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The beginning of the word in Slavic

(1) purpose
   a. look at the diachronic evidence from Slavic in order to assess the situation of this language family with respect to a well-known phonological phenomenon, lenition and fortition. Point out its surprising and undue paucity when compared to other families such as Romance and Germanic.
   b. on the grounds of the scarce evidence, evaluate a prediction made by the Coda Mirror (Ségéral & Scheer 2001): word-initial consonants are strong. This seems to be counterfactual in Slavic.
   c. insert the Slavic situation in a broader cross-linguistic picture: word-initial consonants may or may not be strong.
   d. theory makes a prediction: three seemingly unrelated typological features must always co-occur within a given language:

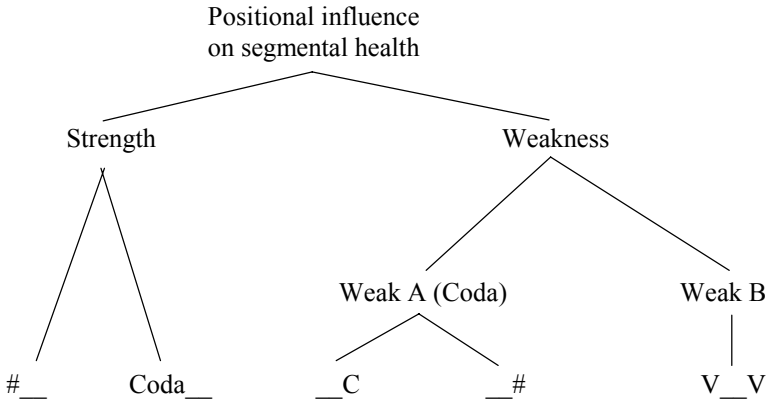
1. initial C weak	1. initial C strong
2. existence of initial clusters that violate sonority sequencing	2. non-existence of initial clusters that violate sonority sequencing
3. possibility for the first vowel of a word to alternate with zero.	3. impossibility for the first vowel of a word to alternate with zero.

1. Strong vs. Weak positions: the "regular" picture (Romance, Germanic)

(2) strong vs. weak positions: empirical situation
[Ségéral & Scheer 2001,forth, Scheer 2004:§110, §556), Szigetvári 1999]
   a. consonantal strength is a neogrammarian concept
   Based basically on Germanic and Romance languages, the picture that is resident in the literature is the following
   b. weak position A: the Coda = __{#,C}
   "word-finally and before a consonant"
   this so-called Coda context has played a major role in generative theory in the 70s-early 80s: it was on these grounds that syllable structure (absent from SPE) was reintroduced into the theory.
   c. weak position B: V__V
   intervocalic. Weak as well, but crucially weak in a different way than the Coda. E.g. voicing or rhotacism are common in V__V, but unheard of in the Coda. Conversely, l-vocalisation is common the Coda, but does not occur in V__V.
   d. Strong Position: {#,C}__
   "word-initially and after a consonant"
   Called "position appuyée" in the Romance literature since the 19th century and well known there, it was by and large absent from modern theory - Ségéral & Scheer (2001) have called attention to it.

e. challenges:
   1. just as for the Coda disjunction, reduce the disjunction of the Strong Position
   2. explain the exact symmetry with the Coda: __{#,C} vs. {#,C}__
   3. explain the opposite effect produced: weakness vs. strength

f. 2.+3. = the mirror effect. This is why Ségéral & Scheer (2001) call the Strong Position the Coda Mirror.



2. Strong vs. Weak positions: the Slavic picture[1]

Slavic record of lenition & fortition
(for pan-Slavic diachronics of the standard languages [and a few dialects] - we aim at exhaustivity here)

(3) unconditioned fortitions/ lenitions
[not particularly interesting]
PSl **g** > **ɣ/h** in Cz, Sk, Uk, BR
e.g. (standard) Ru *gorá* 'mountain' = Cz/Sk *hora*

[1] Abbreviations used:
T = any obstruent, R = any sonorant.
BR = Byelorussian, Bu = Bulgarian, Cz = Czech, E = English, G = German, Ma = Macedonian, OCS = Old Church Slavonic, Po = Polish, PSl = Proto-Slavonic, Ru = Russian, SC = Serbo-Croat, Sk = Slovak, Sn = Slovene, So = Sorbian, Uk = Ukranian.

(4) Lenition in weak positions

a. l-vocalisation
Typically found in
Sn, SC, Uk (also in some Sk dialects)
occurs as unconditioned in Po/So.
Examples (taken from Sn; the other languages exhibit the same pattern):

'be':	PassPartMascSg: *bi[w]*	PassPartFemSg: *bi[l]á*	(= /_#)
'sick, ill':	NomSgFem: *bó[w]na*	NomSgMascIndef: *bo[l]án*	(= /_C)
Also: 'full'	(__C within a morpheme):	**poln- > po[w]n-*	(= /_C)

b. loss of consonantal articulation, transfer of their melodic properties onto the preceding vowel

1. creation of nasal vowels VN > Ṽ
In PSl, nasal Codas are dropped, but nasalisation remains, "landing" on the preceding vowel.

'woman-AccSg':	**ženam > ženõ*	(= /_#)	in PSl
'road':	**pontь > põtь*	(= /_C)	

NOTE: Traditionally, this change is considered to be a "side-effect" of the so-called Open Syllable Law, an alleged conspiracy in the evolution from IE to PSl that aims at eliminating closed syllables. Yet, closed syllables *are* reconstructed for PSl, as in **bergъ* 'shore, bank', **melko* 'milk', with a liquid in Coda position; while it is true that (most) daughter languages eliminate these Codas (cf. Ru *béreg, molokó*, Sn *breg, mléko*, etc.), this is very late, dating to the period of the dissolution of PSl the earliest, if not later. Also, PSl has ST clusters (where S = coronal fricative, T = coronal plosive), as in **nesti* 'to bring', **dьžd'ь* 'rain', whose syllabification as an Onset is rather dubious. E.g., Horálek (1966), Bernštejn (1961), Comrie & Corbett (1993).

2. loss of glides in Codas plus merger with preceding vowel
(= monophthongisation) [may be analysed as a lenition]

'sing-Inf':	*p**oj**-tej	> pētī	> pě**ti**	(= Coda Yod)
'sing-3SgPresInd:	*p**oj**-e-ti		> p**oj**etь	(= Onset Yod)

The verbal suffix *-ow-*:

'Inf':	***-ow**-ā-tej	> **-ow**ātī	> **ow**ati (cf. Sn *delováti* 'function')
'2PlPresInd':	***-ow**-je-te	> **-ū**jete	> **u**jete (cf. Sn *delújete*)

Note: the assumption that **ej/oj/ew/ow** were diphthongs is quite unfounded.

(5) Fortition

a. PSl *w > v in Strong Position (#__) and intervocalically V__V
==> everywhere but in Codas
==> V__V is stronger than the Coda position
[classical topic in the Slavic literature: e.g., Cyran & Nilsson (1998)]

PSl ***w** > **v** / __V in Sn, Sk, Uk, BR
in the other languages, the change is unconditioned (except Sorbian where it does not take place).
Examples (from Sn again):

(1) 'new': (i) NomSgMascIndef: no[w] (ii) NomSgFem: nó[v]a
(2) 'even': (i) NomSgFem rá[w]na (ii) NomSgMascIndef: rá[v]en
(3) 'will$_N$': [v]ólja
(4) 'door': [w]ráta ~ [u]ráta (plus subsequent vocalisation of [w])
'pull': [w]léči ~ [u]léči (plus subsequent vocalisation of [w])
(5) 'world': s[v]et

the subsequent vocalisation of w under (4) shows that the clusters wr, wl have never been branching Onsets: they were syllabified as Coda-Onset sequences. Hence PSl *w first behaved like everywhere else in Coda position (> w), then vocalised because of its **initial** position (by contrast, Coda-w under (1) and (2) is preceded by a vowel).

b. Psl *y > l' / C_{lab}__
yod strengthens to a palatal liquid after (unpalatalisable) labials
elsewhere (= after non-labials) it produces regular palatalisation.

