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Vowel-zero alternations in Government Phonology and Strict CV Theory

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Abstract

According to strict CV syllable theory, all coda-onset clusters are CVC sequences, where V is an empty nucleus. This hypothesis sharply distinguishes Strict CV from other autosegmental theories and has significant consequences on a theory of empty categories. In particular, the CVCV representation of 'vowel-zero' alternations must distinguish between two kinds of empty nuclei, the invisible one, contained in coda-onset clusters, and the one that surfaces in alternation sites. By looking at the 'syncope-epenthesis' phenomena of Emilian Italian dialects, this paper argues that such distinction is not empirically well founded and defends a more restrictive hypothesis about empty nuclei.

Keywords: Government Phonology, Empty Nuclei, vowel-zero alternation, syncope and epenthesis.

1. *Introduction*

In the field of formal approaches to the syllable, the Strict CV theory (Lowenstamm, 1996; Ségéral and Scheer, 2001; 2008; Scheer, 2004; Scheer and Ziková 2010; Scheer and Cyran, 2018; among others) has introduced a radical change of view compared to other autosegmental models. The core of the proposal is the fundamental assumption that the sequence CV is not just the fundamental syllable type, but rather the only syllable type in all the world's languages. Inevitably, this assumption has profound consequences on the principles of phonological analysis. As a result, although strict CV is an outgrowth of Government Phonology (GP) and the two models share common epistemological goals and some central principles, they differ from each other in crucial aspects. Although the Strict CV proposal has been brought forward on the basis of a considerable amount of phonological phenomena belonging to different languages, such radical change in the

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approach to the syllable and to phonological structure in general remains debatable (cf. Pöchtrager, 2011; van Oostendorp, 2013).

This paper is specifically concerned with the different approaches of classical GP (cf. Kaye, Lowenstamm and Vergnaud, 1990; Kaye, 1990a; 1990b; 1992; Charette, 1990; 1991; Harris, 1994; among others) and Strict CV to vowel-zero (V/Ø) alternations. By taking into account here syncope/epenthesis alternations in an Italian dialect of Emilia-Romagna, we will highlight that a crucial insight of GP concerning the nature of empty nuclei is lost in the deeply revised model of Strict CV, and we will argue in favour of a more restrictive theory of empty categories.

Sections 2 and 3 of the paper contain a presentation of some essential aspects of syllable theory in classical GP and Strict CV respectively. In section 4, the issue of consonant clusters resulting from syncope in a dialect of Emilia-Romagna will be presented. Section 5 is devoted to a discussion of some theoretical implications concerning the notion of empty nucleus. Section 6 contains some concluding remarks.

2. *The syllable in Government Phonology: a sketch*

The three subparts that make up the traditional model of syllable structure in autosegmental phonology, onset, nucleus and coda, are maintained in GP. However, the syllable in itself is a merely descriptive notion and onset, rhyme and nucleus are the only constituents at this level of phonological structure (cf. Kaye, Lowenstamm and Vergnaud, 1990; Harris, 1994: 45)[1]. As far as the coda is concerned, in GP it is just a post-nuclear position within the rhyme and is not considered an independent node in the phonological hierarchy. This statement is based on the observation that the coda is not universally present in syllabic inventories and that it does not branch (cf. Kaye, 1990a; Lowenstamm and Vergnaud, 1990; Harris, 1994)[2].

[1] As van Oostendorp (2013) highlights, if clusters with raising sonority are analysed as complex onsets, and codas are regarded as complements within the rhyme, then it follows that a sequence onset-rhyme corresponds exhaustively to a syllable. Therefore, the syllable is in fact an available notion in GP. The same is not true for strict CV representations, where a syllable may correspond to a variable number of CVs (see section 3).

[2] Consonant clusters occurring at the right edge of a word, as in English *carp*, seem to challenge the non-branching argument concerning the coda. However, empirical evidence supports the analysis of seemingly branching codas as coda-onset sequences (see below in this section). Moreover, phonological processes that are typically conditioned by the presence of a coda, e.g. stress placement and vowel

According to independent parametric options, onsets, rhymes and nuclei may branch. The *Binarity theorem* (cf. Kaye, Lowenstamm and Vergnaud, 1990) restricts to two the number of skeletal slots that may associate to each constituent. Given a locality constraint concerning the relation between the '×' positions within each constituent, branching nuclei embedded within branching rhymes are generally excluded[3]. The structure of branching and non-branching constituents is shown in (1):

(1) a. Non-branching b. Branching

The relations holding between units of phonological representation are asymmetric. GP inherits from autosegmental phonology this fundamental conception, expressed by the *Licensing Principle* (cf. Ito, 1986; Goldsmith, 1990). In any phonological domain, each unit must be licensed by another one. By *a-licensing* (autosegmental licensing) each skeletal position licenses melodic content, a relation expressed by association lines. *P-licensing (*prosodic licensing) refers to the asymmetric relations holding between '×' positions within syllabic constituents, between syllabic constituents and at the higher level of nuclear projections. At each level, there is a licensor, the head, and a licensee (cf. Harris, 1994; 1997).

A terminological clarification is useful at this point. As noted by Scheer (2004: 147 ff.), the words *government* and *licensing* are used in a rather inconsistent and confused way in GP literature. For example, Kaye (1990a; 1990b) and Kaye, Lowenstamm and Vergnaud (1990) actually define *government* all the various kinds of relations between skeletal positions; the word *licensing* is also used in some cases (e.g. *coda licensing*, see below) although with a rather vague meaning. In order to avoid confusion, we will use *licensing* to

lengthening, are «never sensitive to a putative branching/non-branching coda distinction» (Kaye, Lowenstamm and Vergnaud, 1990: 201).

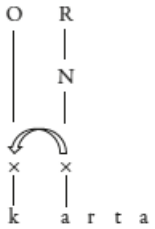
[3] Harris (1994: 77 ff.) discusses the special case of English forms like *shoulder* and *angel*, in which a coda occurs after a long vowel or a diphthong. Referring to the specific melodic requirements that constrain super-heavy rhymes in English, Harris puts forward a possible GP treatment of this peculiar structure. We will not take into account this specific issue.

refer to a-licensing and to the different forms of p-licensing in which a head sanctions a licensee, thus allowing its existence.

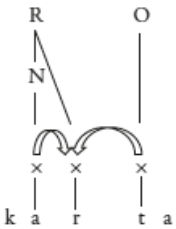
A special relation, which is crucial for the representation of V/Ø alternations, is the one holding between an empty nucleus and the nucleus on its right. This configuration, whereby the empty nucleus is allowed to remain empty, is called *proper government* by Charette (1990), Kaye (1990b), Kaye, Lowenstamm and Vergnaud (1990)[4]. We will maintain here this label.

