

Vowel reduction and Raddoppiamento Fonosintattico induced by stress:  
 The virtual length analysis.  
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The raddoppiamento fonosintattico (RF) is triggered by stress. It is an external sandhi process that reduplicates the initial consonant of the second word in a sequence of two whenever the final vowel of the first word is stressed (e.g. *città ppulita* "clean city" vs. *casa pulita* "clean city") (Loporcaro 1997). This process is well-known especially in Tuscany (Chierchia 1986).

This paper identifies a correlation between stress-triggered RF with another phenomenon which at first appears not to be related to it, namely reduction of unstressed vowels in certain Italian dialects. Drawing on diatopy, the goal of this paper is to show that both phenomena are incompatible, that is, that no system can combine both processes. As an example, let us consider a dialect that reduces unstressed vowels, e.g. Coratino (in the Apuglia region). In Coratino, all vowels (except /a/) surface as schwa in unstressed syllables. Table (1) illustrates the process of vowel reduction in unstressed syllables (in Coratino).

1)	r_	"wheel"	r'otə	"small wheel"	rət'eddə
	m_	"apple"	m'eɫə	"small apple"	məl'eddə
	_m	"file"	l'imə	"to file"	ləm'atə

Table (2) shows that reduction does not occur when the unstressed vowel and the adjacent consonant have similar articulation places, e.g. /u,o/ are protected against the reduction in presence of an adjacent labial/velar consonant while /i,e/ are protected by the adjacency of a palatal consonant.

2)	p_	"poor"	p'ovərə	"poor dim"	povər'iddə
	_m	"lamp"	l'umə	"small lamp"	lum'inə
	k_	"rope"	k'ordə	"small rope"	kurd'ettə
	_j	"fog"	n'ejjə	"augmentative"	nejj'uzzə

According to Bucci (2009), resistance to reduction is due to the fact that the resisting vowels share a melodic prime with an adjacent consonant. Sharing, i.e. branching protects the vowel against reduction. Honeybone (2005) shows that in many languages, branching structures resist lenition (a well-known case is that of the integrity of geminates).

The two resisting contexts in Coratino, i.e. sharing of a melodic prime between an (unstressed) vowel and an adjacent consonant, and stressed, should thus be investigated: we must assume that since these two contexts have the same effect (i.e. absence of reduction), they have something in common. Since adjacent vowels and consonants which have a similar place of articulation branch, we suggest that stressed vowels must also have a branching structure. Therefore: branching vowels should be analysed as long vowels. As a consequence, we must assume that, in Coratino, stressed vowels are phonologically long while reduced vowels are phonologically short (similar accounts have been proposed for Italian (Larsen 1998), and for other languages (Scheer 2000).

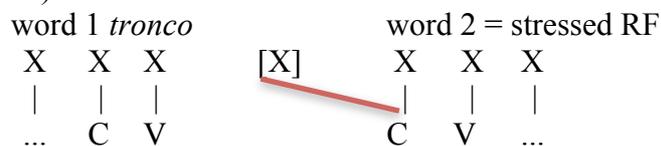
According to Chierchia (1986), stress materialises at the phonological level by some syllabic space. In the version of the idea adopted in this paper, stress materialises as an empty X unit. A stressed vowel branches on one (adjacent) X unit.

We assume that there may be a difference between the phonological representation of an object and its phonetic execution. This is a matter of phonetic interpretation: a given phonological, i.e. abstract, object may receive different interpretations at the phonetic level, i.e. a more concrete level. For example, in Italian, phonologically (i.e. virtually) long vowels

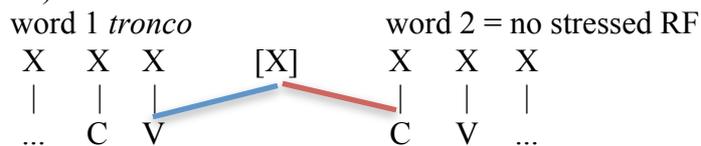
may be interpreted as: 1) long phonetic objects (duration in milliseconds); 2) reduction-resisting vowels ; 3) diphthong (frangimento).

Italian dialects which exhibit vowel reduction are spoken in the south center area of Italy. In this area, all dialects behave like Coratino: stressed vowels are phonologically long. In the proposed analysis, the opposition between full and reduced vowels, in systems with reduction, is conceived as an opposition in length. Therefore, vowel-reduction dialects need the syllabic space provided by stress in order to make stressed vowels branch. Dialects which do not exhibit vowel reduction do not contrast long and short vowels, and stressed vowels in these varieties do not take up the syllabic space provided by stress. In these dialects, the syllabic space provided by stress is occupied by the following consonant, as illustrated under (3a). However, in vowel-reducing varieties, as illustrated under (3b), it is the preceding (stressed) vowel which uses up the space provided by stress, thereby preventing the following consonant from undergoing gemination.

### 3a) Dialects without vowel reduction



### 3b) Dialects with vowel reduction



In short, the analysis predicts that stress-induced RF and vowel reduction are incompatible within a single variety: both compete for the same syllabic space.

The paper presents detailed dialectal data concerning the 1064 research points of the ALI (Atlas of Italian Linguistics), which precisely identifies the dialects which display reduction. The data are confronted with the varieties exhibiting stress-induced RF. We show that, in accordance with the prediction made above, there is a tendency for the two processes to be in complementary distribution.

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