Scenario: the regular movement is palatalisation. However, labials are not liable to palatalisation in PSl (nor in any other language). The surrogate resolution is strengthening to a palatal lateral.

Labials:	**pj bj wj mj**	**>**	**pl' bl' wl' ml'**
Coronal stops:	**tj dj**	**>**	**t' d'**
Sibilants:	**sj zj**	**>**	**š ž**
Coronal sonorants:	**nj lj rj**	**>**	**n' l' r'**
Velars:	**kj gj xj**	**>**	**č dž (> ž) š**

Initial Labial + Yod:
- PSl **bjudo/bjudъ* 'dish' > OCS *bl'udo/bl'udъ*, Po *bluda*, Ru *bl'udo*
- PSl **pjujõ* 'I spit' > OCS *pl'ujõ*, Sn *pljújem*, Po *pluję*, Cz *pliju*, Bu *pl'úja*

- **plāk-jām* 'I cry' > *plačõ*, **log-jām* 'I lay' > *ložõ*, **māx-jām* 'I wave' > *mašõ*;
- **nos-jām* 'I carry' > *nošõ*, **woz-jām* 'I transport' > *vožõ*;
- **min-jām* 'I think' > *mьn'õ*, **wol-jām* 'I want' > *vol'õ*, **gowor-jām* 'I speak' > *govor'õ*;
- **xot-jām* 'I want' > *xošt'õ*, **gord-jām* 'I build' > *gražd'õ* (OCS ***t'/d' > št'/žd'***)
- **kowp-jām* 'I buy' > *kupl'õ*, **lewb-jām* 'I love' > *ľubl'õ*, **low-jām* 'I chase' > *lovl'õ*, **lom-jām* 'I break' > *loml'õ*.

NOTE: In West Slavonic and Bulgaro-Macedonian, the resulting *labial + l'* cluster was subsequently eliminated across a morpheme boundary, cf. Sn *zémlja*, Ru *zeml'á* vs. Cz *země*, Bu *zem'á*. Inside a morpheme, however, the lateral C was retained, cf. Po *bluda*, *pluję*, Cz *pliju*, Bu *pl'úja* above.

(6) what about the evolution of yod in other positions ?

a. Strong Position:
   1) C__ cf. above
   2) #__
   problem: yod is expected to strengthen, but it doesn't.
   - PSl **junъ* 'young', no reflex of ***l'unъ*
   - PSl **jestь* 'be-Sg3PresInd': Pom *jest*, Ru *jest'*, SC *je(st)*, Sn/Sk *je* — Bu *e*
   - 'already': Cz *už*, OCS *ju(že)* — Ru *užé*, Cz *už*, OCS *u(že)*

   - 'I': OCS *azъ ~ jazъ*; Sn *jaz*, Ru *ja*, Cz *já* — Bu *az*
   - 'yoke': Cz *jho* — OCS/Sn/Ru/Bu *igo*

b. intervocalic position V__V: yod is maintained or lost
   - PSl **dobra-jego* 'good-GenSgMascDef': OCS *dobrajego ~ dobraego ~ dobraago ~ dobrago*, Cz *dobrého*, Po *dobrego*, Sn *dóbrega*
   - PSl **dělajetь* 'work-Sg3PresInd': Ru *d'élajet* — Cz *dělá*, Sn *déla*

c. Coda
   yod is lost, cf. (4)b2.

