

Book Review

The morphology-phonology interface in European Portuguese

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Review article of Marina Vigário, *The Prosodic Word in European Portuguese*, Berlin – New York: Mouton de Gruyter, 2003, xvi + 440 pp.

The interface between syntactic and morphological structures and their phonological correlates is an important part of the grammar of natural languages. In this book, a revised version of her dissertation defended in November 2001 at the University of Lisbon, Marina Vigário (henceforth V) investigates this interface with respect to European Portuguese. The kind of Portuguese investigated is the standard variety of Portuguese as spoken in Lisbon by people of 20–40 years old.

As the title of the book indicates the notion 'prosodic word' plays a crucial role in V's analysis of this interface. The basic idea behind this notion is that there is no necessary isomorphy between the morphological and prosodic structure of words. Hence, a distinction must be made between morphological and prosodic words. Words in the grammatical (morphological or syntactic) sense may consist of more than one prosodic word, as is the case for (certain kinds of) compounds in many languages, whereas on the other hand a combination of two grammatical words such as a verbal form followed by a clitic pronoun may form one prosodic word. Since the introduction of prosodic phonology in a number of publications by Selkirk and the seminal work on prosodic phonology published as Nespor and Vogel (1986), lots of

evidence for the notion 'prosodic word' have been found cross-linguistically. A good summary of this evidence can be found in Hall and Kleinhenz (eds., 1999). Note that the terms *prosodic word* and *phonological word* are used interchangeably.

V's book is the first monograph on EP phonology that deals systematically with the role of the prosodic word in this language. Remarkably, this notion does not feature at all in the most recent general book on EP phonology, Mateus and d'Andrade (2000).

The notion prosodic word has at least three roles to play: it is a domain of phonotactic generalizations, a domain of stress assignment, and it is essential in the specification of the domain of application of a number of phonological rules of EP. After a clear summary of the ideas of prosodic phonology in Chapter 1, and a survey of previous work on EP word phonology in Chapter 2, Chapter 3 presents a survey of a number of phonological processes of EP that refer to the domain of the prosodic word, and thus forms a good supplement to the information on EP phonology in Mateus and d'Andrade (2000).

As to the phonotactic role of the prosodic word, V claims that in EP words are not subject to minimal word requirements because there are some words in EP that consist of one light syllable only. This position implies that 'neither the size of words nor their internal syllable make-up may be used to determine whether or not a given string may form a prosodic word' (p. 158). In this respect, EP is similar to Italian that also has a very restricted set of monosyllabic nouns. As V points out on p. 159, this is also the case for EP. Therefore, I would prefer to maintain that there is a minimality requirement on EP prosodic words that is violated by a restricted and closed set of existing content words only. If this is correct, we understand why most clitics consist of one light syllable only, and tend to prosodically cohere with their host word.

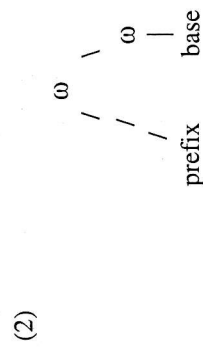
According to V, a crucial distinction must be made within the set of rules with the prosodic word as domain between lexical rules that apply in the lexicon, and postlexical rules that apply after the syntactic module has combined words into syntactic constituents. The notion 'prosodic word' and the distinction between lexical and postlexical rules form the two basic ingredients for V's account of the (non-)application of phonological rules to sound sequences in EP. For instance, the assignment of word stress is a lexical rule with the prosodic word as its domain.¹ This assumption predicts that the addition of enclitic pronouns, although they form one prosodic word with the preceding verbal form, does not influence the location of the main stress of the word. Consequently, the main stress may be on a syllable that is further

away from the right edge of the prosodic word than the case for words without enclitics:

- (1) participávamo-no-la 'we have told it to ourselves'

Another type of evidence for the postlexical status of clitics is that the attachment of enclitics to a word does not block the process of word-final nasal diphthongization (p. 134). In *batem* '(they) hit' the word-final sequence *e* [+nasal] is realised as a nasalized diphthong, and this is not blocked by the addition of a clitic, as shown by the form *batem-te* '(they) hit you'. In this prosodic word, a nasal diphthong occurs before the final syllable of the enclitic *-te*.

