

Is Strict CV just a notational variant of classical syllable theory?

A contribution from the Italian peninsula.

Government Phonology Round Table

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1. Introduction: Strict CV, a lateral theory of phonology

- Strict CV (Lowenstamm 1996, Scheer 2004) is a phonological theory where the underlying phonological structure of all languages is represented as a monotonic sequence of alternating consonantal and vocalic positions (non branching onsets and non branching nuclei), as shown in (1).

(1) Underlying phonological constituent structure

C	V	C	v	C	v	C	V	C	v	C	V
k	o	n	t	r	a	t					o

Surface phonological string

- The lack of branching constituents and arboreal structure means that syllabic structure in CVCV is entirely flat.
- All syllabic effects are derived from a network of lateral relations (government-licensing) entertained by segments and the minimal syllabic unit that may be manipulated by phonology is a CV unit, an onset-nucleus sequence.
- The absence of branching constituents in the phonological representation implies the proliferation of empty structure, which is regulated by the Empty Category Principle.
- The CVCV representation of some common phonological objects, exemplified in (2), illustrates in detail this situation:

(2) closed syllable: *tar* geminate: *tt* long vowel: *a:* word-final C: *t#*

C	V	C	v		C	v	C	v		c	V	c	V		...	C	v
t	a	r			t					a						t	

- In the literature, the view has been sometimes expressed according to which the representation of phonological constituent structure typical of Strict CV may be just a notational variant of the classical arboreal representation of the syllable (Loporcaro 1999:131, van Oostendorp to appear).

2. Comparing classical and lateral theories

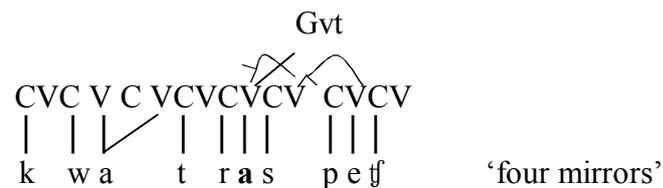
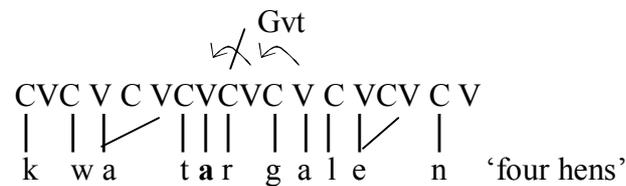
- The strict CV representation of phonological constituent structure is so distant from the phonetic reality that a common reaction to such theory is to discard it on the ground of its abstractness and opt for a less distant representation of syllabic constituents.

- Yet there are a number of respects in which Strict CV can be argued to fare better than a classical theory of the syllable as regards falsifiability and empirical predictions i.e. stress, phonotactics, vowel/zero alternations (cf. Scheer 2004, all devoted to illustrate this point).
- In addition, it is possible to find slight differences between similar theoretical constructs in the two theories, i.e. between a branching onset and an obstruent-sonorant cluster bound by Infrasegmental Government (Scheer 2004:72ff).
- The mainstream stand, however, is that empirical data are accounted for with no need for empty structure and lateral relations: vowel/zero alternations are expressed through syncope and epenthesis, the presence of word-initial clusters of reversed sonority is accounted for by means of extrasyllabicity and so on, as exemplified in (3):

(3) a. *Vowel/zero alternations (exemplified on Piacentino with data from Repetti 1997)*

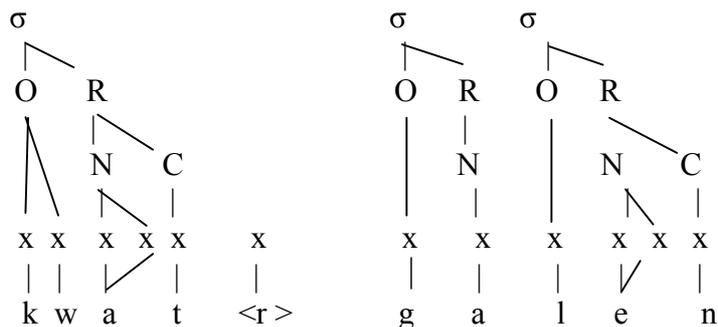
- **Strict CV:**

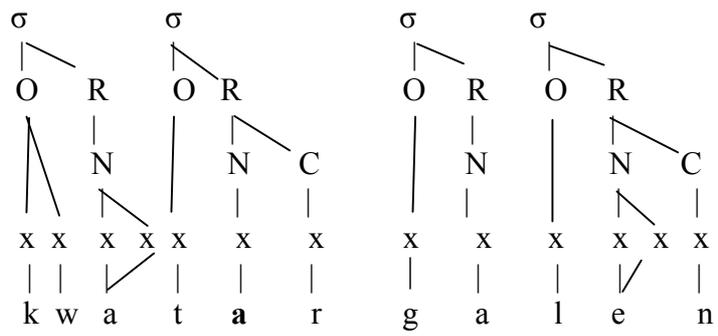
Presence/absence of the vowel depending on government: nuclei that cannot be governed by a preceding fully expressed nucleus vocalise.



