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Où ça?
En syllabe fermée ou en syllabe ouverte si celle-ci est suivie d'une voyelle qui alterne avec zéro

paper (in English) available in .pdf at http://www.unice.fr/dsl/papers.htm

(1)　purpose
　　a.　evaluate the consequences of the empirical object

$$\text{yer context } \underline{\quad} \left\{ \begin{array}{l} \text{C.CV} \\ \text{C\#} \\ \text{C ə} \end{array} \right\} \quad \begin{array}{l} \text{in Closed Syllables} \\ \\ \text{where "ə" alternates with zero} \end{array}$$

　　　　challenge: **how can the disjunction be discarded ?**
　　b.　phonological processes controlled by the yer context:
　　　　1. Slavic vowel-zero alternations
　　　　2. vowel length in Czech
　　　　3. [ɔ] - [u(u)] in Polish and Czech
　　　　4. ą - ę in Polish
　　　　5. ɛ - ə in French
　　　　6. ATRness of mid vowels in French
　　c.　two attitudes in regard of the yer-context
　　　　West: "__Cə" is an optical illusion, this part is reinterpreted as a closed syllable
　　　　East: "in closed syllables" is an optical illusion, all syllables are open
　　　　The West was wrong
　　d.　show that the classical generative analysis of Slavic vowel-zero alternations (Gussmann 1980, Rubach 1984) supposes a distribution of "abstract vowels" that is exactly indentical to the one of empty Nuclei in Standard Government Phonology, i.e. 1) word-finally, 2) locations where a vowel alternates with zero.
　　e.　hence, bring together three traditions among which little communication has existed in the past
　　　　1. French
　　　　2. Slavic
　　　　3. Government Phonology
　　f.　account for the entire set of facts in terms of a unified theory

I. Slavic vowel-zero alternations

(2)　basic pattern of Slavic vowel-zero alternations

	C__C-V	C__C-ø	C__C-CV	gloss
Czech	lokøt-e	loket-ø	loket-ní	"elbow" GENsg, NOMsg, adj.
Polish	wojøn-a	wojen-ø	wojen-ny	"war" NOMsg, GENpl, adj.
etc.				

(3)   naive analysis thereof
   a.   alternation-sites are mute in open syllables
        alternation-sites are vocalized in closed syllables
   b.   their vocalization is a consequence of syllable structure: the immediate trigger is the presence of a Coda in the same syllable.
   c.   the presence or the absence of a following vowel has only an indirect incidence on their vocalization.

(4)   however

| | open syllable | | closed syllable | | |
| | zero | | vowel | | |
	C__C-V	C__C-yer CV	C__C-ø	C__C-CV	gloss
Czech	dom-øk-u	dom-eč-ek-ø	domek-ø	dom-eč-øk-u	house dim.GENsg, double dim. NOMsg, dim. NOMsg, double dim. GENsg
Slovak	kríd-øl-o	kríd-el-iec-ø	kríd-el-ø	kríd-el-øc-e	wing dim.NOMsg, double dim. GENpl, dim. GENpl, double dim. NOMsg
Polish	buł-øk-a	buł-ecz-ek-ø	buł-ek-ø	buł-ecz-øk-a	bread roll dim. NOMsg, double dim. GENpl, dim. GENpl, double dim. NOMsg
Serbo-Croatian	vrab-øc-a	vrab-ac-a	vrab-ac-ø		sparrow GENsg, GENpl, NOMsg

(5)   generalisation
   a.   alternation-sites are vocalized in open syllables iff the following vowel alternates with zero itself.
   b.   vowels that alternate with zero are called yers in Slavic for historical reasons.
        They come in two flavours:
        one front and palatalizing: "ь"
        one back and non-palatalizing: "ъ"
   c.   hence, zero occurs in closed syllables and before yers.
   d.   theory is called to be able to refer to this disjunctive context in a uniform fashion.
        The closed-syllable analysis is contrary to fact.
   e.   **the Eastern way**:
        generalisation of the yer-context
        alternation-sites are vocalized iff followed by a yer in the next syllable.

> **Lower**
> ь,ъ —> e, o / __C_0 {ь,ъ}

Havlíkovo pravidlo 1889 (Havlík 1889), Lower: Lightner (1965), Gussmann (1980), Rubach (1984), etc.

