# Preverbal Vowels in Wh-Questions and Declarative Sentences in Northern Italian Piacentine Dialects ${ }^{1}$ 

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In this paper, we discuss preverbal vocalic segments in interrogative and declarative sentences. Their distribution depends on the type of subject ( $1 \mathrm{sg}, 1 \mathrm{pl}, 2 \mathrm{pl}$ vs $2 \mathrm{sg}, 3 \mathrm{sg}, 3 \mathrm{pl}$ ), the presence of other preverbal clitics, and the verb tense (present vs present perfect). We show that two different types of preverbal vocalic segments should be differentiated: an 'interrogative vowel' (in main wh-questions) and a 'subject field vowel' (in embedded whquestions and in declarative sentences). The two vowels realize different heads of the clausal skeleton (in the CP and the IP layer, respectively), can be found in one and the same dialect, and can co-occur in one and the same clause. Both types of vowels appear to be incompatible with other preverbal clitics in some contexts, and the presence/absence of the preverbal vowel in sentences with auxiliaries is predictable based on the quality of the auxiliary-initial segment (consonant vs vowel).

## 1 Introduction

[^0]In the Emilian dialect of Gazzoli (province of Piacenza), the preverbal vowel [ə] has a very complicated distribution depending on, among other things, the type of sentence (declarative vs interrogative), the subject ( $1 \mathrm{sg}, 1 \mathrm{pl}, 2 \mathrm{pl}$ vs $2 \mathrm{sg}, 3 \mathrm{sg}, 3 \mathrm{pl}$ ), the presence of other preverbal clitics, and the verb tense (present vs present perfect). For example, the distribution of the preverbal vowel [ $[$ ] is different in wh-questions vs declarative sentences. In wh-questions (with wh-phrases and wh-words), the preverbal vowel is found in all six persons with the following distribution: the presence of the preverbal vowel is preferred with a $1 \mathrm{sg}, 1 \mathrm{pl}, 2 \mathrm{pl}$ subject (1a), and the absence of the preverbal vowel is preferred with a 2 sg , 3 sg , 3 pl subject (1b). In declarative sentences, the preverbal schwa is optional with $1 \mathrm{sg}, 1 \mathrm{pl}, 2 \mathrm{pl}$ verbs $(2 \mathrm{a}),{ }^{2}$ and it is ungrammatical with $2 \mathrm{sg}, 3 \mathrm{sg}, 3 \mathrm{pl}$ verbs (2b). ${ }^{3}$ (We use the following symbols: ?(ə) $=$ preference for the presence of $/ \partial /,(? \partial)=$ preference for the absence of $/ \partial /,(\partial)=$ optional $/ \partial /$.
(1) wh-questions
a. $1 \mathrm{sg}, 1 \mathrm{pl}, 2 \mathrm{pl}$
kõ ki ?(ə) 'vo-jə via 'with whom am I going away?'
kõ ki ? (ə) 'num-jə via 'with whom are we going away?'

[^1]kõ ki ?(ə) 'nع:-v via
b. $2 \mathrm{sg}, 3 \mathrm{sg}, 3 \mathrm{pl}$
kõ ki (?ə) 've-t via 'with whom are you:sg going away?'
kõ ki (?ə) 'va-l via
kõ ki (?ə) 'van-jə via
'with whom are you:pl going away?'
'with whom is he going away?'
'with whom are they going away?'
declarative sentences
a. $1 \mathrm{sg}, 1 \mathrm{pl}, 2 \mathrm{pl}$
(ә) 'vo via
(ә) 'num via
(ә) 'n via
b. $2 \mathrm{sg}, 3 \mathrm{sg}, 3 \mathrm{pl}$
(*ə) t askri:v
(*ə) õ 'va via
(*) i 'van via
'I go away’
'we go away'
'you:pl go away’
'you:sg write'
'he goes away'
'they go away'

The 2 sg form of the declarative sentence in (2b) displays a different verb with respect to the rest of the paradigm: [t əskri:v] 'you:sg write'. ${ }^{4}$ We use this verb to clearly show that the preverbal vowel is impossible: *[ə t əskri:v]. In careful speech [ət $\partial s k r i: v]$ is acceptable with a slight pause between the subject clitic [ət] and the verb [əskri:v];

[^2]however, the schwa before the /t/ subject clitic in forms such as [ət əskri:v] and [ət 've via] 'you:sg go away' is epenthetic and not the preverbal vowel discussed above. This follows the general rules of epenthesis in this dialect. See Cardinaletti and Repetti (2004), (2008a) for further discussion.

