

Is the Coda Mirror a phonological object?

- (1) common partition of the string in regard of Lenition/ Fortition



- (2) the disjunctive context $_ \{C,\#\}$ must be invoked when describing a number of phonological processes in many genetically unrelated languages.
consequence: theory must be able to refer to $_ \{C,\#\}$ as a phonological object that is
- single
 - unique = different from any other
 - positive = has its own identity, is not defined as the complementary set of another phonological object
- (3) does the same hold true for The Strong Position $\{C,\#\}_$?
- descriptively YES
 - two possible answers regarding the consequences
 - NO
 $\{C,\#\}_ := \neg (\text{Coda}, V_V)$
 the only identity of The Strong Position is negative: it is defined as the complementary set of the weak positions. It is thereby single and unique.
 - YES
 the phonological identity of The Strong Position must be positive.
 - four arguments in favour of the latter position follow.
 - current syllabic theory is unable to properly discriminate the Weak Position: "Lenition occurs postvocally" is empirically odd and logically contradictory.
 - explanatory adequacy
 - the Mirror effect
 - the non-occurrence of phonological processes is the most extraordinary diachronic process that may be thought of.
- (4) a. $\{C,\#\}_ := \neg (\text{Coda}, V_V)$
supposes a characterization of the Weak Position as a single, unique and positive phonological object.
What is the phonological identity of $\{Coda, V_V\}$?
"A consonant in Weak Position occurs after a vowel."

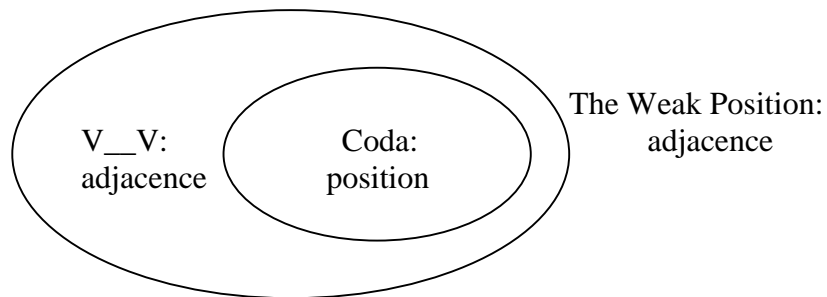
- b. theory must also be able to distinguish between the two kinds of weak positions, that is Coda vs. V__V: both are weak, but do not yield the same results.

process affecting a segment because of its position in a string	Coda	V__V
devoicing	typical	highly improbable
deaspiration (C ^h -->C)	typical	highly improbable
velarisation (l,n-->l,ŋ)	typical	highly improbable
s-debuccalisation (s-->h)	typical	highly improbable
liquid gliding (r,l-->j)	typical	highly improbable
depalatalisation (ɲ-->n)	typical	highly improbable
l-vocalisation (l-->w/o)	typical	highly improbable
r-vocalisation/ loss ([kaad] "card")	typical	highly improbable
[NC] _{hom} : homorganisation of nasals	typical	highly improbable
spirantisation (b,d,g-->β,ðγ)	highly improbable	typical
voicing (t-->d)	highly improbable	typical
rhotacism (z-->r)	highly improbable	typical

- c. only solution when using the familiar model of syllabic structure:

{ __#, __.C, V__V }	= postvocalic	critterion based on
V__V	= flanked by vowels	pure adjacency
{ __#, __.C }	= Coda	pure adjacency
		pure position

- d. contradiction: the superset is defined in pure terms of adjacency. Hence, one of its subsets cannot be defined without making any reference to adjacency. (4c) denies the purely positional character of the Coda.



- e. Attributing Lenition to the influence of a preceding vowel is falsified by the High German Consonant Shift. Consonants are lenited even though they do not occur after a vowel.

	a. #__	b. Coda__	c. Coda	d. V__V
			__C	__#
p	path Pfad	carp Karpfen	sheep Schaf	pope Pfaffe
t	ten ydgm	salt Salz	that das	hate hassen
k	corn kχorn	thank dankχe	streak Strich	make machen

(5) explanation

both options are descriptively and empirically equivalent.

Why are weak positions weak and strong positions strong, rather than the reverse?

Explanatory adequacy may not be achieved unless the Strong Position is assigned a positive identity.

