

This week:

- read Chapter 5 in text
- download Praat speech analysis system: [www.praat.org](http://www.praat.org)

Serbo-Croatian key

adjectives:	masculine	feminine	neuter	plural
	[stem-Ø]	[stem-a]	[stem-o]	[stem-i]
verb:	present	past		
	[stem-em] (1 sg.)	[stem-l-Agreement]		

alternations:

l ≈ o: [l] is found before a vowel and [o] at the end of the word

a ≈ Ø: [a] is found between two consonants at the end of the word and  
Ø is found when the stem is followed by a vowel

accent: mostly final syllable but occasionally on second last (penultimate) vowel (e.g. *jásan* ‘clear’ masc. sg.) and even on third last (antepenultimate) vowel (e.g. *múkao* ‘hoarse’ masc. sg.)

analysis: if /l/ is underlying then we need a rule turning /l/ to [o] at the end of the word;  
if /o/ is underlying then we need a rule turning /o/ to the lateral [l] before a vowel.

+cons	-cons	
+ lateral	-lateral	/ ___ #
	+ back	
	-high	
+syll	+cons	
-high	+lateral	/ ___ V
-low	+dental	
+back		

There are several reasons for choosing the first analysis:

In many languages /l/ is replaced by a glide [w] (recall that English l in the coda is “dark” velarized; in many person’s casual speech milk is [miwk] by velarization and loss of the lateral articulation. For S.C. the change from /w/ to [o] would be addition of [-high]. The alternative analysis changing /o/ to a consonant [l] is without precedent and very unnatural

Phonotactic: if /l/ is underlying we can say that all stems end in a consonant in the lexical representation

Accent: the rule assigning accent can be maintained in the simple form accenting the final vowel (syllable) so long as the l-vocalization rule is ordered later.

/bel/	/bel+a/	underlying representation
bél	bel-á	Final Accent
béo	inappl.	l-vocalization

a≈o

if /a/ is underlying then we need a rule to delete /a/ word medially. Such syncope rules are quite common (cf. English gen<e>ral)

if Ø is underlying we need a rule to break up final clusters. Those appearing in the SC data are Cn#, Cr#, and Cl#. These are exactly the clusters that are banned at the end of English words which turns the sonorant consonant into a syllable nucleus: meter (cf. metr-ic), tattle, chasm (cf. chasmaclitic)

for the data given the deletion analysis runs afoul of krizan and ustao < /ustal/.

We therefore posit an epenthesis rule:

Ø -> +syll	/ +cons	_____	+cons	#
+low			+sonorant	

The epenthesis rule precedes the accent rule since the inserted vowel is not accented.

/dobr/	/dobr+a/	underlying rep
dóbr	dobr+á	final accent
dóbar	inappl.	epenthesis

The stem múkao, muklá exhibits both the l ≈ o and the a ≈ Ø alternations and hence the underlying lexical representation must be /mukl/ according to our analysis. The derivation below shows that our grammar computes the correct surface forms provided that the epenthesis rule precedes the l-vocalization rule (counter-bleeding).

/mukl/	/mukl+a/	underlying rep
múkl	mukl-á	final accent
múkal	inappl.	epenthesis
múkao	inappl.	l-vocalization

The verbs exhibit an additional alternation of t,d ≈ Ø: kradém, krá-o, kra-l-á. The dental stop is missing in the past tense. Since the past tense is marked by /l/ and since dental stop + l is a marked cluster (recall the discussion of Russian), we posit a deletion rule. Insertion is not a feasible analysis since we cannot predict whether to insert [t] or [d]. The dental stop deletion rule must precede the rule vocalizing /l/ (counterbleeding) as well as the epenthesis rule (mutual bleeding).

/krad+l/	/krad+l+a/	underlying rep
krád-l	krad-l-á	final accent
krá-l	krá-l-á	dental stop deletion
inappl	inappl	epenthesis
krá-o	inappl.	l-vocalization

Finally, the verbs exhibit an alternation between the palatals tʃ, ʒ and the velars k, g respectively. Palatalization before front vowels is a very common sound change (cf. log-o, log-ic).

+cons				
-coronal	->	[+coronal]	/ ___	+syll
-anterior		+strident		-back

Since /k/ and /g/ are stops this rule produces as output the affricates /tʃ/ and /dʒ/. We need another rule changing the latter sound to a fricative.

+cons		
-contin	->	+contin
+strident		
+voice		

Basque dialects: