSize	MWord=PWord
☞ a. [nȍv]$_{PW}$		*	
b. nov	*!		*

Note that the monosyllabic element in (11b), which is included directly in the prosodic phrase, incurs a violation of Exhaustivity (5c), which obviously ranks lower than PWordSize, as shown in (17).

(17)

naš studio	PWordSize	MWord=PWord	Exhaustivity
☞ a. [naš [stûdio]$_{PW}$]$_{PP}$		*	*
b. [[nȁš]$_{PW}$ [stûdio]$_{PW}$]$_{PP}$	*!		

In sum, we note a significant prosodic difference between monosyllabic and polysyllabic function words when they immediately precede a lexical element. The same size effect obtains when a function word follows a lexical element, as illustrated in (18). In the two examples, occurring after identical context sentences, the rightmost prosodic phrase has a function word in final position: the monosyllabic form *njim* in (18a), and the disyllabic form *njima* in (18b).[8]

(18) a. So, the director is impressed with the new actor?

x

Ne, nije više [[impresiòniran]$_{PW}$ njim]$_{PPh}$
No is not more impressed (with) him
'No, he is no longer impressed with him.'

[8] The pronominal argument in (18) is in the instrumental case. This is relevant because, while genitive, dative and accusative pronouns have both clitic and non-clitic forms, the instrumental pronoun has a single form which corresponds to a free function word. The effect illustrated in (18) does not extend to pronominal arguments which have clitic counterparts.

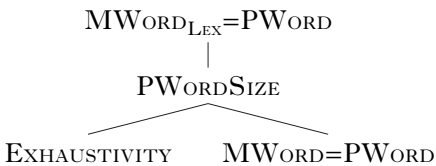
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b. So, the director is impressed with the new actors?

x
x x
Ne, nije više [[impresiòniran]$_{PW}$ [njîma]$_{PW}$]$_{PPh}$
No is not more impressed (with) them
'No, he is no longer impressed with them.'

Again, the disyllabic function word in (18b) is matched with a prosodic word, while the monosyllabic function word in (18a) is not. We return to this case in §2.2.

To conclude, a free function word receives prosodic word status if it is minimally disyllabic. If monosyllabic, it is included directly in the prosodic phrase, incurring a violation of EXHAUSTIVITY. The size constraint on prosodic words does not affect lexical elements, as shown in the ranking in (19):

(19)


2.2 Free function words as prosodic heads

The example in (18b) illustrates another important difference in the prosodic behaviour of lexical and functional elements: they differ in their readiness to assume head status within prosodic constituents. This is demonstrated by comparing the rightmost prosodic phrases in (18b) and (20): the phrase-final prosodic word *Petrom* acts as the prosodic head in (20), which is not the case with its counterpart *njima* in (18b). However, there is no discourse difference between (18b) and (20) that would warrant this difference.

(20) So, the director is impressed with the new actor?
[the actor's name is Peter]

x
x x
Ne, nije više [[impresiòniran]$_{PW}$ [Pȅtrom]$_{PW}$]$_{PPh}$
No is not more impressed (with) Peter
'No, he is no longer impressed with Peter.'

Note that, in (20), as well as in (18), we only consider prominence relations within the rightmost prosodic phrase, whose head is not the head of the entire utterance. In all three utterances, the negated auxiliary *nije* bears

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the highest level of prominence. Thus the prosodic head of the utterance is in its first half, external to the final prosodic phrase.

In sum, while lexical elements readily act as bearers of higher levels of prominence, functional elements shun this prosodic role. This is expressed by the following constraint, which mandates that only elements belonging to the $\text{MWord}_{\text{Lex}}$ class may act as bearers of head prominence:

(21) PHEAD=$\text{MWORD}_{\text{LEX}}$

A PWord with prosodic head status must be a $\text{MWord}_{\text{Lex}}$.

Failure of the prosodic phrase final prosodic word in (18b) to assume head status is captured by ranking PHEAD=$\text{MWORD}_{\text{LEX}}$ above PHEAD ALIGNMENT, stated in (6) above. Due to this ranking, stated in (22), PHEAD=$\text{MWORD}_{\text{LEX}}$ is satisfied in (18b) by violating PHEADALIGNMENT.[9]

(22) PHEAD=$\text{MWORD}_{\text{LEX}}$ ≫ PHEADALIGNMENT

2.3 Focused free function words

The two prosodic deficiencies of free function words are overridden by the association with focus. Any focused function word corresponds to a prosodic word regardless of the number of syllables it contains; and can act as the prosodic head, as shown by the examples in (23), whose prominence structure is laid out in (24).

(23) a. **Nȁše**$_{\text{F}}$ pozorište svi hvale (ne njihovo).
Our theatre everyone praises (not theirs).

b. **Nȁš**$_{\text{F}}$ studio svi hvale (ne njihov).
Our studio everyone praises (not theirs).

(24) a.
x
x x
x x x x
[[**nȁše**$_{\text{F}}$]$_{\text{PW}}$ [pózorište]$_{\text{PW}}$]$_{\text{PPh}}$ [[svi]$_{\text{PW}}$ [hvale]$_{\text{PW}}$]$_{\text{PPh}}$]$_{\text{IPh}}$

b.
x
x x
x x x x
[[**nȁš**$_{\text{F}}$]$_{\text{PW}}$ [stûdio]$_{\text{PW}}$]$_{\text{PPh}}$ [[svi]$_{\text{PW}}$ [hvale]$_{\text{PW}}$]$_{\text{PPh}}$]$_{\text{IPh}}$

[9] Note a similar case in Bengali, in which, according to Hayes & Lahiri (1991), the head of a prosodic phrase is its initial element; yet a function word in this position does not bear head prominence. This property of function words is also encountered in English, as in *Who did he run after?*, where the rightmost word *after* is not the bearer of head prominence, although it does bear a low degree of stress. The bearer of head prominence is the immediately preceding content word *run*. It is reasonable to assume that, in these cases as well, we see the effect of the constraint PHEAD=$\text{MWORD}_{\text{LEX}}$.

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Why is it that in (23) a focused function word is the bearer of highest prominence within the utterance? As noted in §1, focus is assigned in the syntactic component and phonologically interpreted in the prosodic component. Due to the FOCUS constraint in (8), a focused function word assumes the role of a prosodic head. That is, FOCUS overrides PHEAD=MWORD$_{LEX}$, as stated in (25):

(25) FOCUS ≫ PHEAD=MWORD$_{LEX}$

Thus any element associated with focus in the syntactic component is interpreted as a prosodic head in the phonological component. By ranking FOCUS above PWORDSIZE, as in (26), we ensure that the prosodising of a focused word is independent of its size, or of its morphological status, for that matter.

(26) FOCUS ≫ PWORDSIZE

Selkirk (1995b) derives the prosodic prominence of a focused function word from two facts: that a focused element serves as an anchor for intonational melody, and that only a stressed syllable, i.e. a foot, can serve as such an anchor. This, however, still does not guarantee highest prominence. What HEADEDNESS and FOCUS jointly ensure is that a focused word is included in the head, or is itself the head, throughout the prosodic hierarchy.

The ranking in (27) shows the overall interactions among constraints pertaining to prosodic words and those pertaining to higher level prominence within the prosodic hierarchy.

(27) MWORD$_{LEX}$=PWORD FOCUS PWORDSIZE PHEAD=MWORD$_{LEX}$ EXHAUSTIVITY MWORD=PWORD PHEADALIGNMENT

In §3, we turn to the class of bound function words, or clitics, whose prosodic properties radically depart from those of the free function word class. But before that, in §2.4 we explore the typological implications of the proposed analysis.

2.4 Remarks on typology

The set of ranked constraints in (27) splits into two subsets: one subset includes constraints responsible for higher level prominence, FOCUS, PHEAD=MWORD$_{LEX}$ and PHEADALIGNMENT, and the other includes all remaining constraints, which state conditions on prosodic words. The constraint set in (27) thus defines two related dimensions of prosodic interactions that can serve as bases for typological considerations. Crucial

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for us are constraints in the latter subset, those that state morphosyntactic and prosodic conditions on prosodic words. The two alignment constraints, MWord=PWord and $\text{MWord}_{\text{Lex}}$=PWord, stand in a stringency relation, as noted in §1. As a result, they yield the same evaluations regardless of their ranking. Thus typological variation can only be expressed when other constraints are brought into the picture, in particular those that state special conditions on prosodic word status. In standard Serbian the relevant constraint is PWordSize, but because this could in principle be any special condition constraint, we refer to it as $\mathbb{C}$.

In the proposed analysis of standard Serbian, we capture the prosodic asymmetry between lexical and free functional elements by the ranking schema in (3), repeated as (28):

(28) $\text{MWord}_{\text{Lex}}$=PWord $\gg \mathbb{C} \gg$ MWord=PWord

What are the typological implications of this case? We proceed in the standard fashion, and assume that the number of types correlates with the number of ranking permutations. While these three constraints yield six rankings, some of the rankings are non-distinct because of the stringency relation among two of the three ranked constraints. In fact, there are three distinct rankings, and thus three types of interactions and three potential language types.

If the special condition constraint $\mathbb{C}$ dominates the two alignment constraints (regardless of their mutual ranking), as in (29), all morphological words, lexical as well as functional, meet the special condition.

(29) $\mathbb{C} \gg \text{MWord}_{\text{Lex}}$=PWord, MWord=PWord

Next, if the general alignment constraint, MWord=PWord, dominates the special condition constraint $\mathbb{C}$, none of the MWords will be required to meet the special condition constraint. Note that the place of $\text{MWord}_{\text{Lex}}$= PWord in the ranking in (30) will not affect the outcome.

(30) MWord=PWord $\gg \mathbb{C}$

And finally, the special condition constraint can affect only a subset of MWords, as in (28). Crucially, this subset can only be the functional class, and never the lexical class. This important asymmetry is of course due to the stringency relation among the two alignment constraints, and to the fact that there is no specific reference to functional categories in the constraints responsible for the morphology/prosody interface.

It should be further noted that more than one special condition constraint $\mathbb{C}$ could be operative in a language, which adds further complexity to constraint interactions. In particular, it may happen that one special condition constraint neutralises the effect of another. This is certainly the case in standard Serbian, in which two special condition constraints are active: PWordSize and Focus. Because of the ranking Focus $\gg$ PWordSize, a focused function word may be a subminimal prosodic word.

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To conclude, the typology outlined here allows for cases characterised by the absence of the prosodic asymmetry between lexical and functional categories; such cases are captured by the rankings (29) and (30). But, if there is an asymmetry, then it is the class of lexical elements that invariably acts as the prosodically salient class, as captured in (28). Excluded under this typology is the case of asymmetry in which function words are prosodically privileged with respect to content words.

Constraints in the other subset, those responsible for higher level prominence, FOCUS ≫ PHEAD=MWORD$_{LEX}$ ≫ PHEADALIGNMENT, define further, orthogonal typologies. The two constraints on prosodic heads, PHEAD=MWORD$_{LEX}$ and PHEADALIGNMENT, are responsible for the potential tension between the locus of head within a prosodic constituent and its morphosyntactic status. The ranking in standard Serbian ensures that only lexical elements act as heads. The reversed ranking would require that any prosodic word, regardless of the morphosyntactic status of its corresponding MWord, can act as a head. Moreover, the undominated status of FOCUS in (27) is characteristic of languages in which the phonological realisation of focus overrides all restrictions on the realisation of prominence. Alternatives with a dominated FOCUS would either reflect situations in which some restrictions on the realisation of prominence override FOCUS; or those in which the focus in signalled by morphosyntactic, but not necessarily by prosodic, devices.

The range of typological options presented here covers free function words. In §3 we introduce the class of bound function words, which further expands the set of already established prosodic interactions. Crucially, however, the classes of free and bound function words call for markedly different formal mechanisms, as will be argued below.

3 Bound functional elements, or prosodic affixes

Bound functional elements, or clitics, form a distinct prosodic class, differing in crucial ways from free function words. The set of general constraints that regulates the prosody of morphosyntactic elements presented in (27), while capturing the prosody of free function words, does not extend to the prosodic properties of bound functional elements. In this section, I will argue that the properties of bound function words, or clitics, are best captured by representing them as prosodic affixes, with a recursive prosodic representation, and focus on the issue of how this representation is to be encoded in the prosodic grammar of standard Serbian.

Bound function words will be represented here as prosodic affixes, with subcategorisation frames listed in their lexical entries. As shown in (31), the subcategorisation frames specify the prosodic host, and the direction of attachment. Clitics attach to a prosodic host, in particular, to a prosodic word, either as proclitics, as in (31a), or as enclitics, as in (31b), forming a recursive prosodic word structure (as proposed in Inkelas 1989, Zec & Inkelas 1990; compare also Zec 1993, 1997).

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(31) a. *Proclitics:* [__ [ ]$_{PW}$]$_{PW}$

u	preposition	[u [pozorištu]$_{PW}$]$_{PW}$	'in the theatre'
ni	particle	[ni [pozorište]$_{PW}$]$_{PW}$	'nor the theatre'

b. *Enclitics:* [[ ]$_{PW}$ __]$_{PW}$

ga	pronoun	[[vidi]$_{PW}$ ga]$_{PW}$	'sees him'
je	auxiliary	[[video]$_{PW}$ je]$_{PW}$	'saw'

The distributional and prosodic peculiarities of clitics, to be detailed below, lend crucial support to the recursive representation in (31).[10]

Evidence for representationally distinguishing bound function words from the free class comes from their distribution. Two types of evidence will be presented: cases of complementary distribution between bound and free function words, and cases in which the distributions of the two classes of functional elements overlap. A case of the former type is presented in this section, while cases of the latter type are presented in §§4 and 5.

In order to present a case of complementary distribution between free and bound function words, we focus on enclitics, which have a highly restricted syntactic distribution, much more restricted in fact than free elements with the same morphosyntactic status. Enclitics may only occupy the so-called second sentential position: following either the first constituent or the first word. In (32a) the clitic *je* occurs after the first constituent, *plava kuća*, and in (32b), after the first word, *plava*. (Clitics are italicised, and the direction of attachment is marked informally by =).

(32) a. Plava kuća=*je* neobično lepa.
blue house is-CL unusually beautiful
'The blue house is unusually beautiful.'

b. Plava=*je* kuća neobično lepa.
blue is-CL house unusually beautiful
'The blue house is unusually beautiful.'

While clitic positioning is generally governed by both prosodic and syntactic factors, the positioning after the first word, in (32b), is subject primarily to prosodic control. In the remaining part of this section, we present the complementary distribution between clitics and free function words, basing the argument on the enclitic positioning in (32b).

The positioning of enclitics after the first word has been characterised in the literature as attachment to a domain-initial prosodic word. The

[10] In this paper, the focus is on the prosody of clitics. However, both prosodic and syntactic principles are relevant for the characterisation of clitic placement, as claimed in Halpern (1992), Bošković (1995, 2000) and Zec & Inkelas (1990). Clitics are thus a prime case of an interface phenomenon: analyses which are purely syntactic (Progovac 1996, Wilder & Ćavar 1994, Ćavar & Wilder 1999), or those that are purely prosodic (Radanović-Kocić 1996), fail to capture all relevant aspects of this complex phenomenon (for arguments, see Bošković 2000).

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attachment itself is prosodic, as argued in Halpern (1992) and Zec & Inkelas (1990). The relevant domain will roughly be equated here with a clause.[11] The issue of central interest is what material, if any, can intervene between the first prosodic word that serves as an enclitic host and the domain's left edge. It will be shown that the domain-initial prosodic word counts as first even when preceded by a proclitic, i.e. a bound functional element. Any other morphosyntactic element, including a free function word, is prohibited in this position.

In (32b), the leftmost prosodic word is perfectly aligned with the left edge of the relevant domain, as shown in (33):

(33) $[_{\mathbf{D}}$ [[plava]$_{\mathrm{PW}}$ je]$_{\mathrm{PW}}$ kuća neobično lepa

While, of course, no prosodic word may intervene, a monosyllabic function word, which as we saw in §2, has no prosodic status, may not intervene either:

(34) *Mi plavu=*smo* kuću već videli.
we blue AUX-CL house already saw

$[_{\mathbf{D}}$ [mi [[plavu]$_{\mathrm{PW}}$ smo]$_{\mathrm{PW}}$ [kuću]$_{\mathrm{PW}}$]$_{\mathrm{PPh}}$ već videli

However, a proclitic may precede an enclitic host, as in (35):

(35) *O*=plavoj=*smo* kući već čuli.
about-CL blue AUX-CL house already heard
'We already heard about the blue house.'

$[_{\mathbf{D}}$ [[o [plavoj]$_{\mathrm{PW}}$]$_{\mathrm{PW}}$ smo]$_{\mathrm{PW}}$ kući već čuli

The contrast between (34) and (35), noted in Zec (1997), is explained by different representations of monosyllabic free function words on the one hand and proclitics on the other. In (35), but not in (34), the first prosodic word perfectly aligns with the left edge of the relevant domain, due to the recursive structure imposed by the two clitics hosted by *plavu*, as shown in (34).[12] In sum, proclitics blend with the first prosodic word, while monosyllabic free function words do not, and this is fully captured by their distinct representations.

The representation of clitics proposed here also explains the phenomenon of clitic stacking. More than one enclitic, or proclitic, may attach to the same host, as shown in (36a) and (b) respectively.

[11] While equating the domain of enclitic placement with a clause should be sufficient for our purposes, this domain would most likely need to be characterised both syntactically and prosodically, since neither characterisation alone can give the right result. We do not adopt here the claim in Bošković (1995, 2000) and Radanović-Kocić (1996) that the domain of enclitic placement is purely prosodic.

[12] Some interpretation is called for here: it is regularly the outermost prosodic word that counts.

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(36) a. Plavu=*nam*=*je* kuću već pokazao.
blue us-CL AUX-CL house already showed
'He already showed us the blue house.'

$[_{D}$ [[[plavu]$_{PW}$ nam]$_{PW}$ je]$_{PW}$ kuću već pokazao

b. *A*=*o*=plavoj=*smo* kući već čuli.
but-CL about-CL blue AUX-CL house already heard
'But we already heard about the blue house.'

$[_{D}$ [[a [o [plavoj]$_{PW}$]$_{PW}$]$_{PW}$ smo]$_{PW}$ kući već čuli

Clitic stacking follows from the recursive representation proposed here for clitics. Due to recursive prosodic word structure, the leftmost prosodic word can serve as 'first' for any number of enclitics, since each enclitic is attached to a first prosodic word. If enclitics were characterised as following the first morphological word, then any enclitic after the first one in the row would no longer be in the second position. But the prosodic characterisation of clitic attachment, and the recursivity of prosodic word structure, obviates this problem. Likewise, the leftmost prosodic word can serve as 'first' regardless of the number of proclitics it hosts. In sum, clitic stacking follows from the representation itself.[13]

In sum, distinct representations for free and bound function words are necessary for encoding differences in their prosody, while allowing for overlapping distribution. We show next that no useful morphosyntactic correlates can be established for the proposed subclassification of function words, which strongly suggests that this distinction is of purely prosodic nature.

We saw in §2 that the prosodic status of a free function word crucially depends on its size: it becomes a prosodic word if it is minimally disyllabic. Clitics, however, may have one or more syllables, or may correspond to single, non-syllabic, consonant (such as *s* 'with' and *k* 'to'). In (37), for example, the disyllabic proclitic *ali* is attached to the prosodic word that serves as first for the purposes of enclitic placement:

(37) *Ali*=plavu=*smo* kuću već videli.
but-CL blue AUX-CL house already saw
'But we already saw the blue house.'

$[_{D}$ [[ali [plavu]$_{PW}$]$_{PW}$ smo]$_{PW}$ kuću već videli

[13] This analysis has a clear advantage over the alternatives proposed in the literature. In order to account for the phenomenon of clitic stacking, Bošković (1995, 2000) has to resort to a morphological merger between the clitic and its host. Moreover, Legendre's (1999, 2000) analysis of second position clitics, and clitic stacking in particular, as imperfect left edge alignment does not extend to cases where a first word is preceded by additional material, as in (34) and (35). It is not clear how these two cases are to be differentiated under the alignment approach. The free function word in (34) needs to be visible to the alignment constraint, yet the proclitic in (35) needs to be invisible. Any solution to this problem would need to make constraints sensitive to the distinction between free and bound function words, or would need to invoke morphological merger for the case of proclitics, as in Bošković's analysis.

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Cases of disyllabic enclitics include the future auxiliaries *ćemo* and *ćete* and the conditional auxiliaries *bismo* and *biste*. Thus the size of a clitic in no way affects its prosodic status, as is the case with free function words. Significantly, this distinction does not point to any principled grounds for the bifurcation into free and bound function words. Rather, it strongly suggests that the class of clitics needs to be lexically designated.

This is further supported by a complete lack of correlation between a function word's free or bound status on the one hand and its morphosyntactic status on the other. In fact, free and bound function words may, and in a number of cases do, share morphosyntactic characteristics. Thus, the 3rd person accusative pronoun, for example, has both a free and a bound alternant, as in (38):

(38) *3rd person accusative pronouns* (*masculine*)
  a. *free form* njega
  b. *enclitic form* ga

This is in fact true of all pronominal and auxiliary enclitics. Some of the alternant forms are identical in shape, as is the case with the set of conditional auxiliaries *bih, bi, biste*, etc., as well as the 1st and 2nd person plural forms of accusative pronouns, *nas* and *vas*. Moreover, at least two proclitics participate in this type of alternation, the conjunctions *ali* and *jer*; examples with the former are given in (39) (taken from Zec & Inkelas 1990):

(39) a. Zvonili=*smo*, ali=*nam* niko nije otvorio.
  rang AUX-CL but us-CL no-one not open
  'We rang, but no-one opened the door for us.'
  $[_{\mathbf{D}}[[\text{ali}]_{\text{PW}}\ \text{nam}]_{\text{PW}}\ [\text{niko}]_{\text{PW}}$

  b. Zvonili=*smo*, *ali*=niko=*nam* nije otvorio.
  rang AUX-CL but-CL no-one us-CL not open
  'We rang, but no-one opened the door for us.'
  $[_{\mathbf{D}}[[\text{ali}\ [\text{niko}]_{\text{PW}}]_{\text{PW}}\ \text{nam}]_{\text{PW}}$

In sum, there seem to be no clear grounds for distinguishing free and bound function words other than their distinct prosody. The distinction between clitics and non-clitics will thus have to be captured by prosodic specification.