Proposal: The Coda Mirror (ms)

If

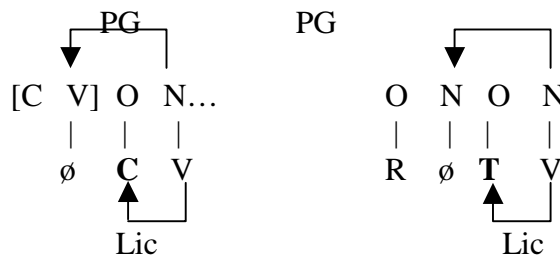
1. Government inhibits segmental expression of its target, cf. vowel-zero alternations
Licensing comforts segmental expression of its target
2. a filled Nucleus may both govern and license
an empty Nucleus may neither govern nor license
3. syllable structure boils down to CVCV Lowenstamm (1996)
4. # = CV Lowenstamm (in press)

then

(6) {C,#}__ = occurring before an empty Nucleus

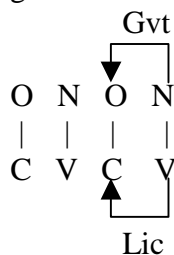
ungoverned but licensed: Coda Mirror

- a. word-initial: [#CV...] b. after a (heterosyllabic) consonant: [...RTV...]



(7) V__V = adjacent to no empty Nucleus

governed and licensed: [...VCV...]



(8) __{C,#} = occurring after an empty Nucleus

ungoverned and unlicensed: Coda

- a. word-final: [...C#] b. before a (heterosyllabic) consonant: [...RTV...]



(9)	Licensing	Government	gloss	segmental health according to predictions
		-	Coda Mirror	splendid
	+	+	V__V	unfavourable
		-	Coda	unfavourable
	-	+	<i>impossible</i>	---

- (10) The Mirror effect
 a. empirical basis of the Coda Mirror

Lenition

	a. #__	b. Coda__	c. Coda		d. V__V
			__C	__#	
Latin obstruents > French	status quo	status quo	loss	loss	spirantisation, voicing, loss
Latin sonorants > Ibero-Romance	status quo	status quo	loss, flapping, velarization	loss, flapping, velarization	loss, flapping
Somali	stop	stop	unreleased stop	unreleased stop	fricative
Tiberian Hebrew	stop	stop	fricative	fricative	fricative
C. Germanic stops > High German	affricate	affricate	---	fricative	fricative

Fortition

	a. #__	b. Coda__	c. Coda		d. V__V
			__C	__#	
IE [j] > Greek	dz̄	dz̄	[j]	[j]	loss
Latin [j] > French	[ʒ]	[ʒ]	---	loss	loss
Cypriot Greek /j/	[j]	stop ([c,k])	---	---	[j]
IE [w] > Armenian		[k]			
cons. epenthesis Latin > French		stop			

b. vocalic manifestation of the Coda: vowel-zero alternations

	zero C__C-V	vowel C__C-∅	vowel C__C-CV	gloss
Moroccan Arabic	kit ∅ -u	k ∅ t i b-∅	k i t i b-∅	write perf.act.3pl, 3sg, 3sg causative
German (optional elision)	inn ∅ r-e	inn e r-∅	inn e r-lich	inner+infl, inner, internal
Tangale (Chadic)	dob ∅ -go	dob e	dob u -n-go	called, call, called me
Somali (Cushitic)	nir ∅ g-o	nir i g-∅	nir i g-ta	young female camel pl, sg indef, sg def
Turkish	dev ∅ r-i	dev i r-∅	dev i r-den	transfer ACC, NOM, ABL
Slavic (e.g. Czech)	lok ∅ t-e	lok e t-∅	lok e t-ní	elbow GEN, NOM, adj.
Hungarian	maj ∅ m-on	maj o m-∅	maj o m-ra	monkey Superessive, NOM, Sublative

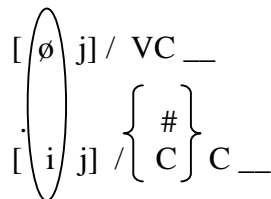
vocalic manifestation of the Coda Mirror: Sievers' Law

Gothic	"light" roots	vs.	"heavy" roots
	√VC-		√VVC- √VCC
2sg pres	nas-j-is		sook-ij-is sand-ij-is
3sg, 2pl pres	nas-j-iþ		sook-ij-iþ sand-ij-iþ
	"save"		"search" "send"