(6) price to pay: underlying yers have to be postulated where they never appear on the surface.
   a. the underlying structure of the word bułeczek contains three "abstract vowels":
      b u ł ь cz ь k ъ
   b. derivation: cyclic application of Lower

underlying	Lower	yer-deletion	surface
buł-ьcz-ьk-a	buł-ecz-ьk-a	buł-ecz-k-a	bułeczk-a
buł-ьk-ъ	buł-ek-ъ	buł-ek	bułek
buł-ьcz-ьk-ъ	buł-ecz-ek-ъ	buł-ecz-ek	bułecz-ek
buł-ьk-a	buł-ьk-a	buł-k-a	bułk-a

(7) consequences
   a. Lower denies any causal relation between syllable structure and the vocalization of alternation sites.
      Vowel-zero alternations are not triggered by the presence or absence of a consonant in a given syllable (Coda-analysis), but by an intervocalic communication.

      ==> the causal relation is not vertical, but syntagmatic

   b. we face a relation between two yers.

II. Other Slavic alternations

(8) however, this distributional pattern extends beyond vowel-zero alternations

	open syllable		closed syllable		
	C__C-V	C__C-yer	C__C-ø	C__C-CV	gloss
a. Czech VV-V	žáb-a	žabek-ø	žab-ø	žab-øk-a	frog NOMsg, dim. GENpl, GENpl, dim. NOMsg
	jádr-o	jader-ní	jader-ø		stone (of a fruit) NOMsg, nuclear, GENpl
b. Czech ů-o	nož-e	nůž-ek-ø	nůž-ø	nůž-øk-y	knife GENsg, scissors (=dim.) GENpl, knife NOMsg, scissors NOMpl
c. Polish ó-o	krow-a	krów-ek-ø	krów-ø	krów-øk-a	cow NOMsg, dim. GENpl, GENpl, dim. NOMsg
d. Polish ą-ę	zęb-a	ząb-ek	ząb-ø	ząb-øk-a	tooth GENpl, dim. NOMsg, NOMsg, dim. GENsg

(9) (8)b-d are synchronically inactive. They are representatives of one single process that is common in all Western Slavic languages (Polish, Czech, Slovak):
   [ɔ] before a word-final voiced consonant is lengthened

	input	Cz	Pol	Pol ("ą" = nasal [ɔ])
		nož - nož-e	krow - krow-a	ząb - ząb-a
a.	o --> oo / __C$_{+voice}$#	noož - nož-e	kroow - krow-a	ząąb - ząb-a
	further diachronic events			
b.	Pol + Cz: oo > uu	nuuž - nož-e	kruuw - krow-a	—
c.	Pol ą > ę	—	—	ząąb - zęb-a
d.	loss of length in Pol	—	kruw - krow-a	ząb - zęb-a
e.	modern situation	nůž - nož-e	krów - krow-a	ząb - zęb-a

   hence all alternations at hand illustrate vowel quantity, not quality.
   The yer context conditions vowel quantity

(10) hence
    a. vowels behave alike in closed syllables and in open syllables iff the following vowel is a yer.
    Or: vowels in open syllables that occur before yers behave like if they stood in closed syllables.
    b. if the identity of this distribution with the one known from vowel-zero alternations is not accidental, the generalisation in order must be as follows:
        1. vocalic alternations in Slavic languages are triggered by yers.
        2. triggering yers are "abstract vowels" that are underlyingly present
            1. in locations where a vowel alternates with zero
            2. in word-final position
        3. target-vowels may be yers themselves (vowel-zero alternations), but may be regular vowels as well
        4. the generalisation may not be achieved using Lower.
        It is of more general intervocalic nature