Nor is there a principled basis for differentiating between proclitics and enclitics. Certain morphosyntactic classes do exhibit some general tendencies: proclitics, for example, include phrase-initial elements such as prepositions or conjunctions, while pronouns and auxiliaries belong to the class of enclitics. However, sentential particles may belong either to the class of enclitics (*li, se*) or to the class of proclitics (*ma*). The distinction between proclitics and enclitics will thus need to be stated in the function word's lexical entry.

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We conclude that bound function words need to be designated in the lexicon, for the sole purpose of differentiating them from free function words. The most straightforward, and natural, solution would be to opt for prosodic prespecification since, as we saw, the difference between free and bound function words is prosodic in nature. The prosodic dependence of clitics will be formally expressed as a type of subcategorisation, modelled on the morphological subcategorisation of affixes (following Inkelas 1989, Zec & Inkelas 1990, Booij & Lieber 1993). The prosodic frames in (31) will be included in a function word's lexical entry, and will in fact serve to designate bound function words, and thus distinguish them from the free class. A bound function word would contain in its lexical entry a prespecified prosodic frame, which characterises it as either proclitic or enclitic. In all other respects, free and bound function words would be identical, as shown by the lexical entries for the clitic and non-clitic forms of the 3rd person accusative pronoun in (40):

(40) a. *ga* PRONOUN, 3SG, MASC, ACC
[[ ]$_{PW}$ __]$_{PW}$

a. *njega* PRONOUN, 3SG, MASC, ACC

Crucially, there are no morphosyntactic differences between free and bound function words, that is, between clitics and non-clitics.[14] The only relevant difference is that the bound function word is a prosodic affix, while the free one is not.[15] In sum, any morphological designation of the class of bound function words would be inferior to the proposed solution.

Since any properties of the underlying form, including prespecified representations, are protected in OT by the set of faithfulness constraints, the following constraint from the faithfulness family will require that the prespecified prosodic frame appear in the output (following Inkelas *et al.* 1997):

(41) PROSODICAFFIX
Any prosodic prespecification in the input must have a correspondent in the output.

[14] In this, I agree with Bošković (1995, 2000), who takes the same position, proposing that clitics and non-clitics are differentiated by their prosody rather than by their morphosyntax. An alternative position is to assign different morphosyntactic categories to clitics and non-clitics, as proposed, for example, in Cardinaletti & Starke (1999), and in the syntactic studies of Serbian and Croatian clitics listed in note 10. Thus what we have shown to be a purely prosodic distinction is encoded by morphosyntactic means, leading to an undesirable, and also unnecessary, proliferation of morphosyntactic categories.

[15] Clitics have been analysed as affix-like phrasal entities by Klavans (1985) and Anderson (1993). The present proposal crucially assumes prosodic, rather than morphological, affixation. Bošković (1995, 2000), proposes prosodic clitic attachment, which, however, is implemented by morphological merger.

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The faithfulness constraint in (41) will have to outrank the prohibition against recursive structure (stated as NON-RECURSIVITY in (5d) above), since its crucial effect is both to supply the clitic with a host prosodic word, and to supply the entire combination with a prosodic status, again that of the prosodic word.

(42) PROSODICAFFIX ≫ NON-RECURSIVITY

By judiciously ranking (41) with respect to other prosodic constraints, we will be able to capture the differences between the classes of function word. By ranking it higher than MWORD=PWORD, we ensure that a disyllabic clitic does not become a prosodic word, erroneously following the pattern of free function words:

(43) PROSODICAFFIX ≫ MWORD=PWORD

Any free functional element, and of course any lexical one, may serve as a clitic host. Significantly, even monosyllabic free function words, those that are not associated with prosodic word status, can host clitics; and when they do, they are pitch-accented and may participate in the prominence hierarchy. The ill-formed example in (34) becomes grammatical when a clitic is positioned after the pronoun *mi*, as in (44):

(44) Mî=*smo* plavu kuću već videli.
we AUX-CL blue house already saw
'We already saw the blue house.'

It is an empirical issue, however, which of the two representations in (45) is selected in this case. The choice crucially depends on the ranking between PROSODICAFFIX and PWORDSIZE. If PROSODICAFFIX outranks PWORDSIZE, the resulting configuration is (45a), in which a monosyllabic free function word has prosodic word status. With the reversed ranking, the resulting configuration is (45b), in which PROSODICAFFIX is minimally violated in order to satisfy PWORDSIZE.

(45) a. **[D** [[mî]$_{PW}$ smo]$_{PW}$ plavu kuću već videli
b. **[D** [mî smo]$_{PW}$ plavu kuću već videli

In §4, we provide evidence for the configuration in (45b), and the ranking in (46).

(46) PWORDSIZE ≫ PROSODICAFFIX

However, given the ranking in (27), in which FOCUS ranks higher than PWORDSIZE, the configuration in (45a) should emerge when the monosyllabic free function word is focused, as in (47).

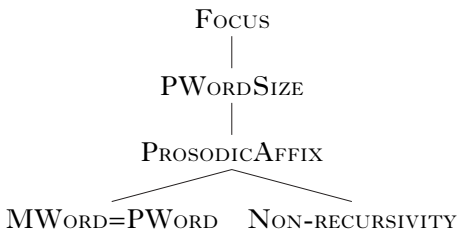
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(47) **[D** [[**mî**$_{F}$]$_{PW}$ smo]$_{PW}$ plavu kuću već videli

This is indeed the case, as shown in §4. The evidence for both (45b) and (47) is based on the place of pitch accent in the combinations of proclitics with monosyllabic free function word hosts.

The additional rankings established in this section are given in (48):

(48)



It further follows from this ranking that an enclitic cannot be placed after a proclitic; such a configuration would incur two violations of ProsodicAffix, yet there would be no salvaging effect of a higher-ranked constraint. The examples in (49) provide a minimal contrast: the conjunction *i* in (49a), which is a proclitic, cannot host the enclitic *će*, while the conjunction *pa* in (49b), which is a free function word, can.

(49) a. Pozovi=*je* *i*=doći=*će*. *Pozovi je i će doći.
invite her-CL and-CL come will-CL
'Invite her, and she will come.'

[D [[i [doći]$_{PW}$]$_{PW}$ će]$_{PW}$

b. Pozovi=*je* pa=*će* doći. *Pozovi je pa doći će.
invite her-CL and will-CL come
'Invite her, and she will come.'