Before going into the details of the analysis of EP clitics, let us first have a look at the relation between morphological and prosodic structure. As in so many European languages, most EP suffixes form one prosodic word with their stem, as can be concluded from the fact that a stem-suffix boundary does not influence the application of lexical phonological rules with the prosodic word as their domain. Prefixes are different, and exhibit less prosodic coherence to the stem. The phonological processes that apply in word-initial position are also found after unstressed prefixes (p. 167). Therefore, V concludes that prefixes such as *re-* and *des-* are Chomsky-adjoined to the prosodic word node of the stem:



This is the morphology – prosody mapping proposed for verbs such as *refazer* 'to make once again' and *desfazer* 'to undo' (p. 166). There are also prefixes that bear the main stress of the word, such as *pre-* and *pro-*. These prefixes form a prosodic word of their own, just like a number of disyllabic prefixes, and roots such as *poli-* and *multi-*. However, in a number of existing words with the prefixes *pre-* and *pos-* these prefixes do not behave as independent prosodic words, as can be concluded from the fact that vowel reduction applies obligatorily to their vowels. Hence, they are unstressed syllables at the beginning of a prosodic word, with the vowel [u] or [i], and they are prosodically like underived words.

- (3)
- | | | |
|----------|--------------|-------|
| promover | 'to promote' | [pru] |
| prever | 'to foresee' | [pri] |

¹ In the summary of rules on p. 125 word stress is said not to refer to the domain of the prosodic word, but this must be a mistake considering what V states about the word stress in the rest of her book.

Therefore, V formulates the following mapping principle for the morphology-phonology interface:

- (4) "The prosodic word domain includes a stem plus suffixes (and non-transparent prefixes)" (p. 263)

This formulation is slightly awkward in that it is not prefixes that are non-transparent but words with those prefixes, such as *promover* and *prever*. The question arises how this mapping rule can see if a prefixed word is transparent or opaque. One might assume that in these words, the internal morphological structure has disappeared completely. However, this has a drawback from the morphological point of view since the parts *-mover* and *-ver* might still have to be recognizable, for instance because of the particular way in which they form nominalizations: *pro-moção* and *pre-visão*, parallel to the nominals *mission* and *vision* for the underived verbs.

In compounds each of their lexical constituents corresponds with a prosodic word. Thus, it is correctly predicted that compounds have more than one syllable with prominence, and that each constituent forms an independent domain for rules that apply within the domain of the prosodic word.

Although suffixes in Romance languages tend to be cohering, V observes that, among others, the suffix *-mente* and evaluative suffixes that begin with a *z-* such as *-zinho* and *-zito* are non-cohering, that is, form a prosodic word of their own. Thus, these suffixes form a separate domain of stress assignment, which blocks the application of phonological rules that typically apply to stressless vowels. As in Dutch and German, these non-cohering suffixes can be gapped under identity, as in (p. 251)

- (5) *seguramente* mas lentamente > *segura-* mas lentamente
'surely but slowly'

Interestingly, these suffixes are also special from the morphological point of view since they do not attach to the stem forms of their bases, but to its word form including thematic element and inflectional ending. The following examples, among others, are mentioned by V to illustrate this (p. 221).

- (6) *cão / cães* 'dog / dog-PL' *cãezitos* 'dog-PL-DIM-PL'
bela 'beautiful.FEM' *bela-mente* 'beautifully'

These are intriguing data, but I am not sure if we really need to interpret these words as derived from inflected words, as V suggests. Consider the second example. In all Romance languages, the adverbializing suffix *-ment(e)* selects a stem form of the adjective that is identical to the feminine form. This reflects its historical origin, a grammaticalization of the ablative form of the feminine noun *mens* in Latin. However, that does not mean that

synchronically, the suffix attaches to bases with the property FEMININE. As argued in Booij (1997a), these data may be interpreted as a case of paradigmatically governed allomorphy: the allomorph of the stem to be selected is identical in form to another form of the paradigm. In the first example, V's interpretation forces us to conclude that words can be marked twice for the category 'plural', which is exceptional, but also occurs in Breton.

As to the prosodic status of clitics, V argues that proclitics behave as prefixes in that they are Chomsky-adjoined to the prosodic word node of their host word. Similarly, enclitics are like most suffixes in that they become part of the prosodic word of the host word that precedes them. V argues, however, that it is crucial that clitics are interpreted as post-lexical additions to words, and differ in this respect from derivational and inflectional affixes that are added to words in the lexicon. An example of this kind of argumentation is that glide insertion that resolves a vowel hiatus within a word, does not apply if the triggering context has been created in a word + clitic combination (pp. 83-85). Another example is that EP lexical prosodic words cannot begin with a palatal [ʃ]. However, due to prosodic restructuring, a word-final [ʃ] may form the initial segment of a prosodic word in a word group, as in *malha original* 'original mesh' with the prosodic structure (ma)_ω ([ʃ]original)_ω. Hence this prosodic word constraint is contradicted, and made opaque at the phonetic level (p. 160).