III. French

(11) however, this distributional pattern extends beyond Slavic
French [ɛ] – schwa alternation

closed syllable	open syllable		
ɛC#	ɛCə	əCV	
mɔχsɛl	mɔχsɛləmã	mɔχsəlɔ̃, mɔχsəle	1) je, tu, il, ils morcèle(s)(nt), 2) morcèlement, 3) nous morcelons, 4) inf./ part./ vous morceler/ -é/ -ez
apɛl	apɛləra	apəle	j'appelle, appellera, appellation
ãsɔχsɛl	ãsɔχsɛləmã	ãsɔχsəle	j'ensorcèle etc., ensorcèlement, ensorceler etc.
aχsɛl	aχsɛləmã	aχsəle	je harcèle etc., harcèlement, harceler etc.
aʃɛv	aʃɛvəmã	aʃəve	j'achève etc., achèvement, achever etc.
sɛvʁ	sɛvʁəʁa	səvʁe	elle sèvre, sèvrera, sevrer, sevrage
		səvʁaʒ	

(12) French ATR-alternations of mid vowels

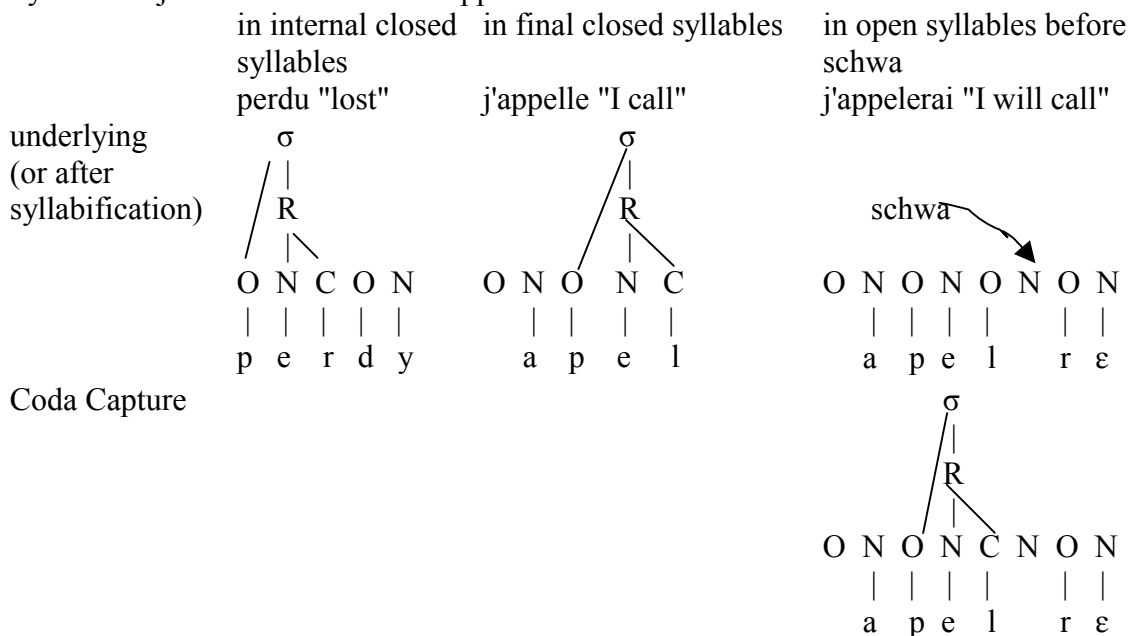|	closed syllable	open syllable		
		__Cə	__CV	
e	fɛt	sɛləʁi	fete	je fête, céleri, fêter
	pɛʁdy	bɛtəʁav	peʁiʁ	perdu, betterave, périr
	səʁɛn	sərɛnəmã	seʁenite	sereine, sereinement, sérénité
o	kɔd	mɔkəʁi	kode	code, moquerie, coder
	rɔz	rɔzəʁɛ	rozje	rose, roseraie, rosier
	sɔbʁ	sɔbʁəmã	sobrijete	sobre, sobrement, sobriété
ø	øʁœz	øʁœzəmã	apøʁe	heureuse, heureusement, apeuré
	œvʁ	bœvəʁi	øvre	œuvre, beuverie, œuvrer
	ʒœn	vœləri	ʒønɛs	jeune, veulerie, jeunesse

(13) generalisation
- a. Ajustement en syllabe fermée
the French facts are well known and extensively discussed for example in
Dell (1973:209ss), Selkirk (1972:367ss), Schane (1968:30ss), Valdman (1972), Morin (1986,1988), Tranel (1987,1988)
- b. +ATR and schwa occur in open syllables
- c. -ATR and [ɛ] occur in closed syllables AND in open syllables if the following vowel is a schwa.
Or:
-ATR and [ɛ] occur in closed syllables AND in open syllables if the following vowel is alternating with zero itself.