[D [[[pa]$_{PW}$ će]$_{PW}$ [doći]$_{PW}$]$_{PPh}$

The contrast in (49) highlights another important point. It has been claimed in the syntactic literature that what serves as first for the purpose of enclitic placement is either the material moved in the syntax or the material *in situ*, but not both (e.g. Progovac 1996). In either case, the first position is occupied by a syntactic constituent. From the prosodic perspective, what serves as a first word for enclitic placement needs to be a prosodic, but not necessarily a syntactic, constituent. This is precisely the case in (49a): what occupies the first position is a conjunction, an element *in situ*, combined with a following verb. While this clitic host can in no way correspond to a syntactic constituent, it clearly corresponds to a prosodic constituent. In sum, the clitic host that serves as a first word for the purposes of clitic placement has to correspond to a single prosodic constituent, but not necessarily to a single syntactic constituent.

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In the following sections, two additional sources of evidence for the distinction between free and bound function words will be presented: evidence from pitch accent, to be presented in §4, and evidence from interactions of pitch accent and focus, in §5. In both cases, free and bound function words overlap in their distribution, yet exhibit markedly different prosodic traits.

4 Evidence from pitch accent

The prosodic word is the domain of pitch accent, which is the principal bearer of prominence within the prosodic hierarchy. The pitch-accented syllable corresponds to the head of the prosodic word, by virtue of belonging to its most prominent foot. It is subject to the following constraint, which requires the head's left alignment (formulated as ALIGNSFT by Zec 1999: 251):[16]

(50) ALIGNPA
Align(H(PWord)-L, PWord-L)

In the simple case, the prosodic word corresponds to exactly one morphological word, and possesses exactly one pitch accent. The more complex case is that of prosodic words with recursive structure, as in (51), enforced by the presence of clitics and the resulting violation of NON-RECURSIVITY:

(51) a. $[clitic\ [host]_{PWi}\ ]_{PWj}$
$[clitic\ [clitic\ [host]_{PWi}\ ]_{PWj}\ ]_{PWk}$
b. $[[host]_{PWi}\ clitic]_{PWj}$
$[[[host]_{PWi}\ clitic]_{PWj} clitic]_{PWk}$

In one of the cases, in (51a), there is an obvious ambiguity as to which of the multiple left edges of the prosodic word will be selected by the alignment constraint. The strong interpretation of the alignment constraint is that it is satisfied only if there is no syllable preceding the pitch-accented one that belongs to the same prosodic word. Under this interpretation, constraint (50) is satisfied only if pitch accent falls on the initial syllable of the largest prosodic word: PWj in the first case in (51a), and PWk in the second case.

In standard Serbian, it is the smallest domain that is selected, the one identical with the morphological word that serves as clitic host. This, however, is not a necessary choice. As noted in Zec (1993), there is cross-dialectal variation with regard to the selection of the pitch-accent domain.

[16] An additional, undominated, constraint, named STRONGFOOTSALIENCE in Zec (1999), requires that the prosodic word's head be associated with a High tone, which ensures its association with pitch prominence, in addition to stress prominence. This constraint may preclude perfect left alignment of the pitch accent.

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While one group of dialects, including the standard (spoken in Belgrade) selects the minimal domain, another group, which includes the Herzegovian dialect, selects the maximal domain, i.e. the outermost prosodic word, as the domain of pitch accent. The two cases are illustrated in (52):

(52) a. *Standard* [u [kùći]$_{PWi}$]$_{PWj}$ 'in the house'
b. *Herzegovian* [ù [kući]$_{PWi}$]$_{PWj}$

In all other relevant respects, the prosodic systems of the two dialect groups are identical.

The position of pitch accent in the two dialect groups results from the interaction of two constraints: AlignPA in (50) and Headedness, one of the architectural constraints listed in (5), which in this specific case requires that every prosodic word contain a head. This constraint is satisfied only if pitch accent is contained within the smallest prosodic word. It is only in this case that every prosodic word in the recursive structure possesses a head.[17] In the spirit of OT, the difference between the two dialect groups is expressed simply as a difference in constraint ranking. The position of pitch accent in the standard dialect is captured by the ranking Headedness ≫ AlignPA. As a result, every prosodic word is headed, at the expense of absolute left alignment of the head, as in the winning candidate in (53). The remaining candidates are eliminated because each includes at least one prosodic word which either has no head or has more than one head, thus incurring a violation of Headedness.[18]

(53) *Standard:* Headedness ≫ AlignPA

[u[kùći]$_{PWi}$]$_{PWj}$	Headedness	AlignPA
☞ a. [u[kùći]$_{PWi}$]$_{PWj}$		*
b. [ù[kući]$_{PWi}$]$_{PWj}$	*!	
c. [ù[kùći]$_{PWi}$]$_{PWj}$	*!	*
d. [u[kući]$_{PWi}$]$_{PWj}$	*!*	

By contrast, the position of pitch accent in the Herzegovian dialect is accounted for by a reversed ranking: AlignPA ≫ Headedness. In this case, AlignPA is satisfied at the cost of violating Headedness.

[17] I am grateful to an anonymous referee for suggesting this approach to dialect variation, which has led to a considerable improvement over an earlier analysis.

[18] Note that even in the Belgrade dialect, pitch accent is on the initial syllable of a prosodic word. This is captured by another alignment constraint, Align(PWord-L, H(PWord)-L), which requires that every prosodic word be left-aligned with its head.

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(54) *Herzegovian:* ALIGNPA ≫ HEADEDNESS

[u[kȕći]$_{PWi}$]$_{PWj}$	ALIGNPA	HEADEDNESS
a. [u[kȕći]$_{PWi}$]$_{PWj}$	*!	
☞ b. [ù[kući]$_{PWi}$]$_{PWj}$		*
c. [ù[kȕći]$_{PWi}$]$_{PWj}$	*!	*
d. [u[kući]$_{PWi}$]$_{PWj}$		**!

The crucial assumption is that the prosodic representation of clitics is identical in the two groups of dialects, the only difference being how the two constraints that select the locus of pitch accent are ranked.

In a reanalysis of this case, Selkirk (1995b) proposes to capture the cross-dialectal variation in pitch-accent domains as a difference in the prosodic representation of clitic/host combinations.

(55) a. *Standard* [u [kȕći]$_{PW}$]$_{PPh}$ 'in the house'
b. *Herzegovian* [ù kući]$_{PW}$

Under this analysis, different prosodic constituencies in the two dialects emerge from the difference in constraint ranking. In the standard dialect, NON-RECURSIVITY and EXHAUSTIVITY outrank constraints on prosody/morphology alignment, thus excluding the proclitic from the pitch-accent domain. And in the Herzegovian dialect, EXHAUSTIVITY is dominated by both NON-RECURSIVITY and the prosody/morphology alignment constraints, thus obligatorily including the proclitic in this domain. In both cases, the domain of pitch accent is the prosodic word. However, we showed in §2 that the representation in (55a), posited for proclitics in the standard dialect, is precisely the one reserved in our account for monosyllabic free function words. As argued in §§2 and 3, this representation captures the properties of subminimal free function words, and is unavailable for proclitics, whose properties are fully captured only in a recursive prosodic word structure. Thus Selkirk's analysis does not attribute the right prosodic constituency to proclitics in either dialect and furthermore fails to capture the prosodic distinction between proclitics and monosyllabic free function words characteristic of the standard dialect (but extending to Herzegovian and, most likely, to other dialects). In the standard dialect, in particular, more than one prosodic representation is called for to capture the range of prosodic distinctions among function words. First, distinct prosodic representations are needed to capture the prosodic contrast between monosyllabic free function words and proclitics. Second, the representation used by Selkirk in (55b), while inadequate for the situation in the Herzegovian dialect, needs to be invoked for a special effect exhibited by monosyllabic function word hosts in the standard dialect, to be presented below. In sum, Selkirk's analysis is inadequate on empirical grounds. It does not capture the range of

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intradialectal prosodic distinctions which, as we have seen, characterises the standard dialect, nor does it capture cross-dialectal similarities in the prosody of clitics which, we claim, follow from identical representations within the lexicon.