In the onset-rhyme domain, the nucleus is the head, and as such it projects to the higher layer of the prosodic structure, i.e. the foot. Within a syllable, a nucleus is necessary for a coda, if present, and for the onset (*Onset licensing*; cf. Harris, 1994: 160). However, the coda also depends on the onset on its right, with which it often shares features of melodic content, as shown by phenomena of homorganicity in nasal-consonant clusters and more generally by assimilation in coda-onset clusters. The asymmetric relationship holding between a coda and the following onset is expressed by the principle of *Coda licensing* (cf. Kaye, 1990a; Harris, 1994: 160). Therefore, the coda enjoys double licensing, by the nucleus within the rhyme and by the following onset. Onset and coda licensing are exemplified in (2) with the Italian word *carta* "paper". The arrow indicates licensing:

(2) a. Onset licensing



b. Coda licensing



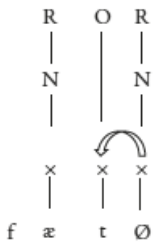
The variety of phonotactic patterns that languages actually exhibit cannot be described by plainly referring to the syllabic constituents thus defined, because there are discrepancies between surface phonological forms and the principles that inform the representation.

[4] Proper government follows from the fundamental assumption of GP that empty categories may be postulated in phonological representation only provided some specific conditions are met. This conception is expressed by the *Empty category principle* (which explicitly recall the ECP of syntactic theory).

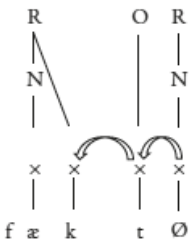
Languages that have consonants or consonant clusters in word-final position are one apparent violation of the aforementioned principles of licensing. A traditional account of forms like English *fat* and *fact* is that *-t* and *-kt* are a simple and a branching coda respectively. In GP, such analysis is excluded by Coda licensing, since no onset is available as a licensor (branching codas are also excluded for independent reasons mentioned above). Actually, rich empirical evidence exists of final consonants that actually behave like onsets, and not like codas. The main evidence comes from pre-final vowels, which display the same behaviour as the vowels of internal open syllables, thus showing that the final consonant does not close the syllable, i.e. is not a coda (cf. Kaye, 1990a; Harris, 1994; Harris and Gussmann, 1998). However, if final consonants must be represented as onsets, an apparent conflict arises with the Onset licensing principle, and here empty nuclei come into play: languages may have final consonants if they allow an empty nucleus to occur in final position, where it fulfils its role of licensor (see 3a).

In word-final position, the empty nucleus is licensed parametrically, which means that it needs not be governed by a following nuclear position. Depending on further parametric options, a final nucleus may or may not also license the preceding onset to license a coda, as in English *fact* (see 3b), and may or may not license an onset to branch (cf. Charette, 1990). The latter option, for example, is available in French, e.g. *vitre* (see 3c), but not in English.

(3) a.



b.



c.

Empty nuclei are also required by *s*-consonant (*s*C) clusters in word-initial position.

The traditional analysis of *s*C clusters relies on a distributional axiom whereby initial and final syllable boundaries match with permissible word-initial and word-final boundaries respectively (cf. Kuryłowicz, 1948; Pulgram, 1970). Accordingly, given the existence of word-initial *s*C clusters, *s*C is descripted as a double onset, and a sequence containing /s/ followed by *muta cum liquida* is descripted as a triconsonantal onset. More recent approaches to *s*C sequences, adopting a non-strictly distributional conception of the syllable, focus on other aspects of the question (cf. Lowenstamm, 1981; Chierchia, 1986; Kaye, 1992; Marotta, 1995). Those analyses maintain that a *s*C cluster, due to its raising sonority profile, corresponds to a coda-onset sequence. Moreover, they refer to robust evidence that the /s/ of word-internal *s*C makes a closed syllable with the preceding vowels. Therefore, word-internal *s*C clusters are almost uncontroversially analysed as heterosyllabic[5]. As far as word-initial *s*C clusters are concerned, various solution were proposed in the literature about the syllable, in order to place a word-initial /s/ followed by a consonant outside of the onset[6].

In GP, the representation of *s*C is completely consistent with the general theory of syllable: given that a coda must receive double licensing, the sibilant of *s*C clusters is licensed by a preceding empty nucleus. Indirect empirical evidence supporting this analysis comes from phrasal phenomena which show that the initial empty nucleus has a tendency to get some melodic content. For example, some Sardinian varieties show prothesis when the *s*C cluster follows a consonant in phrasal contexts, e.g. in Sardinian /skɔla/ → [sɔi in iskɔla] "I am at school" (Lai, 2015: 44)[7]. For Italian, evidence in favour of the empty nucleus analysis comes from the selection

[5] See Marotta (1995) for a thorough discussion of various kinds of arguments concerning the syllabification of both internal and word-initial *s*C clusters in Italian. Her conclusion, also based on experimental measurement of the duration of preceding vowels, is that *s*C clusters are consistently heterosyllabic. A contrary position is expressed by Bertinetto (2000; 2004). His opinion, also based on experimental results about Italian, is that none of the arguments advanced in favour of the heterosyllabic analysis is sound and persuasive enough to allow any generalisation.

[6] For example, Kenstowicz (1994: 260-261) treats the /s/ in this position as an 'appendix', i.e. an independent constituent, while according to Chierchia (1986) and Rubach (1999) the sibilant in #*s*C- sequences is left non-syllabified and is directly attached, after syllabification, to the syllable or to the prosodic word nodes.

[7] Prothesis is also observable in Italian now crystallized forms like *pe*[*r is*]*critto*, instead of *pe*[*r s*]*critto* "in writing".

of the masculine singular definite article. Two forms are available before a word-initial consonant, *il* and *lo*; significantly, before a *s*C cluster, the form ending in vowel is selected, while *il* occurs before simple or complex onset (see among others Marotta, 1993).

The licensing of *s*C clusters is exemplified in (4) with the Italian word *scalino* "step". The representation in (4a) corresponds to the lexical form and to the form in utterance-initial position: the initial coda is licensed by an empty nucleus. In (4b), in a phrasal environment, the word is preceded by the article *lo*. Here, the final nucleus of the article, available for licensing, takes the place of the initial empty nucleus:

(4) a. 

b. 

The third kind of circumstances in which empty nuclei play a role in phonological representation is the 'vowel-zero' (V/Ø) alternation, whereby a given vocalic position may be either filled or empty, according to a regular pattern. This phenomenon is cross-linguistically widespread, and particularly common in Slavic languages. Some Northern Italian dialects, that will be taken into account in section 4, also show a V/Ø pattern known as syncope/epenthesis alternation.