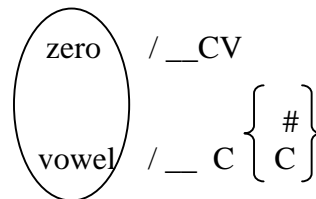
c. summary

Sievers's Law

= vowel-zero alternation
after {C,#} plus C



vowel-zero alternations
before C plus {C,#}



d.	structural description	=	segmental effect	=	syllabic analysis
Coda	__ {#,C}	=	weakness	=	before empty Nuclei
	vs.		vs.		vs.
Coda Mirror	{#,C}__	=	strength	=	after empty Nuclei

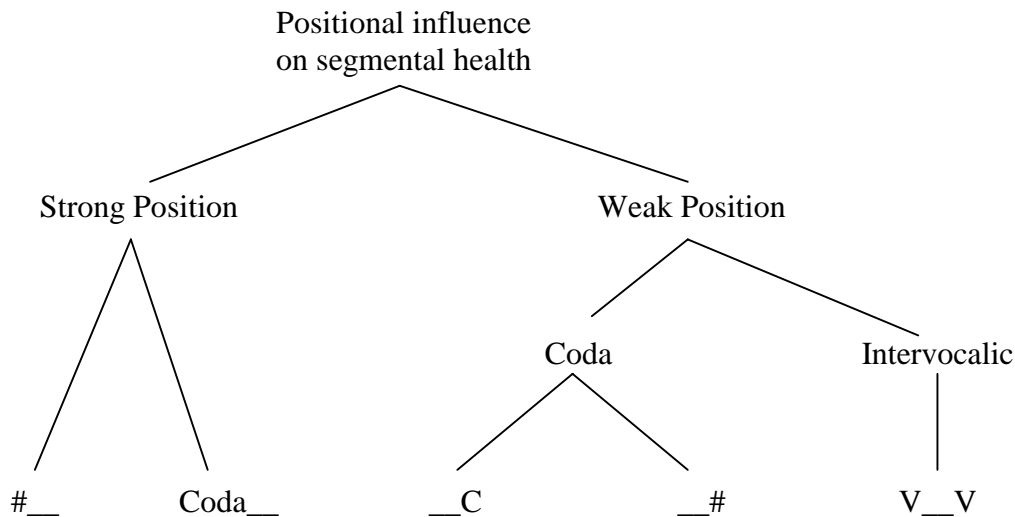
e. a generalisation is missed if the phonological identity construed for the Strong Position is not the Mirror of the one assigned to the Coda.

The Coda Mirror is not only the complementary set of the Coda, it is also its reciprocal expression.

f. if the Strong Position is "anything but {Coda, V__V}", it is not expected to possess a structure of its own. The Strong Position, however, is a very precisely structured object, both in its structural description and regarding the effect it produces on segments.

- (11) Why should phonological theory account for the fact that no process is observed?
- processes do occur in the Coda Mirror: Fortition.
 - language is expected to change in time. An object that does not change is not a language. Absence of change is the most extraordinary thing that may occur diachronically.

(12) Partition of the string



predictions made by The Coda Mirror (ms):

- no strong context can go along with no weak context.
- formally: for any n contexts that behave alike, at least one must c-command all others.
- spell-out: there are 10 and only 10 possible combinations (out of 31, cf. query):

1. #_ + Coda_	= Strong Position	Latin > French,...
2. #_	= half Strong Position	
3. Coda_	= half Strong Position	French consonantal epenthesis
4. _C + _#	= Coda	deaspiration, devoicing,...
5. V__V	= Intervocalic	voicing
6. _C + _# + V__V	= Coda + Intervocalic	spirantisation Tib.Hebrew
7. _C	= half Coda	NC
8. _#	= half Coda	final devoicing
9. _C + V__V	= half Coda + Intervocalic	
10. _# + V__V	= half Coda + Intervocalic	

References

- Lowenstamm, Jean 1996. CV as the only syllable type. In: Current trends in Phonology. Models and Methods, edited by Jacques Durand & Bernard Laks, 419-441. Salford, Manchester: ESRI.
- Lowenstamm, Jean in press. The beginning of the word. In: Syllables?!, edited by John Rennison. Amsterdam: Holland Academic Graphics.
- Ségéral, Philippe, Tobias Scheer ms. The Coda Mirror.