We now return to the standard dialect. The analysis of pitch-accent domains advocated here is further justified by two cases of departure from the minimal domain selection in standard Serbian. One case will be presented in this section; the other, which crucially depends on the interactions with focus, is detailed in §5.

Consider the distribution of pitch accent in forms consisting of proclitics combined with free function words. In (56a) the free function word is monosyllabic, and in (56b) disyllabic. Of interest here is the fact that, while in (56b) the pitch accent is realised as expected, i.e. in the minimal domain, in (56a) it is realised on the proclitic, i.e. in the maximal domain.[19] The constraints posited thus far will be sufficient to characterise the difference in domain selection between (56a) and (b).

(56) a. zà nju ‘for her’ *za njû
b. za njȅga ‘for him’ *zà njega

It is important to note that the departure from the minimal domain in (56a) coincides with only one type of clitic host: the monosyllabic free function word. This strongly suggests that PWordSize is a crucial player in this interaction. In fact, this case is accounted for by the ranking PWordSize ⩾ ProsodicAffix, postulated in §3. Due to this ranking, (56a) and (b) have different prosodic configurations. The tableaux in (57) demonstrate how this ranking yields different outcomes with monosyllabic and polysyllabic function word hosts. In (57a), due to a minimal violation of ProsodicAffix, the proclitic and its host combine in a nonrecursive prosodic word, which satisfies PWordSize, while violating MWord=PWord. However, PWordSize is fatally violated by candidate (ii), which has a recursive prosodic word structure.

(57)

	$[za[nju]_{PW}]_{PW}$	PWordSize	MWord=PWord	ProsodicAffix	Non-recursivity
a.	☞ i. $[zà\ nju]_{PW}$		*	*	
	ii. $[za\ [njû]_{PW}]_{PW}$	*!			*
b.	$[za\ [njega]_{PW}]_{PW}$				
	i. $[zà\ njega]_{PW}$		*!	*	
	☞ ii. $[za\ [njȅga]_{PW}]_{PW}$				*

[19] This effect is restricted to the Belgrade dialect, and, while robust in those speaker that do have it, seems to be disappearing in the speech of younger generations.

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The distribution of pitch accent in the winning candidates in (57) follows the general pattern characteristic for the standard dialect, secured by the ranking HEADEDNESS ≫ ALIGNPA. What appears to be a departure from the minimal domain is really a departure from the recursive prosodic word structure, as in (57a).

No comparable effect is detected if a monosyllabic function word of the free class precedes a monosyllabic prosodic word which itself corresponds to a free function word. While it is not easy to construct a case of this sort, (58) is my best approximation:

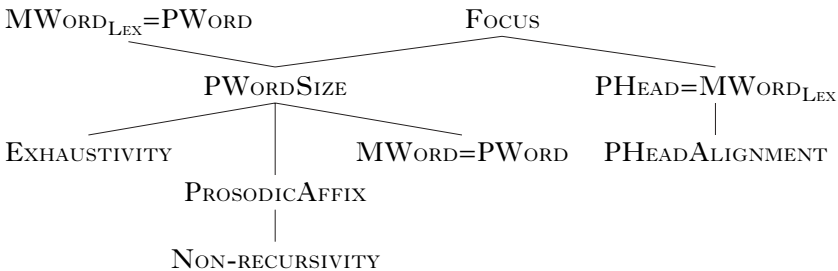
(58) Mi *s*=njîm radimo.
we with-CL him work
'We work with him.'

$[_{D}$ [mi [s njîm]$_{PW}$]$_{PPh}$

The monosyllabic free function word *mi* has no prosodic status and is included directly in the prosodic phrase. It is immediately followed by a monosyllabic prosodic word consisting of the proclitic *s*, which corresponds to a single consonant, and the monosyllabic host *njim*. Although the resulting prosodic word is monosyllabic, and thus violates PWORD SIZE, the monosyllabic free function word *mi* has no power to amend this situation.

The relevant rankings established in this section are given in (59):

(59)



It follows from (59) that there are two cases in which accent does not shift from a monosyllabic prosodic word. First, it does not shift when the monosyllabic host word is a lexical element. Due to the undominated status of MWORD$_{LEX}$=PWORD, which guarantees that a lexical element has prosodic word status even when it violates PWORDSIZE, a lexical element is immune to prosodic interactions that functional elements are subject to.

Second, accent does not shift when the monosyllabic prosodic word is focused. The requirement that the focused element bear the highest prominence overrides the minimality requirement, and thus prevents domain expansion, as expressed by the undominated status of FOCUS in the ranking in (59).

We now turn to the second case of accent shift, which crucially depends on the interactions with focus.

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5 Evidence from focus

In this section we present a case of prosody/focus interface in standard Serbian which provides further evidence for the prosodic differences between free and bound function words. Relevant here is a class of focus-triggering particles, *ni* 'neither', *i* 'also' and *bilo* 'any', reminiscent of focusing adverbs such as *only* and *even* in English (Rooth 1996). These particles possess identical semantic characterisations, but differ in their prosody: *ni* and *i* are bound function words, specifically proclitics, and *bilo* is a free function word. These particles should thus be listed in the lexicon as in (60). In the syntactic subpart of the lexical entry, $\{\ldots\}_{DF}$ designates the focus domain (which corresponds to the constituent that immediately follows the particle), and X_F designates the focused element within this domain. The lexical entry of a bound function word in (60a) includes a prosodic specification, while that of a free function word, in (60b), does not.

(60) a. *ni* particle
syntax $\{\ldots \mathbf{X}_F \ldots\}_{DF}$
prosody $[__\,[\ \ ]_{PW}]_{PW}$

b. *bilo* particle
syntax $\{\ldots \mathbf{X}_F \ldots\}_{DF}$

We begin with the behaviour of the particle *ni*, described in Zec (2000). As shown in (61), this particle, being a proclitic, combines with its host in the predictable fashion: in each case, the pitch accent is realised on the host, which in (61a) corresponds to a lexical element, and in (61b) to a disyllabic, free function word. The syllable that bears pitch accent is additionally associated with the high degree of prominence characteristic of focus. In (62) the same proclitic combines with indefinite pronouns which belong to the class of free function words. This case departs from (61) in two unexpected ways: first, pitch accent is realised on the proclitic, which acts as bearer of focal prominence; and second, pitch accent is not realised on the indefinite pronoun, which, being a disyllabic free function word, should be pitch-accented.

(61) a. Nije pomogla *ni*=Màriji.
not helped not-even-CL Mary
'She didn't even help Mary.'

b. Nije videla *ni*=njèga.
not saw not-even-CL him
'She didn't even see him.'

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(62) a. Nije pomogla *nȉ*=kome.
not helped not-even-CL whom
'She helped no-one.'
b. Nije videla *nȉ*=koga.
not saw not-even-CL whom
'She saw no-one.'

