

1. when stems and affixes are combined the resultant sound combinations often trigger sound changes that result in multiple realizations of the stem or affix. If the alternations are systematic then we posit a single underlying representation for the stem and affix and derive the various surface alternants by ordered rules. The study of alternations is a primary vehicle to discover the rules of the grammar. Certain general principles guide the analysis of alternations.

2. given $a \approx b$, analytic alternatives:

- i. /a/ is underlying and is changed to [b] in some context
 - ii. /b/ is underlying and changed to [a] in the complementary set of contexts
 - iii. both [a] and [b] derive from /c/ with two rules: $c \rightarrow a$ and $c \rightarrow b$
- choice among the alternatives is guided by the simplicity and plausibility of the rules and the coherence of the overall analysis

3. **predictability:**

if one set of lexical items exhibit an alternation between sound [a] and sound [b] and another set has stable, non-alternating [a] then try positing /b/ as underlying the alternating set, with rule /b/ \rightarrow in some context

4. **Polish nouns**

$p \approx b, s \approx z, k \approx g$

| <u>sg.</u> | <u>pl.</u> | |
|------------|------------|----------|
| klup | klub-i | 'club' |
| trup | trup-i | 'corpse' |
| grus | gruz-i | 'rubble' |
| nos | nos-i | 'nose' |
| wuk | wug-i | 'lye' |
| wuk | wuk-i | 'bow' |

A. [+cons, -sonorant] \rightarrow [-voice] / __ #

| | | | | |
|--------|----------|--------|----------|---------------------------|
| /klub/ | /klub-i/ | /trup/ | /trup-i/ | underlying representation |
| klup | ----- | ----- | ----- | final devoicing |

B. [+cons, -sonorant] -> [+voice] / V __ V

| | | | | |
|--------|----------|--------|----------|---------------------------|
| /klup/ | /klup-i/ | /trup/ | /trup-i/ | underlying representation |
| ----- | klub-i | ----- | *trub-i | intervocalic voicing |

- rule B would have many exceptions and so analysis A is the better choice

o ≈ u

| | | |
|------------|------------|---------|
| <u>sg.</u> | <u>pl.</u> | |
| snop | snop-i | 'sheaf' |
| ʒwup | ʒwob-i | 'crib' |
| trut | trud-i | 'labor' |
| kot | kot-i | 'cat' |
| lut | lud-i | 'ice' |
| sok | sok-i | 'juice' |
| ruk | rog-i | 'horn' |

A. [+syll, -low, -high, +back] -> [+high] / __ [+cons, +voice] #

| | | | | | | | | |
|-------|---------|-------|---------|-------|---------|-------|--------|-----------------|
| /rog/ | /rog-i/ | /sok/ | /sok-i/ | /wug/ | /wug-i/ | /wuk/ | wuk-i/ | |
| rug | ----- | ----- | ----- | ----- | ----- | ----- | ----- | o > u |
| ruk | ----- | ----- | ----- | wuk | ----- | ----- | ----- | final devoicing |

B. [+syll, -low, +high, +back] -> [-high] / __ [+cons, +voice] V

| | | | | | | | | |
|-------|---------|-------|---------|-------|---------|-------|--------|-----------------|
| /rug/ | /rug-i/ | /sok/ | /sok-i/ | /wug/ | /wug-i/ | /wuk/ | wuk-i/ | |
| --- | rogi | --- | ---- | ---- | wogi | ----- | ----- | u > o |
| ruk | ----- | ----- | ----- | wuk | ----- | ----- | ----- | final devoicing |
| | | | | | *wogi | | | |

- once again analysis B with u > o would have many unexplained exceptions so analysis A is the better choice
- final devoicing removes potential inputs to o > u but o > u nevertheless applies
- so o > u precedes final devoicing

5. Serbo-Croatian oxytones

| | | | | | |
|----|--------------|-------------|---------------|---------------|----------|
| a. | <u>masc.</u> | <u>fem.</u> | <u>neuter</u> | <u>plural</u> | |
| | mlád | mlad-á | mlad-ó | mlad-í | young |
| | púst | pust-á | pust-ó | pust-í | empty |
| | zelén | zelen-á | zelen-ó | zelen-í | green |
| | tǎést | tǎest-á | tǎest-ó | tǎest-í | frequent |
| | bogat | bogat-a | bogat-o | bogat-i | rich |
| | rapav | rapav-a | rapav-o | rapav-i | rough |

- V -> 'V / __ Co# accent the final syllable of the word

| | | | | | |
|----|--------------|-------------|---------------|---------------|-------|
| b. | <u>masc.</u> | <u>fem.</u> | <u>neuter</u> | <u>plural</u> | |
| | debéo | debel-á | debel-ó | debel-í | fat |
| | posustao | posustal-a | posustal-o | posustal-i | tired |
| | béo | bel-á | bel-ó | bel-í | white |
| | mío | mil-á | mil-ó | mil-í | dear |
| | tséo | tsel-á | tsel-ó | tsel-í | whole |