d. **==> what makes the initial position special in Slavic ?**

(7) another case that singles out the initial position as non-strong in Slavic:
NorthEastern Polish dialects (Mazovian, Kurp): strengthening of yod
[Friedrich (1955), Furdal (1955), Dejna (1994, map 18), Czaplicki (1998). Data and analysis from Kijak (forth)]

a. all over Polish and its dialects: "soft labials"
   młod-y [mwɔd-ɨ] "young masc." ==> the adj masc marker is -y
   młod-a "young fem." the adj fem marker is -a
   grub-y [grubɨ] "fat masc.") hence a regular b
   gruba [gruba] "fat fem."
   but
   głupi [gwupi] "idiotic masc." hence a soft labial
   głupia [gwupja] "idiotic fem."

b. let us now look at the behaviour of yod in North-Eastern dialects

c. y > ʑ / C__
   in other words
   b' > ʑ
   (only b' is illustrated, the behaviour of p', f', v' and m' is analogous)

	Polish spelling	Polish	North. Mazovian	Kurp	gloss
initial	biały	bjawɨ	bʲawɨ	bʑawɨ	white
medial	kobieta	kɔbjɛta	kɔbʲɛta	kɔbʑɛta	woman
final	drób	drup	drupç	drupɕ	poultry

d. BUT: y > y / #__
   jabłko, *jagoda*, *jeleń*, *jutro* "apple, berry, deer, tomorrow"

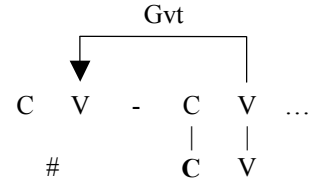
e. yod is also unchanged in all weak positions:
V__V *dojąć*, *jajeczko*, *zając* "arrive, small egg, rabbit"
__C bajka, czajnik "fary tale, kettle"
__# bój, kraj "battle, country"

(8) summary
a. in Slavic the only Strong Position seems to be after a consonant (= post-Coda)
b. the initial position seems to be non-strong

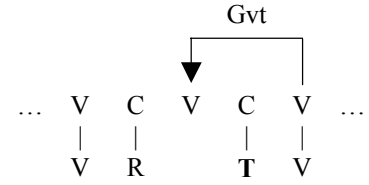
3. CVCV and the Coda Mirror: predictions

(9) predictions made conjointly by
1. CVCV (Lowenstamm 1996, Szigetvári 1999, Scheer 2004)
2. The Coda Mirror
3. the theory of the initial CV (Lowenstamm 1999, Scheer 2000, 2004, forth)
the detail of the demonstration would not fit into the frame of this conference. Here are just the general properties:
a. CVCV
– rather than by the familiar tree, syllable structure is expressed by lateral relations (Government and Licensing)
– "flatness": hence there is no syllabic arborescence at all: no Codas, no Rhymes, no branching Onset/ Nuclei
– only a strict sequence of non-branching Onsets and non-branching Nuclei
– consequence: all consonant clusters are separated by an empty Nucleus
b. the initial CV
– diacritics such as # etc. are non-linguistic and must be eliminated: syntax or physics don't deal with pink panthers either. Having diacritics in a scientific theory is nothing else than the confession that there is something that we don't understand but which is important, which we therefore mark with an arbitrary symbol.
– hence the real linguistic identity of # etc. needs to be discovered.
– proposal: the linguistic identity of "the beginning of the word" is an empty CV unit.
c. hence the 5 relevant contexts are
Strong Position {#,C}__

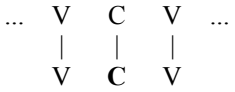
a. word-initial consonant #__



b. post-Coda consonant C.__

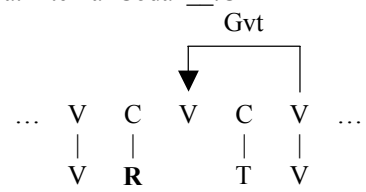


intervocalic position V__V

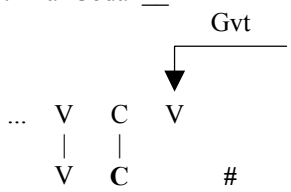


Coda position __{#,C}

a. internal Coda __.C



b. final Coda __#



d. generalisation

ø__	= after an empty Nucleus	= Strong Position
__ø	= before an empty Nucleus	= Coda
V__V	= no adjacent empty Nucleus	= intervocalic position

