# English Phonology

## Autosegmental Phonology

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- specific problems in the representation
- Autosegmental phonology considers phonological representations to consist of several separate, independent tiers or levels
- they may interact with each other

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- when vowels are deleted, the tones associated with the vowels are often retained
- this demonstrates that, at least in some cases, a process affecting one tier may have no impact on elements on a different tier

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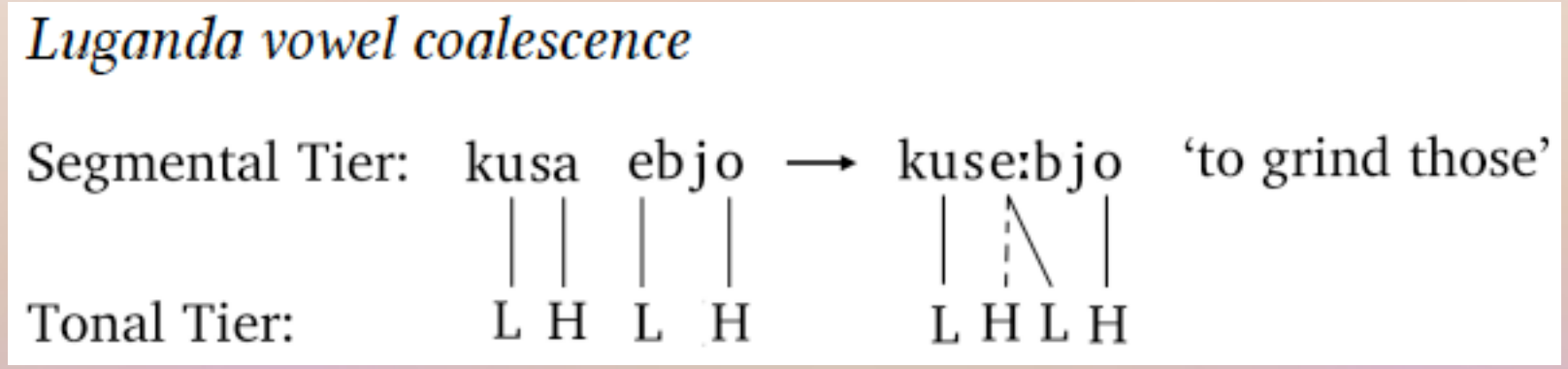
- Luganda, a Bantu language (Katamba & Stonham 2006)



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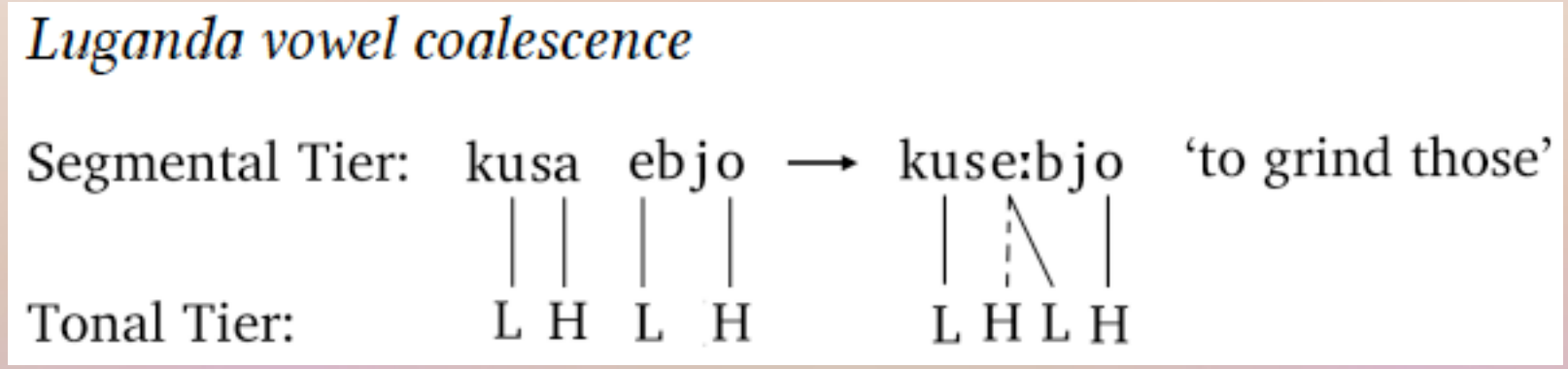


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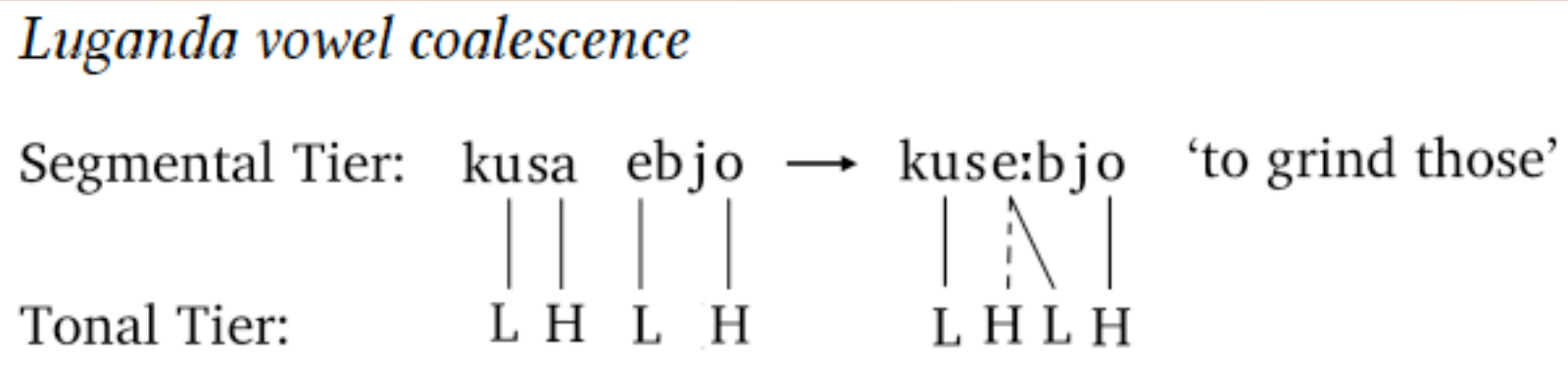


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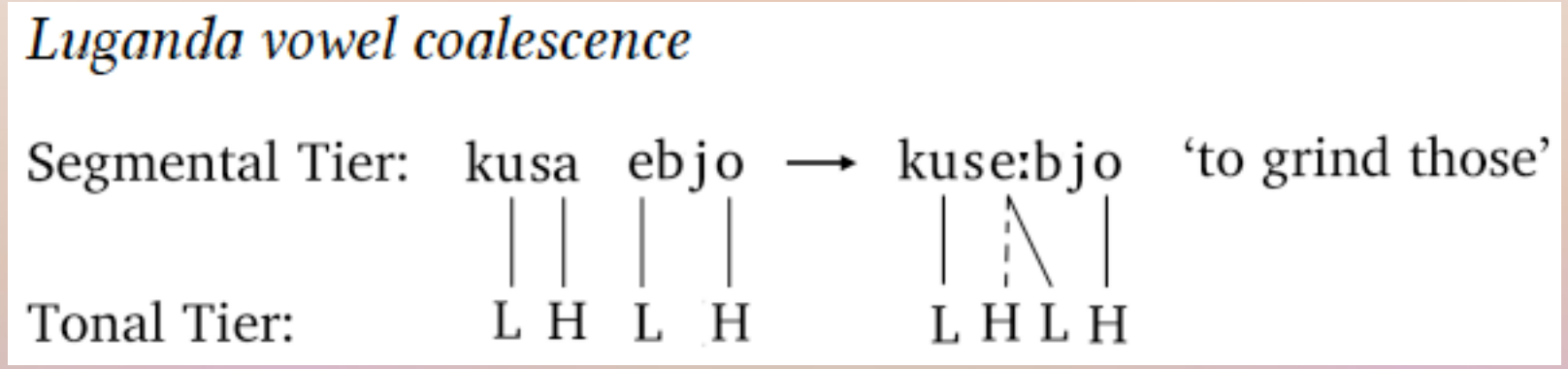


- when two vowels are adjacent, the first may be deleted, unless it is a high vowel
- if it is a high vowel it becomes a glide [j] or [ w]
- the tone that was associated with the deleted vowel is not affected

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- tone is represented on a separate *tonal tier*
- vowels and consonants belong to the *segmental tier*