(14) **the Western way**: Anderson (1982) How to get something for nothing
- a. paradox: le beurre et l'argent du beurre
  1. segmentally, the only possible underlying identity of the alternants zero, schwa and [ɛ] is zero = **nothing**
  2. the occurrence of alternating itens cannot be predicted: *pelage* [pəlaʒ], [plaʒ] vs. *plage* [plaʒ], *[pəlaʒ], hence it must be **something**
- b. solution: autosegmental structure
schwa is melodically nothing, but syllabically something, i.e. an empty Nucleus

(15) Coda Capture: we face an Onset that behaves like a Coda, so let's make it a Coda
the disjunction "in closed syllables and before schwa" is reduced to "in closed syllables" through Coda Capture:
the Onset of empty Nuclei is resyllabified as the Coda of the preceding syllable. Closed Syllable Adjunstment can then be applied and concerns all relevant contexts.

Closed Syllable
Adjustment
e —> ε / Coda
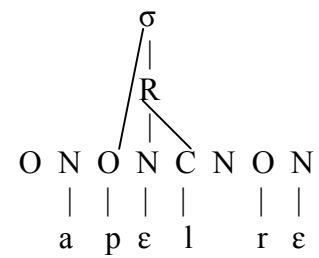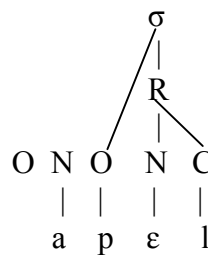
vocalization of
empty Nuclei
(optional)
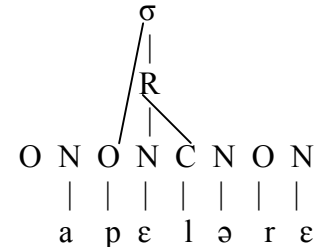
IV. The puzzle

(16)

alter-nation	statement	object occurring in		example	
	surface	__CV if V≠schwa	closed syllable and __CV if V=schwa	__CV	__Cyer
	using yers	__CV	__Cyer		
Slavic vowel-zero	zero	vowel	dom-øk-u	dom-ek, dom-eč-ek, dom-eč-øk-u
French schwa - [ε]	schwa	[ε]	[apεl] *appelle*	[apəle] *appeler*
Pol + Cz vowel length	V	VV	cf. detail	cf. detail
Czech vowel length French ATR	VV +ATR	V -ATR	žáb-a [fεt] *fête*	žab, žak-ek, žab-øk-a [fete] *fêter*

detail				
	V	VV		
Polish o-ó	[ɔ]	[u]	krow-a	krów, krów-ek, krów-øk-a
Czech o-ů	[ɔ]	[uu]	nož-e	nůž, nůž-øk-y, nůž-ek
Polish ą-ę	ą (> ę)	ąą (> ą)	zęb-a	ząb, ząb-ek, ząb-øk-a

(17) hence, if the incidence of the yer context is not accidental
    a. **Eastern syntagmatic solution** (built with no regard of Government Phonology)
        in case the East is right, there must be yers in French:
        /perьdu, appelьrai, appellь/
        absurd? Not if they are considered as "abstract vowels", i.e. empty Nuclei.
    b. Government Phonology (built with no regard to Slavic)
        empty Nuclei exist
        1. in locations where vowel-zero alternations occur
        2. word-finally
        identical proposals made independently and on different grounds: empirical (Slavic) in
        the East, theoretical in GP.

c. Government Phonology provides the tools for a unified analysis
   1. "abstract vowels" = empty Nuclei
   2. Lower describes a lateral internuclear relation = Proper Government
d. **Western vertical solution**
   fails to recognize the fundamental fact that the vowels that trigger the process in preceding open syllables are not arbitrarily chosen, but possess a very peculiar and **non-melodic** property: they alternate with zero.
   If, say, [a], [u] or any other non-alternating vowel were observed to have this function, the Coda Capture rule would simply state
   "an Onset is resyllabified as the Coda of the preceding syllable if the next vowel is [a], [u] etc."
   Under Coda Capture, the alternating property of the triggering vowel is pure accident. This is the expression of two typical sortcomings of early generative endeavour (e.g. Foley 1977:3ss, Harris 1999):
   1. no causal relation between the changed item and the trigger
      rules transform X into Y in the vicinity of the context A. We are not interested in the causal relation involved: why does A turn X into Y rather than into Z? Why is X turned into Y by A rather than by B?
   2. the grammar can describe all processes of human speech, and all the rest
      anything can be a rule and change any object into any other object, the only goal being to produce the attested result on the surface.