(10) language-specific parameter: the initial CV is either present or absent

a. the following three properties are predicted to be conjointly instantiated by languages that possess the initial CV:
   1. this is a #TR-only language, i.e. where only initial clusters of rising sonority occur: *#RT, *#TT, *#RR.
      Reason: the Nucleus of the initial CV needs a Governor, and the empty Nucleus enclosed by TR is taken care of by the consonants, unlike its peer enclosed in RT, TT and RR.
   2. word-initial consonants are strong in this language.
      Reason: they are ungoverned since the first vowel must govern the empty Nucleus of the initial CV.
   3. the first vowel of words in this language cannot alternate with zero.
      Reason: the Nucleus of the initial CV needs a Governor.

b. the following three properties are predicted to be conjointly instantiated by languages that lack the initial CV:
   1. this is an anything-goes language with respect to word-initial clusters: #TR is as good as #RT, #TT and #RR.
      Reason: the first vowel of the word must only take care of the empty Nucleus enclosed within the cluster - the initial empty Nucleus is lacking.
   2. word-initial consonants are non-strong in this language (actually intervocalic).
      Reason: they are governed since the first vowel has no governing duty for the empty Nucleus of the initial CV and hence can govern its own Onset.
   3. the first vowel of words in this language can alternate with zero.
      Reason: there is no initial empty Nucleus that the first vowel of the word needs to govern.

4. How does Slavic behave with respect to these criteria?

(11) initial clusters
general picture (roughly):

	#TR	#RT, #TT, #RR
1. Northern (East-West)	yes	yes
2. Southern	yes	no
3. PSl	yes	no

(12) distribution of #RT clusters among Slavic languages
[data from Scheer 2000, the exhaustive list of Slavic #RT words in the 14 languages quoted is available at www.unice.fr/dsl/tobias.htm, then "other stuff to download/ Slavic data"]

		West						South				East		
#RT cluster		Cz	Sk	Po	USo	LSo	Ka	Bu	Ma	SC	Sn	Ru	Uk	BR
j+T	jd	+			+									
	jh	+												
	jm	+	+										+	
	js	+												
r+T	rb									+				
	rt͡s	+		+										
	rt͡ʃ	+								+				
	rk, řk	+												
	rd, rd͡z, rd͡ʒ	+		+						+		+		
	rz	+								+				
	rʒ	+		+	+					+		+	+	
	rf													
	rs													
	rt	+		+						+		+	+	
	rv, řv	+		+						+		+	+	
l+T	lb	+		+								+		
	lg, lh	+		+			+					+	+	
	lʒ	+										+	+	
	lz	+		+	+									
	lk	+		+										
	lp	+												
	ls, lɕ	+		+								+		
	lʃ												+	
	lv	+		+								+	+	
m+T	md	+	+	+										
	mg, mh	+	+	+			+					+	+	
	mʒ	+		+								+	+	
	mz													
	mx			+								+		
	mʃ	+	+	+	+		+					+	+	
	mk	+		+			+					+		
	mt͡ʃ												+	
	ms, mɕ	+		+								+	+	
	mz	+	+	+	+							+	+	
	mt	+												
n+T	absent													