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| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Tonal Tier | | L | | H | L | | | H |
| | | \| | | \| | \| | | | \| |
| Skeletal Tier | x | x | x | x | x | x | x | x |
| | \| | \| | \| | \| | \| | \| | \| | \| |
| Segmental Tier | k | u | s | a | e | b | j | o |

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- *association lines* link tones to vowels via the skeletal tier
- the skeletal tier may be represented by x-slots (cf. Hyman 1985)

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| | \| | \| | \| | \| | \| | \| | \| | \| |
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# CV tier

- Alternatively, the skeletal tier may be represented by C and V slots (cf. Clements 1983)

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Tonal Tier | | L | | H | L | | | H |
| Skeletal Tier | C | V | C | V | V | C | C | V |
| Segmental Tier | k | u | s | a | e | b | j | o |

# Autosegmental Notation

- In order to properly characterize the relationship between tiers, additional notation is employed:

| | | |
|---|---|---|
| a. | \| | A solid association line indicates pre-linking, i.e., prior association in the lexicon of elements on separate tiers. |
| b. | ¦ | A broken association line indicates active linking, i.e. the creation of an association line by means of spreading. |
| c. | ǂ | A crossed-through association line shows delinking or disassociation, i.e., the breaking of an association line. |
| d. | [ ] | Brackets show the boundaries of a phonological form. |
| e. | ⓥ | A circle around an item indicates that it has been deleted. |

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- they come from different tones associating with a single vowel

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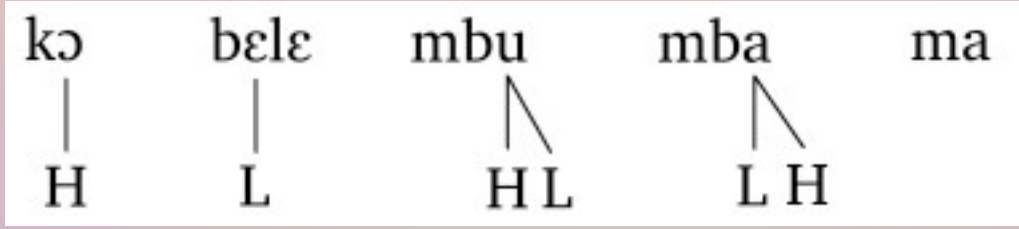

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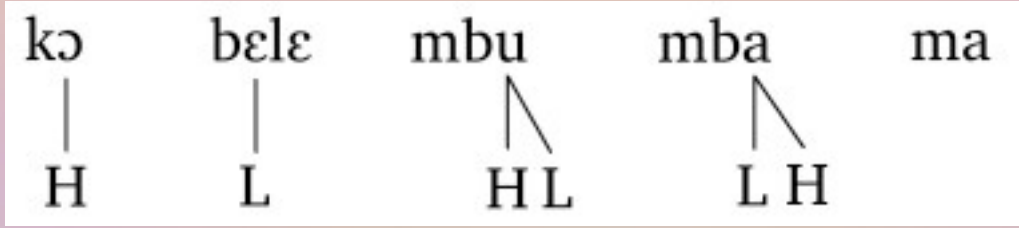


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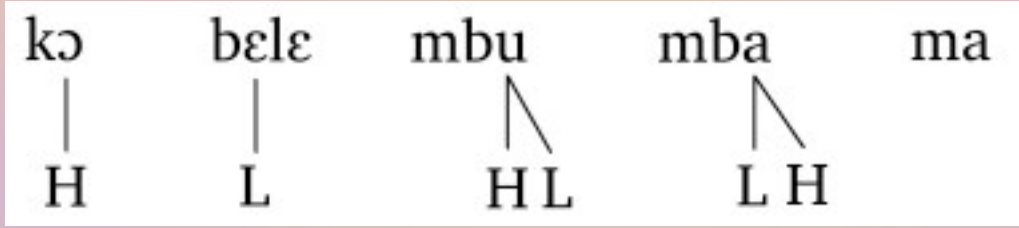


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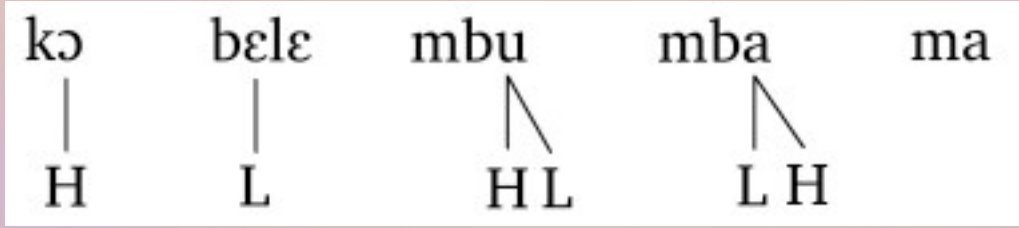


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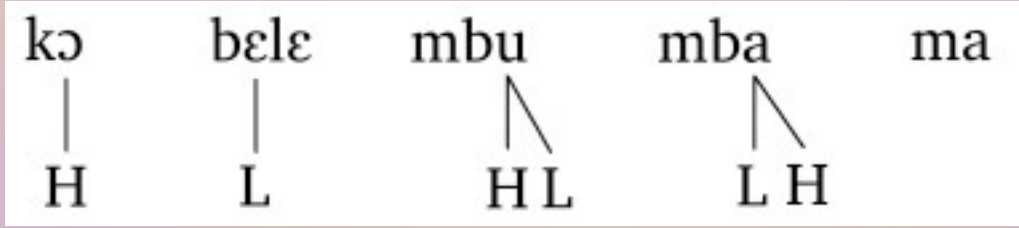


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- this is due to *autosegmental spreading*

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- if a monosyllabic root has a LH pattern, then the H spreads onto -*ma*, leaving the L behind on the root
- since all roots have tones, the suffix, -*ma*, will always receive a tone in this way

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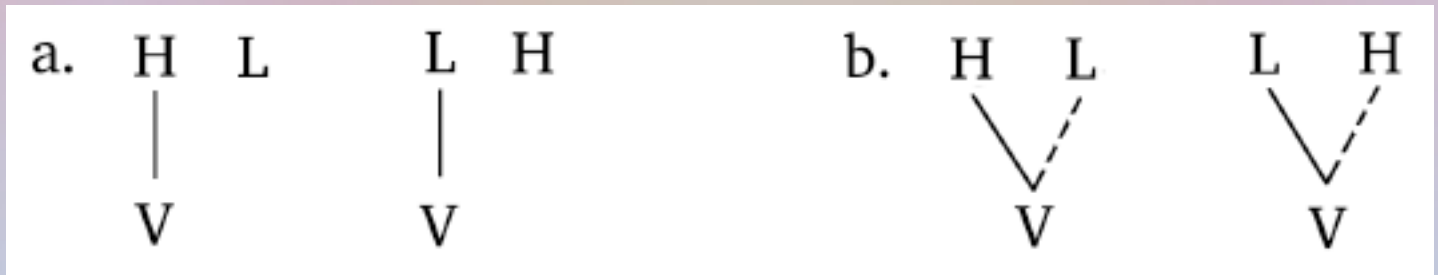

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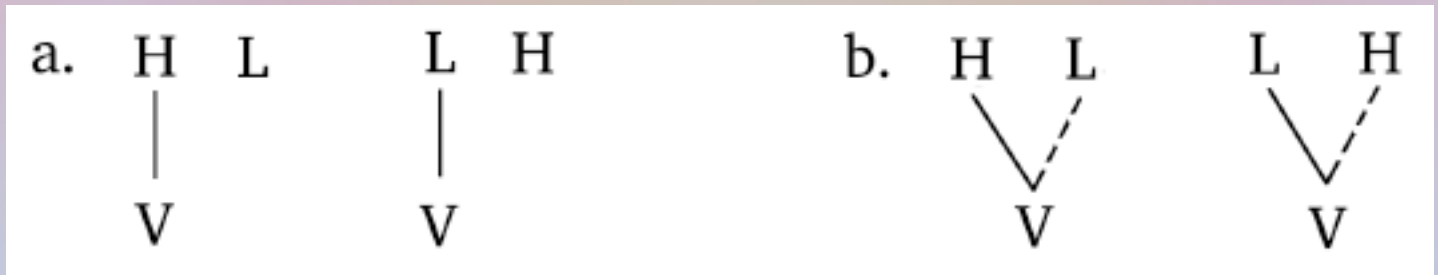