For the 3 sg and 3 pl forms in (2b) [õ 'va via] and [i'van via], as well as the 3 sg feminine form [a 'va via] 'she goes away', the preverbal vowels / $\mathrm{o} /$ / /i/, /a/ are true subject clitic pronouns and do not enter the typology of functional vowels discussed in this paper. These forms are impossible with the preverbal schwa: *[ə õ 'va via], *[ə i 'van via], *[ə a 'va via]. In nearby dialects, such as Donceto, the 3sg masculine form- [ol 'va via] 'he goes away' - contains an initial schwa that is epenthetic and is needed to syllabify the 3sg masculine subject clitic /1/; it is not the functional vowel discussed in this paper. See Cardinaletti and Repetti (2004), (2008a) for further discussion.

In this paper we will discuss the nature of the preverbal schwa in the above data, and its distribution in various contexts. We will show that the preverbal vowels are two different syntactic entities: an 'interrogative vowel' (1) and a 'subject field vowel' (1a)-(2a). We will further show that the realization of the preverbal vowel(s) depends on other considerations, such as phonological considerations and the presence of other clitics.

This paper is organized as follows. In §2 we present our analysis of the preverbal schwa as two different functional vowels, and in $\S 3$ we provide data from closely related dialects to support our analysis of the Gazzoli facts. We then discuss the occurrence of preverbal schwa with object clitics (§4) and with auxiliary verbs (§5) to illustrate how various components of the grammatical system are involved in the realization of the preverbal schwa. We conclude the paper in $\S 6$.

## 2 Analysis of the preverbal schwa

In this section, we suggest that the preverbal vowel occurring in declarative sentences and the preverbal vowel occurring in interrogative sentences are not one and the same vowel, and that they realize different functional heads in the clausal skeleton. This proposal is supported by the fact that the two vowels occur in different persons of the paradigm in different sentence types (as seen in (1)-(2)), by their distribution in embedded questions (§2.3), and by the fact that the two vowels can cooccur in main wh-questions (§2.5).

### 2.1 Main wh-questions

In main wh-questions (1), the preverbal vowel is an 'interrogative vowel' which is merged in the Focus head of the CP layer (in Rizzi’s 1997 sense). This explains why it is found in all six persons of the verbal paradigm. The preverbal vowel is the spell out of the complex $\mathrm{Q}+$ Foc head found in main questions, following Rizzi's (2006) analysis of Italian. The interrogative head has an edge feature which attracts the wh-phrase. We exemplify the derivation with the 2 sg form.


In interrogative structures, verb - subject clitic inversion is obtained by moving the verb to Y across the subject clitic (see Cardinaletti and Repetti 2008a, 2010, for discussion). We take the Y head to be located in the INFL layer. This is coherent with the wide-spread
proposal that no V-to-C movement takes place in Romance languages. See Kayne (1994:44, 139, n.15) and Sportiche (1999) for French, Suñer (1994) for Spanish, Guasti (1996) and Cardinaletti (2007) for Italian, Munaro (1999) and Cardinaletti and Repetti (2008a), (2010) for northern Italian dialects. V-to-Y movement is motivated by the need to check the inflectional [wh] feature on the verb (Rizzi 1996, 2001) against the $Y$ head.

In §2.6, we will address the issue of preference/dispreference of the preverbal vowel in the different forms of the verb paradigm.

### 2.2 Declarative sentences

In declarative sentences, the (optional) preverbal vowel is only found in some persons of the paradigm (2a). We suggest that it is merged in a lower functional head (in (4) we call the head Z) belonging to the IP layer (in Rizzi's 1997 sense) that hosts the features of $1 \mathrm{sg}, 1 \mathrm{pl}$ and 2 pl , namely of the persons that do not have a subject clitic (there is no evidence that the vowel has a different distribution in these three persons). We call this vowel a 'subject field vowel', and in (4) we show the derivation for the 1 sg. ${ }^{5}$
(4) $\quad\left[{ }_{\mathrm{ZP}}(\partial) \quad\left[_{\mathrm{TP}}\right.\right.$ pro vo $\ldots\left[_{\mathrm{VP}}\right.$ pre ve via $\left.\left.]\right]\right]$

In $\S 2.6$, we will address the issue of optionality vs impossibility of the preverbal vowel in the different forms of the verb.

