B U P H O C   2 4 M A R C H 1 9 9 9

Repartitioning the skeleton: VC phonology

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(1) Lowenstamm 1996: CV phonology

i. claim: the phonological skeleton is made up of strictly alternating C and V slots; apparently adjacent CC and VV is always separated by an empty V or C slot, respectively: no branching constituents

ii. selected arguments

a. compensatory lengthening—without violation of the Projection Principle: Proto-Greek *[esmi] 'I am' > Attic [eːmi], > Aeolic [emːi]

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C V C V C V     C V C V C V     C V C V C V
  e s   m i       e     m i       e     m i
```

b. stress assignment—without reference to heavy vs. light syllables: *phenómena, aréna, agénda*

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C V [C V] C V C V     C V [C V] C V C V
f ə  n ɒ  m ə n ə       ə  r i       n ə

C V [C V] C V C V
  ə  ʤ e  n   d ə
```

c. C_1C_2 & C_2C_1: The simultaneous existence of a given C cluster and its mirror image is symptomatic of an empty V between the members of (at least) one of the two clusters.

(2) Scheer & Ségéral 1998: Coda mirror

i. aim: to explain the location of lenition sites

ii. definitions

a. LICENSING backs up segmental expression

b. GOVERNMENT inhibits segmental expression

c. a non-empty V licenses the immediately preceding C

d. a non-empty V governs the preceding V if it is empty or the immediately preceding C if the preceding V is non-empty

iii. hypothesis: words begin with an empty CV pair (Lowenstamm 1997)

iv. consequences

a. strong position—no lenition: licensed and ungoverned C

α. #**C**V, licensed by V, ungoverned because government is absorbed by the word-initial empty V

β. C.**C**V, licensed by V, ungoverned because government is absorbed by the inter-consonantal empty V

b. weak position 1—lenition: licensed and governed C

V**C**V, licensed by second V, governed by second V because government is not absorbed by non-empty first V

c. weak position 2—lenition: unlicensed and ungoverned C

α. **C**.C, following empty V neither licenses nor governs

β. **C**#, idem

v. problems

a. The word-final empty V is functionless: it neither licenses, nor governs. Its original function (Kaye 1990), to distinguish word-final consonants from word-internal codas, becomes void with a CV skeleton. (Cf. also Polgárdi's (1998) uneasiness with this position.)

b. The word-final empty V is different from the word-medial empty V: *oːr@ta–oːr@. The claim that WFEVs have the licensing/governing properties of a full V is false: at@ka–*at@k@, an@ta–an@t@.

c. The word-initial empty CV pair is rather stipulative (pace Lowenstamm's (1997) proposals for its use). Its C part is functionless in any case. In fact, one wonders why it does not cause the gemination of any word initial consonant.

d. There is no restriction to the proliferation of empty CV positions in the skeleton.

e. There is only a formal difference between the two types of lenition, nothing is predicted about their outcome.

(3) VC phonology, preliminaries

i. restriction: branching onsets are (temporarily?) excluded

ii. conventions

a. C: non-empty C position

b. c: empty C postion

c. V: non-empty V position

d. v: empty V position

iii. axioms

a. C hosts consonantal segments

b. V hosts vocalic segments

c. consonantalness is mute, Cs aim at remaining silent
note: the prototypical C is a stop, a brief period of silence, also cf. Dependency Phonology

d. vocalicness is loud, Vs aim at being pronounced

iv. definitions

a. LICENSING enhances the nature of the target

b. GOVERNMENT destroys the nature of the target

c. a CORE UNIT is VC or non-marginal

d. a PERIPHERAL UNIT is vC (word-initially) or Vc (word-finally)

v. constraints (language specific?)

a. V and v are licensed

b. government and licensing is uniformly right-to-left (but branching onsets!)