The forms in (63) and (64) further illustrate the combinations of the focus-triggering particle *ni* with prepositional phrases. Because prepositions have the prosodic status of proclitics, this case makes it clear that *ni* cannot be analysed as a prefix. The forms in (64), in which the proclitic host is an indefinite pronoun, again depart from the expected prosodic behaviour, with the proclitic *ni* exhibiting pitch-accent prominence, and the indefinte pronoun lacking it; and, as in (62), *ni* is also the bearer of focal prominence. In (63), pitch accent, as well as focal prominence, invariably falls on the host word, following the expected pattern.

(63) a. Ne govori *ni*=*o*=Màriji.
not speak not-even-CL of-CL Mary
'He doesn't speak even about Mary.'
b. Ne dolazi *ni*=*kod*=njèga.
not visit not-even-CL at-CL him
'He doesn't visit even him.'

(64) a. Ne govori *nȉ*=*o*=kome.
not speak not-even-CL of-CL whom
'He speaks about no-one.'
b. Ne dolazi *nȉ*=*kod*=koga.
not visit not-even-CL at-CL whom
'He visits no-one.'

The place of pitch accent in (62) and (64) clearly departs from the pattern established in §2. This can be attributed to a semantic peculiarity of indefinite pronouns: they cannot be the bearers of focus:

(65) *{… X_F …}$_{DF}$, where X_F is an indefinite pronoun

Since focus is obligatory in the presence of a focus-triggering particle, we add a further requirement: if no element within the domain of focus is a possible bearer of focal prominence, then focus will land on the focus-triggering particle. This is precisely what accounts for the focal prominence of *ni* in (62) and (64).

But while indefinite pronouns are incompatible with focal prominence, they are not incompatible with pitch accent. When it is not combined with a focusing particle, an indefinite pronoun can bear pitch accent, exhibiting the pattern we established in §2 as characteristic of free function words.[20]

[20] As polarity-sensitive items, indefinite pronouns appear in a restricted set of environments (Ladusaw 1996). The examples in (66) are all yes/no questions.

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This is illustrated in (66), with indefinite pronouns italicised. In (66a, b) the indefinite pronouns are monosyllabic, and therefore unaccented; in (66c) the disyllabic indefinite pronoun bears pitch accent; in (66d) a disyllabic indefinite is preceded by the proclitic *na*; and in (66e) a monosyllabic indefinite pronoun appears in this collocation; only in the latter case is *na* the bearer of pitch accent, following the pattern established in §4.

(66) a. Da li se ko žalio?
Q REFL who complain
'Did anyone complain?'

b. Ima li šta za jelo?
have Q what for eating
'Is there anything to eat?'

c. Da nisi kòga izostavio?
Q not whom leave out
'Didn't you leave someone out?'

d. Da nije *na*=kòga zaboravio?
Q not on-CL whom forget
'Didn't he forget about someone?'

e. Da se nije *nȁ*=šta žalio?
Q REFL not on-CL what complain
'Did he complain about something?'

In sum, indefinite pronouns can bear pitch accent, and when they do, they follow the standard pattern. It is thus clearly the case that an indefinite pronoun cannot be focused, as further shown by (67), modelled on the example in (66c). The indefinite pronoun *koga* is not a possible bearer of focus, as shown in (67a); the verb *izostavio* is, however, as shown in (67b):[21]

(67) a. *Da nisi izostavio **koga**$_{F}$?
Q not leave out whom

*Da nisi **koga**$_{F}$ izostavio?
Q not whom leave out

b. Da nisi **izòstavio**$_{F}$ kòga?
Q not leave out whom
'Didn't you leave someone out?'

Da nisi kòga **izòstavio**$_{F}$?
Q not whom leave out
'Didn't you leave someone out?'

[21] The indefinite pronouns in (66) and (67) differ from the indefinite pronoun *any* in English, which is clearly focusable. As noted in Kadmon & Landman (1993), *any* is characterised by additional strengthening effects. Such strengthening effects are absent in the Serbian indefinites in (66) and (67), but emerge when they combine with focus-triggering particles.

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But when the indefinite pronoun is replaced by a lexical element, as in (68a), or by a personal pronoun, as in (68b), these elements are perfectly good focus bearers.

(68) a. Da nisi izòstavio **Pètra**$_{F}$?
Q not leave out Peter
'Didn't you leave out Peter?'

Da nisi **Pètra**$_{F}$ izòstavio?
Q not Peter leave out
'Didn't you leave out Peter?'

b. Da nisi izòstavio **njèga**$_{F}$?
Q not leave out him
'Didn't you leave him out?'

Da nisi **njèga**$_{F}$ izòstavio?
Q not him leave out
'Didn't you leave him out?'

In sum, the semantic constraint in (65) and the resulting focusing of the focus-triggering particle explain why the indefinite pronouns in (62) and (64) cannot be focused. However, the semantic factors do not explain why the indefinite pronouns in (65) and (67) are barred from a lower degree of prominence, i.e. from bearing pitch accent. The lack of pitch accent on indefinite pronouns in (62) and (64) calls for a prosodic explanation, which we now turn to.

We consider here only those forms that satisfy the semantic prohibition against focusing indefinite pronouns; those, that is, that bear focus on the focus-triggering particle. In tableau (70), we invoke FOCUS, the constraint in (8) that requires the highest degree of prominence on the focused constituent. FOCUS ranks higher than HEADEDNESS, which in standard Serbian outranks ALIGNPA, as in (69):

(69) FOCUS ≫ HEADEDNESS ≫ ALIGNPA

Because of this ranking, the winner is the form with pitch accent on *ni*, which is the focus-bearer, rather than the form with pitch accent on *kome*, which does not bear focus. As a result, the maximal domain is selected over the minimal domain, as shown below:

(70)

[**ni**$_{F}$ [o [kome]$_{PW}$]$_{PW}$]$_{PW}$	FOCUS	HEADEDNESS	ALIGNPA
☞ a. [**nì**$_{F}$ [o [kome]$_{PW}$]$_{PW}$]$_{PW}$		*	
b. [**ni**$_{F}$ [o [kòme]$_{PW}$]$_{PW}$]$_{PW}$	*!		*
c. [**nì**$_{F}$ [o [kòme]$_{PW}$]$_{PW}$]$_{PW}$		*	*!

It is again due to HEADEDNESS, which permits at most one pitch accent within a prosodic word, that the form in which both *ni* and *kome* are

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pitch-accented is ruled out, as shown in (70). The winner is candidate (a), which satisfies FOCUS and ALIGNPA.

We now turn to the focus-triggering particle *bilo*, which, like *ni*, is focused when the only candidate for focus prominence within its domain is an indefinite pronoun. But, being a free function word, *bilo* exhibits a different prosodic pattern from the proclitic *ni*. As illustrated in (71), indefinite pronouns combined with *bilo*, which bears focal prominence, fully conform to the pitch-accent pattern characterised in §§2 and 4. Thus a monosyllabic indefinite pronoun is unaccented, as in (71a, b), while a disyllabic indefinite bears pitch accent, as in (71c); and, when a monosyllabic indefinite combines with a proclitic, pitch accent falls on the proclitic, as in (71e), while a disyllabic indefinite combined with a proclitic is the bearer of pitch accent, as in (71d).