[^3]
### 2.3 Embedded wh-questions

The patterning of schwa in embedded questions reflects the different behavior of the preverbal vowel in main clauses. In both contexts, the preverbal vowel follows two patterns: it is found in all persons of the paradigm, or it is found with $1 \mathrm{sg}, 1 \mathrm{pl}, 2 \mathrm{pl}$ forms. In embedded questions, only the subject-field vowel is possible (5a), while the interrogative vowel is ungrammatical (5b) (see footnote 4). The vowel occurring in (5c) is an epenthetic vowel inserted to syllabify the 2 sg subject clitic /t/ (see section 1 ).
(5) a. õ lə sa mia õ:d (ə) vo 'he doesn't know where I am going' b. õ lə sa mia ko:z ( ${ }^{*} \partial$ ) t askri:v 'he doesn't know what she is writing' c. õ lə sa mia õ:d ət ve 'he doesn't know where you:sg are going'

The occurrence of preverbal vowels in embedded wh-questions supports our proposal: the CP head realized by the interrogative vowel is not available in embedded clauses, while the IP-internal subject-field vowel found in main declarative clauses (2a) can appear in interrogative embedded clauses, as well as in declarative embedded clauses (6):
(6) õ la sa mia ke (ə) vo via 'he doesn't know that I am going away'

### 2.4 Functional vowels

The two types of vowels discussed above - both the 'interrogative vowel' and the 'subject field vowel'- are referred to here as 'functional vowels' since they realize functional heads of the clausal skeleton. In the chart in (7), we show the contexts in which each of the functional vowels can (optionally) appear. The 'interrogative vowel' is possible in main wh-questions in all persons, while the 'subject field vowel' is possible in embedded whquestions and declarative sentences, but only in the $1 \mathrm{sg}, 1 \mathrm{pl}, 2 \mathrm{pl}$ forms. Nothing prevents the 'subject-field vowel' from occurring in wh-questions as well. Below we show that this is indeed the case.

| (7) Distribution of the <br> preverbal vowels... | $1 \mathrm{sg}, 1 \mathrm{pl}, 2 \mathrm{pl}$ |  | $2 \mathrm{sg}, 3 \mathrm{sg}, 3 \mathrm{pl}$ |  |
| :--- | :---: | :---: | :---: | :---: |
|  | $\bullet$ interrog /a/ | $\bullet$ subj field /a/ | $\bullet$ interrog /a/ | $\bullet$ subj field /a/ |
| in main wh-questions: | yes | yes | yes | no |
| in embedded wh-Qs: | no | yes | no | no |
| in declarative sent.: | no | yes | no | no |

Similar distributional patterns of what we call 'functional vowels' are found in other Northern Italian dialects and have been previously discussed, e.g. by Chinellato (2004), Goria (2004) and Poletto (2000). However, many properties of the paradigms in (1)-(2) have not been discussed. For example, previous analyses have not examined cases in which a preverbal vowel found in all persons of the paradigm (what have been called 'invariable subject clitics' by Poletto 2000) is found in wh-questions. In fact, cases like
(1) have been claimed not to exist. ${ }^{6}$

Our data suggest that 'functional vowels' can be found in both the CP layer ('interrogative vowel') and the IP layer ('subject field vowel'), in one and the same dialect (for example, Gazzoli). Hence, there is no reason why they should not be able to co-occur in the same phrase, and this is indeed what is found, as discussed in the following section.
2.5 Co-occurrence of the 'interrogative vowel' and the 'subject field vowel'

The preverbal schwa in the $1 \mathrm{sg}, 1 \mathrm{pl}$, and 2 pl can be pronounced as a long vowel in main wh-questions, a fact which can be understood as follows: a long vowel is the simultaneous realization of the 'interrogative vowel' and the 'subject field vowel'. ${ }^{7}$ As expected, no long preverbal vowel is found in the $2 \mathrm{sg}, 3 \mathrm{sg}, 3 \mathrm{pl}$ forms of main whquestions since there is only an 'interrogative vowel' but not a 'subject field vowel' possible. Furthermore, no long preverbal vowel is found in embedded wh-questions and declarative sentences since the 'interrogative vowel' is not available.

| (8) Distribution of the | $1 \mathrm{sg}, 1 \mathrm{pl}, 2 \mathrm{pl}$ | $2 \mathrm{sg}, 3 \mathrm{sg}, 3 \mathrm{pl}$ |
| :--- | :--- | :--- | :--- |

[^4]| preverbal vowels... |  |  |
| :--- | :---: | :---: |
| $\ldots$ in main wh-questions: | $\bullet$ interrogative vowel | $\bullet$ interrogative vowel |
|  | $\bullet$ subject field vowel |  |
| $\ldots$ in embedded wh-Qs and | $\bullet$ subject field vowel | $\bullet$ neither possible |
| declarative sentences: |  |  |

### 2.6 On the distribution of the 'interrogative vowel'

We have noted that in wh-questions (1), the preverbal vowel is preferred in the $1 \mathrm{sg}, 1 \mathrm{pl}, 2 \mathrm{pl}$ forms (and perhaps it is obligatory in the 2 pl form, see footnote 2 ), and it is dispreferred in the 2 sg , $3 \mathrm{sg}, 3 \mathrm{pl}$ forms. Why would this be? We can now propose an answer to this question. In $1 \mathrm{sg}, 1 \mathrm{pl}, 2 \mathrm{pl}$ wh-questions, the preverbal schwa can be either the interrogative vowel or the subject field vowel. Since both functional vowels are optional, there is a higher possibility that (at least) one will be used. Alternatively, in 2sg, 3sg, 3pl wh-questions the preverbal schwa can only be the (optional) interrogative vowel. This may explain why the former are more commonly realized with the preverbal vowel, than the latter.