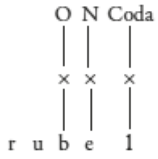
In the alternation site, the 'ghost' vowel only appears when no successive vowel is contained in the word (5a), otherwise it remains hidden (5b). The examples in (5) refer to Poland (Szpyra, 1992: 277).

(5)	a. Nominative sg.	b. Genitive sg.	
	rubel	*rubl-a*	"ruble"
	koper	*kopr-u*	"dill"
	sen	*sn-u*	"dream"

At first sight, the consonants in the words in (5) are assigned a new prosodic structure after the attachment of a final vowel. For example, in the *rubel* / *rubl-a* pair, /b/ and /l/, an onset and a coda respectively (6a), are rear-

ranged as a complex onset (6b). For brevity, the structure of the rhyme is not included in the following representation.

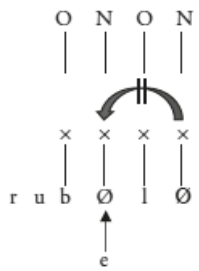
(6) The representation of V/Ø alternation: the resyllabification analysis

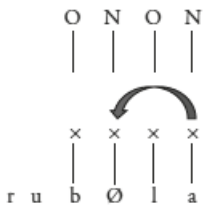
a. 

b. 

In GP, such an analysis is excluded by a core principle of phonology, namely the *Projection Principle*, whereby the syllabic constituency established in the lexicon remains constant throughout the derivation (Kaye, Lowenstamm and Vergnaud, 1990). In this theorisation, ghost vowels correspond to empty nuclei, which may or may not be properly governed, i.e. followed by a contentful nucleus. The consonants flanking the empty nucleus maintain the syllabic status established in the lexicon. In (7a), the internal nucleus is not properly governed and epenthesis takes place. (In the following examples the black arrow indicates government; the arrow pointing upward indicate the site of epenthesis):

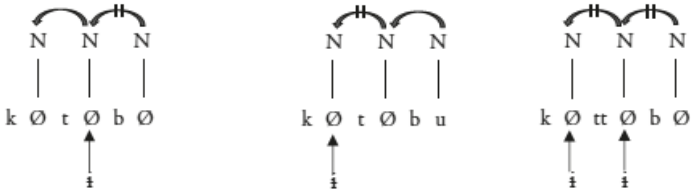
(7) The representation of V/Ø alternation: the empty nuclei analysis

a. 

b. 

Proper government is also blocked when a consonant cluster (coda-onset or branching onset) intervenes between the potential governor and the preceding empty nucleus (Charette, 1990; Kaye, 1990b). This configuration in illustrated in (8) and (9). The examples in (8) are from Moroccan Arabic (Kaye, 1990b). Given a templatic lexical representation /kØtØbØ/, empty nuclei emerge with melodic content, i.e. the epenthetic vowel [ɨ], when they are not properly governed. The geminate, corresponding to a coda-onset sequence, blocks proper government in (8c):

(8) a. [ktɨb] "write.Pf.3Pl" b. [kɨtbu] (Pf.3Sg) c. [kɨttɨb] (3Sg.Caus)



The examples in (9) refer to the schwa/Ø alternation in French (Charette, 1990):

(9) a. [rəvny] *revenu* "come back" b. [səkrɛ] *secret* "secret" (*skrɛ)

In (9b), the branching onset blocks proper government and a schwa emerges, although the final nucleus is occupied by a full vowel.

3. *The syllable in Strict CV: a sketch*

The claim that the only syllable type is universally CV was put forward by Lowenstamm (1996). Starting from the analysis of alternation patterns in Semitic languages, Lowenstamm argues that the diversity of syllabic structures (CV syllables, clusters, geminates) displayed by inflected forms of different roots is only apparent, since all of them may be mapped on a same CVCVCV template. Crucially, the templatic analysis is then extended to non-templatic languages. The argument is that the occurrence of long vowels, on the one hand, and of geminates or coda-onset clusters, on the other, follows a common pattern in both a templatic language like Classical Arabic and a non-templatic one like Italian[8]. Examples of this parallelism are the following (Lowenstamm, 1996):

[8] Lowenstamm (1996) does not take into account the role of stress in vowel lengthening and the different contrastive value of long vowels compared to geminates in Italian; the focus is restricted to syllable structure.

(10)

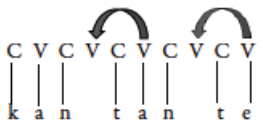
Classical Arabic	Standard Italian
kattaba	*fatto*
ka:taba	*fa:to*
**ka:ttaba*	**fa:tto*

According to Lowenstamm, the fundamental identity in these forms suggests a generalisation regarding both templatic and non templatic languages. In this approach, the distribution of long vowels and geminates is attributed to one and the same underlying structure, i.e. a sequence of non-branching onsets and nuclei. The representations in (11), refer to Italian [fatto] "made" and [fa:to] "fate"; vowel lengthening is blocked in (11a) because V_2 is trapped between C_1 and C_2 and therefore not available for linking to melodic content:

(11) a. 

b. 

In Strict CV the presence of empty nuclei is pervasive, because they have a part in the representation of any word containing a consonant cluster[9]. Empty nuclei contained in coda-onset clusters must be governed by a following contentful nucleus, and cannot be governors themselves. The representation of coda-onset clusters is illustrated in (12) with the Italian word *cantante* "singer".

(12) 

The same representation accounts for the word-initial *s*C clusters, which require a special structure in GP terms, as shown in (4). A word like Italian *scalino* is simply analysed as containing an empty nucleus in between the two consonants of the cluster (/sØkalino/).

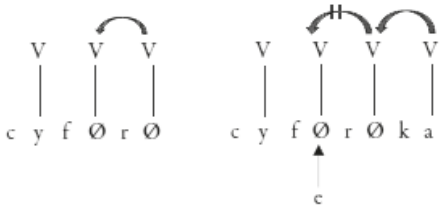
[9] The status of clusters corresponding to a branching onset is a complex and debated issue that is not relevant to the topic of this paper, and will not be taken it into account here. In what follows, we will generally refer to coda-onset clusters.