- l ≈ o : l is found between vowels and o is word-final
- alternatives

A. l -> o / __ #

B. o -> l / V _ V

- l vocalization to a vocoid is common (cf. Engl *field* [fiɔd], It. *piazza* < plaza)
- o-> l is unprecedented
- deriving [o] from a vowel also simplifies the analysis of accent

| | | | |
|--|-----------|-------------|----------------|
| | /#debel#/ | /#debel-a#/ | |
| | debél | debel-á | final accent |
| | debéo | ----- | l-vocalization |

| | | | | | |
|----|--------------|-------------|---------------|---------------|--------|
| c. | <u>masc.</u> | <u>fem.</u> | <u>neuter</u> | <u>plural</u> | |
| | ledan | ledn-a | ledn-o | ledn-i | frozen |
| | dóbar | dobr-á | dobr-ó | dobr-í | kind |
| | jásan | jasn-á | jasn-ó | jasn-í | clear |
| | sítan | sitn-á | sitn-ó | sitn-í | tiny |
| | mókar | mokr-á | mokr-ó | mokr-í | wet |

- $a \approx \emptyset$
- alternatives
 - A. syncope: $a \rightarrow \emptyset / VC_CV$ cf. gen<e>ral
 - B. epenthesis: $\emptyset \rightarrow a / C_ [+sonorant, +cons] \#$ (cf. *cycle* \approx *cycl-ic*)
- additional coherence: inserted [a] is skipped by accent rule

| /#dobr#/ | /#dobr-a#/ | |
|----------|------------|--------------|
| dóbr | dobr-á | final accent |
| dóbar | ----- | epenthesis |

d. epenthesis precedes l-vocalization

| <u>masc.</u> | <u>fem.</u> | <u>neuter</u> | <u>plural</u> | |
|--------------|-------------|---------------|---------------|--------|
| okrúgao | okrugl-á | okrugl-ó | okrugl-í | round |
| óbao | obl-á | obl-ó | obl-í | plump |
| nágao | nagl-á | nagl-ó | nagl-í | abrupt |

| /#okrugl#/ | /#okrugl-a#/ | |
|------------|--------------|----------------|
| okrúgl | okrugl-á | final accent |
| okrúgal | ----- | epenthesis |
| okrúgao | ----- | l-vocalization |

e. summary:

- rules normally form a partially ordered set
- in this case from SC we have a total ordering since each of the three rules potentially affects the applicability of the other two

final accent precedes l-vocalization
 final accent precedes epenthesis
 epenthesis precedes l-vocalization

| | | | | |
|-----|----------|--------------|--------------|-----------------|
| (2) | mela | mela-n | mela-ɾ | sea |
| | wanka | wanka-n | wanka-ɾ | arm |
| | kuŋka | kuŋka-n | kuŋka-ɾ | groin |
| | ŋuka | ŋuku-n | ŋuku-ɾ | water |
| | kaɬa | kaɬu-n | kaɬu-ɾ | child |
| | ŋawa | ŋawu-n | ŋawu-ɾ | wife |
| | ŋiŋe | ŋiŋi-n | ŋiŋi-wuɾ | skin |
| | pape | papi-n | papi-wuɾ | father's mother |
| | tjempe | tjempe-n | tjempe-ɾ | mother's father |
| | wiɬe | wiɬe-n | wiɬe-ɾ | interior |
| (3) | yalul | yalulu-n | yalulu-ɾ | flame |
| | mayar | mayara-n | mayara-ɾ | rainbow |
| | wiwal | wiwala-n | wiwala-ɾ | bush mango |
| | karikar | karikari-n | karikari-wuɾ | butter-fish |
| | yiliyil | yiliyili-n | yiliyili-wuɾ | oyster |
| (4) | yukar | yukarpa-n | yukarpa-ɾ | husband |
| | wulun | wulunka-n | wulunka-ɾ | fruit sp. |
| | wuɬal | wuɬaltji-n | wuɬaltji-wur | meat |
| | kantukan | kantukantu-n | kantukantu-ɾ | red |
| | karwakar | karwakarwa-n | karwakarwa-ɾ | wattle sp. |

| | | | | |
|-----|-----------|---------------|---------------|---------------|
| (5) | ṭurara | ṭuraraṅ-in | ṭuraraṅ-kuṭ | shark |
| | ḡalu | ḡaluk-in | ḡaluk-uṭ | story |
| | putu | putuka-n | putuka-ṭ | short |
| | murkuni | murkunima-n | murkunima-ṭ | nullah |
| | ḡawuḡa | ḡawuḡawu-n | ḡawuḡawu-ṭ | termite |
| | tipiti | tipitipi-n | tipitipi-wuṭ | rock cod |
| | ṭapu | ṭaputji-n | ṭaputji-wuṭ | older brother |
| | muṅkumu | muṅkumuṅku-n | muṅkumuṅku-ṭ | wooden axe |
| | tjumpuṭju | tjumpuṭjumu-n | tjumpuṭjumu-ṭ | dragon-fly |

| | | | | |
|-----|-------|---------|---------|-----------|
| (6) | ṭilta | ṭil-in | ṭil-uṭ | neck |
| | maṭṭa | maṭ-in | maṭ-uṭ | hand |
| | ṭuṭṭa | ṭuṭ-in | ṭuṭ-uṭ | excrement |
| | wunta | wun-in | wun-kuṭ | rain |
| | kaṅṭa | kaṅ-in | kaṅ-kuṭ | grass |
| | ṭera | ṭer-in | ṭer-uṭ | thigh |
| | yaka | yak-in | yak-uṭ | fish |
| | ṭelka | ṭelk-in | ṭelk-uṭ | head |

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