α. licensed V or v governs the preceding v, C or c

β. licensed V or v licenses the preceding C or c

γ. C may govern the preceding C across a v, which in this case is "buried"—coda cluster (absence of C government—bogus cluster)

c. governed position must be licensed in order to govern or license (cf. Charette 1990)

d. governed or buried v loses its inherent license

vi. The Empty Category Principle

An empty category loses its inherent properties iff governed or buried.

a. v remains silent (losing its inherent loudness) iff governed or buried

b. c is pronounced (losing its inherent muteness) iff governed or buried

vii. further conventions

a. licensing: licensee ⇐ licensor

b. government: x V

c. buried v: v

d. bogus cluster: no relation between the parties (*tn*), C v C

e. coda cluster: right-headed relation between the parties (coda-onset, *rt*), C v C

f. onset cluster: left-headed relation between the parties (branching onset, *tr*), ???

(4) VC phonology, the theory

i. **The skeleton is made up of VC units.**

a. no word-initial empty CV, no word-final empty V

b. more constrained skeleton: *vc, q.v. below

ii. visceral aversions

a. What about unmarked syllable structure/language types?

α. #C ≫ #V: V or v prefers to dispose of its licensing/governing power, it can only do so if there is a preceding C or c (cf. OT's ONSET constraint)

β. V# ≫ C#: *unlicensed & ungoverned C
note: we predict that *C# languages lack bogus clusters

γ. unmarked skeleton: vC-[VC]$^+$-Vc (also cf. the minimal word, q.v. below)

b. What about onset maximization?

This makes little sense once we do not have syllables and all C positions are "onsets."

iii. types of C

a. ungoverned & licensed: word-initial & second in bogus cluster

b. ungoverned & unlicensed: word-final & first in bogus cluster

c. governed & licensed: intervocalic & second in coda cluster

d. governed & unlicensed: first in coda cluster

iv. goodies

a. government and licensing power is not a function of melodic content, it only depends on skeletal relations

b. the stop paradox resolved: consonatal properties (noncontinuancy, nonsonorancy; GP's **ʔ**) are dispensed with; it is by virtue of being linked to a C position that segments are stops/obstruents (cf. Rennison 1996)

c. two types of lenition (Scheer & Ségéral's (1998) type 1 and 2), can now be distinguished as regards their outcome

α. unlicensed, ungoverned C loses melody but remains consonantal: word-finally and in bogus clusters we find debuccalization ([ʔ h]); call this consonantal lenition

β. governed C loses its consonantalness: intervocalically we get sonorization/vocalization; call this vocalic lenition

v. coda clusters vs. bogus clusters (in Hungarian)

a. *#rt, *#tn: word-initial v ungoverned, hence should be pronounced

```
*v  C  v  C        *v  C  v  C
    |     |            |     |
    r     t            t     n
```

b. rt# vs. *tn#: coda cluster's buried v is fine, bogus cluster's v needs government

```
V  C  v  C        V  C  *v  C
|  |     |        |  |      |
a  r     t        a  t      n
```

c. arta, atna: coda cluster has buried v, bogus cluster has governed v; coda cluster's first C is governed and licensed, it lenites vocalically (like if intervocalic), bogus cluster's first C is ungoverned and unlicensed, it lenites consonantally (like if word-final)

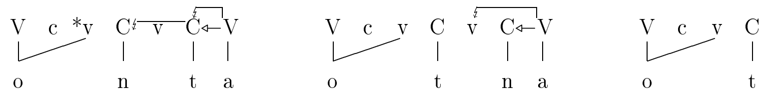
```
V  C  v  C⇐V        V  C  v  C⇐V
|  |     |  |       |  |     |  |
a  r     t  a       a  t     n  a
```

d. artna, *atnta: v cannot govern v

```
V  C  v  C  v  C⇐V        V  C  *v  C  v  C⇐V
|  |     |     |  |       |  |      |     |  |
a  r     t     n  a       a  t      n     t  a
```

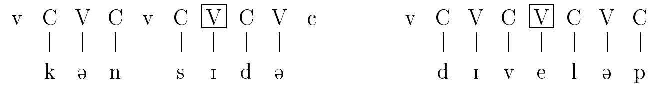
vi. closed syllable shortening

*V:nta, V:tna, V:t#: we seem to need ungoverned C. . .