As far as final empty nuclei are concerned, Strict CV maintains the GP theorisation whereby their presence is regulated by a parameter: languages that allow final consonants have parametrically governed empty nuclei[10]. A final empty nucleus, in turn, can or cannot govern an empty nucleus on its left, depending on a finer parametrisation. If the final nucleus is a governor, final clusters are possible, if it is not, only single consonants are allowed[11]. The examples in (13) refer to English. In (13b), the final empty nucleus governs the internal nucleus:

(13) a. *fat* b. *fact*

Let us now consider the issue of V/Ø alternations in the Strict CV approach (cf. Scheer, 2004; 2012b; 2019). In this regard, a clear example comes from Polish. Two forms of the noun *cyfra* "number.Nom.Sg" are compared in (14). In the first (14a), the prefinal nucleus is governed by the final one and remains silent. In the second, the corresponding internal empty nucleus is followed by an empty nucleus and remains ungoverned; the insertion of the epenthetic vowel [e] takes place.

(14) a. *cyfr* (Gen Pl) b. *cyferka* (Diminutive)



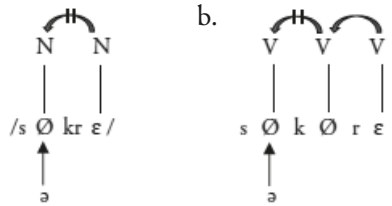
[10] Scheer (2004: 625 ff.; 2012a), also basing on Piggot (1999), confutes the GP claim that all final consonants are onsets (defended, among others, by Kaye, 1990a; Harris, 1994; Harris and Gussmann, 1998; see also fn. 19).

[11] We will not discuss the subtler variation that distinguishes languages like French, which show in word-final position both coda-onset clusters and branching onsets, from languages like English, which only allow coda-onset clusters; a universal implicational hierarchy (coda-onset<complex onset) has been observed in this regard (cf. Kaye and Lowenstamm, 1981). See Charette (1990; 1991) for an account of this variation in GP terms. In the proposal by Cyran (2008; 2010), developed within a Strict CV model, the variation concerning final clusters results from the interaction of two scales, a complexity scale and a strength scale. The former (simple onset<coda-onset<complex onset) concernes the structure that must receive licensing, the latter (empty nucleus< schwa<full vowel) the strength of licensors. Cavirani and van Oostendorp (2017) develop the hypothesis of a markedness hierarchy concerning empty categories.

The Strict CV assumption that any kind of cluster consists of a CØC sequence (with the exception of some kinds of complex onsets) has a significant consequence for the account of the case in which proper government involving a final and a prefinal empty nucleus is blocked by an intervening cluster. The difference between the GP and the Strict CV account of this specific configuration is illustrated in (15) where the analysis by Charette (1990) of the example in (9b), repeated in (15a), is compared with the Strict CV analysis in (15b):

(15) [səkrɛ] *secret* "secret" (*skrɛ)

a. b.



In the Strict CV representation, the blocking effect due to the intervening cluster follows directly from the general mechanism of government and no special stipulation is required to derive the correct results. We can conclude that Strict CV offers a simpler explanation in regard to this specific issue. However, in section 5 we will consider other aspects of the V/Ø phenomenon and analyse some problematic consequences of the CVCV approach.

4. *When empty nuclei are visible: syncope and consonant clusters in the dialect of Finale Emilia*

Most Northern Italian dialects, differing from Standard Italian with regard to prosodic structure, show among other features the weakness of unstressed nuclei. Generally speaking (but a subtler complex variation is observable in different dialects), final vowels have undergone diachronically a complete deletion, so that their content is no longer available. An exception in this regard is final /a/, which is preserved in most varieties (cf. Rohlfs, 1966: 169-173; Loporcaro, 2011; Benincà, Parry and Pescarini, 2015)

Several Northern dialects, particularly in the Piedmont and Emilia-Romagna areas, also show vowel deletion in word-internal positions. In

most cases, however, this process has not produced a complete elimination of the affected vowel. In fact, in the alternation among forms of an inflectional or derivational paradigm, the deleted vowel may reappear, with some light, schwa-like melodic content, provided certain contextual conditions are met. This V/Ø alternation pattern goes under the traditional name of syncope/epenthesis (cf. Repetti, 1995a; 1995b; Loporcaro, 1998; Passino, 2013a).

Syncope/epenthesis alternations may result from different configurations[12].

Syncope may target the pretonic string of the word. The following examples refer to the dialect of Finale Emilia (Province of Modena) that show both epenthetic and non epenthetic forms (data regarding this dialect here and in the examples that follow, have been collected by the author through field work). The Standard Italian corresponding form is also indicated for comparison:

(16) a. Finale Emilia — Standard Italian

No epenthesis

dman'de "ask.Pres.2Pl"	*domandate*
v'diva "see.Past.3Pl"	*vedévano*
p'ka "sins"	*peccati*
s'ɲora "lady, madam"	*signora*

b. *Epenthesis*

al'dam "manure"	*letame*
al'kar "to lick"	*leccare*
an'vada "snowfall"	*nevicata*
ar'batar "to retort"	*ribáttere*

As Passino (2013a) observes, the emergence of an epenthetic vowel before the cluster created by vowel deletion cannot always be explained by only referring to prosodic conditions (i.e. government relations). In fact, the occurrence of a cluster in word-initial position also depends on the melodic properties of the consonants flanking the vowel that undergoes syncope. We will not take into account pretonic syncope in this paper, and we refer to

[12] In this section we will use the words *epenthesis* and *epenthetic* in a merely descriptive sense, to refer to a default vowel that emerges only in specific contexts. We do not mean that the process consists in the insertion of a vowel; on the contrary, we believe that it should be considered the result of the vocalisation of an empty nucleus that is present in the lexical form.

Passino (2013a) for an analysis of this phenomenon in Emilian dialects. In what follows, we will focus on V/Ø alternations in the postonic section of the word.

A first pattern of postonic syncope/epenthesis is caused by the deletion of a final vowel that is preceded by a consonant cluster. In the forms affected by final vowel deletion, the cluster occupies the word-final position. Because of language-specific requirements, this configuration may be not allowed in some dialects. A second source of potential final clusters is the syncope in proparoxytones, i.e. the deletion of the postonic vowel.