V. There are two kinds of vowel-zero alternations in nature

(18) Modern Slavic vs. the rest of the world
   a. Slavic: alternation sites are vocalized before vowels that alternate with zero
      everybody else: alternation sites are not vocalized before vowels that alternate with zero
   b. in other words: given a sequence of alternation sites
      Lower (Modern Slavic) = all alternation sites but the last one are vocalized
      Havlík (everybody else) = counting from the right edge, every other alternation site is vocalized
   c. Proper Government derives Havlík, not Lower

(19) illustration: "ə" = vowel that alternates with zero

	zero C__C-V	vowel C__C-ø	vowel C__C-CV	vowel C__Cə	zero C__Cə
Moroccan Arabic	kɨtøb-u	køtɨb-ø	kɨttɨb-ø		køtɨb-ø
German	innør-ə	innər-ø	innər-lich		innər-əs
French	je tø montre				je tø le montre jø te le montre
Havlík: Old Slavic, e.g. Old Polish	pøs-a	piɛs-ø	piɛs-k-a		pøs-ek

Modern Slavic (e.g. Polish)	pøs-a	piɛs-ø	piɛs-k-a	piɛs-ek

(20) this must be accounted for by a parameter. Theories that treat both patterns as unrelated do not qualify.

    a.   the parameter concerns the behaviour of alternating sites in presence of a following alternating vowel.

    b.   translation in to terms of Government: in the Modern Slavic pattern, alternating vowels do not dispense Proper Government

psa "dog GENsg"	pies "id. NOMsg"	pieska "id. dim GENsg"	piesek "id. dim NOMsg"
PG	PG̸	PG̸ PG	PG̸ PG̸
O N O N	O N O N	O N O N O N	O N O N O N
| | |	| | |	| | | | |	| | | | |
p s a	p ie s	p ie s k a	p ie s e k

    c.   Hence: parametrized lateral actorship for different basic nuclear objects

	can govern
full Nuclei	yes
schwa	parametrized
final empty Nuclei	parametrized
internal empty Nuclei	no

VI. Self-contradictory evidence ?

(21) how come that the strong alternant sometimes appears in the yer context, and at other times in __CV ?

		strong alternant		weak alternant	
		yer context	__CV	yer context	__CV
a.	Slavic vowel-zero	vowel			zero
	French schwa - [ε]	[ε]			schwa
	W Slavic o --> oo	VV			V
b.	Czech vowel length		VV	V	
	French ATR		+ATR	-ATR	

(22) There are two lateral forces in nature

    a.   all contextual parameters being exactly identical, how can we conceive of opposite results ?
there is no solution to this puzzle unless it is accepted that the yer context does not represent one, but two empirical patterns.

    b.   Proper Government
is the lateral force that provokes the phonetic absence of its target
Its general action is to inhibit the melodic expression of its target, cf. lenition, Ségéral & Scheer (2001)
it is therefore not expected to back up the melodic expression of its target

    c.   for entirely independent reasons (lenition), a second lateral force is needed which has opposite properties:
Government: inhibits the segmental expression of its target
Licensing: backs up the melodic expression of its target
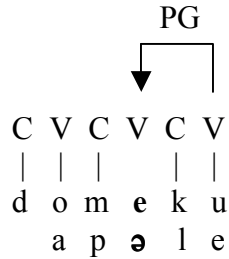Government and Licensing have the same phonotactic properties.

d. cases under (21)a are instances of Government
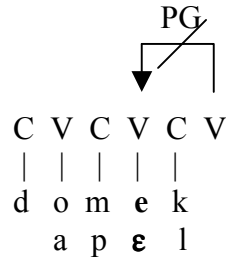   cases under (21)b are instances of Licensing