## 3 Cross-linguistic data

The patterns observed above for the Gazzoli dialect, are also found in other Piacentine
dialects. ${ }^{8}$ Wh-questions are reported both with and without the preverbal vowel: for the dialect of Bobbio, Mandelli (1995) reports wh-questions with the interrogative vowel [a] (underlined a in the following data), while for the dialect of Travo, Zörner (1989) reports forms without the interrogative vowel ([a]).
(9) Bobbio: 2sg [ke dzurnćl a ledz-at] 'what newspaper did you:sg read?' (M 30) what newspapers $a$ read-you

3sg [kwant a kusta-l] 'how much does it cost?' (M 30)
how much $a$ cost-it
Travo: $\quad 2 \mathrm{sg} \quad[\mathrm{kus} \mathrm{f}$-t] ' what are you:sg doing?' (Z143)
what do-you:sg
[kus vø-t] 'what do you want?' (Z 143)
what want-you:sg
[duv ve-t] 'where do you:sg go?' (Z 144)
where go-you:sg

why come-you:sg never
3sg [kus vø-l] 'what does he want?' (Z 143)
what want-he
[kwãd nirá-l] 'when will he arrive?' (Z 144)

[^5]when will arrive-he
3 pl [da duv venan-ja] 'from where do they come?' (Z 144) from where come-they

2pl [ĩ kwãt si-v] '(in) how many are you:pl' (Z 144) in how many are-you:pl

In some cases, the status of a preverbal [a] in wh-questions is not clear. In the Piacentine dialects, many wh-words can be realized as monosyllabic (for example, [koz]/[dõd] 'what/where') or bisyllabic ([koza]/[dõda]). Given these latter forms, it is difficult to analyze the role of a preverbal [a] in the following sentences from Bobbio (Mandelli 1995) and Groppallo (Zörner 1989).

| (10) | [koz]/[dõd] + /a/ | [koza]/[dõda] without /a/ |  |
| :---: | :---: | :---: | :---: |
| Bobbio: | [koz a v vn-at ke da $\mathrm{f} \varepsilon$ ] <br> what $a$ come-you here to do | [koza v $\varepsilon$ n-at ke da f $\varepsilon$ ] <br> what come-you here to do | 'what do you come <br> here to do?' (M 30) |
| Groppallo: | [dõd a $\mathrm{v} \varepsilon-\mathrm{t}$ ] <br> where $a$ go-you:sg | [dõda ve-t] <br> where go-you:sg | 'where are you:sg <br> going?' (Z 171) |
|  | [dõd a vum-ja] where $a$ go-we | [dõda vum-ja] <br> where go-we | 'where are we <br> going?' ( Z $175)$  |

Is the underlined /a/ in the data in (10) the preverbal vowel discussed above, or is it part of the wh-word? There are three possible ways to analyze these data.

These forms could be interpreted as [koz]/[dõd] followed by a preverbal /a/. There is
some evidence in support of this approach. In the Groppallo cases in (10), Zörner (1989) reports the wh-word as monosyllabic, and in the closely related dialect of Travo, [kus] and [duv] can only be interpreted as monosyllabic (9). The problem with this analysis is that in Gazzoli (1), the preverbal vowel is dispreferred with 2 sg , $3 \mathrm{sg}, 3 \mathrm{pl}$ wh-questions; however, the forms in (10) would have to be analyzed as including the preverbal vowel.

Alternatively, the forms in (10) could be interpreted as [koza]/[dõda] without a preverbal /a/. In fact, the Bobbio form is written by Mandelli (1995) as a bisyllabic word. The problem with this approach is that in Gazzoli (1), $1 \mathrm{sg}, 1 \mathrm{pl}, 2 \mathrm{pl}$ wh-questions are preferred with a preverbal vowel, but the 1 pl question from Groppallo would have to be analyzed as not having the preverbal vowel.

A third possibility is that the forms are [koza a] and [dõda a], consisting of a bisyllabic wh-word [koza]/[dõda] plus an interrogative /a/; however, the two /a/'s are not represented as long. Evidence in support of this analysis is that neither of these two authors record long vowels, although these dialects clearly have vowel length distinctions. So, if this vowel is indeed long, we would not expect to see it recorded as such.