Final clusters are repaired in different ways. The example in (17) and (18) illustrate the treatment of word-final coda-onset clusters (17) and of complex onsets (18) in some Northern Italian dialects. We can see that the final clusters may be preserved (17a, 18a), may be simplified by the deletion of the second consonant (17b), may be resolved by the insertion of a non-etymological final vowel (17c, 18b) or by the insertion of an epenthetic vowel between the two consonants (17d, 18c,d). The forms in (18c, d) are examples of V/Ø alternation due to epenthesis. The data from Olivone (Canton Ticino), Breme (province of Pavia) and Urbino are in Savoia (2015: 363-369), the example concerning Carrara is taken from Cavirani (2015):

(17)	a.	Standard Italian *forno* "oven"	*Olivone*	a. ˈfoːrn
			Breme	b. ˈfuːr
			Urbino	c. ˈforne
			Finale Emilia	d. ˈforɐn
(18)	b.	Standard Italian *magro* "lean"	*Carrara*	a. ˈmagr
			Urbino	b. ˈmɛgre / ˈmɛgra (FSg)
			Breme	c. ˈmagar / ˈmagra (FSg)
			Finale Emilia	d. ˈmagɐr / ˈmagra (FSg)

Notably, considerable variation is observable among dialects as far as the treatment of final clusters is concerned. Beyond the observation that complex onsets are less tolerated than coda-onset clusters (see fn. 11 and reference therein) a valid generalisation is hardly possible on this topic. In fact, it is quite clear that prosodic variables, i.e. syllable structure and government relations, are only one of the relevant factors. As already observed about the pretonic syncope, whether a final cluster is preserved or resolved

also depends on the melodic content of the consonants involved. Such an issue certainly deserves specific investigation and is left for future work. The examples in (19), (20) and (21) from Finale Emilia, can give a sense of such complex variation. In this dialect, final obstruent-liquid clusters (19a), corresponding to both etymological complex onsets and cluster produced by syncope, are regularly resolved through the insertion of the only epenthetic vowel available in this language, i.e. [ɐ]. The same holds for final stop-obstruent (19b), non-homorganic nasal-stop (19c), obstruent-nasal (19d), vibrant-nasal (19e), vibrant-liquid (19f) and non-homorganic nasal (19g) clusters. Instead, variation (occasionally free variation) is observable in vibrant-obstruent clusters (20), that show non-extensive epenthesis. Final /l/-stop (21a) and /s/-stop (21b) clusters are generally preserved. At the end of the list we put in (22) two last examples of epenthetic forms the we will comment in section 5.

(19) a. *obstruent - liquid*

'pegɐr / 'pegra	"lazy.MSg / FSg"	Standard Italian	*pigro*
'kavɐr / 'kavra	"goat.FPl / FSg"		*capra*
'vedɐr	"glass.MSg"		*vetro*
'pjegɐr / 'pjegra	"sheep.FPl / FSg"		*pécora*
'tavɐl / 'tavla	"table.FPl / FSg"		*távola*
'mandɐl / 'mandla	"almond.FPl / Fsg"		*mándorla*

b. *stop - obstruent*

sal'vadɐg / sal'vadga	"wild.MSg / FSg"	*selvático*
'mɔrbɐd / 'mɔrbda	"soft.MSg / FSg"	*mórbido*
'vedɐv / 'vedva	"widower / widow"	*védovo*

c. *non-homorganic nasal - stop*

'umɐd / 'umda	"damp.MSg / FSg"	*úmido*
'gomɐt	"elbow.MSg"	*gómito*
'stɔmɐg	"stomach.MSg"	*stómaco*

d. *obstruent - nasal*

'pɛtɐn / pɐt'nar	"comb.MSg / to comb"	*péttine / pettinare*
'ordɐn / urd'nar	"command.MSg / to command"	*órdine / ordinare*
'azɐn / azna	"donkey.MSg / FSg"	*ásino*
'ɔrfɐn / 'ɔrfna	"orphan.MSg / FSg"	*órfano*

e. *vibrant - nasal*

'karɐn / 'karna	"meat.FPl / FSg"	*carne*
in'vɛrɐn	"winter.MSg"	*inverno*
'ferɐm / 'ferma	"still, firm.MSg / FSg"	*fermo*

f. *vibrant - liquid*

'mɛrɐl / 'mɛrla	"blackbird.MSg / FSg"	*merlo*
'torɐl	"yolk.MSg"	*tuorlo*

g. *non homorganic nasals*

'femɐn / 'femna	"female.FPl / FSg"	*fémmina*
'semɐn / 'semna	"to sow.Pres 1Sg/3Sg"	*sémino / sémina*

(20) *vibrant - obstuent*

'ɔrt	"vegetable garden.MSg"	*orto*
'sord	"deaf.MSg"	*sordo*
'kɔrp	"body.MSg"	*corpo*
'furb *or* 'furɐb	"astute.MSg"	*furbo*
'serk	"seek, try.Pres.1Sg"	*cerco*
'larɐg / 'larga	"large.MSg / FSg"	*largo*
'ɔrdz	"barley.MSg"	*orzo*
'mars	"rotten.MSg"	*marcio*

(21) a. */l/ - stop*

'elt	"tall, high.MSg"	*alto*
'kald	"hot, warm.MSg"	*caldo*
'kolp	"hit.MSg"	*colpo*
'palk	"stage.MSg"	*palco*
'fals	"false.Msg"	*falso*

b. */s/-stop*

'most	"must.MSg"	*mosto*
'bɔsk	"forest.MSg"	*bosco*
'vrɛsp	"wasp.FPl"	*vespe*
'mastʃ	"male.MSg"	*maschio*
'dezd	"wake.Pres.1Sg"	*desto*

(22) *Other epenthetic non alternating forms*

'tɔzɐk	"poison.MSg"	*tóssico*
'salɐs	"willow.MSg"	*sálice*

Previous analyses of syncope/epenthesis in Italian dialects mostly maintain the traditional view that the vowel that emerges in alternation sites is the result of a strategic insertion, aimed at reshaping the segmental sequence and repairing syllable structure (cf. Repetti, 1995a; 1995b; Loporcaro, 1998). As shown in section 2 and 3, such approach conflicts with the fundamental

assumptions of GP and Strict CV and we will not deal with this issue here (see Passino, 2013a for discussion).

For the purpose of this paper, some aspects of the rich and complex variation exemplified above are specifically relevant.

First, the emergence of the epenthetic vowel is not limited to the cases of V/Ø alternation; in fact, forms like *vedɐr* "glass", *gomɐt* "elbow" do not alternate. However, we consider [ɐ], in these forms as in all the others, to be an epenthetic vowel with the effect of giving content to an empty nucleus that must be filled. The empty nucleus is contained in the lexical representation, and in fact, in this case, it is an etymological vowel. Indeed, this is not always the case, as different forms exist, e.g. *larɐg* "large", *furɐb* "astute", in which [ɐ] does not correspond to an etymological vowel. Nevertheless, the empty nucleus corresponding to the epenthetic vowel is part of the lexical form in both the former and the latter examples.