(23) a. instances of Government
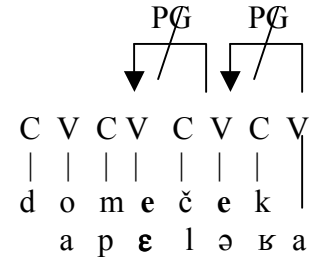   Slavic V-ø: dom-ø̸k-u GENsg   dom-ek NOMsg   dom-eč-ek adjective
      French [ɛ]-schwa: appeler inf.   appelle 3rd sg pres   appellera 3rd sg future

```
        PG                           PG                      PG      PG
      ┌──┐                         ┌──┐                     ┌──┐   ┌──┐
      ▼  │                         ▼  │                     ▼  │   ▼  │

   C V C V C V                  C V C V C V              C V C V C V C V
   | | |   | |                  | | | | |                | | | | | | |
   d o m e k u                  d o m e k                d o m e č e k
      a p ə l e                    a p ɛ l                  a p ɛ l ə ʁ a
```

      b. instances of Licensing
      Slavic V-VV: žáb-a NOMsg   žab GENpl   žabek dim GENpl
      French [e]-[ɛ]: sérénité noun   sereine adj. fem   sereinement adverb

```
        Lic                          Lic                     Lic      PG
      ┌──┐                         ┌──┐                     ┌──┐   ┌──┐
      ▼  │                         ▼  │                     ▼  │   ▼  │

   C V C V C V                  C V C V C V              C V C V C V C V
   | |     | |                  | |     |                | |     | | |
   ž a   b a                    ž a   b                  ž a   b e k
  se r e   n i t é              ser  ɛ   n                se r ɛ   n ə m ã
```
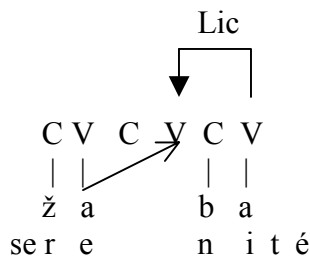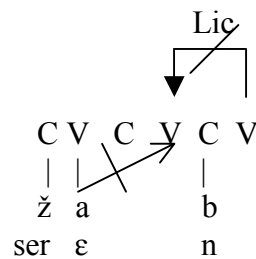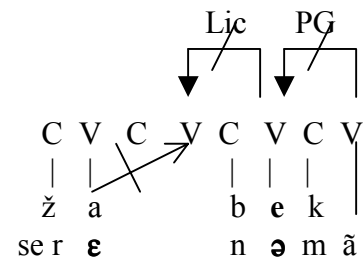
(24) parametrized lateral actorship of schwa

| | schwa may | |
	govern	license
modern Slavic	no	no
French, German and Havlík	yes	no

(25) basic nuclear objects and their lateral actorship

	can govern	can license
full Nuclei	yes	yes
schwa	parametrized	parametrized
final empty Nuclei	parametrized	parametrized
internal empty Nuclei	no	no

(26) conclusion
  a. the West was wrong: the closed syllable is a mirage.
  b. the West was right: schwas are empty Nuclei.
  c. parametrizing the lateral actorship of basic nuclear categories allows to
    1. do away with the yer-disjunction
    2. eliminate serialism from the Eastern anaylsis
    3. achieve cumulativity in the sense of Durand & Laks (1996): provide a unified solution for the same empirical object that has been treated independently and without recognition of the other by Slavicists, phonologists of French and within Government Phonology.
       Significantly, all these approaches were perfectly contemporary: Gussmann (1980), Rubach (1984), Anderson (1982), Spencer (1986), Kaye et al. (1985,1990).
    4. propose a unified theory of vowel-zero alternations
  d. typology of lateral relations
     Standard Government Phonology: Government was either internuclear or interconsonantal. Licensing relations held between vowels (heads) and consonants (complements) or among consonants
     The Coda Mirror: introduction of Nucleus-to-Onset Government
     here: introduction of internuclear Licensing (see also Yoshida 1993)
     empirical scope: vowel length. Long vowels may exist only if their complement is licensed.

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