The reader may wonder if the proposed analysis can be maintained in theories that make use of output constraints instead of rules that derive phonetic forms from underlying forms in an ordered fashion. The answer is that the distinction between a lexical and a postlexical level can also be made in a theory with output constraints. It has been argued in, for instance, Booij (1997b), and Ito and Mester (2001) that this division between lexical and postlexical application of rules remains necessary.²

The claim that EP clitics are combined with their host words post-lexically raises the question how to deal with the lexically governed allomorphy of certain pronoun clitics. This is discussed in Chapter 4 of the book. For instance, the accusative 3SG clitic pronoun *o* has the form *lo* if the preceding element (either a verbal form or another clitic) ends in a consonant.³³

- (7) comes 'eat.PRES.2SG' come-lo 'eat.PRES.2SG.ACC'
dás-nos 'give.PRES.2SG-1PL.DAT' *dás-no-lo* 'give.PRES.2SG-1pl.dat-3sg.acc'

² See also Booij (2003) for discussion of this issue.

³³ These examples are taken from p. 141. However, the typographic markers have been adapted to the usual glossing conventions: a hyphen is used to separate two bound morphemes, a dot is used to separate grammatical categories that are expressed by one and the same morpheme, or to indicate that further analysis into constituent morphemes is not relevant. Unfortunately, these conventions (cf. Lehmann 1982) are not followed systematically in this book.

The final consonant that is assumed to trigger the selection of *lo* deletes subsequently. As V points out, this kind of allomorphy is an idiosyncrasy of specific pronouns which must be specified in the lexicon. In order to maintain the postlexical status of such clitics, as desired in V's analysis, she makes use of the idea of 'precompiled phrasal phonology' proposed by Hayes (1990). For instance, the different allomorphs of the accusative pronoun are lexically listed with a specification of the syntactic environment in which each of them occurs. The consonant deletion rule is interpreted as a lexical rule that deletes the final consonant of verbal forms that are inserted in the contexts defined by frames (p. 147):

- (8) $C \rightarrow \emptyset [\dots \dots]_{\text{Frame 1}} [\text{Frame 2}]$
 Frame 1: $[\dots]_{\text{VB}} [\dots]_{\text{CL}_{\text{ACC}}}$
 Frame 2: $[\dots]_{\text{VB}} [\text{IP}] [\dots]_{\text{CL}_{\text{nosVos}}}$

Although this solution might work technically, it accounts in a clumsy way for the fact that this kind of lexically governed allomorphy also depends on syntactic context.

The famous phenomenon of mesoclitisis in conditional and future verbal forms of EP is another problem for assigning a postlexical status to clitics, since the attachment of pronominal clitics seems to precede here that of inflectional affixes, as in (p. 148):

- (9) dar-te-iamos 'give-COND.1PL-2SG.DAT'

For phonological reasons, V wants to maintain the postlexical status of clitics, and hence advocates the position that mesoclitisis structures are the result of a syntactic operation. This means that *-iamos* in example (9) is seen as a syntactic clitic. This is a hotly debated issue in the literature, and I will make no specific comments on it (see Luís and Spencer (2004) for a detailed discussion and a morphological alternative). However, the underlying problem deserves some attention here.

A general point to be made here is that the notions 'lexical' and 'morphological' should not be equated. It is quite clear that multi-word units might sometimes have to be stored in the lexicon, that is, there are word sequences that are phrases, and yet are lexical units. It is even necessary to have phrasal structures in the lexicon, with a lexical specification of some of their end nodes only, as is the case for particle verbs in Germanic languages (Booij 2002). This is the notion of 'constructional idiom' as defended in the tradition of Construction Grammar, and in Jackendoff (2002). If this position is correct, it raises the question how the lexical-postlexical distinction of which the importance is shown so clearly in V's book can be translated in models in which syntactic configurations may have a lexical status. One possible solution is the use of output-output correspondence constraints, as

proposed in Benua (2002) within the framework of Optimality Theory. In that approach the overapplication or underapplication of phonological rules in a word + clitic combination is accounted for by requiring phonetic identity between the output form of the lexical word as such, and its output form in a combination with a clitic.

This is not the place to present a detailed proposal concerning this problem. Whatever solution is chosen, it must have the effect that word combinations that include clitics can be seen as lexical units, and yet must be dealt with by the phonological module in such a way that it makes a difference between prosodic words without, and prosodic words with clitics.

A final important empirical and theoretical contribution to the study of EP phonology is the chapter on clitic reductions. In this chapter V argues that reduction of EP clitics does not always follow from general rules of EP phonology, that clitics are similar to other high frequency words with respect to reduction, and that reduced forms often have to be listed as such in the lexicon. Thus, V's analysis supports the general tendency in present-day phonology to assign a larger role to the lexicon in accounting for allomorphy, and a smaller role to computational procedures.

In sum, V's book is a well-argued study on the necessity of the prosodic word, and the interface between morphological and prosodic structure. It also shows convincingly, that clitics pattern prosodically like affixes, and yet must be assigned another status than affixes with respect to their effects on the phonetic forms of the words with which they combine. It remains a challenge for the future to come up with models of the architecture of the grammar that do justice to the generalizations expressed by the lexical – postlexical distinction even when phrasal units are stored in the lexicon.

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