A second consideration is that the underlying empty nucleus, even when it does not vocalise, is indirectly detectable in the surface form of the words. Some phonotactic peculiarities support this statement. In systems like the dialect of Finale Emilia, the sequences consisting of non-homorganic stop-stop and nasal-stop are not allowed in lexical forms. The same holds for *s*C sequences in which the two consonants have opposite value of the feature [voice]. In contrast, forms like *salvadga* "wild", *mɔrbda* "soft", *umda* "damp", *femna* "female", *pka* "sin", *ŋora* "lady" show such anomalous phonotactic behaviour, thus revealing that the two consonants are adjacent at the surface level, but separated by the empty nucleus in the lexical representation. Further support for this argument comes from data relating to another Emilian dialect, spoken in Ligonchio (province of Reggio Emilia; data collected by the author):

(23) Ligonchio		Standard Italian
a. *Syncope*	b. *No syncope*	
o t'tava "suck the milk.Past.3Sg"	i 'tɑtni (Pres.3Pl)	*tettáva*, *téttano*
o c'car "the spoon"		*cucchiáio*

These examples contain pseudo-geminates in initial position. As the alternation with the non-syncopated form in (23b) and the comparison with the Italian counterpart (from Latin COCHLEARIU(M) "spoon") show, these initial clusters are the result of the deletion that cancels the intermediate vowel of an unstressed position, e.g. *tettáva* → *tØtáva*. Notice that word-in-

itial geminates are ungrammatical in this language, as well as in most Italo-Romance languages. In fact, the initial sequence in the examples in (23a) is not a geminate, but is simply the sequence of two structurally separate consonants, which happen to be contiguous on the surface phonological representation because of the (temporary) deletion of the vowel that keeps them apart in the lexical representation.

The arguments just put forward support the idea that epenthetic vowels are lexically established empty nuclei that may or may not assume phonetic form, depending on a complex interaction of different conditions. These arguments are certainly conflicting with a traditional account of V/Ø alternations conceived as deletion/insertion of vowels and resyllabification. Interestingly, they are also at odds with some significant aspects of the Strict CV theory of empty nuclei. We will develop this issue in the next section.

5. *The approach to 'ghost' vowels in GP and Strict CV: theoretical premises and implications*

In this section, we will argue that given its conception of empty nuclei, the CVCV model cannot offer an accurate characterisation of the syncope/epenthesis phenomena described in section 4. Firstly, let us take into account the question concerning the exact nature of empty nuclei.

We have seen in section 2 that for GP, empty nuclei have the function of formally expressing some peculiar features of the phonological string: final consonants that behave like onsets, word-initial *s*C clusters and word-internal vowels that alternatively do or do not emerge to the phonetic surface. In regard to the latter issue, in section 4 we have drawn attention to the fact that empty nuclei are either directly or indirectly detectable in the phonological string: even when they are silent, they are 'visible' (and, crucially, recognisable by the speaker and the learner) through indirect empirical evidence.

In Strict CV, given their pervasive presence in the phonological representation, where they replace branchingness in syllabic constituents, empty nuclei are conceived in a different way.

Scheer (2004: 91-91) states that there are three types of empty nuclei: plain contentful nuclei (24a); nuclei with no melodic content, that Sheer calls 'true' empty nuclei (24b) (we will henceforth adopt this label

for clarity); nuclei with floating melody (24c). In (24) [M] stands for 'melodic content':

(24) Three types of empty nuclei (Scheer, 1994: 92)

a. V
|
[M]

b. V

c. V
[M]

According to Scheer, the nuclei of the third type are the ones involved in V/Ø alternations. They are empty but endowed with lexically established melodic content. Yet, such segmental material is floating, i.e. not steadily associated to the corresponding V position (put in different words, not p-licensed); the association to the V position only takes place when the nucleus is not governed. This theorisation accounts for the fact that in some languages, instead of a single 'default' vowel, more than one vowel alternates with zero; therefore, the content of the alternating vowels must be lexically established (see Scheer, 1994: 88 on Slovak; Passino, 2013a discusses the same issue referring to Emilian dialects).

Notice that the idea that lexical melodic content may be paired with a given empty nucleus could also be adopted in a GP approach to V/Ø alternation, when empirical evidence shows that this is the case. However, it is debatable that this is the better hypothesis for all languages, including those like the dialect of Finale Emilia, in which only one epenthetic vowel alternates with Ø in all the contexts and the forms. The crucial point is that, in a CVCV representation, the stipulation in (24c), combined with a further assumption, cannot be dispensed with in the account of V/Ø alternation. The additional assumption concerns the governing abilities of final empty nuclei, and is considered to be universal (Scheer, 2004: 644-645):

(25) Final empty nuclei can only govern nuclei that do not possess any floating melody in the lexicon.

Crucially, if (24c) and (25) were not assumed together in the theory, wrong predictions would result. For sake of illustration, let us consider the case of a language like the one of Finale Emilia, in which some coda-onset clusters are possible in word-final position. The comparison between a non-epenthetic and an epenthetic form is in (26). Both words are represented in the lexicon as containing two empty nuclei in a row. However, V_2 in *kolp* is

a 'true' empty nucleus, while V_2 in *larɐg* has floating melody. Given (25), V_3 can govern V_2 in (26a), but cannot in (26b).

(26) a. ['kolp]

b. ['larɐg]

If [ɐ] in (26b) were not contained in the lexical representation, a wrong outcome would result, because in such configuration the final nucleus would be able to govern V_2 and the vowel would be cancelled. The same result would be produced if we wanted to dispense with the stipulation in (25). In this case, the final nucleus would be strong enough to govern (and delete the vowel) in both (26a) and (26b). To sum up, the two assumptions in (24c) and (25) are the necessary representational tool of Strict CV to distinguish between 'true' consonant clusters and alternation sites and to avoid wrong derivations; however, we will show that they fail to provide a revealing insight to some subtler aspects of the phenomena descripted in section 4.

More recently, Scheer (e.g. 2012b; 2019) has slightly revised the statement in (24), by admitting that, under restricted circumstances, the vocalisation of an empty nucleus may simply consist in the emergence of a default vowel that is not lexically established; such condition is illustrated by the example in (14) above. Let us now consider how this revision may affect the account of V/Ø alternations in the dialect of Finale Emilia.

As already observed, in this language one single epenthetic vowel occurs in all relevant contexts. This is consistent with the hypothesis that epenthesis is just the 'default' vocalisation of an empty nucleus, with no floating melody involved. However, this hypothesis raises a drawback for the CVCV representation. The forms in (22) repeated here in (27a), are epenthetic, non-alternating words. In (27) they are compared with words that contain a word-final cluster resulting from the deletion of the former final vowel (27b).