The analysis of the forms in (10) is possibly a combination of all three options discussed above. However, given the limited amount of available data, a more definitive analysis is not possible at this point.

## 4 On the occurrence of functional preverbal vowels with object clitics

One interesting observation about the Piacentine dialects is that in wh-questions and
declarative sentences the presence of the preverbal functional vowel seems incompatible with certain other preverbal clitics.

The functional vowels are fully compatible with post-verbal subject clitics (as seen in (1) and (2)), but not with preverbal subject clitics. We would not expect the 'interrogative vowel' with preverbal subject clitics since subject clitics are post-verbal in interrogatives. And the 'subject field vowel' is in complementary distribution with preverbal subject clitics: it is found with $1 \mathrm{sg}, 1 \mathrm{pl}, 2 \mathrm{pl}$ forms which do not have a preverbal subject clitic, and it is not found with 2 sg , $3 \mathrm{sg}, 3 \mathrm{pl}$ forms which do have a preverbal subject clitic. However, the functional vowels are absent with other types of preverbal clitics. Why is the realization of the functional vowel restricted in the presence of another clitic? Is there a syntactic restriction against this combination or a phonological constraint banning these clusters? In §4.1-4.2 we look into the cooccurrence of the functional vowel with other consonant-initial and vowel-initial clitics. In $\S 4.3$ we investigate whether the restriction can be phonological, and we conclude that it is not.

### 4.1 Functional vowel + consonant-initial clitic

In phrases involving a (potential) functional vowel plus a consonant-initial clitic, the status of the vowel preceding the consonantal clitic is not clear: is this vowel the functional vowel, or is it an epenthetic vowel needed to syllabify the consonantal clitic? The quality of the functional vowel and epenthetic vowel is identical: in Groppallo both are $/ \mathrm{a} /$ and in Gazzoli $/ \mathrm{o} /$.

In (11), the initial vowel can be analyzed as the subject-field vowel optionally present
in the 1 sg in a declarative sentence, or it can be analyzed as an epenthetic vowel needed to syllabify the following consonantal clitic.
(11)

| Groppallo: | /a | m | rikord/ | 'I remember' (Z 274) |
| :---: | :---: | :---: | :---: | :---: |
|  | $a$ | REFLEX | I-remember |  |
|  | /a | g | so sto/ | 'I was there' (Z 276) |
| Gazzoli: | / $\partial$ | t | prumót/ | 'I promise you:sg' |
|  | $\partial$ | LOC | I-am been |  |

The problem was addressed by Vanelli (1984) in response to a series of articles on epenthetic vowels and clitic pronouns in Romance languages. Analyzing the quality of the vowel, Vanelli (1984) concludes that in some cases the vowel preceding the consonantal clitic is a vocalic subject clitic pronoun, while in other cases it is an epenthetic vowel. Since in (11), the quality of the two is the same (i. e., the quality of the functional vowels and the epenthetic vowel is identical), we cannot determine what the nature of the vowel is in these examples.

### 4.2 Functional vowel + vowel-initial clitic

We will now look into the possibility of the co-occurrence of the functional vowel(s) and a vocalic clitic. As seen in the data below, the functional vowel is not realized in the presence of another vowel-initial clitic (mas sg acc [õ] Gazzoli, [u] Groppallo, and
mas/fem pl acc [i] Gazzoli and Groppallo). ${ }^{9}$ Groppallo and Gazzoli both have the same distribution of preverbal functional vowels illustrated in (1)-(2). In (12)-(15) we provide data showing the lack of a preverbal functional vowel when there is a preverbal vowelinitial accusative clitic. The restriction holds for both the subject field vowel in (12)-(13) and the interrogative vowel in (14)-(15):

| Gazzoli: | /o | man3/ | $(*[$ o õ man3] $)$ |
| :--- | :--- | :--- | :--- |
|  | ACC | I eat | 'I eat it' |
|  | /i | man3/ | $(*[\partial$ i 'man3] $)$ |
|  | ACC | I eat | 'I eat them' |

(13) Groppallo: /u fávam nœy/ 'we did it' (Z 276) ACC we did we
(14) Gazzoli: /kwand i vad- ja/ 'when do I see them?'
when ACC I see I
/a ki $\quad \tilde{\mathrm{o}} \quad$ do- $\quad \mathrm{j} \partial \quad$ 'to whom do I give it?'
to whom ACC I give I
/kwand i vad- at/ 'when do you see them?'
when ACC you see you
/a ki õ d $\quad$ - t/ 'to whom do you give it?'
to whom ACC you give you

[^6](15) Groppallo: /dõd i mə́tam- ja/ 'where do we put them?' (Z 175) where ACC we put- we

In conclusion, we have not found evidence of the co-occurrence of the functional vowel with other vowel-initial clitics.