vii. stress assignment

Word-final consonants are extrametrical. The CV theory cannot really account for this fact. If the word-final consonant belongs to the last VC unit, this is explained: cf. *consíder, devélop*.



viii. compensatory lengthening

We predict the absence of compensatory lengthening triggered by the loss of a word-final consonant.

ix. the minimal word

The minimal word contains at least a core unit.

a. A CV word is subminimal, it does not contain a core unit: vC-Vc.

b. A VC word is ok: <u>VC</u>.

c. A CVV word is ok: vC-<u>Vc</u>-Vc.

(5) The *vc constraint

i. rationale: empty skeletal units are banned (or at least strongly dispreferred), VC, vC, Vc are ok, *vc is not. This constrains the set of possible skeletons, e.g. minimal word could otherwise be vC-vc-Vc (i.e. CV). Also cf. Gussmann & Kaye's (1993) Reduction.

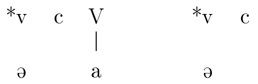
ii. consequences

a. headedness:
long vowels are left-headed, long consonants (geminates) are right-headed

b. geminate constraints:
*#C:, $*C_1C_2$:, *V:V, *V:#

*V:# appears rather controversial. . .

c. default vowel constraints:
*əV, *ə#, where ə represents a melodically empty but pronounced vowel



iii. alternatives: explaining the above without *vc

a. headedness in clusters: We know very little about V clusters. C: may be a coda cluster, which are right-headed. (There are also arguments against equating coda clusters and C:: many languages have the former but not the latter, many have the former word-finally but not the latter. . .)

b. geminate constraints: if C: is a coda cluster, *#C: follows from *#rt, q.v. above. As for $*C_1C_2$:, the asterisked v is ungoverned. V:V loses its explanation, V:# becomes ok.

c. default vowel contraints: *əV is impossible because V governs v

(6) Summary

i. We claim that if we are to accept a skeleton made up of strictly alternating Cs and Vs and that these form units (i.e., if the string begins with one, it must end with the other), then it must be made up of VC and not CV units.

ii. We elaborate on the definition of government and licensing proposed by Scheer & Ségéral (1998).

iii. We define what consonantalness and vocalicness means.

iv. We propose a universal version of the ECP, which accounts not only for the non-pronunciation of empty Vs but also for the pronunciation of empty Cs.

v. We account for the different behaviour of coda clusters and bogus clusters in an explicit way.

REFERENCES

Charette, Monik. 1990. License to govern. Phonology 7. 233–253.

Gussmann, Edmund and Jonathan Kaye. 1993. Polish notes from a Dubrovnik cafe: I. The yers. SOAS Working Papers in Linguistics & Phonetics 3. 427–462.

Kaye, Jonathan. 1990. 'Coda' licensing. Phonology 7. 301–330.

Lowenstamm, Jean. 1996. CV as the only syllable type. Ms. Université Paris 7. Appeared in Jacques Durand and Bernard Laks (eds.). 1996. Current trends in phonology: models and methods. European Studies Research Institute, University of Salford Publications. 419–442.

Lowenstamm, Jean. 1997. The beginning of the word. Ms. To appear in John Rennison and Klaus Kühnhammer (eds.) Phonologica 1996. Syllables!? The Hague: Holland Academic Graphics.

Polgárdi, Krisztina. 1998. Vowel harmony: an account in terms of Government and Optimality. PhD dissertation published by Holland Academic Graphics, The Hague.

Rennison, John R. 1996. Can there be empty elements? On empty heads and empty operators. Paper presented at the Eighth International Phonology Meeting, Vienna, 1–3 November 1996.

Scheer, Tobias and Philippe Ségéral. 1998. The identity of #_ and C._. Paper presented at the 31st Poznań Linguistic Meeting, Poznań, 1–3 May 1998.