Unification de l'alternance vocalique et de la pré-accentuation dans les verbes russes se terminant par -iva

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- **Basic aspect derivation:**

  1) Most unprefixed verbs are IPF

  | to work |

  rɔbɔt-a-tʲ
  IPF

  Stress is underlined

Karcevski (1927); Garde (1980); Comtet (1997)

- **Basic aspect derivation:**

  1) Most unprefixed verbs are IPF

  2) Prefixation derives PF verbs

       a) same meaning

Stress is underlined

Karcevski (1927); Garde (1980); Comtet (1997)
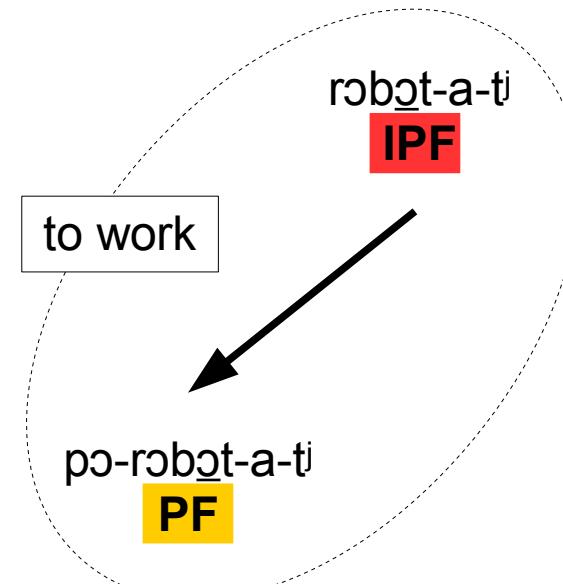
- **Basic aspect derivation:**

  1) Most unprefixed verbs are IPF

  2) Prefixation derives PF verbs

     a) same meaning

     b) distinct meaning

Stress is underlined

Karcevski (1927); Garde (1980); Comtet (1997)

- **Basic aspect derivation:**

    1) Most unprefixed verbs are IPF

    2) Prefixation derives PF verbs

       a) same meaning

       b) distinct meaning

    3) -(v)a or -ɨva derive IPF verbs

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Karcevski (1927); Garde (1980); Comtet (1997)

- **Basic aspect derivation:**

  1) Most unprefixed verbs are IPF

  2) Prefixation derives PF verbs

     a) same meaning

     b) distinct meaning

  3) -(v)a or -ɨva derive IPF verbs

- **Issue:**

  - ɔ → a / _+ɨva

Stress is underlined

Karcevski (1927); Garde (1980); Comtet (1997)
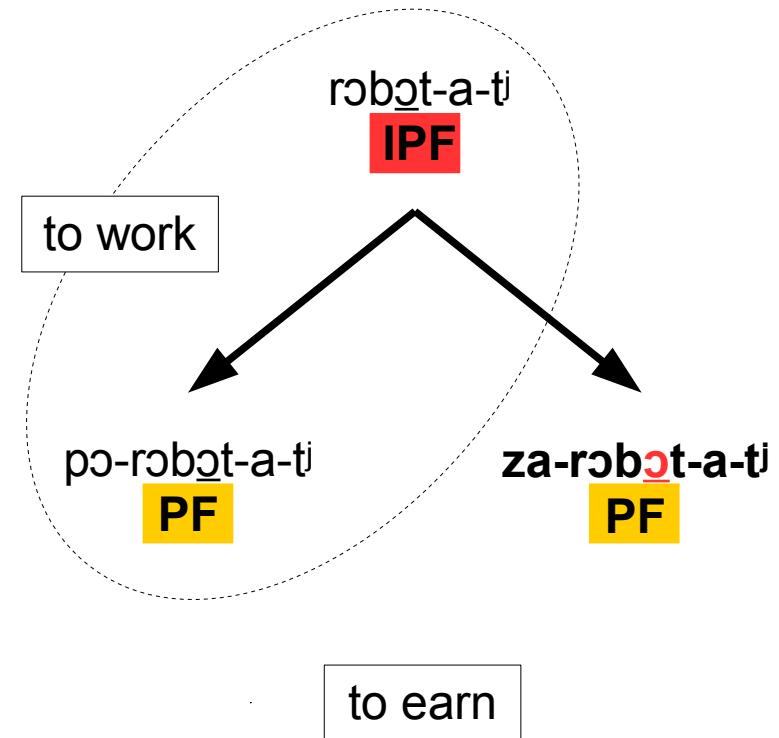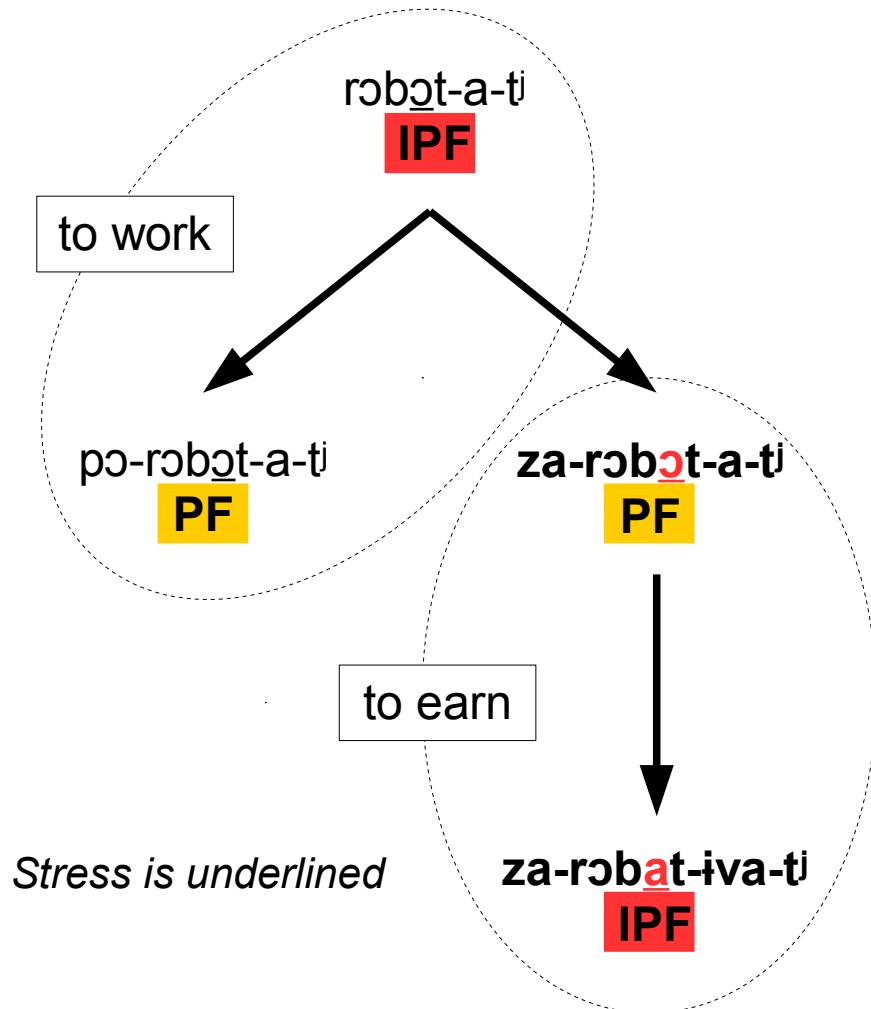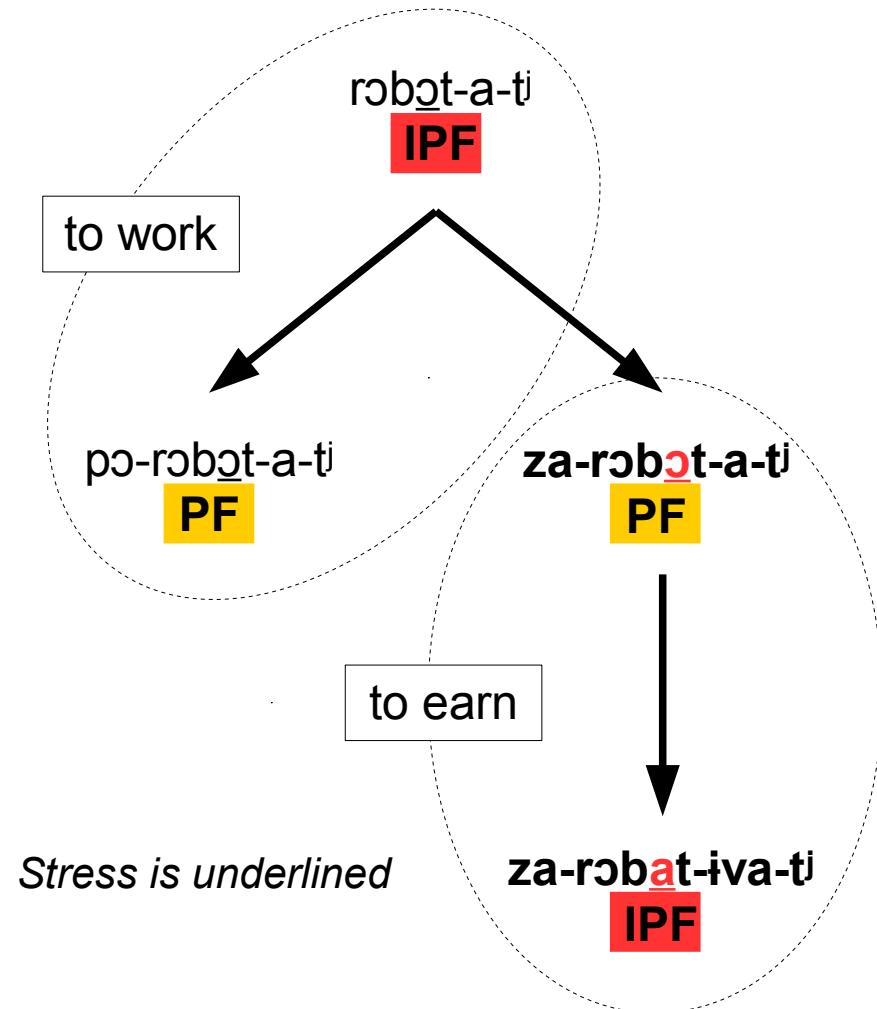
- Some examples of ɔ/a alternation

| PF	IPF	gloss
na-brɔs-a-tʲ	na-br**a**s-iva-tʲ	*throw a lot*
za-kɔntʃ-i-tʲ	za-k**a**ntʃ-iva-tʲ	*finish*
raz-gɔvɔr-i-tʲ	raz-gɔv**a**rʲ-iva-tʲ	*talk*
s-prɔsʲ-i-tʲ	s-pr**a**ʃ-iva-tʲ	*ask*

- Two morphophonological properties:

  - ɔ/a alternation

  - preaccentuation

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- **Issue: Bracketing paradox**

    - **Derivation:** (((na-(bras))-ɨva)-tʲ)

    - **Phonology:** [na-bras-ɨva]-tʲ

        - root vowel alternation due to -ɨva = -ɨva and the root are in the same domain.

    - **Semantics:** [na-bras]-ɨva-tʲ

        - semantically, the first prefix of the verb involves the edge of the domain (because other prefixes necessarily have a compositional meaning).

        - Thus -ɨva, which occurs higher in the derivation, is not in the domain of the root

        - We should not expect the ɔ/a alternation!

- **Structure of -ɨva type verbs:**

  - prefixed verbs involve a stem suffix

    - -i, -ɛ, -nu, -a, -(v)a or -Ø

  - -ɨva type verbs involve a prefix

$$-ɨva \supset p\text{-} \supset \text{-}v \supset \sqrt{}$$

$$((p\text{-}((\sqrt{})\text{-}v))\text{-}ɨva)$$

Garde (1980: §605); Svenonius (2004a: 186; 2004b: 238)
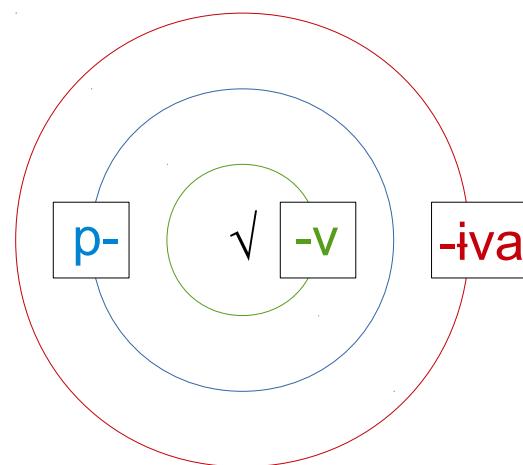
- prefixed verbs involve a stem suffix

Imperfectif	Traduction	Perfectif	Traduction
krɨ-Ø-tʲ	*cover*	**pɔ**-krɨ-Ø-tʲ	*cover*
		za-krɨ-Ø-tʲ	*close*
pis-**a**-tʲ	*write*	**na**-pis-**a**-tʲ	*write*
		za-pis-**a**-tʲ	*record*
gɔvɔr-**i**-tʲ	*talk*	**pɔ**-gɔvɔr-**i**-tʲ	*talk*
		u-gɔvɔr-**i**-tʲ	*persuade*

- -iva type verbs involve a prefix

Perfectif	Imperfectif second	Traduction
u-gɔvɔr-i̱-tʲ	**u**-gɔva̱r-**iva**-tʲ	*persuader*
na-pis-a̱-tʲ	**na**-pi̱s-**iva**-tʲ	*écrire*
prɔ-vɛ̱trʲ-i-tʲ	**prɔ**-vɛ̱trʲ-**iva**-tʲ	*aérer*

- **Structure of -iva type verbs:**

  - But no stem suffix in -iva type verbs!

  - Svenonius (2004a) supposes that it is *morphologically* deleted.

$$\text{na-bras-a-t}^j$$

$$\Longrightarrow$$

$$\text{*na-br}\underline{\text{a}}\text{s-a-iva-t}^j$$

$$\text{na-br}\underline{\text{a}}\text{s-}\varnothing\text{-iva-t}^j$$
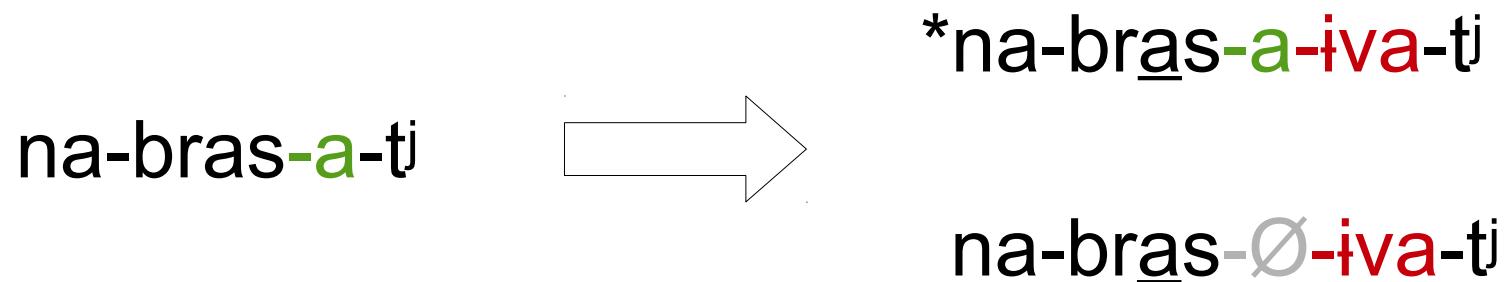
- **Aim of the talk**

  1) -iva cannot be directly responsible for the ɔ/a alternation.

  2) -a is not *morphologically* deleted, but *phonologically*.

  3) the phonological deletion of -a accounts for the ɔ/a alternation.

# Organization of the talk

- Framework

- Analysis

- Predictions

Framework

- **Issue:** morphonological phenomenon

- **Syntactic Approach** (Halle & Marantz, 1993)

  - ➢ Mirror Theory   (Brody, 1997, 2000)

  - ➢ Phases   (Marantz, 2001)

 - ➢ PIC1   (Chomsky, 1998; Marvin, 2003; Lowenstamm, 2012)

- **Mirror Theory** (Representation)
  - No projections
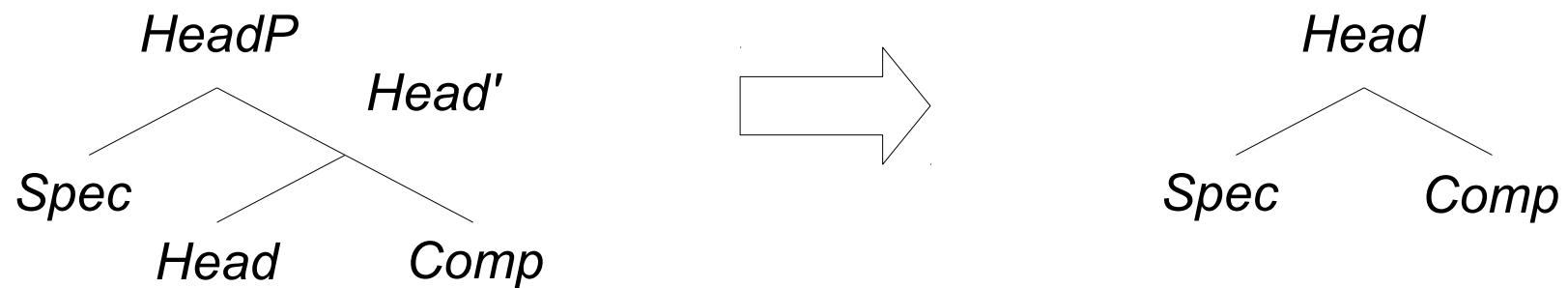
- **Mirror Theory** (Linearization)
  - Spec < Head < Comp
  - Syntactic Head-Comp = morphological Head-Spec
 - Morphological words are spelt-out in the @ position

I, ~~-s~~

Mary   v @ → love-s

t_{Mary}   V, ~~love~~

John

Brody (1997, 2000)
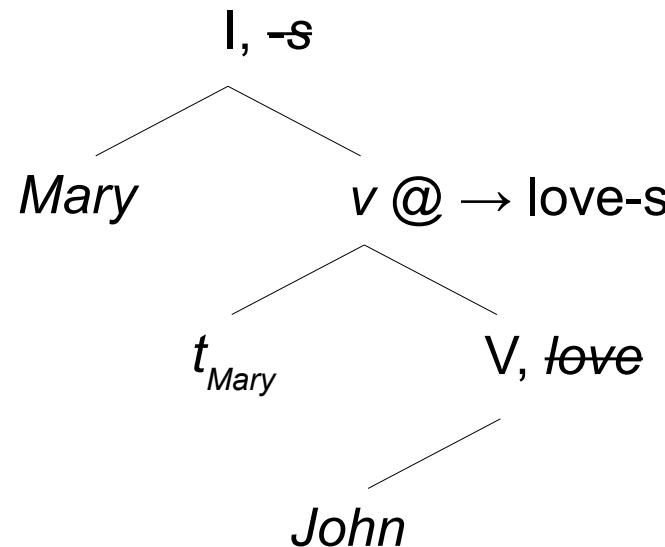
- **Phases**
  - n, v, a = phasal heads.

Marantz (2001), Marvin (2003), Embick (2010), Lowenstamm (2012, 2013, 2014), among others...

- **Phase Impenetrability Condition (v1)**

  - *« The domain of H [phasal] is not accessible to operations outside HP. Only H and its edge are accessible to operations »*


No possible operation

Chomsky (1998), Marvin (2003), Lowenstamm (2012)
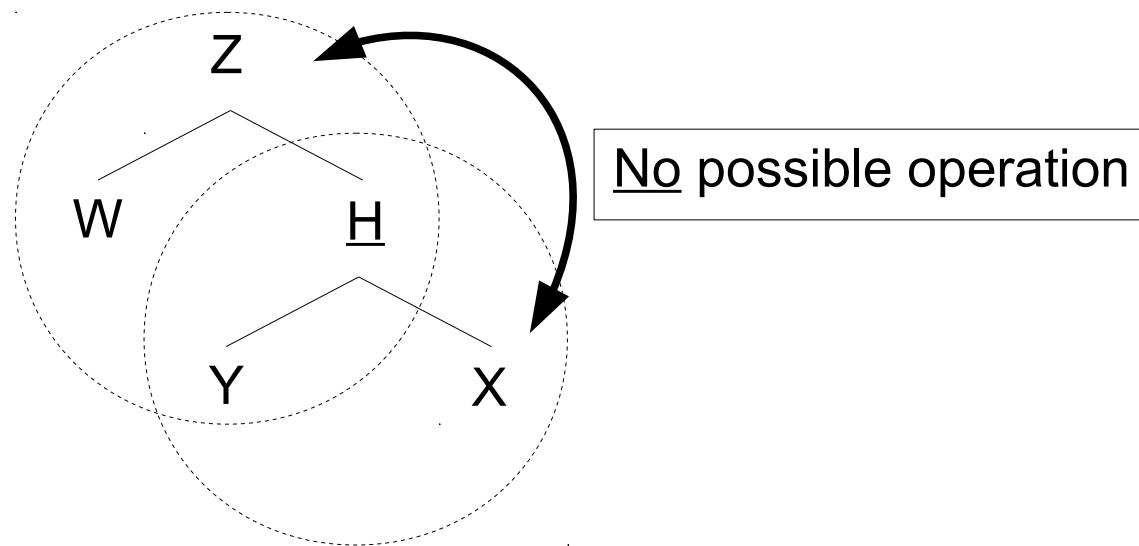
- **Phase Impenetrability Condition (v2)**

  - *« For [$_{ZP}$ Z… [$_{HP}$ a [H YP]]]: the domain of H is not accessible to operations at ZP, but only H and its edge. »* (Chomsky, 2001)
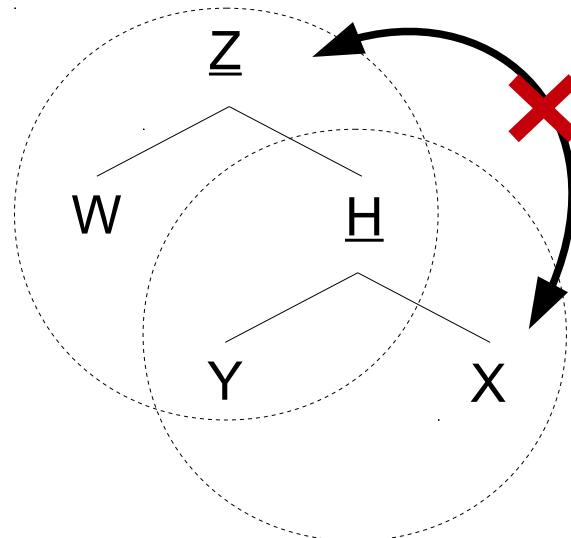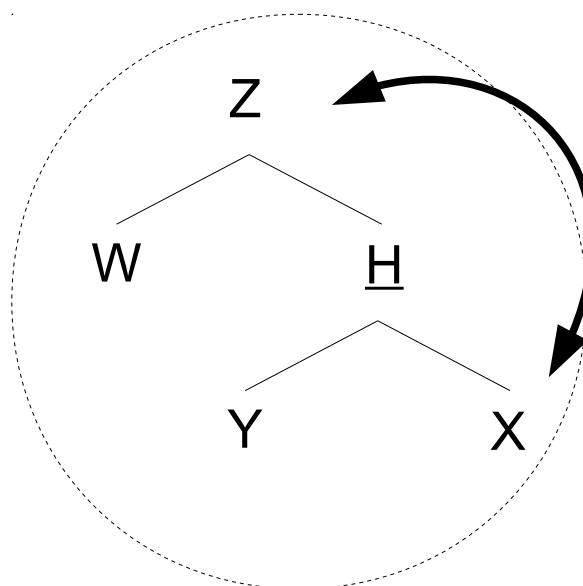

Z = phase head   Z = not a phase head

Analysis

- **Representation of -iva type verbs**
  - **Remember:** -iva involves a prefixed stem
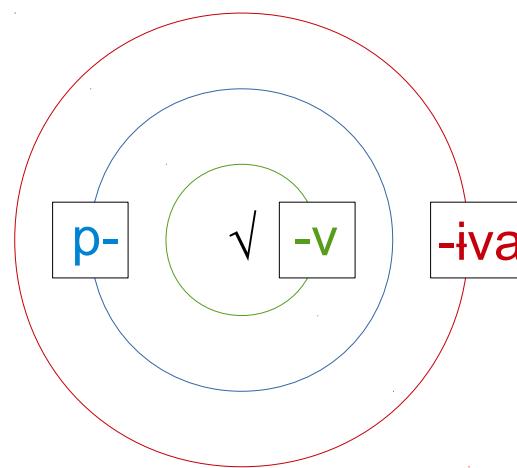
➔ -iva selects a prefixed stem.

- **Representation of prefixes**

  - 2 categories of homophone prefixes

a.	**pɔ-**ɔt-krɨ-v<u>a</u>-tʲ	DLMT-*from*-open-IPF-INF	*open for a while*
	pɔ-pɛrɛ-p<u>i</u>s-ɨva-tʲ	DLMT-RPT-*write*-IPF-INF	*rewrite sth for a while*
	pɔ-za-p<u>i</u>s-ɨva-tʲ	DLMT-*on-write*-IPF-INF	*register for a while*
b.	**pɔ-**zn<u>a</u>-tʲ	?-*savoir*-INF	*know*
	pɔ-m<u>ɔ</u>g-tʲ	?-*pouvoir*-INF	*help*

➔ on the left of a prefix = compositional

➔ on the left of a root = compositional or not

Svenonius (2004a, 2004b, 2008), Gribanova (2013)

- **Representation of prefixes**

  - 2 categories of homophone prefixes

	Lexical prefixes (LP)	Superlexical prefixes (SP)
non compositional	**+**	**-**
can cooccur with an LP	**-**	**+**
	na-bras-ivati 'sketch'	**na-**jes-tʲ-sʲa 'eat a lot'

➔ LP = inside the first phase

➔ SP = outside the first phase

Svenonius (2004a, 2004b, 2008), Gribanova (2013)

- **Differences between LP et SP**

  - PS = sens compositionnel

Lexical prefix (LP)	Préfixe superlexical (PS)
na-br<u>a</u>s-ɨva-tʲ	**na-**j<u>e</u>s-tʲ-sʲa
on-throw-IPF-Inf	Saturative-*eat*-Inf-pronominal
put sth on shoulder	*eat enough*

  - SP-LP, but *LP-LP

a. PL	b. PS+PL
na-br<u>a</u>s-ɨva-tʲ	**pɔ-vɨ-**br<u>a</u>s-ɨva-tʲ
on-throw-IPF-Inf	Delimitative-*out-throw*-IPF-Inf
on-throw-IPF-Inf	*get rid of sth, partially*

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- **H1:** Adjunct
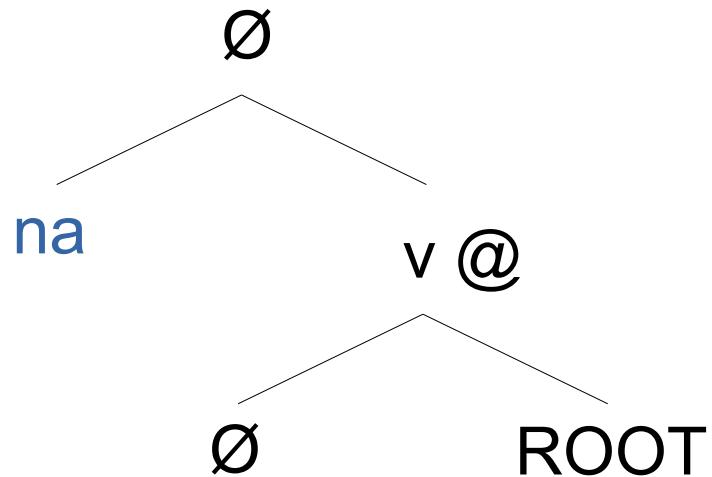
✔ Linearization

✔ Perfectivity

✗ Uniqueness of LP

Ø
na   v @
Ø   ROOT

na=ROOT+v

- **H2:** Complement

✔ Linearization

✔ Uniqueness of LP

✘ Bracketing paradox

✘ Perfectivity

```
        v @
       /    \
      Ø      ROOT
               \
                R, na
```
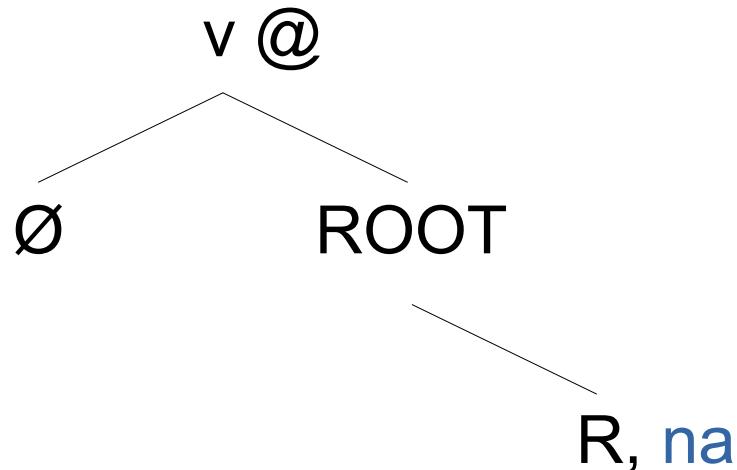
na+ROOT+v

About prefixes as complements, see Julien (2002); and for Slavic, see Svenonius (2004a, 2004b, 2008), Gribanova (2013)

- **H3:** Specifier

v @
```
       v @
      /   \
    na    ROOT
```
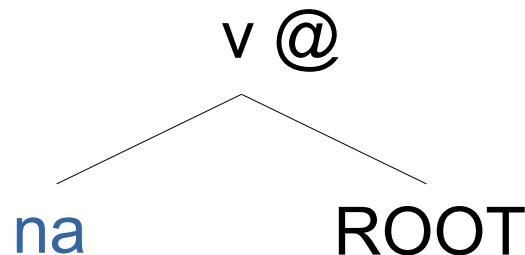
na=ROOT+v

✔ Linearization

✔ Uniqueness of LPs

✔ Perfectivity

✔ Bracketing paradox:

- Inside the first phase
- Outside the *word*

About prefixes as specifiers, see Bok Bennema (1994), Drijkonningen (1999) and Haiden (1997, 2001)

- **Lexical prefixes (LP)**
  - inside the first phase → non compositional
 - only 1 spec of v → cannot cooccur with another LP
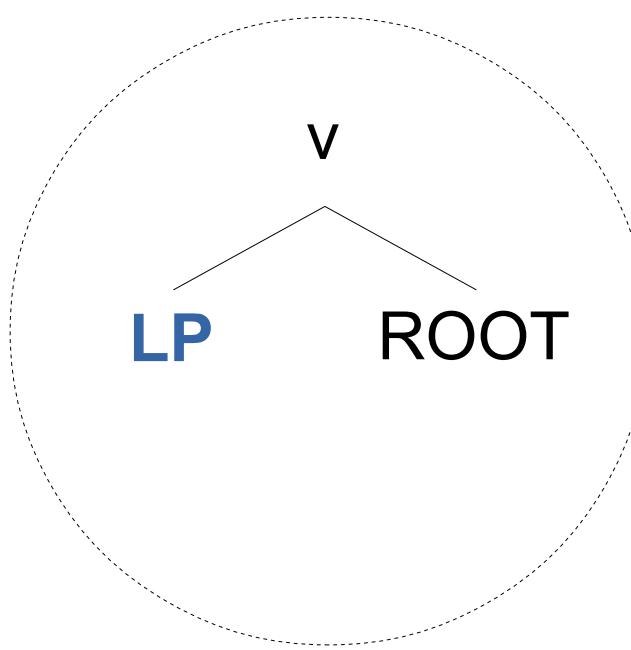
- **Superlexical prefixes**
  - outside the first phase → compositional

H
　　SP　　　v
　　　　(LP)　　ROOT
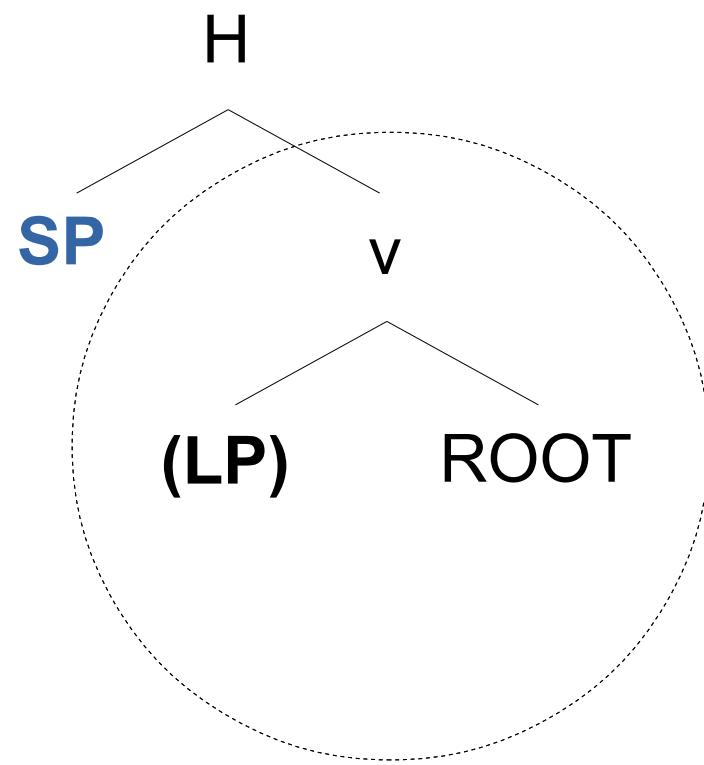
- **Position of -ɨva**

  - -ɨva occurs on verbs with a prefix
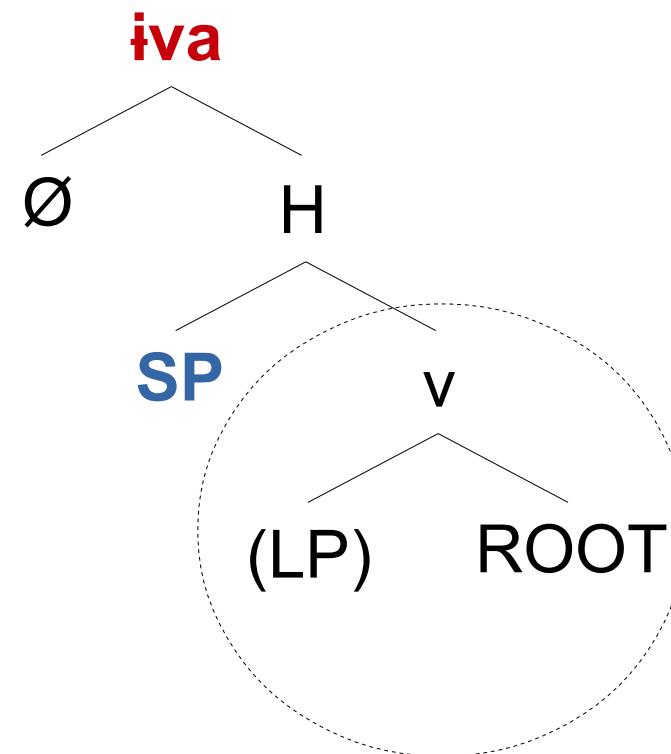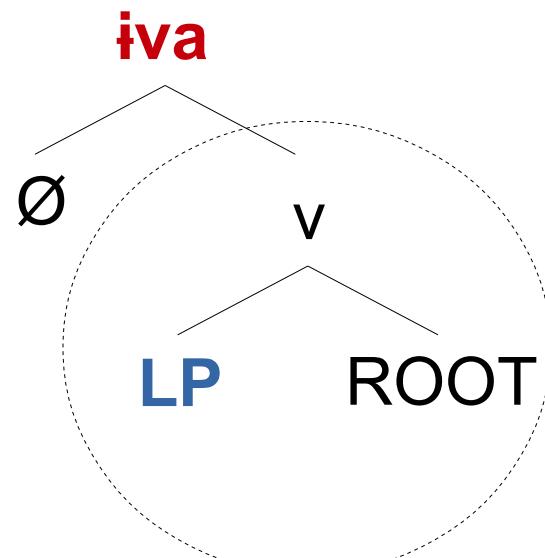
- **Issue:**
  - PIC 1 (Chomsky, 1998; Marvin, 2003)
  - We do not expect the ɔ/a alternation!
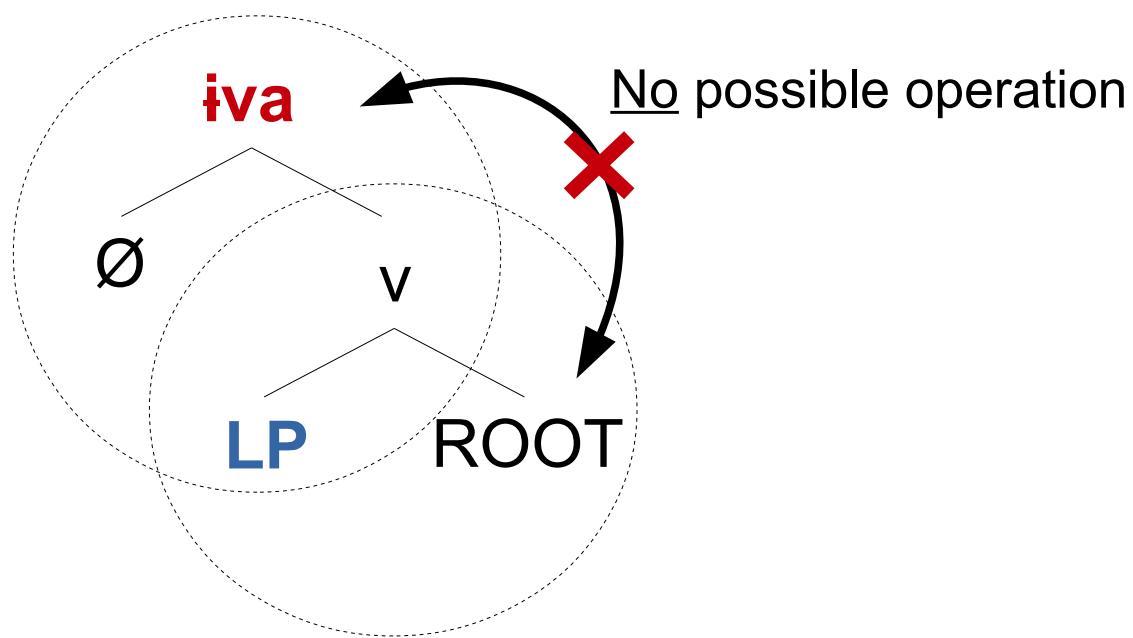
- **Issue:**
  - PIC 2 (Chomsky, 2001)
  - We expect the ɔ/a alternation, iff -ɨva is not a phase head.
  - But I will show that it is.
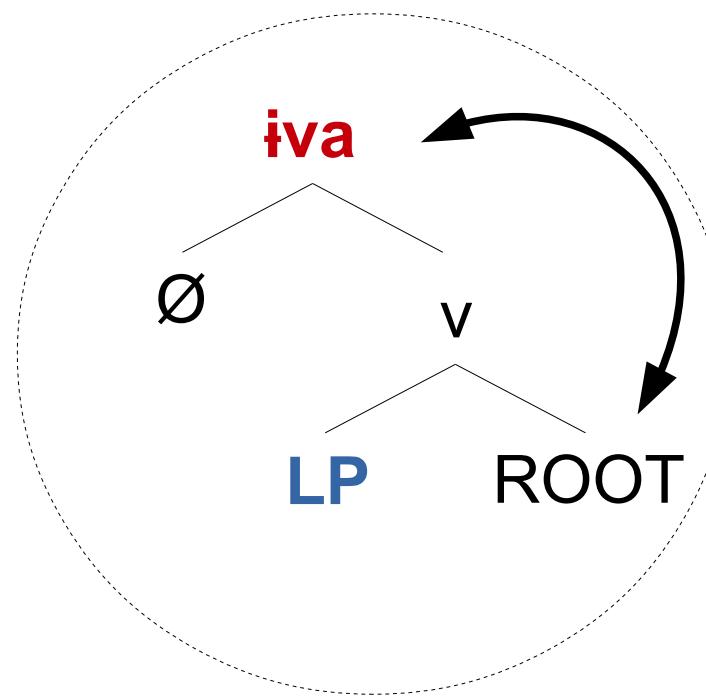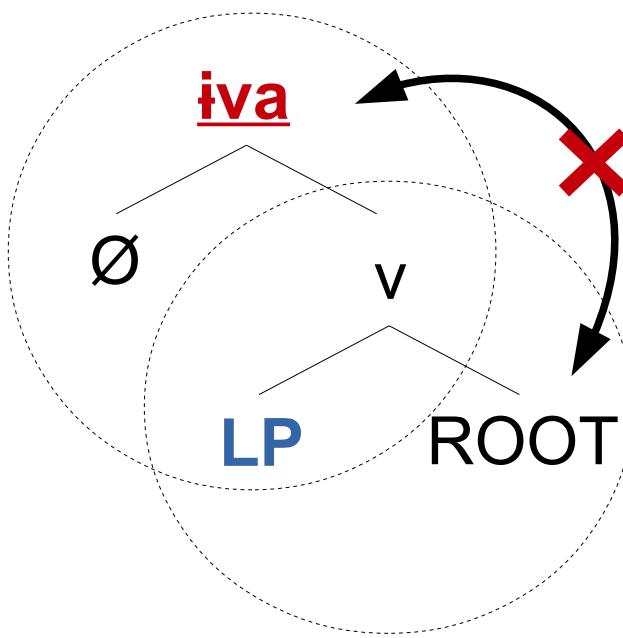
- **Hypothesis:**
  - underlying factor involved in both phase
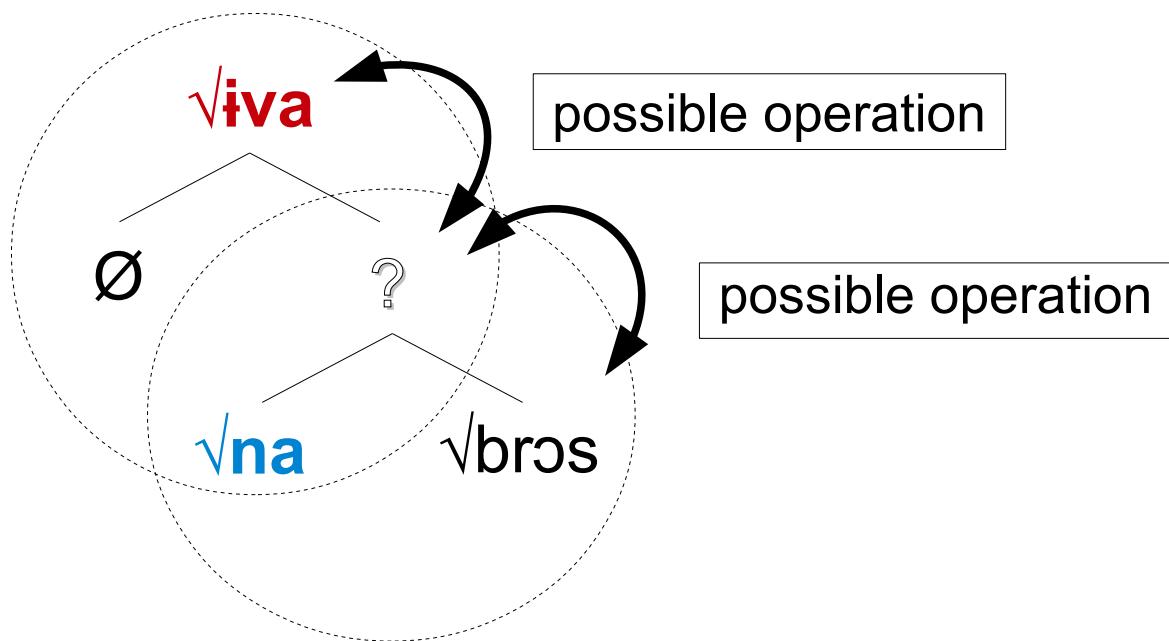
- **Deletion of suffix stems**
  - **Remember:** we expect a stem suffix with -ɨva.
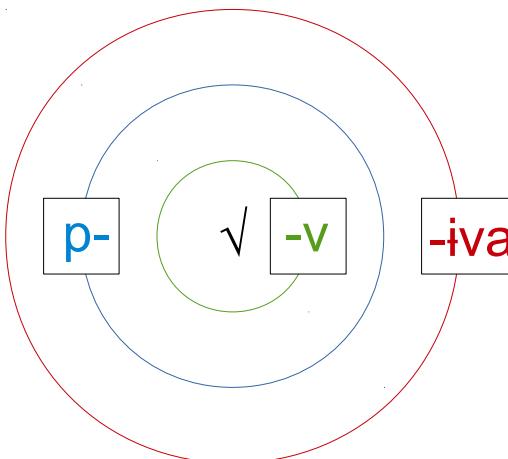
  - But it doesn't occur...

na-brɔs-a-tʲ → na-br<u>a</u>s-∅-ɨva-tʲ

- **Deletion of suffix stems**
  - Two types of deletion:
    - Phonological deletion

-i, -ε

    - Morphological deletion

-a, -nu

- **Phonological deletion**
  - underlyingly *present*
  - *mutation* of the root

PF	IPF	gloss
s-prɔs-**i**-tʲ	s-pra**ʃ**-ɨva-tʲ	*to ask*
ɔt-kɔrm-**i**-tʲ	ɔt-ka**rmlʲ**-ɨva-tʲ	*to feed*
ɔt-rast-**i**-tʲ	ɔt-ra**ʃ**ʲ-ɨva-tʲ	*to make grow*
za-sidʲ-**ɛ**-tʲ-sʲa	za-si**ʒ**-ɨva-tʲ-sʲa	*to overstay*

Halle (1963: 121), Lightner (1967: 39), Flier (1972: 240); Coats (1974: 33), Feinberg (1980: 149), Svenonius (2004a: 187)

- **Morphological deletion**
  - underlyingly *absent*
  - *no* mutation of the root

na-brɔs-$\underline{a}$-tʲ → na-br$\underline{a}$s-∅-iva-tʲ

- **Morphological deletion**
  - underlyingly *absent*
  - *no* mutation of the root

na-brɔs-$\underline{a}$-tʲ → na-br$\underline{a}$s-∅-ɬva-tʲ

Really?
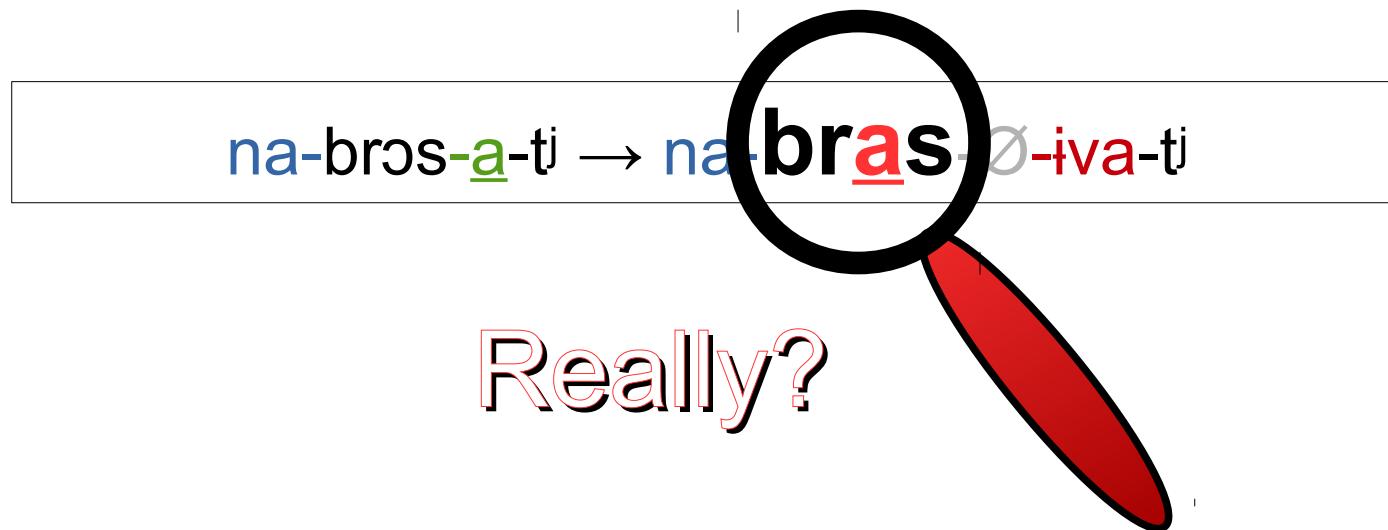
- **Same complementary distribution:**
  - between -i/-ɛ and palatalisation
  - common representation: *element I*   (KLV, 1985)

  > ɔt-rast-**i**-tʲ (PF)   *or*   ɔt-ra**ʃʲ**-iva-tʲ (IPF)

  - between -a and ɔ → a
  - common representation: *element A*

  > na-brɔs-**a**-tʲ (PF)   *or*   na-br**a**s-ɨva-tʲ (IPF)

- **Phonological deletion?**
  - Does -a involve the mutation of the root?
  - Originally, it does!

PF	IPF
(iz)-b**o**s-ti	iz-b**a**d-**a**-ti
(po)-m**o**ʃ-ti	(po)-m**a**g-**a**-ti
sə-g**o**r-ʲa-ti	sə-g**a**r-**a**-ti

➔ Both -i and -a are *phonologically* deleted

1. v (filled with -a) selects the root

v, a
Ø   √brɔs

brɔs-a-tʲ
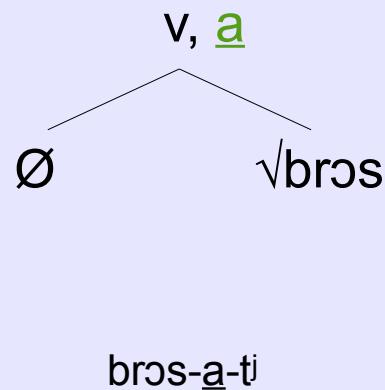
2. na- is adjoined as a specifier

v, a
na   √brɔs

na-brɔs-a-tʲ

3. -iva selects vP

v, -iva
Ø   v, a
na   √brɔs

na-brạs-iva-tʲ

iva

v, a
na   √brɔs

possible operation

possible operation

ɬva

Ø   v, a @ ⟶ na=brɔs+a+ɬva

na   √brɔs

1. -ɨva has a floating /ɨ/.

$$C\ V\ =\ C\ V\ C\ V\ +\ C\ V\ +\ \ \ C\ V$$
$$|\ \ |\ \ \ \ \ |\ \ |\ \ |\ \ \ \ \ \ \ \ \ \ |\ \ \ \ \ \ \ \ |\ \ |$$
$$n\ a\ \ \ \ br\ ɔ\ s\ \ \ \ \ \ \ \ \ \underline{a}\ \ \ \ \ \ ɨ\ v\ a$$
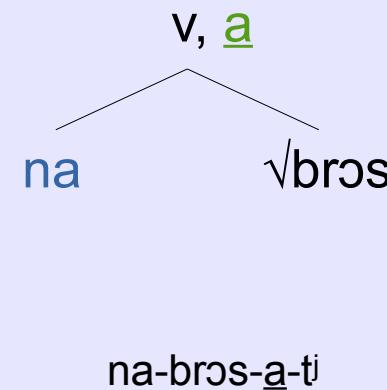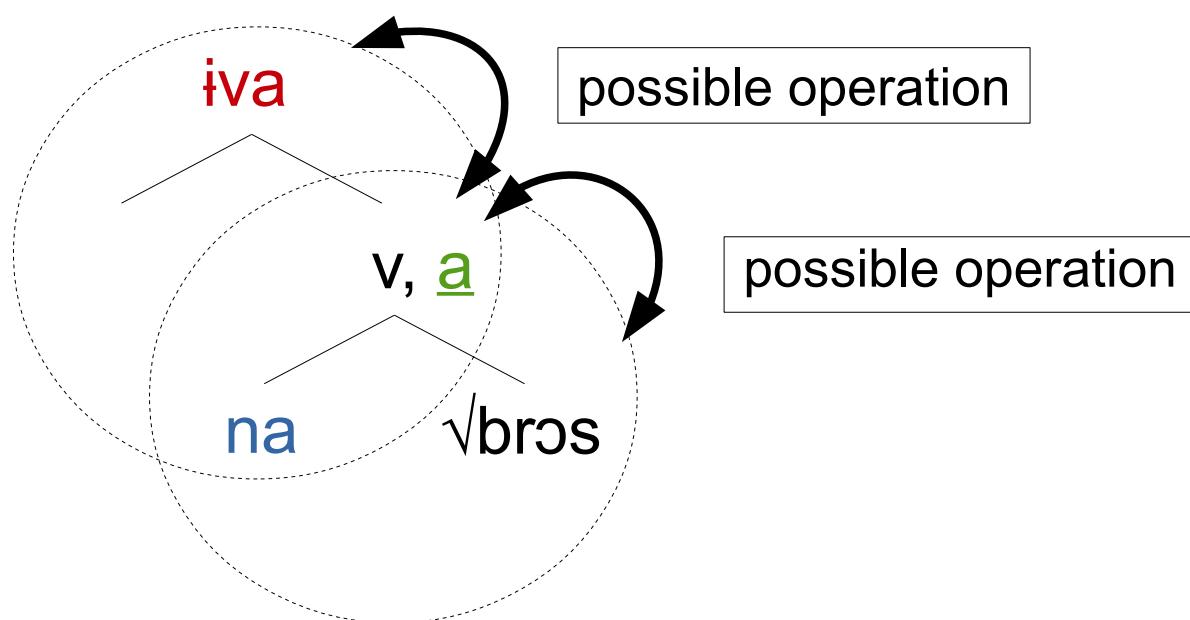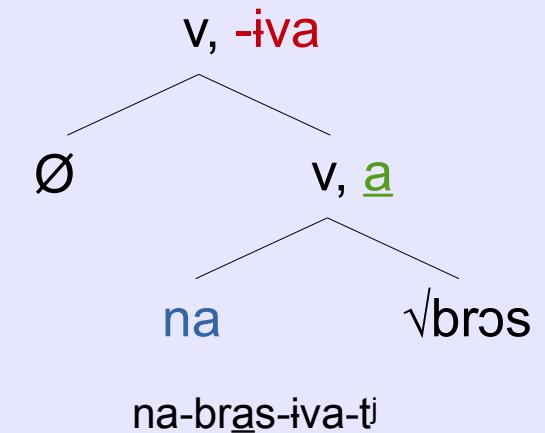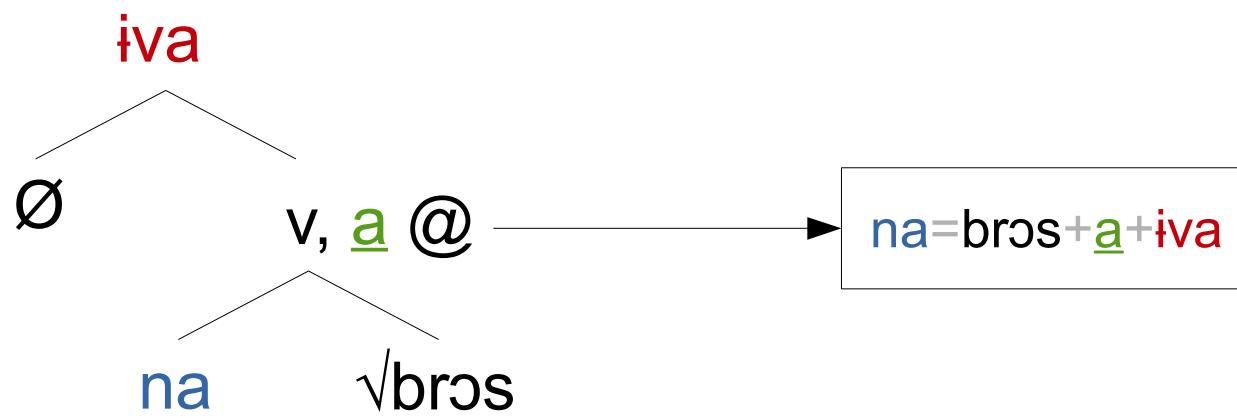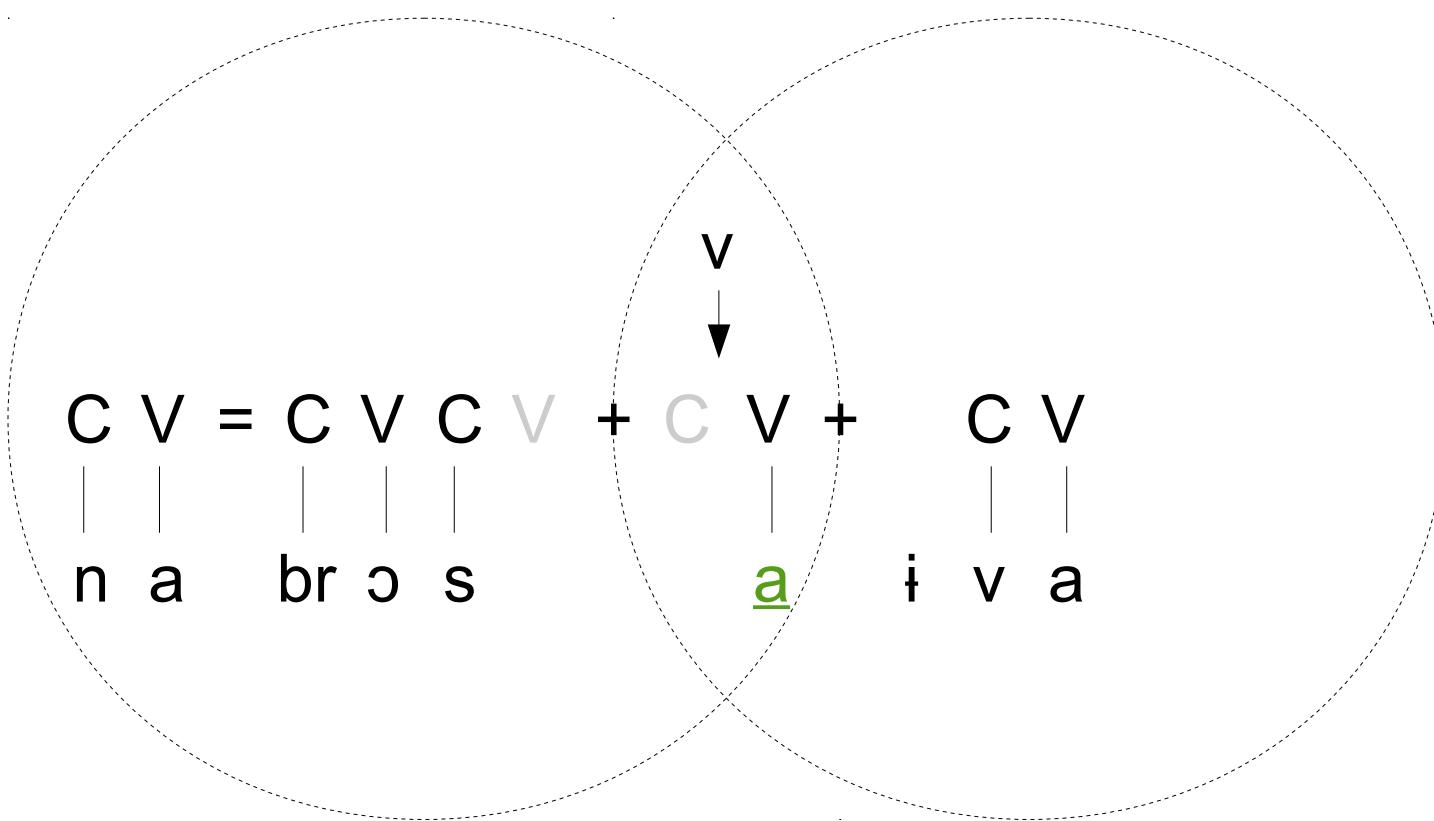
see Cyran (2010) about floating /ɨ/ in the Polish suffix -ɨva. About the CVCV representation, see Lowenstamm (1996).

2. /ɨ/ associates to the nearest V position. /a/ is delinked

v
↓
▼

C V = C V C V + C V + C V

n a   br ɔ s   a   ɨ v a

46
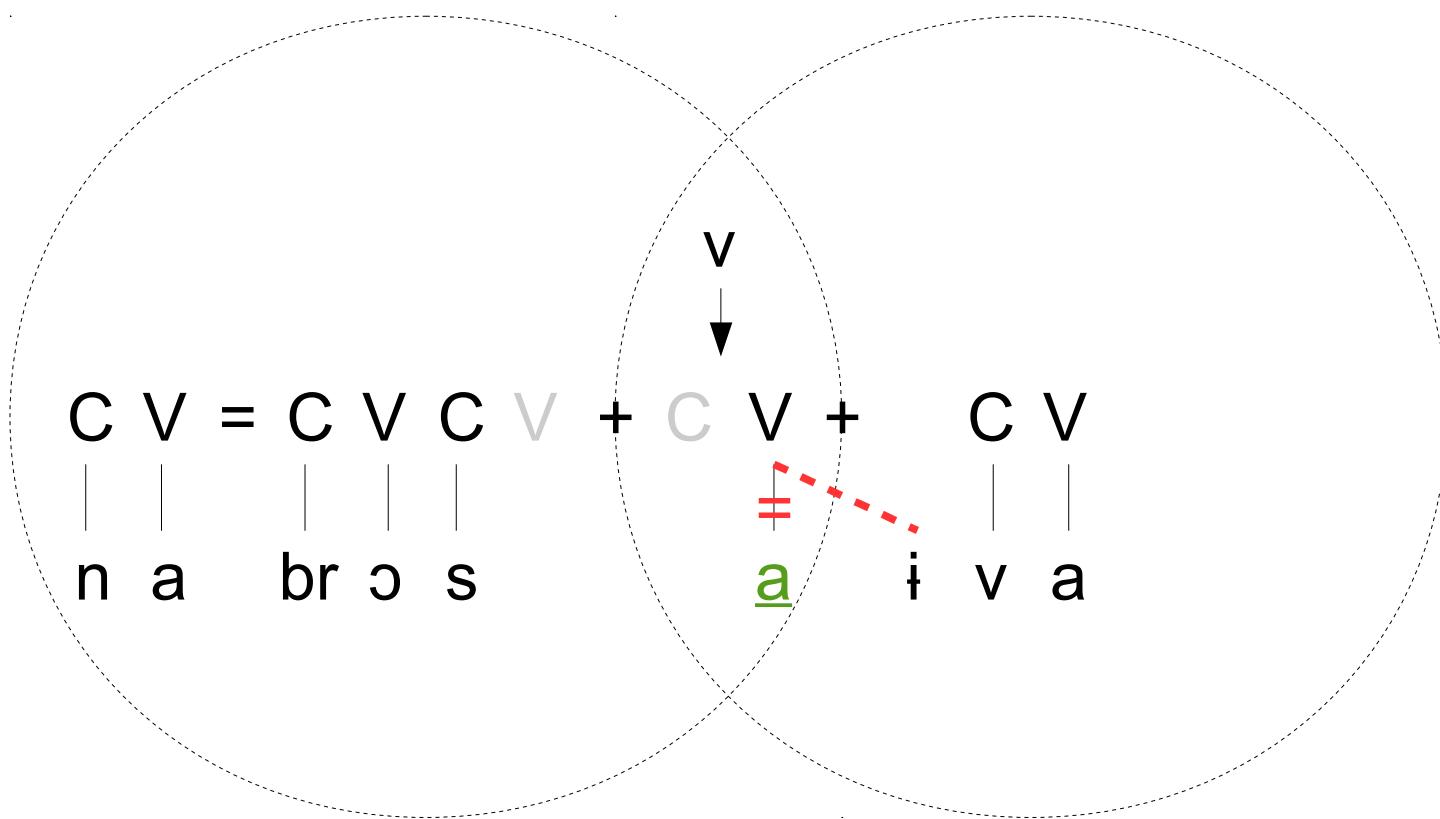
3. /a/ remains in the structure as a floating vowel.

C V = C V C V + C V +   C V
| | | | | | | |
n a   br ɔ s   ɨ   v a

a
<<<
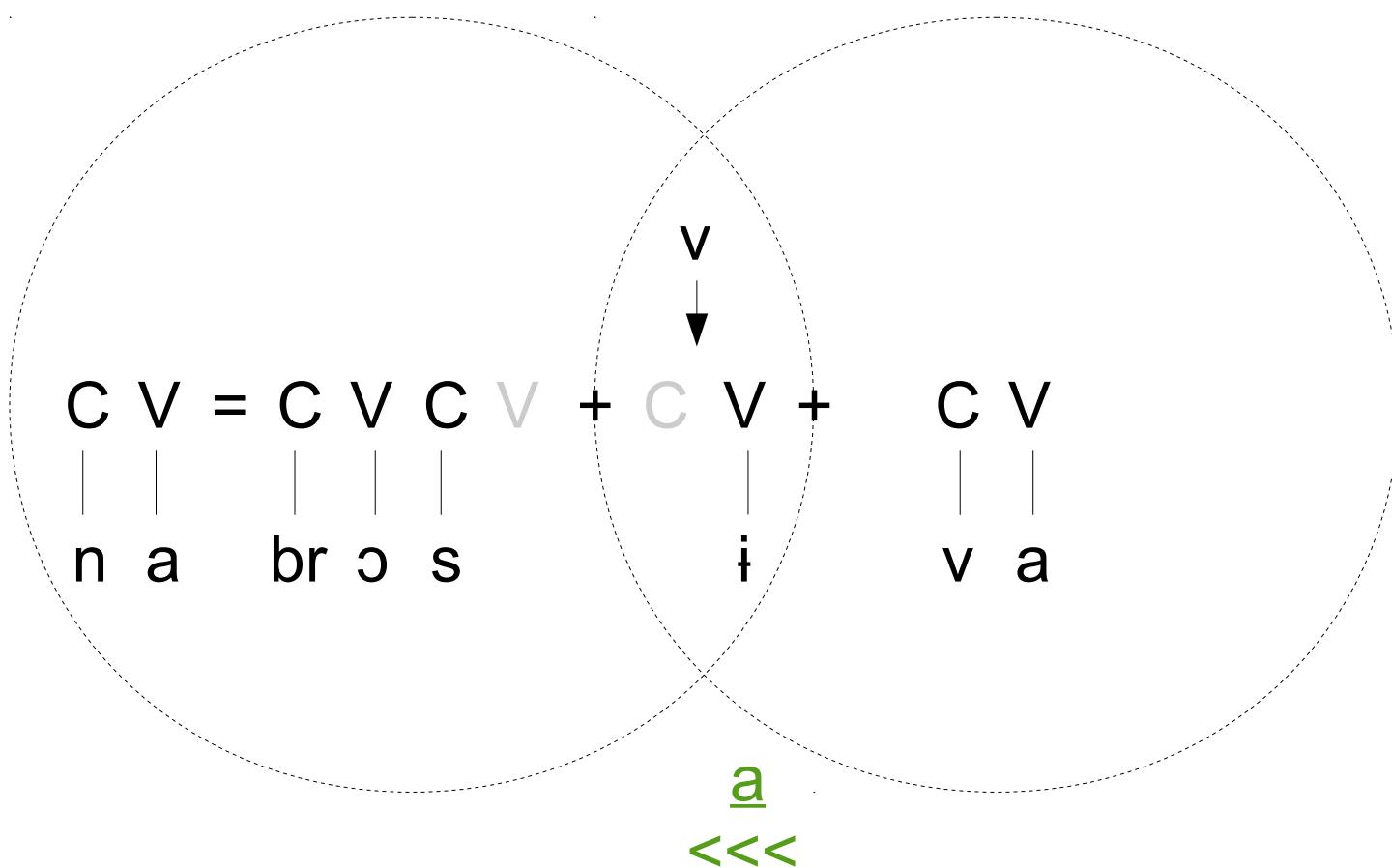
4. -<u>a</u> associates to the nearest compatible segment: /ɔ/
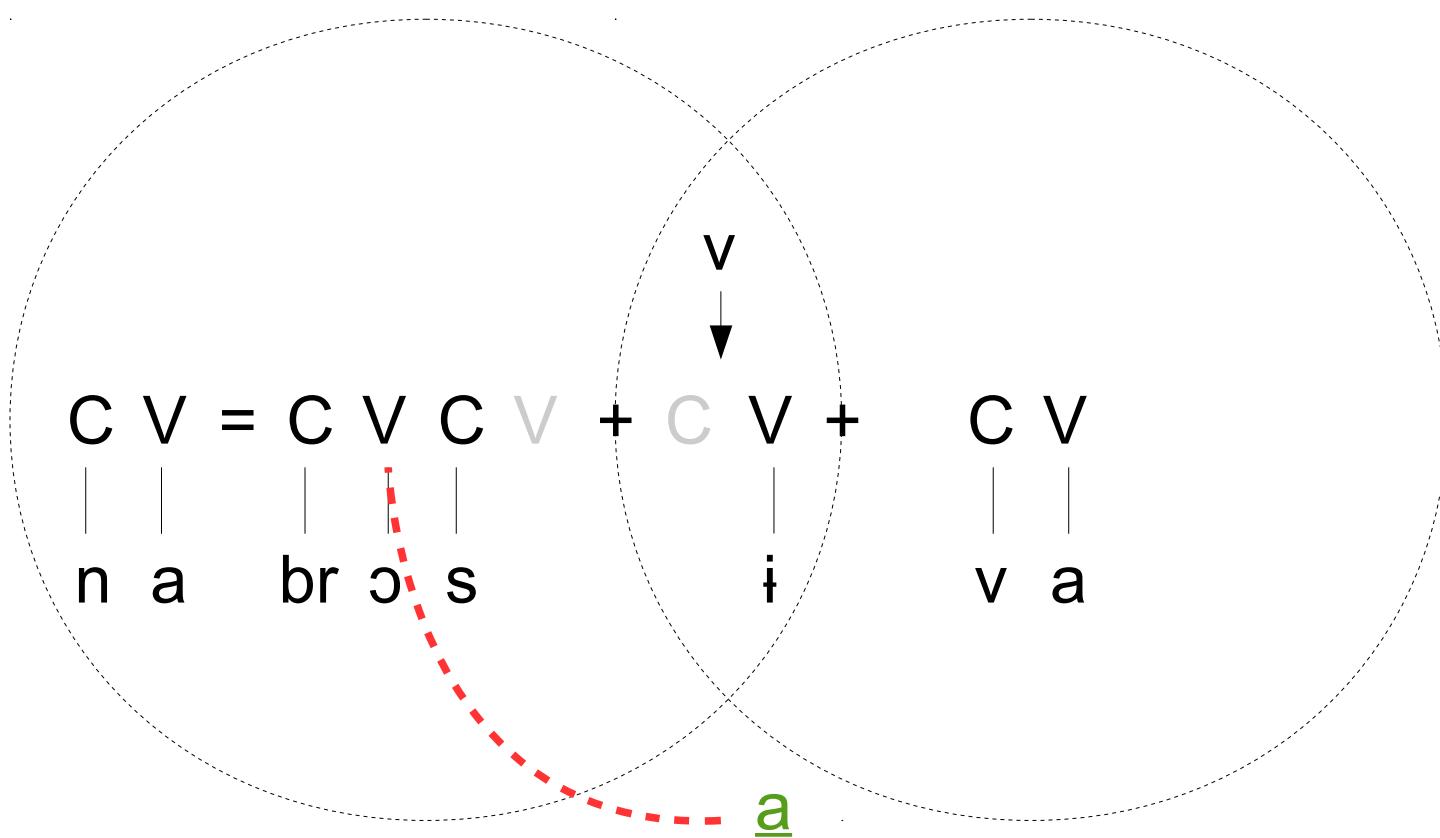
5. /ɔ/ is delinked. It results an a-mutation of ɔ.

C V = C V C V + C V +   C V
| | | | | | | |
n a   br a s   ɨ   v a
ɔ
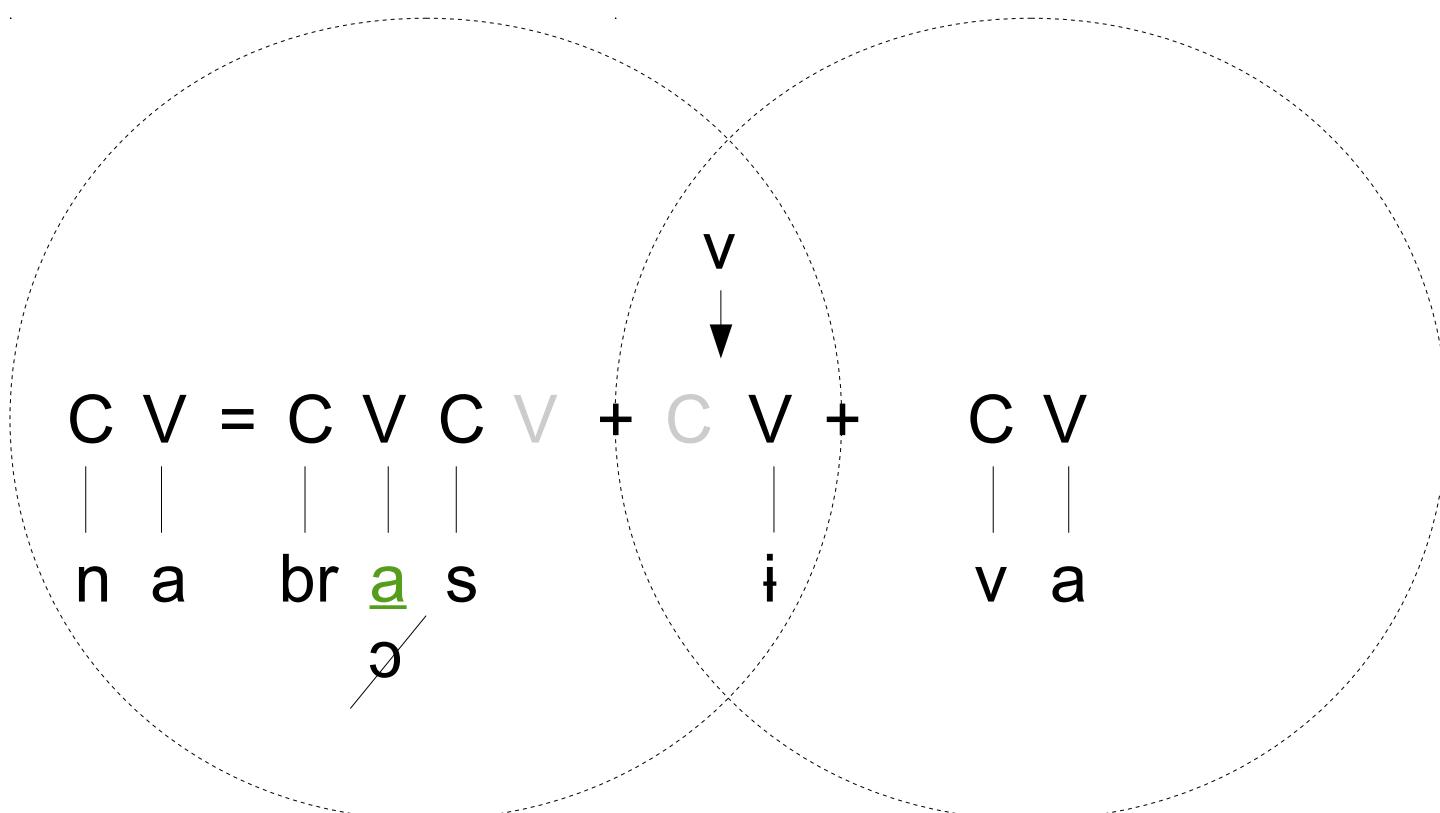
- **Pre-accentuation of -iva**

  - IPF -a has an inherent stress

  → stress is shifted because -a is shifted

C V = C V C V + C V + C V

n a brɔs   a ɨ v a
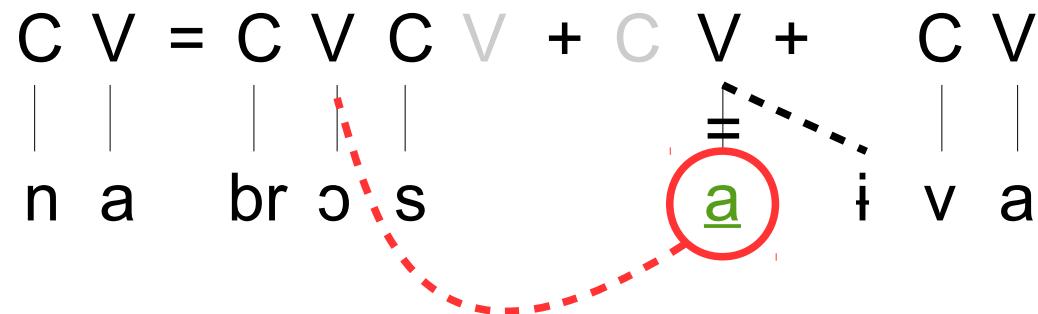
About the accentuation of -(v)a, see Garde (1980: §582) and Melvold (1989: 295)

- **Palatalization + ɔ/a alternation**
  - involve both -i and -a

s-prɔs-i-tʲ (PF)

↓

s-praʃ-iva-tʲ (IPF)

=

v, iva

Ø   v, a @

s   √i

Ø   √prɔs
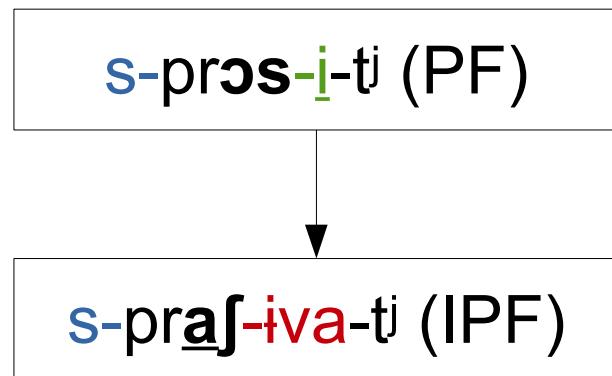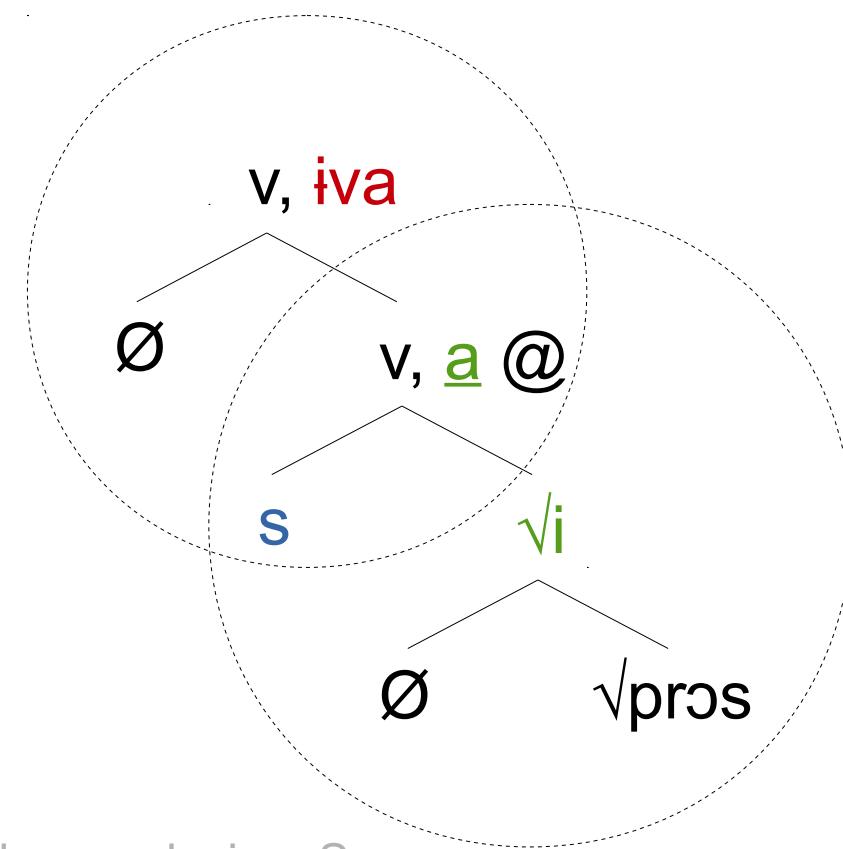
See Coats (1974), Feinberg (1980) for a similar conclusion. See Lowenstamm (2012, 2013, 2014) about affixes as roots.

- **Palatalization + ɔ/a involves -i + -a?**

  - **2 arguments**

    - Diachronic:

      pri-gɔtɔvlʲ-<u>a</u>-tʲ > pri-gɔt<u>a</u>vlʲ-iva-tʲ
      to prepare/cook

    - Bulgarian:

      o-ʦen-i-a[1Sg] (PF) → o-ʦen-i-a[IPF]-va-m[1Sg] (IPF)
      to estimate

- **Palatalization + ɔ/a alternation**
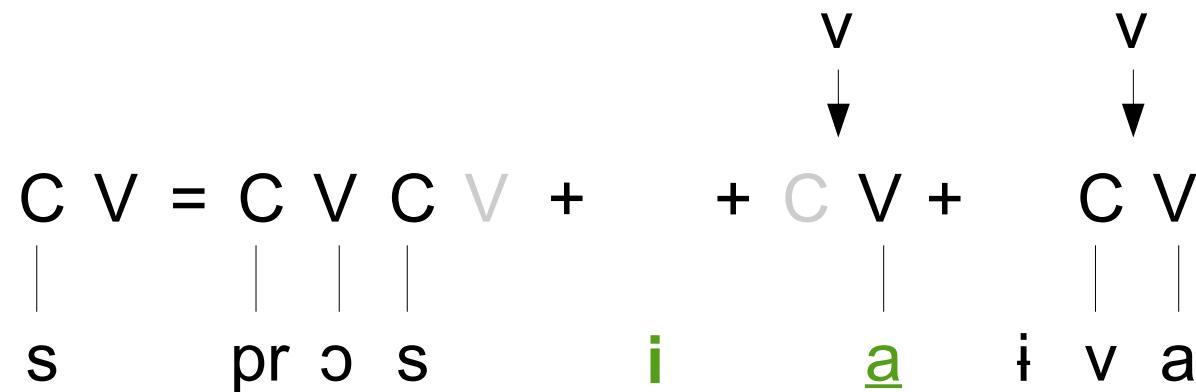
  - -i is floating (= truncation of Jakobson, 1948)

The floating -i serves as a representation of the vowel truncation of jakobson (1948)

- **Palatalization + ɔ/a alternation**
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- **Palatalization + ɔ/a alternation**
  - -i is floating (= truncation of Jakobson, 1948)

- **Palatalization + ɔ/a alternation**

  - -i is floating (= truncation of Jakobson, 1948)

3. Predictions

- **Complementary distribution of -(v)a and -iva**

  - -(v)a never cooccurs with -(v)a

  - -iva always cooccurs with -(v)a
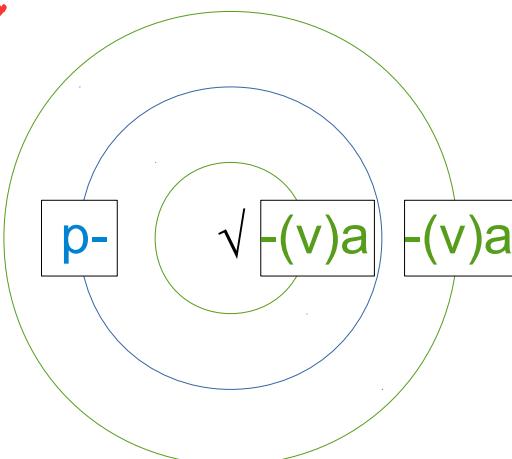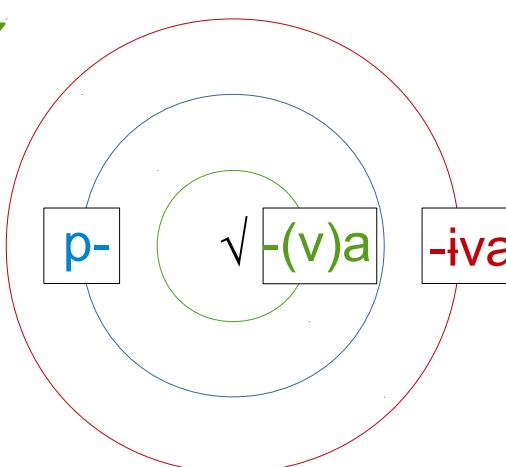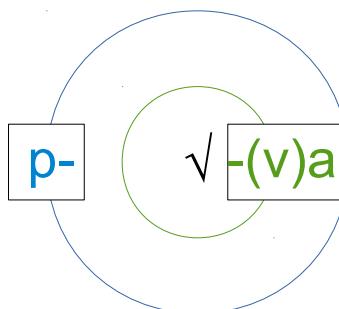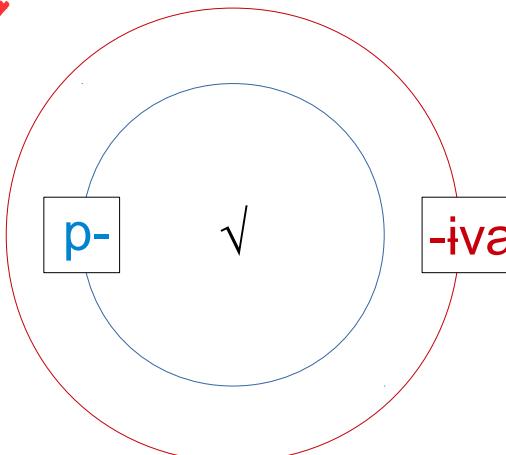
- **Hypothesis:** -ɨva is the realization of two -(v)a

  - Purpose: repair an ambiguity   see Karcevski (1927: 93)

v, (v)<u>a</u>

Ø   v, (v)<u>a</u>

na   √brɔs
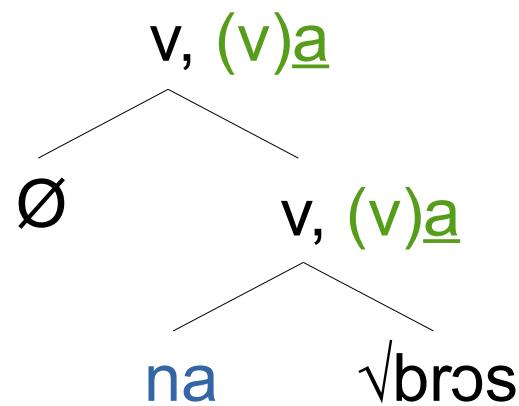
Compare:
Russian   za-igr-ɨva-tʲ
Bulgarian   za-igr-a-va-m

See Coats (1974), Feinberg (1980) for similar conclusion. See also Mazon (1908: 60) and Matushansky (2009) about the common origin/representation of -(v)a and -ɨva

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- **Issue:** where does /ɨ/ come from?
  - ✗ Reduction?   Halle (1963), Coats (1974), Feinberg (1980)
  - ✗ Epenthesis?   Matushansky (2009)
  - ✔ **Expletive root.**   see Faust (2011) about Modern Hebrew

- repairs a [ᵥ[ᵥ]] cluster

  - √ɨ selects a phase

  - v selects a root

v, (v)a̲ [u-√]

Ø   √ɨ [u-v]

Ø   v, (v)a̲ [u-√] @

na   √brɔs
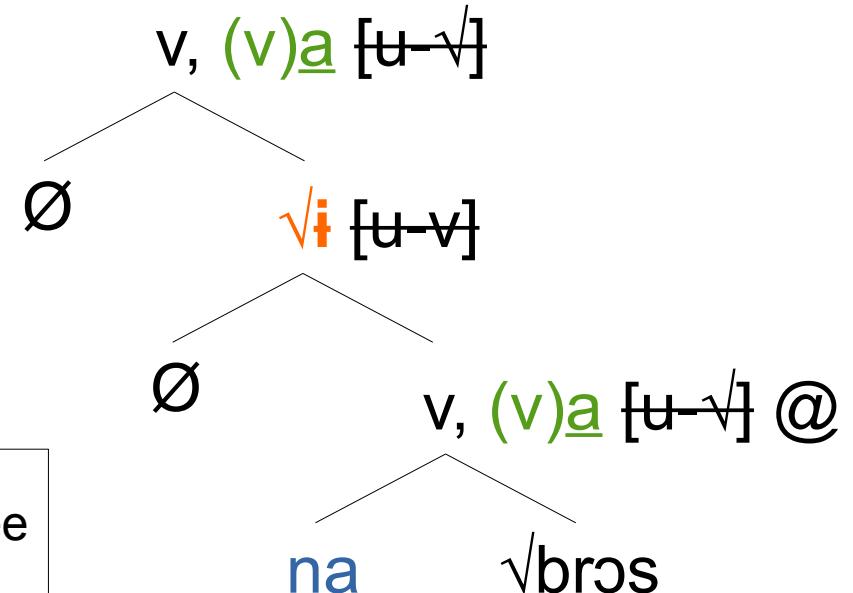
About identity avoidance in morpho-syntax, see
Van Riemsdijk (2008), Grimshaw (1997), Yip
(1998) and Ackema (2001)

- **Issue:** where does /ɨ/ come from?

  - Similar to…
  - Reduplication with fixed segmentism (Alderete et al., 1999)
  - Echo words (ex: english *shm-reduplication*) (Yip, 1992, 1998)
    - *'echo-words result from a tension between two constraints, one requiring repetition (reduplication) and one banning repetition (the OCP).'* (1998)

Deverbal reduplication in Yoruba

gbóná   →   **gbí**-gbóná *'warmth'*

jɛ   →   **jí**-jɛ   *'act of eating'*

rí   →   **rí**-rí   *'act of seeing'*

- **Expected structures**

v, (v)<u>a</u>
 / \
Ø   √ɨ

v, (v)<u>a</u> @
 / \
Ø   ROOT

/-(v)a/

---

v, (v)<u>a</u>
 / \
Ø   √ɨ
     / \
    Ø   v, (v)<u>a</u> @
         / \
        Ø   ROOT

/-ɨva/

---

v, (v)<u>a</u>
 / \
Ø   √ɨ
     / \
    Ø   v @
         / \
        Ø   ROOT

?

- **Hypothesis:**

v, (v)<u>a</u>

Ø √ɨ

Ø v

na √z(ʊ)v

v, (v)<u>a</u>

na √z(ʊ)v

na-zv-<u>a</u>-tʲ (PF) → na-zɨv-<u>a</u>-tʲ* (IPF)
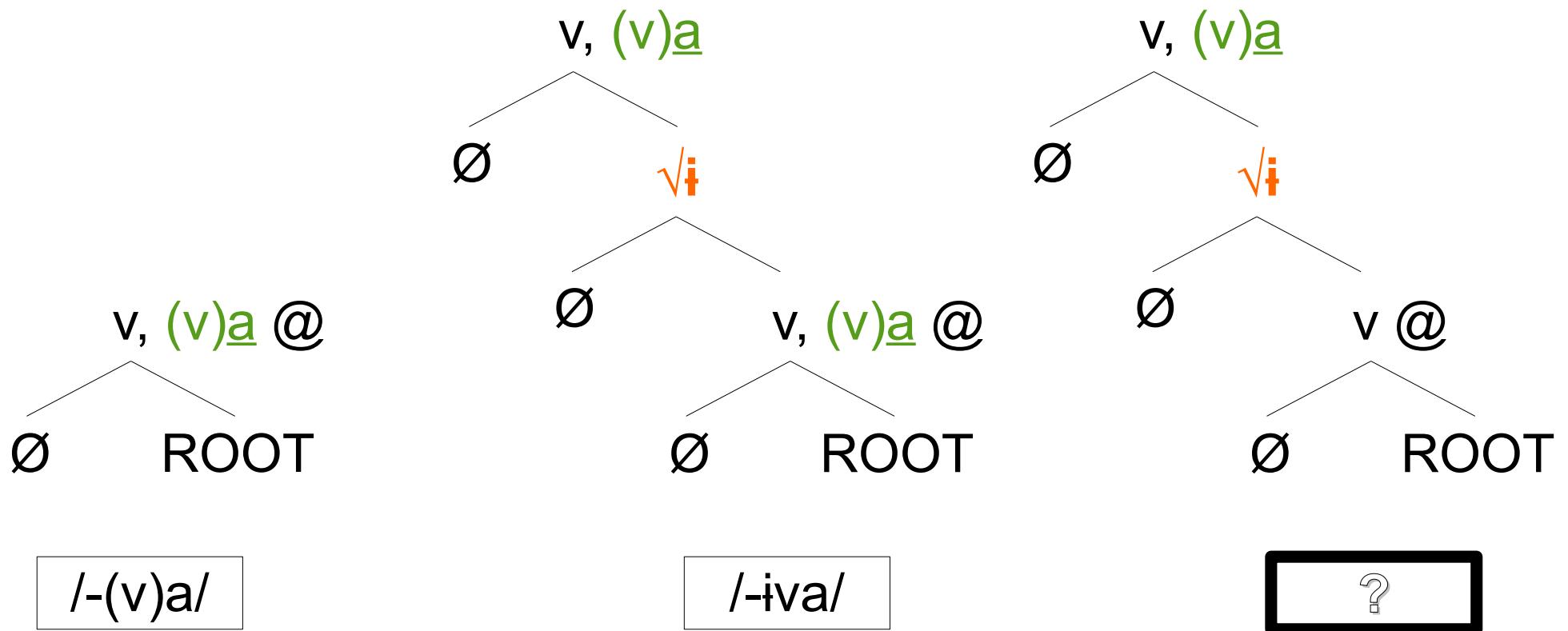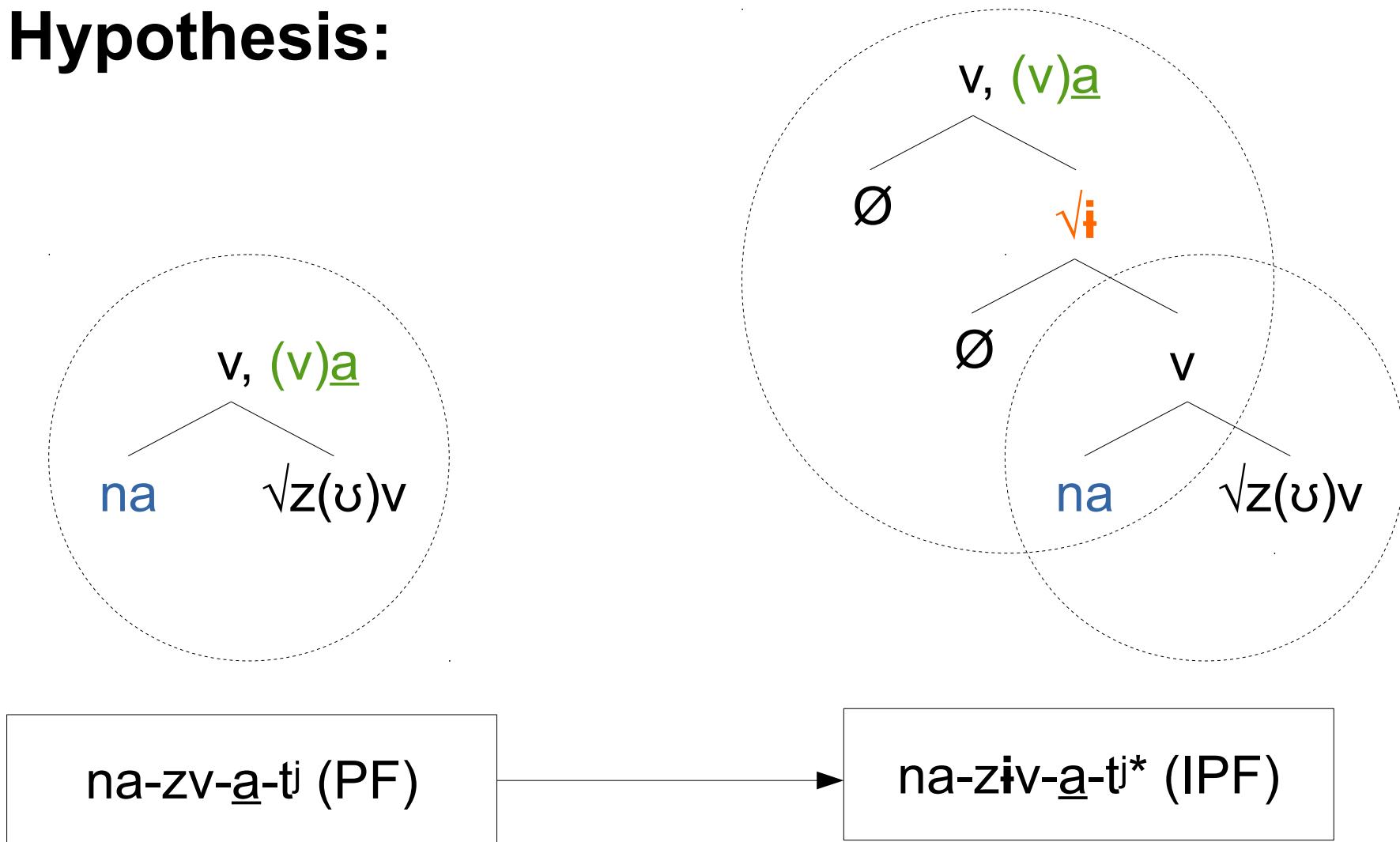
* [ɨ] is not a regular realization for a yer. We should expect /ʌ/ as in [zʌv<u>u</u>] 'I call'

- **Realization:**
  - As an underlyng floating vowel, ɨ phonologically belongs to all/none of the positions (i.e. CV units) of the phase
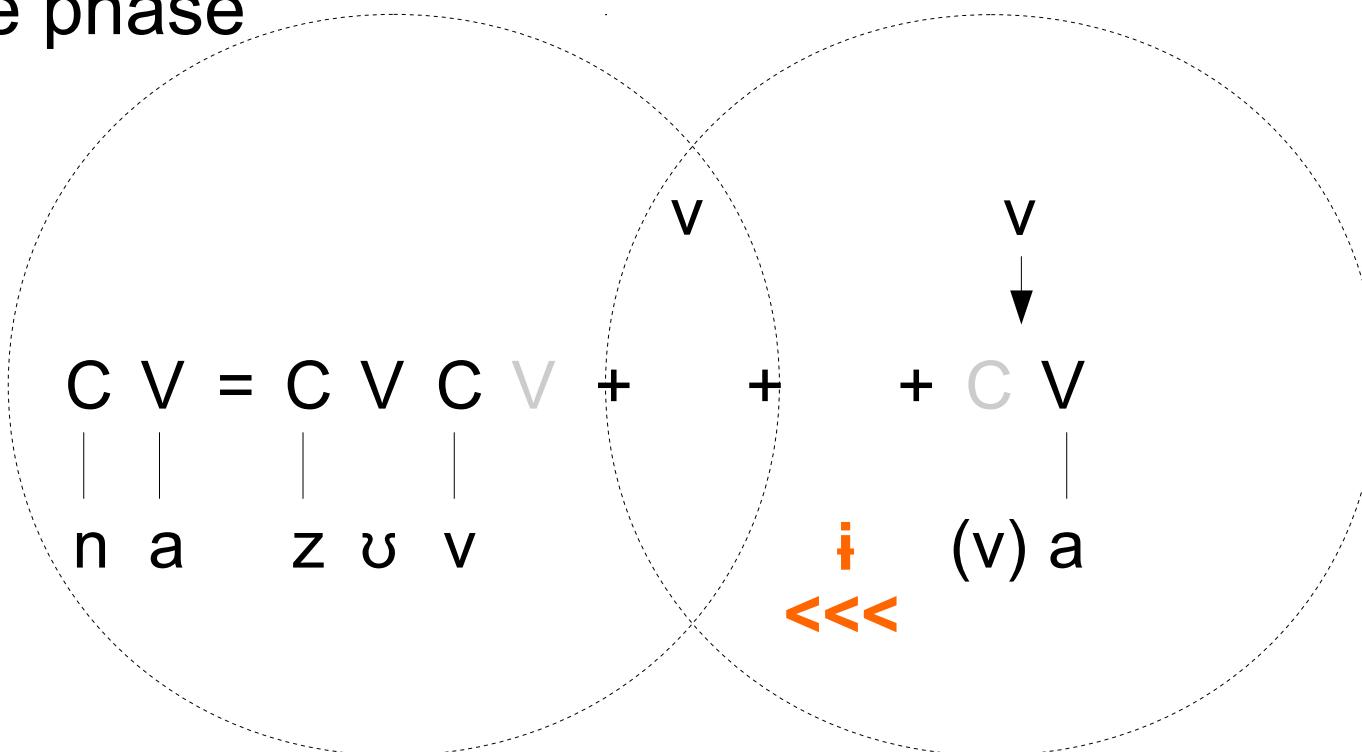
- **Realization:**

$$\overset{\text{v}}{\text{C V}} = \text{C V C V} + \quad + \quad + \text{C V}$$

C V = C V C V + + + C V

| | | | |
n a   z ʊ v   ɨ   (v) a

<<<
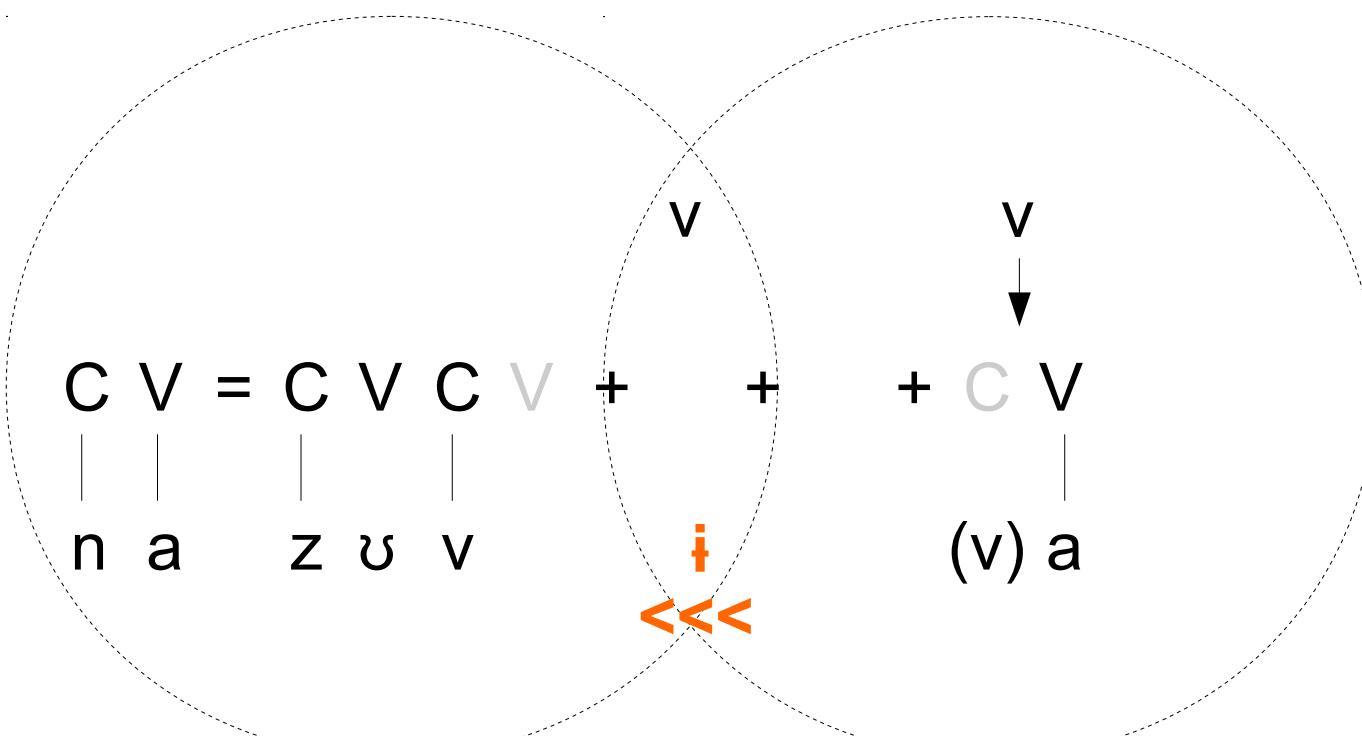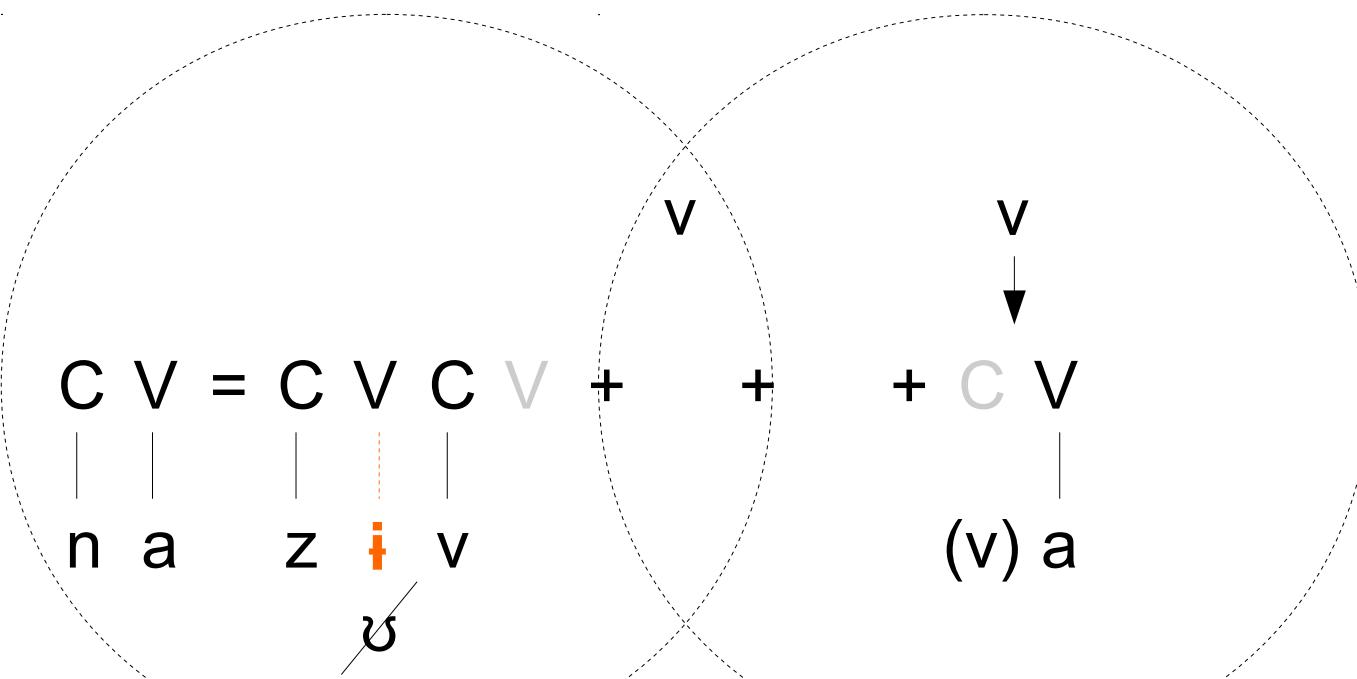
- **Realization:**

The [i] realization of this /ɨ/ is phonologically conditioned by a neighbouring /r/ or /n/ (Garde, 1980:§584)

Conclusion

- **Topic:** ɨva-conditioned phonological changes

- **Issue:** -ɨva **cannot** access the root.

- **Solution:** stem suffix involved in both phases.

- **Prediction:**

  - ɔ/a alternation

  - palatalization

  - Stress shift

  - Complementary distribution of -(v)a and -ɨva

  - Ø/ɨ alternation

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Appendix 1

- Does /j/ belong to the stem suffixes?

  - -aj, -<u>a</u>j, -ɛj   (Flier, 1972)

  - ✔ /j/ = redundant   (Garde, 1972)

  - ✔ /j/ = marker of the present tense   (Micklesen, 1972)

- Does /v/ belong to -(v)a?

  - j → w / _aj   Flier (1972, 1974), Coats (1974)

  - Distinct morpheme   Matushanski (2002)

  - ✔ -(v)a   Garde (1972, 1980)

Appendix 2

- ## Why Mirror Theory?

  - Phonology cannot be representational with DbP

  - Cyclicity and locality are redundant (see Freidin, 1978)

  - Locality existed before cyclicity (Boeckx & Grohmann, 2007)

  - No bleeding in morphology (see Marvin, 2003)

 - No bleeding = no derivation (see Brody, 2002)

# Appendix 3

- ## Is PIC1 too restrictive? Marvin (2003), Embick (2010)

 - ## not with « Affixes as Roots » Lowenstamm (2014)

n, ity
  Ø
      a, ic
        Ø   √atom

C1-LIN: *at<u>o</u>micity

n
  Ø   √ity
        Ø   √ic
              Ø   √atom

AaR: atom<u>i</u>city

74

Appendix 4

I, et

(DP) ⬚1   T, j

 Ø V[oice]

  $t_{(DP)}$ **v, ɨva**

   Ø v, <u>a</u> @ ⬚3

    na ⬚2 √brɔs

      (DP) ⬚4

(DP)#na=brɔs+<u>a</u>+ɨva+j+et#(DP)
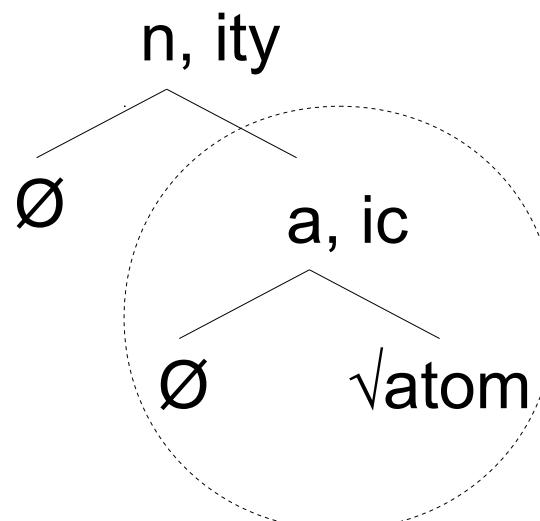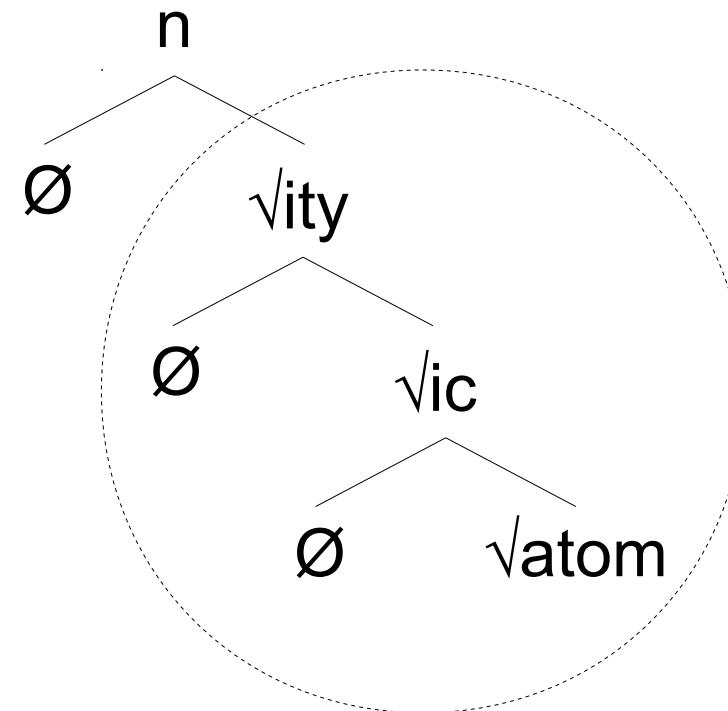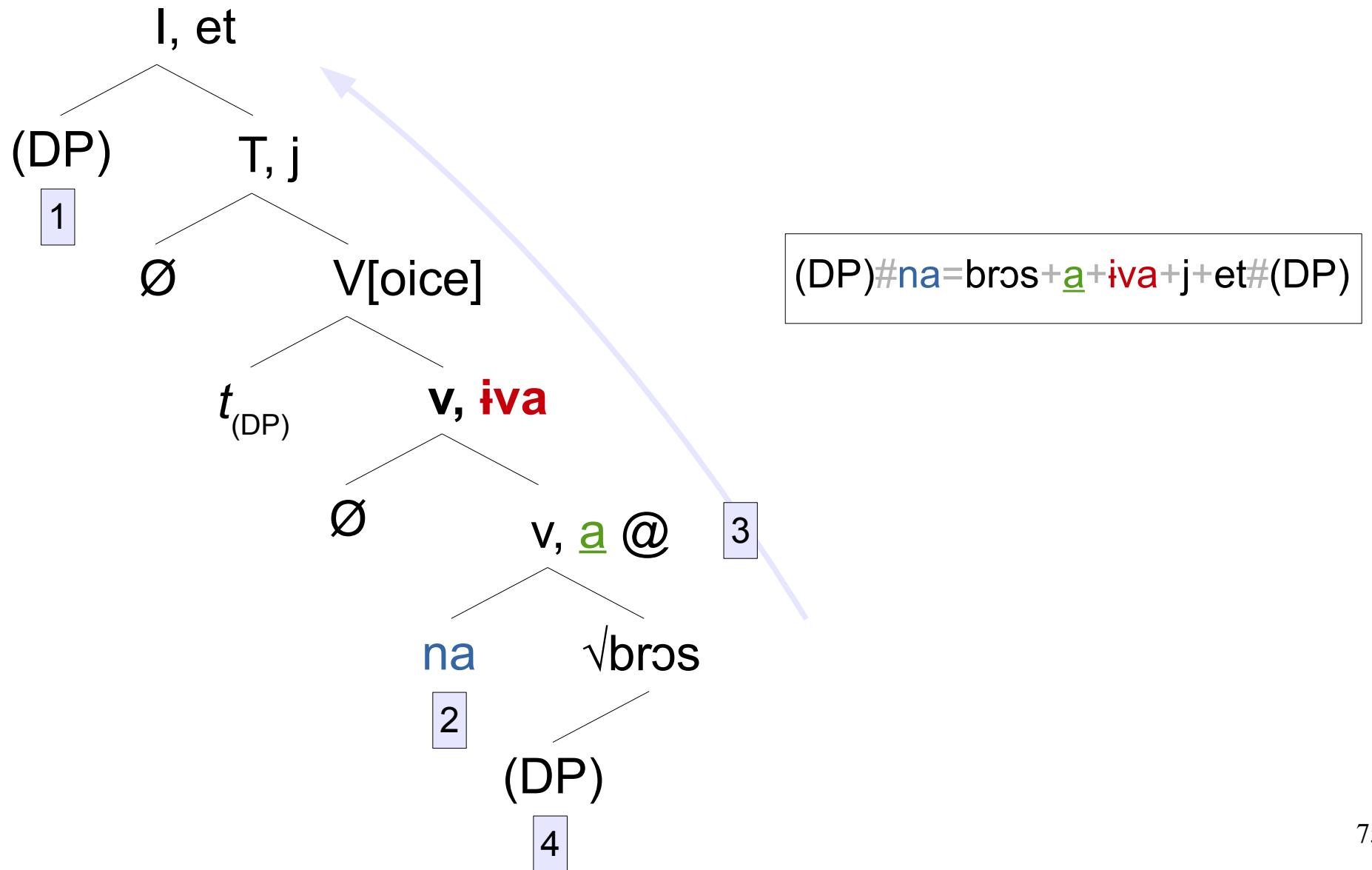
Appendix 5

- Why is only /ɔ/ A-compatible (not a, ɛ, i, u, ɨ)?
  - Correlation: only /ɔ/ can be reduced to a single element A in the unstressed context.

Vowel Reduction		
nɔr**a**	[n**ʌ**r**a**]	*burrow*
m**u**k**a**	[m**u**k**a**]	*flour*
k**i**n**ɔ**	[k**i**n**ɔ**]	*cinema*
ʦ**ɨ**g**a**n	[ʦ**ɨ**g**a**n]	*romani*
tʲ**ɛ**pʲɛrʲ	[tʲ**i**pʲ**e**rʲ]	*now*

Appendix 6

- Exceptions to the ɔ/a alternation
  - Mostly denominatives Mazon (1908, 1943), Garde (1980)

No possible operation
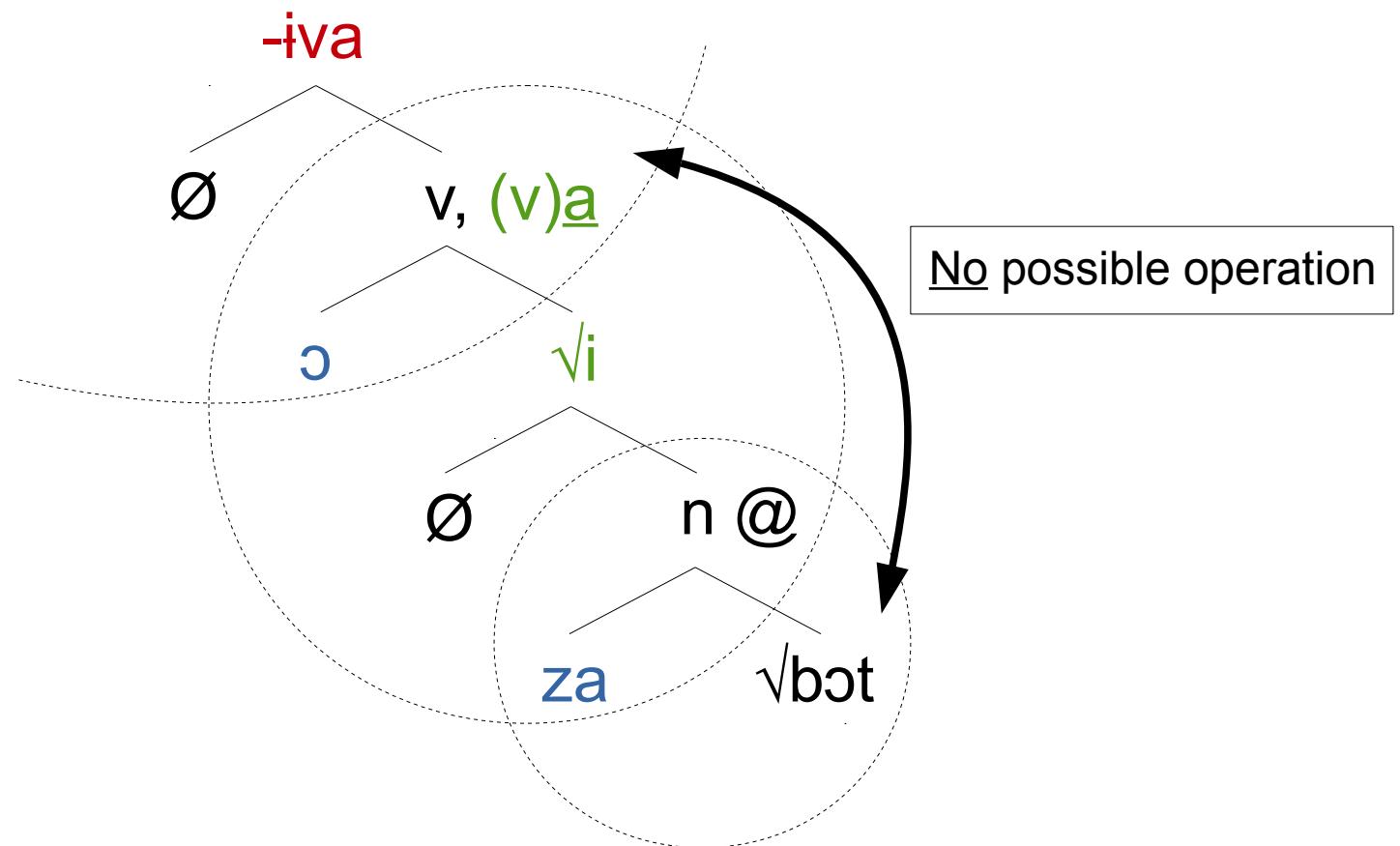
Appendix 7

- ## Iterative verbs

  - ### (rare and outdated)

v, (v)<u>a</u> [u̶ ̶√̶]

Ø √i̶ [u̶ ̶v̶]

Ø v, (v)<u>a</u> [u̶ ̶√̶] @

Ø √pis

v, (v)<u>a</u> @

Ø √pis
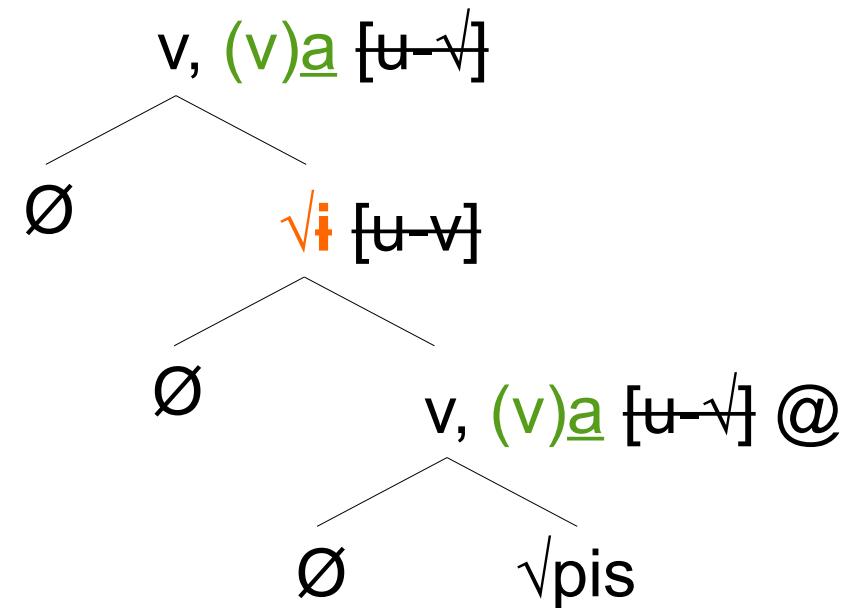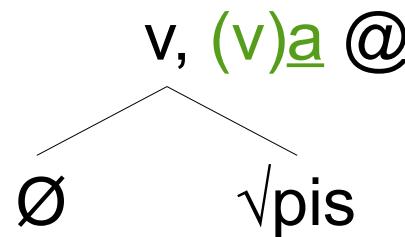
Appendix 8
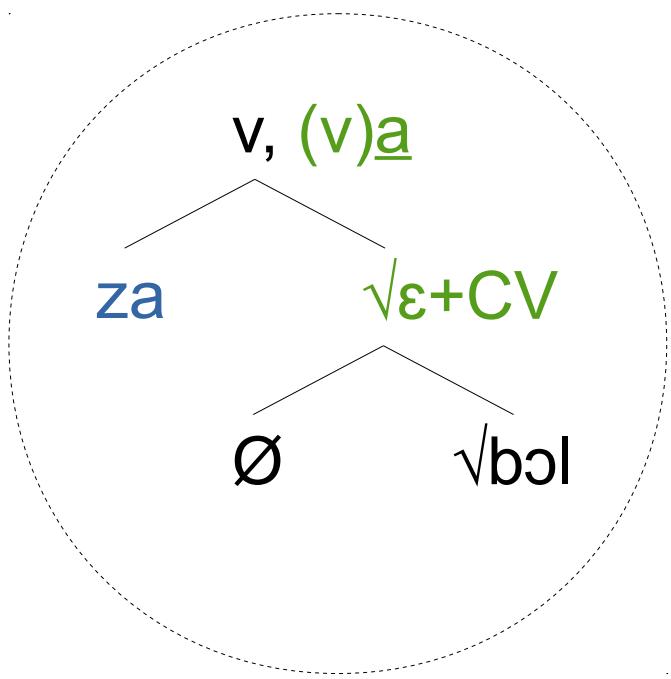
- Verbs ending with -ɛva

Appendix 9

- **Stress shift = moving of -<u>a</u>?**

- **Alternative 1:** accentual property of another morpheme.

  - ✗ Unstressed roots (e.g. °govor, Garde, 1980) are stressed in -<u>i</u>va verbs: razgov<u>a</u>r-<u>i</u>vat'

- **Alternative 2:** stress by default

  - ✗ Stress by default is on the first syllabe (e.g. °na-°ʧa-°l → n<u>a</u>-ʧa-l, Garde, 1980; Melvold, 1989). In -<u>i</u>va type verbs, the stress is not initial.

- ➔ **Both these assumptions are wrong.**

° = unstressed   80