### 4.3 3sg feminine subject clitic + another clitic

Perhaps the restriction on the cooccurrence of the functional vowel with another clitic is phonological. In order to test this hypothesis, we can see if there are restrictions on the cooccurrence of the obligatory 3 sg feminine subject clitic /a/ (Gazzoli and Groppallo) with other clitics. We find that the obligatory 3 sg feminine subject clitic $/ \mathrm{a} / \mathrm{can}$ co-occur with some consonantal clitics. In the examples in (16), the initial vowel can only be analyzed as the mandatory 3 sg fem subject clitic, and not as an epenthetic vowel (which has the same quality in Groppallo).
(16) Groppallo: /a g fáva la sýpa/ 'she made them the soup’ (Z 272) SCL DAT made the soup Gazzoli: /a s láva/ 'she gets washed' SCL REFLEX washes

We can now see if there are restrictions on the cooccurrence of the scl /a/ with other
vocalic clitics (mas sg acc /õ/ (Gazzoli), /u/ (Groppallo), and gender-neutral pl acc /i/ (Gazzoli and Groppallo)). Since the mas sg acc clitics are realized with a different allomorph (/l/) in the presence of a third person subject (see Cardinaletti and Repetti ms), the only vowel initial clitic we can investigate is 3 pl acc $/ \mathrm{i} /$. The situation is further complicated by the fact that there are restrictions on the syllabification of a third person scl with a third person acc clitic when they cooccur: the two cannot form a single syllable (see Cardinaletti and Repetti ms). Therefore, we expect that the 3 sg feminine subject clitic /a/ cannot syllabify with 3 pl accusative clitic $/ \mathrm{i} /$. In fact, the 3 pl acc $/ \mathrm{i} /$ is syllabified by the insertion of a following epenthetic vowel, resulting in the syllable [ja] (Groppallo) or [jə] (Gazzoli). ${ }^{10}$
(17) Groppallo: /a ja tája/ 'she cuts them (fem)' (Z 174)

SCL ACC cuts
Gazzoli: /a jə fa le/ 'she (emphatic) makes them (mas/fem)'
SCL ACC makes she

Since the mandatory 3 sg feminine subject clitic /a/ can co-occur with another vocalic clitic (although they cannot be syllabified together), there is no phonological reason for the restriction on the occurrence of the functional vowels with other vocalic clitics.

[^7]In conclusion, we have no clear evidence of the co-occurrence of the functional vowels discussed in this paper with another clitic pronoun. There is no phonological reason for this ban since obligatory subject clitic /a/, which is homophonous to the functional vowels in some Piacentine dialects, can co-occur with other clitics. Nor does there seem to be a syntactic reason for this ban: functional vowels and especially the interrogative vowel realize functional heads which do not interfere with object clitic placement. Instead, we propose that this ban is due to an economy principle. As we have seen, the co-occurrence of vocalic subject and object clitics implies the use of different allomorphs for object clitics, or the application of marked syllabification strategies. These marked options can be avoided in the case of a functional vowel: since the functional vowel is optional, it is not used in the presence of other clitics. Things are different with a true subject clitic, which must be obligatorily realized. We hope to develop this point more fully in future research.

## 5 On the occurrence of the preverbal vowel with auxiliaries

In some dialects, such as the Friulian dialect of San Michele al Tagliamento, preverbal vowels (similar to the functional vowels investigated in this paper) and auxiliaries can co-occur.
(18) Friulian: San Michele al Tagliamento (Poletto 2000)
a. $\quad$ Quantis caramelis *(i) a-tu mangiat? (p. 25, 60) how many sweets $i$ have-you:sg eaten?
b. Coma (i) a-tu fat il compit? (p. 60)
how (i) have-you:sg done the task?

Renzi and Vanelli (1983:129) and Poletto (2000:183,n.19) have claimed that in Emilian dialects, preverbal vowels are not possible with auxiliaries. This claim is correct for the Gazzoli cases like (19) and (20b), but it is not generally true, as shown by the grammaticality of (20a). The data are organized so that the forms in (19) contain the 'have' auxiliary, and the forms in (20) contain the 'be' auxiliary, and the forms in (a) are $1 \mathrm{sg}, 1 \mathrm{pl}, 2 \mathrm{pl}$, and the forms in (b) are $2 \mathrm{sg}, 3 \mathrm{sg}, 3 \mathrm{pl} .^{11}$
(19) 'have' auxiliary
a. (*ə) 'o bu'vi:d kwã:d (*ə) 'o-jə bu'vi:d? 'I have drunk'/'when ...?'
(*ə) 'um bu'vi:d kwã:d (*ə) 'um-jə bu'vi:d? ‘we have drunk'/'when ...?’
(*ə) 'i bu'vi:d kwã:d (*ə) 'i:-v bu'vi:d? 'you:pl have drunk'/'when ...?'
b. (*ə) t 'e bu'vi:d kwã:d (*ə) 'e-t bu'vi:d? 'you:sg have drunk'/'when ...?'
(*ə) 1 'a bu'vi:d kwã:d (*) 'a-l bu'vi:d? 'he has drunk'/'when ...?'
(*ə) j 'an bu'vi:d kwã:d (*ə) 'an-jə bu'vi:d? 'they have drunk'/'when ...?'
(20) 'be' auxiliary

[^8]

Two facts are surprising in these paradigms. First, consider the contrast between (19a) and (20a) in both declarative and interrogative sentences: in the $1 \mathrm{sg}, 1 \mathrm{pl}, 2 \mathrm{pl}$, the functional vowels are possible with the 'be' auxiliary but are not possible with the 'have' auxiliary. Second, the interrogative forms in (19b) and (20b) are, surprisingly, ungrammatical if compared with the optionality of [ə] in (1b).

We cannot provide a syntactic account of these seemingly complicated patterns. As can be seen in the above data, the choice of the auxiliary ('have' or 'be') does not affect whether or not the preverbal vowel is used: it is never found with the 'have' auxiliary, and it is only found with the $1 \mathrm{sg}, 1 \mathrm{pl}, 2 \mathrm{pl}$ 'be' auxiliary forms. In addition, the distribution of the preverbal vowel is identical in declarative sentences and wh-questions in (19)-(20), where we claim two different vowels are involved ('subject-field vowel' and 'interrogative vowel').

We propose that the insight behind this seemingly complicated pattern is not syntactic, but phonological in nature. The ungrammaticality of (19) and (20b), is due to a phonological restriction, and specifically a constraint against schwa + stressed vowel: $*[\rho$ + 'V]. Notice that the 'be' forms in (20a), which allow the preverbal schwa, are
consonant-initial ([so], [sum], [si]), while the 'have' forms in (19) and the 'be' forms in (20b), which do not allow the preverbal schwa, are vowel-initial. ${ }^{12}$

Independent evidence of the constraint banning schwa + stressed vowel: $*[0+\mathrm{V}]$ is found. In normal speech an unstressed word-final schwa is deleted when followed by a word-initial stressed vowel. ${ }^{13}$
(21) Gazzoli: /õ vedə ána/ > [õ ved- ána] 'he sees Anna'
/əm pja:zə aj/ > [əm pja:z- aj] 'I like Ai (town name)'

We predict that the same pattern would hold for lexical verbs beginning with a stressed vowel, namely that the preverbal vowel is not possible with vowel-initial verbs. We cannot test this pattern with vowel-initial verbs (other than auxiliaries or the copula) because, to the best of our knowledge, no such verbs exist in the Gazzoli dialect. Common Romance vowel-initial verbs are consonant-initial in the dialect of Gazzoli: It. amare $=/$ vu'le bey/ 'to love', It. entrare $=/$ vni dentr/ 'to enter', It. uscire $=/$ na føra/ 'to


[^9]Other Piacentine dialects appear to have the same restriction. ${ }^{14}$ In Groppallo and Travo (Zörner 1989), none of the sentences with vowel-initial auxiliaries are recorded with the preverbal vowel (22); however, sentences with consonant-initial auxiliaries do allow for the optional subject-field vowel (23).
(22) Groppallo: [m e-l estó u ta vjaj] 'how was your trip?' (Z 171)
[m e-la stá a partída] 'how was the game?' (Z 171)
[kwãd $\varepsilon$-t fat kula vjaj ke] 'when did you take this trip?' (Z 171)
[kwãd e-l nasýd] 'when was he born?' (Z 171)
Travo: [kwãd e-l nasí] 'when was he born?' (Z 144)
[m e-l and $\varepsilon$ la partída] 'how did the game go?' (Z 145)
(23) Groppallo: [a sum jyd da naskús] 'we came hidden' (Z 172)
[a sum ast $\varepsilon$ ] 'we were' (Z 276)
[so sto] 'I was' (Z 276)

## 6 Conclusions

In sum, we have shown that the preverbal vocalic segments in the data in (1)-(2) (what we

[^10]call here 'functional vowels') are of two different types: 'interrogative vowels' (1) and 'subject field vowels' (1a)-(2a). Our data suggest that 'functional vowels' can be found:

- in both the CP layer ('interrogative vowel') and the IP layer ('subject field vowel'),
- in one and the same dialect (for example, Gazzoli),
- in one and the same phrase (as shown by the occurrence of long functional vowels in the $1 \mathrm{sg}, 1 \mathrm{pl}, 2 \mathrm{pl}$ in main wh-questions).

Both types of vowels appear to be incompatible with other preverbal clitics in some contexts, and the presence/absence of the preverbal vowel in sentences with auxiliaries is predictable based on the quality of the auxiliary-initial segment (consonant vs vowel).

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[^0]:    ${ }^{1}$ We would like to thank the audience at the LSRL and two reviewers of this volume for their helpful comments, and our Piacentine informants for their time and patience. We use the following abbreviations: $s g$ singular, $p l$ plural, mas masculine, fem feminine, $A C C$ accusative, $D A T$ dative, $L O C$ locative, NEG negative, REFLEX reflexive, SCL subject clitic, $Z=$ Zörner (1989), and $M=$ Mandelli (1995).

[^1]:    ${ }^{2}$ Although the 2 pl is possible without the preverbal schwa, there is a strong preference for the presence of the preverbal vowel.
    ${ }^{3}$ A note on the semantics of the forms with and without the preverbal vowel: for other northern Italian dialects, such as Paduan, it has been suggested that the presence of the preverbal vowel denotes new information (Benincà 1983:28). However, Zörner (1989:150) notes (and we concur) that this does not appear accurate for the Piacentine dialects.

[^2]:    ${ }^{4}$ In [t əskri:v], an epenthetic vowel (/a/) is needed between the subject clitic $/ \mathrm{t} /$ and the initial $/ \mathrm{s} /+$ consonant cluster of the verb in order to syllabify these consonants. This follows the general rules of epenthesis in this dialect: an epenthetic vowel is inserted before an unsyllabified consonant or between two unsyllabified consonants (see Cardinaletti and Repetti 2004, 2008a for further discussion).

[^3]:    ${ }^{5}$ For some evidence that the subject field vowel is higher than subject clitics, see Cardinaletti and Repetti (2004).

[^4]:    ${ }^{6}$ For a thorough discussion of previous literature, see Cardinaletti and Repetti (2008b). In that paper, we also analyze the distribution of functional vowels in main and embedded yes-no questions.
    ${ }^{7}$ Although no phonetic measurements have been done on vowel duration in Pacentine dialects, vowel length distinctions are clearly audible.

[^5]:    ${ }^{8}$ In the Gazzoli dialect the preverbal functional vowel and the epenthetic vowel are both [ə], while in the other Piacentine dialects discussed here (Bobbio, Groppallo, Travo) the functional vowel and the epenthetic vowel are both [a].

[^6]:    ${ }^{9}$ All vowel-initial object clitics are accusative; there is no vowel-initial dative clitic.

[^7]:    ${ }^{10}$ If the 3 pl acc clitic /i/ can syllabify with the following vowel-initial verb, it does.
    Groppallo [a ja fat køz] 'she cooked them (mas)' (Z 274)
    SCL ACC - has made cook
    The SCL clitic /j/ syllabifies as the onset of the following verb.

[^8]:    ${ }^{11}$ In the declarative forms in (19b) and (20b), which are included for completeness, the preverbal vowel is ungrammatical, as with simple verbs (see section 1), and confirms the observation that no subject-field vowel is found in the 2 sg , 3 sg , 3pl. Notice also that the epenthetic vowel is not found; this is because the subject clitic syllabifies with the vowel-initial auxiliary.

[^9]:    ${ }^{12}$ The consonant-initial and the vowel-initial forms coincide with the person split which pervasively shows up in these dialects: $1 \mathrm{sg}, 1 \mathrm{pl}, 2 \mathrm{pl}$ vs. 2 sg , 3 sg , 3 pl . This seems to be a lexical accident. The Gazzoli paradigm of 'be' should be compared with the Italian paradigm of the same verb, which only has one vowel-initial form in the 3 sg ( $e$ 'he/she is').
    ${ }^{13}$ Although the schwa in (21) is in a different prosodic context with respect to the functional vowel (wordfinal vs proclitic), certain important aspects of the two contexts are the same, including the fact that the schwa is before a stressed vowel.

[^10]:    ${ }^{14}$ Zörner (1989) provides data involving subject-field /a/ + an unstressed vowel (although, like Gazzoli, there are no data with a verb beginning with a stressed vowel): Groppallo: [(a) ãdúm] 'we go', [(a) ãdéma] ‘we were going', etc. (Z 298); Travo: [(a) ãdró] ‘I will go’, [(a) ãdrís] ‘I would go’, etc. (Z 299).