(13) but: additional information needed
  a. initial clusters
    1. r in SC initial #rC is always syllabic:
       SC *ŕtovi* ‘cape-NomPl’ with a syllabic [r̩], cf. also *ŕt* ‘Id.-NomAccSg’
    2. r in orthographic Sn #rC is always preceded by a schwa
       rdéč ‘red’ = [ərˈdɛt͡ʃ]
  b. vowel-zero alternation of the first vowel
    1. BR: yes, but accompanied by the appearance of an epenthetic I before the first consonant: "lion" lav - ilv-a.
    2. anything-goes languages (Cz, Ru etc): yes
       #TR-only languages (Ma, Bul): no
  c. strength of the first consonant
     scarce evidence, two examples reviewed:
    1. North-Eastern Polish dialects: good prediction since
       – they are anything-goes
       – initial yod is non-strong
    2. strengthening of yod in the evolution from PSl to Slavic languages
       – initial yod is non-strong
       – PSl seems to be #TR-only, but what about OCS? It is precisely in late PSl/ OCS that yers started to alternate with zero, including situations when they were the first vowel of the word.
       – in case PSl was truly #TR-only: alternative solution
         yod is frequently dropped intervocalically in the daughter languages. Furthermore, in most items in PSl, a word-initial yod is etymologically epenthetic — before **ь, e, a (< a/ě)**; as shown under (6), we often find variation,, even within a given language, between **#jV ~ #V**. Therefore, maybe yod was interpreted as an optional “Empty Onset filler” by PSl speakers (as well as by the speakers of early Slavonic dialects). As all Cj sequences had been eliminated by (i) palatalisation, (ii) strengthening, the status of yod as an underlying unit may be questioned.

(14) possibly problematic
  a. Sk
    – almost no #RT
    – but first vowel regularly alternates with zero.
  b. SC, Sn
    – no initial #RT at all, and a very small number of #TT (exhaustive list in appendix)
    – but first vowel alternates with zero, even though only in a very limited set of roots.

(15) Slavic is not alone: a broader cross-linguistic picture
parametric variation of the positional strength of edges
[Ségéral & Scheer (forth)]
In Greek word-initial consonants are also weak - and there are #TT clusters in this language: Seigneur-Froli (2003, forth)

	Strong Position			Coda	
	#__	C.__	V__V	__.C	__#
a. French	strong	strong	weak A		
b. Greek	≠ strong	strong	weak A		
c. Polish			weak A	weak B	≠ weak B
d. Braz. Portuguese, French			weak A	weak B	weak B

(16) conclusion

a. CVCV predicts that universally three properties concerning the beginning of the word are not randomly distributed. Rather, they are interrelated:
1. existence of initial #RT, #TT, #RR clusters
2. vowel-zero alternations of the first vowel of words
3. strength of the word-initial consonant
all of these properties stem from just one single parametric choice: the presence vs. absence of the initial CV.

b. we have set out to test these predictions with respect to 3) the strength of initial consonants.
Unexpectedly and unfortunately lenition and fortition seem to be rare in Slavic.
There is no good reason for that (there are a lot of consonant clusters !), so we assume that there must be some explanation that we have missed.

c. some apparently problematic cases in limited areas of South Slavic (SC, Sn) have been isolated - further work is needed here.

Appendix

(17) exhaustive list of roots illustrating #TT clusters in SC

	cluster	word	gloss
a. #T-stop	bd	bdjeti	to keep guard
	gd	gdje	where
	pt	ptica	bird
	tk	tkati, tko, tkivo	to weave, who, (muscle) tissue
	k͡tɕ	kći	daughter
	p͡tʃ	pčela	(honey) bee
b. #Tv	gv	gvožđe	iron
	xv	hvaliti, hvatiti	to praise; to seize, to catch
	t͡sv	cvat, cviljeti	blossom, to moan
	t͡ʃv	čvor	node
	kv	kvar, kvas	damage, yeast
c. #TS	ps	psa, pseći, psikati, psovati	dog GENsg, like a dog, to whizz, to curse
	pš	pšenica	wheat

(18) exhaustive list of roots illustrating #TT clusters in Sn (and their cognates in SC)

cluster	Slovenian spelling	[ ]	Serbo-Croatian	gloss
bd	bdeti	bdɛti	bdjeti	to keep guard
gd	kto	gdo	gdje	where (S-C), who (Sl)
pt	ptica		ptica	bird
tk	tkati		tkati	to weave

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