(71) a. **bílo**$_{F}$ ko
any who
'anyone'

b. **bílo**$_{F}$ šta
any what
'anything'

c. **bílo**$_{F}$ kòme
any whom
'to anyone'

d. **bílo**$_{F}$ *o*=kòme
any about-CL whom
'about anyone'

e. **bílo**$_{F}$ *nȁ*=šta
any on-CL what
'on anything'

In sum, when combined with *bilo*, indefinite pronouns exhibit the same pitch-accent pattern as in (66), where no interfering factors affect their prosody. This is due to the free status of *bilo*, which, unlike *ni*, forms a prosodic word of its own, and realises its pitch accent within this prosodic word, as schematised in (72):

(72) a. [**bílo**$_{F}$]$_{PW}$ ko (66a)
b. [**bílo**$_{F}$]$_{PW}$ [kòme]$_{PW}$ (66c)
c. [**bílo**$_{F}$]$_{PW}$ [o [kòme]$_{PW}$]$_{PW}$ (66d)
d. [**bílo**$_{F}$]$_{PW}$ [nȁ šta]$_{PW}$ (66e)

Note that the free function word *bilo* is compatible with prosodic word status by virtue of being disyllabic, i.e. by satisfying PWORDSIZE. As a result, the prosodic status of the indefinite pronoun in no way depends on the prosodic status of *bilo*, and its prosodisation follows the already established pattern.

In sum, the contrast between *ni* and *bilo* is fully captured by their distinct prosodic representations: *ni* is a prosodic affix and *bilo* a free function word.

6 Concluding remarks

The prosodic account of standard Serbian presented in this paper provides a general theoretical perspective on prosodic differences

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among classes of function words. I have argued for a bifurcation of function words in standard Serbian into a free and a bound class. I have further argued that, while the properties of the free class are to be captured by a general set of prosodic constraints, which account for both lexical elements and free functional elements, the status of bound function words, or clitics, calls for a different approach. My proposal is to prespecify clitics as prosodic affixes, associating their lexical entries with prosodic subcategorisation frames. The full burden of the distinction between free and bound function words is thus placed on prosody, and implemented by lexical prespecification. The range of prosodic configurations that emerges in our analysis is identical with that put forward by Selkirk (1995b). The four prosodic configurations relevant for the case analysed here are listed in Table I, and correspond to Selkirk's free word (a), free clitic (b), affixal clitic (c) and internal clitic (d).

prosody	lexical MWord	free functional MWord	bound functional MWord
a. $[\text{MWord}]_{\text{PW}}$	all	disyllabic or focused	
b. $[\text{MWord} [\ \ ]_{\text{PW}}]_{\text{PPh}}$ $[[\ \ ]_{\text{PW}}\ \text{MWord}]_{\text{PPh}}$		monosyllabic	
c. $[\text{MWord} [\textit{host}]_{\text{PW}}]_{\text{PW}}$ $[[\textit{host}]_{\text{PW}}\ \text{MWord}]_{\text{PW}}$			all
d. $[\text{MWord}\ \textit{host}]_{\text{PW}}$ $[\textit{host}\ \text{MWord}]_{\text{PW}}$			host = monosyllabic free functional MWord

Table I
Prosodic differentiations in Standard Serbian.

Thus, while configurations (a) and (b) emerge from constraint interactions in the prosodic grammar, with the morphologically based difference between the classes of lexical and functional categories playing a crucial role, the contrasting status of configuration (c) is encoded in the grammar by virtue of prosodic prespecification, and the ProsodicAffix constraint, which protects the faithfulness of lexically prespecified material. Finally, configuration (d) emerges as a special case of (c), sensitive to the type of host. These configurations emerge from interactions of the ranked set of constraints in (59). Thus, while the general morphosyntactic bifurcation into lexical and functional categories coincides with systematic prosodic differences among these classes of words, no readily detectable morphosyntactic differences coincide with prosodic subdivisions within the class of function words. In sum, the classification into free and bound function words has no clear morphosyntactic correlate, and as such, presents a purely prosodic contrast.

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The principal difference between the present proposal and that of Selkirk's is how the prosodic grammar generates the configurations listed in Table I. Selkirk proposes to derive all prosodic differences solely through mutual interactions of constraints on the morphology/prosody interface, thus implicitly excluding the possibility of lexically contrasting prosodic configurations. Selkirk's claim is based on two case studies: prosodic diversity in English and prosodic diversity across Serbo-Croatian dialects. In the latter case, as we argued in §4, Selkirk's analysis is not tenable on empirical grounds. This analysis aims to capture cross-dialectal variation in the position of pitch accent in proclitic/host combinations in terms of cross-dialectal differences in prosodic configurations. Yet, as detailed in §4, this analysis does not generalise beyond the set of proclitics, and thus fails to capture the general aspects of function word prosody. Our account, which relies on a lexically implemented prosodic contrast within the class of function words, provides full empirical coverage.

Turning to the English case, while Selkirk's analysis covers the facts, it does so at a cost. Under her analysis, only three of the four prosodic types in Table I emerge in English, (a)–(c). Selkirk argues that these three prosodic outputs are generated from different morphosyntactic inputs, with the same set of ranked constraints. Configuration (b) is generated when a function word precedes a lexical category, as in [with [Bill]$_{PW}$]$_{PPh}$, and is generally reserved for function words that are not final in larger prosodic constituents. Function words that do occur in prosodic domain final position prosodise as either (a) or (c). The prosodic configuration in (a) emerges in the well-known case of English function-word prosody: failure of function words to reduce in final position, as in *Fred hasn't responded, but Liz* ['hæz]/*[(h)əz]. The prosodic configuration in (c), however, emerges with object pronouns, as in *need him*, which may occur reduced in this same position, and are prosodised, under Selkirk's analysis, as [[need]$_{PW}$ 'm]$_{PW}$. In order to generate both the cases of reduced and unreduced finally positioned function words with the same set of constraints, Selkirk posits a morphosyntactic difference. Pronouns are associated with optional recursive syntactic structure, as in [V Pro]$_{V}$, which as morphosyntactic input results in recursive prosodic structure. While this structure is reserved for the reduced case, object pronouns that do not reduce appear as DP heads in [V DP]$_{VP}$. A prosodic difference is thus encoded as a morphosyntactic difference of a somewhat idiosyncratic sort: reduced pronouns are analysed as a case of morphological incorporation. An obvious alternative is to assume that object pronouns have clitic allomorphs, which are listed in the lexicon as prosodic affixes. This lexical solution eliminates the need for positing different morphosyntax for clitic and non-clitic object pronouns. Moreover, once this option is adopted for reduced pronouns, another difficult case can receive the same treatment: non-finite auxiliaries also occur in reduced form at the right edge of larger prosodic domains, as in *Fred couldn't have responded, but Liz could* *[hæv]/[əv], paralleling the prosodic behaviour of pronouns (cf. Selkirk 1972,

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Inkelas & Zec 1993). In order to capture the clitic behaviour of non-finite auxiliaries, these forms should also be lexically prespecified as prosodic affixes.

To conclude, I argue for the proposed subclassification of function words into free and bound classes, i.e. into clitics and non-clitics, which is rooted in prosody rather than morphosyntax, and reflects different degrees of prosodic dependence. We capture this by differentiating function words into those whose prosody is less idiosyncratic, and thus closer to that of content words, and those with a higher degree of prosodic dependence and more idiosyncratic prosody. If constraints were asked to distinguish between the two classes of function words, this would obviously call for class-specific constraints.

Moreover, the classes would not be morphosyntactically grounded, but would rather need to be diacritically designated. In sum, I opt here for prosodic prespecification as the most natural, and least cumbersome, solution.

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