- **Classical theory:**

Presence/absence of the vowel depending on the syllabification of the clusters. Unparsed segments drive epenthesis.





b. *Phonotactics of the word-initial position*

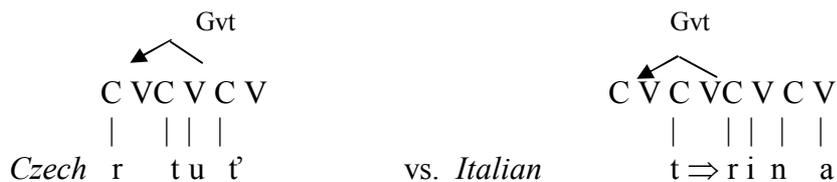
Word-initial clusters of reversed sonority

Czech rtuť ‘quicksilver’

Georgian rva ‘eight’

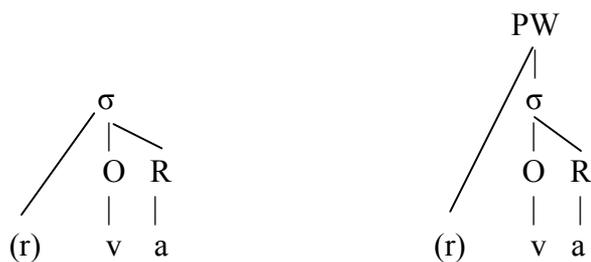
- **Strict CV:**

Presence of word-initial clusters of reversed sonority = absence of a word-initial CV slot (the equivalent of # in SPE cf. Lowenstamm 1999, Scheer 2004, 2012).



- **Classical Theory:**

Presence of word-initial clusters of reversed sonority = extrasyllabic word-initial consonants.



- A case in point is the representation of syllabic weight: Szigetvári and Scheer (2005), by means of the presence of empty nuclei in the phonological representation, manage to
 - account for syllabic weight by exclusively referring to nuclei to the exclusion of consonants, counted in the classical analysis, and which arguably have no relationship with stress.
 - Derive the weightlessness of onsets
- The so-called Weight-by-Position parameter (Hayes 1989), namely the difference between languages where coda consonants count for weight (Latin) from those where consonants do

not make a syllable heavy (Malayalam), derives from a parameter on the sensitiveness of the stress computation to empty nuclei, as shown in (4):

(4)

a. languages of the former type are sensitive to empty nuclei

Latin

(Stress falls on the heavy penultimate
or on the antepenultimate if the penult is light
stress falls on the third nucleus from the right:
empty nuclei are counted)

h a ' b e r e f e ' c i s t i
| | | \ | | | | | | |
C V C VcVCV C V CVCv CV

b. languages of the latter type are insensitive to empty nuclei: the stress algorithm only “sees” expressed nuclei.

Malayalam

(Stress falls on the most peripheral
heavy syllable starting from the left
stress falls on the second nucleus:
empty nuclei are not counted)

p a t ' a l a , k a r a n ' k u t a m
| | \ | \ | | \ | | | | | | |
C VcVCVcVCVCvCVcVCVCv C VcVCvCVCv
'soldier' 'crowd'

- Yet moraic consonants are still accepted and the question persists for people who compare the two models: is Strict CV a notational variant of the classic model for representing syllable structure?

3. A contribution from the Italian peninsula

- A little contribution to the debate comes from data of the Italian peninsula, where the languages spoken present cases in which the two approaches to syllable structure provide accounts that are in not interchangeable, grounding the position I argue for, namely, that the two approaches are not just notational variants.

3.1 Italian secret languages

- Not everybody agrees on the weight that evidence coming from ludlings should have on our understanding of the syllable, of its representation, and of the native speakers' competence concerning syllabic parsing. Yet data from secret languages are often discussed when evidence for the syllable is presented in introductions to phonology.
- Nespor (1993) makes no exception and discusses an Italian secret language where [g+copyV] is inserted after every syllable, in order to present evidence for innate syllabic parsing, as shown in (5).

(5) **VIEgeNIgi** < vieni 'come.PRS2SG'

Other secret languages of the kind exist in Italian, most notably *farfallino* where [f+copyV], or variants like the *lingua furbesca* described by Biondelli (1846), where [p+copyV] is

inserted, and others where [g+copyV+s+copyV] [mb+copyV] [t+copyV+k+copyV], [s+copy V] (alfabeto serpentino) or [se] (alfabeto serpentino del Salento) are added.

- In all these secret languages, words with internal codas, not discussed by Nespor, crucially show that the masking syllables are not inserted after every syllable but after every expressed nucleus. In fact the syllable codas are parsed with the following onset for the purpose of the game, as shown in (6)¹:

- (6) a. **BE**fe**LLI**fi**SSI**fi**MA**fa < bellissima ‘very beautiful’
 b. **PO**goso **NTE**gese < ponte ‘bridge’
 c. **RO**mbo **BE**mbe **RT**ombo < ‘Roberto’
 d. **LI**pi**NGU**Apa**FU**pu**RB**Epe**SC**Apa < lingua furbesca ‘secret language’ (Biondelli 1846)
 e. **ZI**tiki**ATA**ka**PI**tiki**PP**Ataka < Zia Pippa
 f. **USU**FFAsa < uffa

- Among others, language games spoken by students in Etiopia (Bausani 1974), and in Germany (Jespersen 1946) show that ‘coda consonants’ are parsed with the following syllable or separated from the nucleus if word final, for the purpose of the games.
- Far from providing evidence for innate syllabic parsing, the Italian secret game rules can be easily described by referring to expressed nuclei vs empty nuclei. The masking syllables are not inserted after empty nuclei, codas in traditional phonological theory, but after fully expressed nuclei.
- This is not to say that it is impossible describe the processes underlying insertion in these games using ordinary syllable theory. Vogt and Kraemer (2013) for instance describe the mechanism of Italian farfallino as follows:

The game mechanism: “iterative infixation” (Yu 2003, 2007)

division of a source word into syllables (bases) (*quan+to+tem+po*)

application of the game mechanism to each syllable:

reduplication of the open syllable, e.g.: .tem.> te[RED]

“overwriting” of the onset of the source syllable: fe[RED]

infixation into the source-syllable: .te.- fe[RED] -m.

- A problem arises for VC monosyllables like *un*, **UfuN**, where in order for the classical syllable analysis to work, a final empty nucleus must be posited in order to justify the division of *un* in two syllables.

3.2 The evolution of vowels in the dialects of Italy.

- Across languages, asymmetries in the evolution of vowels connected to the kind of syllable these vowels head are quite common: vowels in open syllables may pattern differently from closed syllables in sound change.
- In some dialects of Italy the distinction between open syllable and closed syllable is not enough to describe the pattern of evolution in vowels. In some dialects vowels show the

¹ Data from these languages come my own fieldwork with speakers of the languages and from internet searches.

same evolution in open syllables of proparoxytones and in closed syllables, as data on the evolution of Lat. Ē in the Apulian dialect of Canosa, shows (7):

(7) Canosa di Puglia (data from Maiden 1997:13)

<i>open syll</i> <i>paroxytone</i>	<i>closed syllable</i>	<i>open syllable</i> <i>proparoxytone</i>
pɛt < PEDE	sett < SEPTE	pekura < PEKORA

- In the Emilian dialect of Imola, on the contrary, open syllables pattern together in paroxytones and proparoxytones and differently from closed syllables, as shown in (8) where open syllables in paroxytones are obscured by final vowel deletion.

(8) Imola (data from Maiden 1997:13)

<i>open syll</i> <i>paroxytone</i>	<i>closed syllable</i>	<i>open syllable</i> <i>proparoxytone</i>
des < DECE	pɛl < PELLE	pegra < PEKORA

- In CVCV, the Latin words with closed syllables and those with open syllables in proparoxytones share the same representation as far as the structure is concerned: a CVCVCV template. On the other hand, as illustrated in (9), paroxytones are characterized by a CVCV template. Recall that CVCVCV paroxytones are impossible in Latin:

PEDE	SE P TE	PEK ORA
DECE	PEL LE	PEG RA
C VCV	CVCVCV	CVCVCV

- A way to understand the diachronic evolution discussed above is to suppose a parametric distinction according to which
 - on the one hand, in the dialects where open syllables pattern together in paroxytones and proparoxytones, the phonological processes leading to sound change are sensitive to melody: in both cases the vowel is followed by a consonant and an expressed nucleus, as shown in (10);