(27) a. *Epenthetic*
'salɐs "willow" / 'salØsØ/
'tɔzɐk "poison" / 'tɔzØkØ/

b. *Non-epenthetic*
'dols "sweet" / 'dolØsØ/
'bosk "forest" / 'bosØkØ/

The forms in (27a) contain the epenthetic vowel [ɐ] that corresponds to an empty nucleus in the lexical form; in fact, this empty nucleus is the trace of an etymological vowel (*salɐs* < Latin SALICE(M), *tɔzɐk* < Latin TOXICU(M)). On the contrary, the forms in (27b), that present very similar or identical final clusters, are not affected by epenthesis and the cluster is preserved. In spite of this, they would receive the same representation, i.e. two empty nuclei in a row, in a strict CV account. This produces the wrong prediction that epenthesis should take place in both (27a) and (27b), which is actually not the case. We believe that this last example further highlights the weakness of the model in accounting for this kind of syncope/epenthesis phenomena.

In a more general perspective, we argue that the formalism of strict CV theory and its conception of empty nuclei is not able to properly characterise the distinction between 'true' empty nuclei and alternating empty nuclei, that in fact are two different kinds of objects. The empty nuclei required by the representation of syllabic branching never manifest segmental content nor interrupt the phonological adjacency between the two consonants of coda-onset or complex onset clusters. On the contrary, this is clearly what happens to empty nuclei in alternation sites, at least in languages like the one of Finale Emilia. This notwithstanding, the two kinds of empty nuclei are given exactly the same representation on the CVCV tier. The burden of differentiating between the two distinct objects is entirely shifted to the melodic level. This is clear in (26), where the two representations are identical in the CVCV tier. Then, if floating melody is excluded, as in (27), the two representations are completely identical. We believe that this modelling is inadequate.

More precisely, this modelling implies the conceptualisation that, on the one hand, an empty nucleus paired with melodic content is a heavier constituent and therefore requires a harder governing effort, compared to a perfectly empty nucleus; on the other hand, that an empty nucleus is a weaker governor compared to a contentful nucleus. This explains why vocalisation takes place in (26b) as opposed to (26a). This is a plausible hypothesis, whose validity is independent of the representational format, and is in fact developed in different models[13].

The questionable side of this theorisation is the representational one, i.e. the fact that the CVCV representation fails to differentiate a coda-onset

[13] This conceptualisation explicitely recalls CYRAN's (2010) theory of complexity scale and licensing. See also CAVIRANI and VAN OOSTENDORP (2017) on the same issue.

cluster from a cluster resulting from syncope. As observed above, the two kinds of clusters are different because: i) the consonants of the latter cluster are sometimes separated by a vowel that rises to the surface form, while the consonants of the former never are; ii) the consonants of the latter cluster show sometimes signs of underlying non-adjacency, while the consonants of the former never do.

Our argument is that the only way to capture this difference is to express it in the skeletal (or CVCV) tier. This is illustrated in (28), where Strict CV and GP are compared.

(28) Representing the difference between coda-onset clusters and 'syncope' clusters

	['loŋg] "long.MSg" (cf. ['loŋga] FSg)	['umɐd] "damp.MSg" (cf. ['umda] FSg)
a. Strict CV	/ 'l o n Ø g Ø /	/ 'u m Ø d Ø /
b. GP	/ 'l o n g Ø /	/ 'u m Ø d Ø /

In (28), the sequence [ŋg] in *loŋg* / *loŋga*, is an etymological coda-onset cluster that is preserved also word-finally, whereas the cluster [md] is the result of syncope. Syncope has stripped the etymological content from the postonic nucleus causing the presence of an empty nucleus in the lexical form[14]. In surface phonology, this results in a non-homorganic cluster ([md] is impossible in coda-onset clusters), alternating with vowel epenthesis. The comparison in (28) shows that only (28b) is able to locate in the lexical representation the difference between the two kinds of clusters, while (28a) fails to capture this essential difference.

Crucially, such drawback is an unescapable consequence of the fundamental assumption that any kind of consonant cluster is to be represented as a CVC sequence. In the next section we will discuss some issues connected to this assumption.

5.1. *Government, licensing and Coda Mirror*

Although Strict CV is an outgrowth of GP, their conception of government and licensing diverge in a significant way.

[14] As already observed, the syncope of a former full vowel is in most cases the cause for the presence of empty nuclei in lexical representation, and therefore of epenthetic vowels, but not always. In forms like *furɐb*, *larɐg*, the empty nucleus is not etymological but must have steadely entered the lexical form in some previous stage of the language.

In autosegmental phonology as well as in some model of GP, licensing and government are essentially configurations that organise the units of phonological structure[15].

We have seen that in GP government is a static relation, which expresses in formal vocabulary regularities observed in specific circumstances. In respect to V/Ø alternation, government defines the pattern of vocalisation of empty nuclei. Thus conceived, government is not the cause of vowel deletion, it is just a necessary condition for it. For example, the syncope phenomena in Northern Italian dialects are the result, typical of those systems, of a weakening process that affects unstressed vowels. The cause of vowel deletion is the absence of stress, and government is only a condition for the relevant nucleus to be empty. In a similar way, p-licensing involves syllabic constituents and nuclear projections in asymmetric relations whereby a recessive position must be sanctioned by a head. Therefore, for example, the reason why an onset licensed by a stressed nucleus may be preserved against lenition but the onset licensed by an unstressed nucleus may not is not licensing, is stress.

Strict CV has deeply modified the way of understanding government and licensing. In this theory, they assume the role of activities that any contentful nucleus normally exerts on preceding positions. Government and licensing are deemed to be two opposite forces, a positive and a negative one, immanent to phonological representation (cf. Cyran, 2006). Licensing supports and strengthens while government weakens and destroys the melodic content of CV positions. In this view, the two lateral relations are more than mere conditions for the application of segmental processes, since they may themselves cause strengthening or weakening of CV positions[16].

The conception of licensing and government just outlined is connected in an essential way with the notion of Coda Mirror (Ségéral and Scheer, 2001; 2008). The goal of this theorisation is to obtain a strong generalisation about phonological organisation such that one and the same mechanism, i.e. the interaction of opposite forces, accounts for both the static (phonotactic distribution) and the dynamic (phonological processes) properties of utteranc-

[15] We ignore here the terminological problem described in section 2. We maintain that (proper) government is the relation that sanctions empty nuclei, and licensing the relation that sanctions any unit of the phonological representation except the head of a given domain.

[16] For example, Scheer (2009) and Passino (2013b) analyse phenomena of consonant gemination in sandhi, in Corsican and in Italian respectively, as due to the presence of an empty strong position, i.e. a C that is licensed but not governed.

es. More specifically, Coda Mirror theory aims at a unified explanation of lenition and fortition, such that these phenomena may be formally connected to their environment.

Ségéral and Scheer (2001; 2008), Scheer (2004) observe that the set of strong positions, i.e. the word-initial and the post-coda position (#_ ; C_) is the mirror image of the set of weak positions, i.e. the word-final and the coda position (_# ; _C). The beginning of the word is usually described as a strong position[17]. In Strict CV terms, a word-initial (or utterance-initial) boundary corresponds to an initial empty CV.

In the explanation of the specularity of Coda Mirror, the definition of licensing and government, whereby government destroys and licensing supports, plays a crucial role: strong positions are the ones that receive licensing but not government, while weak positions are neither licensed nor governed[18]. The (utterance) initial and the post-coda consonants are licensed but not governed, and therefore they are in a strong position. Instead, given that the internal empty nucleus is inert, the consonant in coda is not supported by licensing, and is not governed either. For this reason it is expected that the coda position may be a site of weakening phenomena, while the reverse holds for initial and post-coda positions[19]. The representation of Italian *carta* in (28), illustrates the activity of the nuclei, which license (white arrow) a preceding consonant but must govern (black arrow) a preceding empty nucleus:

(28)

[17] In most Italo-Romance languages, this characteristic is actually restricted to the utterance-initial position, because in those systems word boundaries are ignored in phrasal phonology by the so called 'resyllabification' process (cf. Vogel, 1982), with the result that sometimes a word-initial C is placed in an intervocalic context.

[18] A well-known problematic issue concerning the Coda Mirror theory is that a cross-linguistically typical lenition site, i.e. the V_V environment, does not share the condition of the 'coda' environment, because intervocalic consonants are both licensed and governed. The issue is dealt with by Scheer and Ziková (2010) through the stipulation that when both licensing and government are exerted on the same position, government prevails and licensing is suspended.

[19] As far as word-final consonants are concerned, in Strict CV terms, in languages with coda-like final consonants, final empty nuclei are unable to govern and licence, while languages with onset-like final consonants have final empty nuclei that can govern and license. In this model, a final consonant that behaves like a coda is arranged in the same configuration as an internal coda, i.e. it is followed by an empty non-governing, non-licensing nucleus.

The enhanced role of licensing and government in the representation of phonological structure is clearly consistent with a theory-internal necessity, i.e. to provide motivation for the fundamental assumption that syllabic constituents do not branch. In fact, the assumption that any kind of segmental sequence corresponds to a sequence of CV raises an essential questions, that need to be answered: why is it the case that a C before an empty V should be weak, and a C after an empty V should be strong? The activity of licensing and government is the answer. However, a legitimate question is whether this theorisation has a sufficiently strong independent motivation.

Basing on evidence coming from syncope/epenthesis of Italian dialects, we argue that the V/Ø alternation hints at the presence in the skeleton of a vocalic unit, different in nature from 'true', invisible empty nuclei: a vowel that, when conditions are met, surfaces with its melodic content. This is consistent with the fact that consonant clusters resulting from syncope differ in an essential way from coda-onset clusters. The latter consist of structurally adjacent units, while for the formers adjacency is only superficial, as distributional facts described in section 4 clearly show.

This state of affair questions the Strict CV representation, in which the two kinds of empty nuclei, the 'true' and invisible, and the alternating one, are differentiated at the melodic level, but identical in the CV tier, which is the relevant layer for the representation structural adjacency.

6. *Conclusions*

In this paper we have compared the approach to V/Ø alternations according to GP and Strict CV theory. On this specific subject, we have argued that the latter theory does not offer a clear characterisation of the empty nuclei that are involved in this kind of process. This argument, in turn, raises a more general issue that concerns the very notion of empty nuclei and could challenge a core assumption of the theory, i.e. that CV is the only syllable type.

Some of the fundamental tenets of Strict CV phonology have been taken into critical account by van Oostendorp (2013). One the one hand, van Oostendorp questions the basic assumption that the syllable structure is flat and that all prosodic relations are horizontal, i.e. non-hierarchical, and argues that such strong claim is not supported by uncontrover-

sial evidence. In the same line of argument, some segmental phenomena of Italo-Romance varieties suggest that the foot is not just a descriptive notion (cf. Scheer and Szigetvári, 2005) and should be maintained as a relevant constituent of phonological structure (see Savoia, 2015 among others). On the other hand, van Oostendorp draws attention to the risk that some aspects of the representational system of Strict CV may simply be notational variants of a classical autosegmental representation of the syllable.

On the first issue, the formal distinction between coda and onset, which in Strict CV are unified under the single category 'C', is a good illustration of the point. We believe that the distinction should be maintained at least in light of distributional facts. Cross-linguistically, it is frequently observed that the consonants displayed by a coda in a given language are a subset of the consonants that may occur in an onset; among other things, this is one of the empirical motivations for the Coda licensing principle (cf. Harris, 1994: 158 ff.). Thus, at least from this point of view, onsets behave as a homogeneous class. Instead, if considered from the point of view of lateral relations of Strict CV, the positions that display the full inventory of consonants do not make a natural class. More specifically, the contexts (#_) and (C**.** _) ('**.**' stands for syllable boundary) have in common the Coda Mirror configuration (+licensing, -government), but (V_V) does not.

In strict CV terms, the homogeneous class of consonants displaying the entire set of the segments existing in a language (i.e. the 'onset') can be defined by the fact that they are followed by full vowels, while codas are followed by empty nuclei. However, we find this a weak argument. Firstly, those definitions correspond exactly to the classical definitions of 'onset' and 'coda'. Moreover, if 'C before a contentful nucleus' and 'C before an empty nucleus' are relevant definitions that identify relevant classes, then it is not clear why we should dispense with them in the first place. The fact that those definitions are necessary to account for (at least) distributional regularity show that 'C', 'V', 'licensing' and 'government' are at the same time too much and too little to express all the relevant generalisations concerning phonological structure. In sum, we believe that the asymmetric distribution of consonants, that cannot be defined by referring to Strict CV lateral relations, is a positive argument in favour of the categories 'onset' and 'coda'.

This bring us to the second issue addressed by van Oostendorp (2013), mentioned here above. The question is whether the formal vocabulary of Strict CV provides better results than GP for a model of phonological competence and acquisition. Both theories (and any phonological model, for that matter) consider CV the prototypical syllable. Obviously, the point is how to account for the more complex variety of structures observable in the world's languages and how to provide a plausible model of the speaker's competence and of acquisition. In this regard, the assumption that invisible empty nuclei are a better conceptualisation than branching constituents is debatable.

A reasonable supposition is that the child expects to find alternating Cs and Vs in the phonological input; when clusters are met, the original hypothesis must be replaced by more complex representations. Whether this expansion of the phonological competence consists in the statement 'my target language has codas' or instead in the statement 'my target language has empty nuclei and unlicensed/ungoverned C positions' could be just a matter of notational variants.

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