(10)	<u>DECE</u>	<u>PEKORA</u>	vs.	PE L LE
	CVCV	CVCVCV	vs.	CVCV CV
	des	pegra		pɛl

- on the other hand, in the dialects where open syllables in proparoxytones pattern with closed syllables the same phonological processes are *sensitive to structure*. The phonological processes must in some way “see” the structural space and “be blind” to melody in order to create the pattern discussed, whereby two CVCVCV templates pattern together and differently from a CVCV template, as illustrated in (11):

['tɔ] “you”,

- In these dialects all postonic vowels are reduced to schwa.
- A possible way to describe the contexts in a non disjunctive way is by referring to the vowels licensors in respectively the strong (open) and the weak (closed) positions. By assuming a CVCV representation vowels in closed positions are followed by an internal reduced vowel. Weak nuclei are not good licensors, hence lengthening, diphthongisation, and contrast between mid vowels are not licensed.
- Final nuclei are also reduced but final weak nuclei are usually better licensors usually with respect to their internal peers, and, at least on a parametric basis, they can support a preceding strong nucleus, thus licensing, lengthening, diphthongisation or an extended melodic inventory in a preceding nucleus.
- Tonic vowels are enriched of an empty CV projected by stress. If the empty V position gets support from a following nucleus this could yield lengthening or diphthongisation.
 - Stress CV in *Open position* supported by a final schwa
 - Stress CV in *Closed position* not supported by
 - Open antepenultimate (internal schwa)
 - Closed syllable (internal empty nucleus)
 - Word final (no following nucleus)

4. Final remarks

- In the analysis of the phenomena discussed here, the representation of a coda as a post-nuclear consonant preceding a governed empty nucleus or as a post-nuclear consonant bound to the nucleus in the branching constituent rhyme, arguably does not lead to the same results. As well, to describe patterns of alternations as due to syllable structure or ascribe it to lateral internuclear communication, does not lead to the same results. In the former case no unification of disjunctive context is attainable. This indicates that perhaps strict CV is not just a notational variant of classical syllable theory.

References

- Bausani, A.** 1974. *Le lingue inventate*. Roma: Ubaldini.
- Biondelli, B.** 1846. *Studi sulle lingue furbesche*. Milano: Civelli.
- Carpitelli, E. & L. M. Savoia.** 2008. Problèmes de micro-variation phonologique dans les domaines dialectaux de l'Italie septentrionale. *Revue Française de Linguistique appliquée*. 13-2, 103-119.
- Hayes, B.** 1989. The prosodic hierarchy in meter, in P. Kiparsky and G. Youmans, eds., *Rhythm and Meter*, Academic Press, Orlando, FL, pp. 201-260
- Jespersen, O.** 1946. *Mankind nation and individual from a linguistic point of view*. London: Allen and Unwind
- Lowenstamm, J.** 1996, *CV as the only syllable type*. In J. Durand / B. Laks (eds.), *Current trends in Phonology. Models and Methods*. Manchester, Salford, 419-441.
- Lowenstamm, J.** 1999. The beginning of the word. In John R. Renison and Klaus Kühnammer (eds),

Phonologica 1996: Syllables !?, The Hague: Thesus 153-166

Loporcaro, M. 1999. *On possible onsets*, in John R. Rennison and Klaus Kühnhammer (eds.).

Phonologica 1996: Syllables!?, *Proceedings of the 8th International Phonology Meeting*, Vienna, 1-3 November 1996. The Hague: Thesus, 133-151.

Loporcaro M. 2001. *Distinctive features and phonological change: vowel fronting and gravity interactions in Altamurano*, «*Rivista di Linguistica*» XIII (2001), pp.255-308 (ma 2002).

Marotta G., & L. M. Savoia. 1994. Vowel properties and nuclear constituents: evidence from Italian dialects. *Probus* 6.1:43-79

Maiden, M. 1997. *Vowel systems*. In M. Maiden & M. Parry (eds.) *The dialects of Italy* 7-14.

Nespor, M. 1993. *Fonologia*. Bologna: Il Mulino.

van Oostendorp M. to appear, Sigma strikes back, *The Linguistic Review*.

Repetti, L. 1997. Fenomeni di sandhi in un dialetto piacentino. *Atti del terzo convegno della società internazionale di linguistica e filologia italiana*.

Scheer, T. 2004. *A lateral theory of phonology* Vol I, Berlin: Mouton de Gruyter.

Scheer, T. 2012. *A lateral theory of phonology* Vol II, Berlin: Mouton de Gruyter.

Szigetvári P. and T. Scheer 2005. Unified representations for stress and the syllable. *Phonology*, 22, pp 37-75