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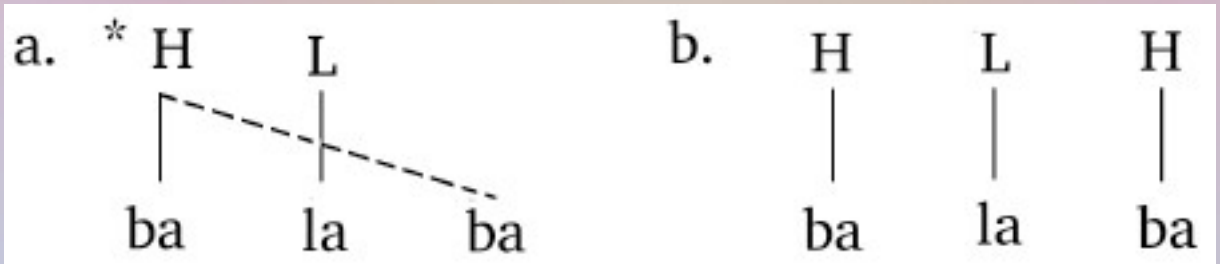

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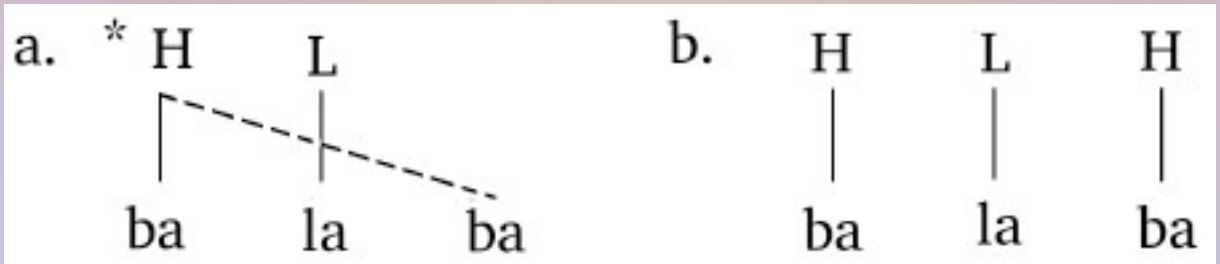
- in this situation, we must posit two separate H tones linked with the first and third vowels, as in (b)



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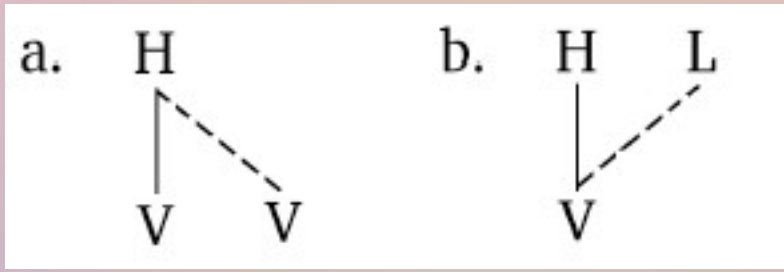
- the repair strategy always makes the minimal number of changes required to satisfy the WFC

# Repairs

- in (a) the repair operation links unassociated vowels with tones



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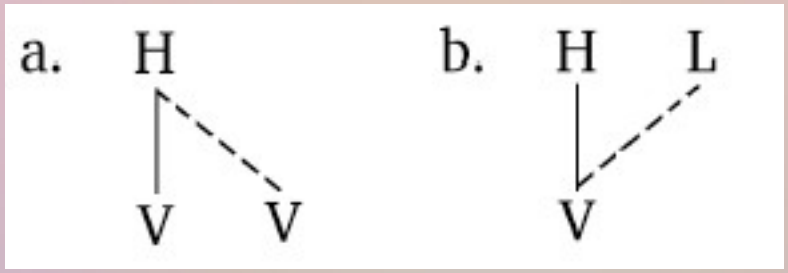
- in (b) it associates unassociated tones with vowels



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- they regulate the ways in which association lines may link autosegments to elements that bear them

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- consonants are associated with C-slots
- take, for example, the Korean word *kaŋadʒi* ‘puppy’

| | | | | | | |
|---|---|---|---|---|---|---|
| Skeletal tier: | C | V | C | V | C | V |
| | \| | \| | \| | \| | \| | \| |
| Segmental tier: | k | a | ŋ | a | dʒ | i |

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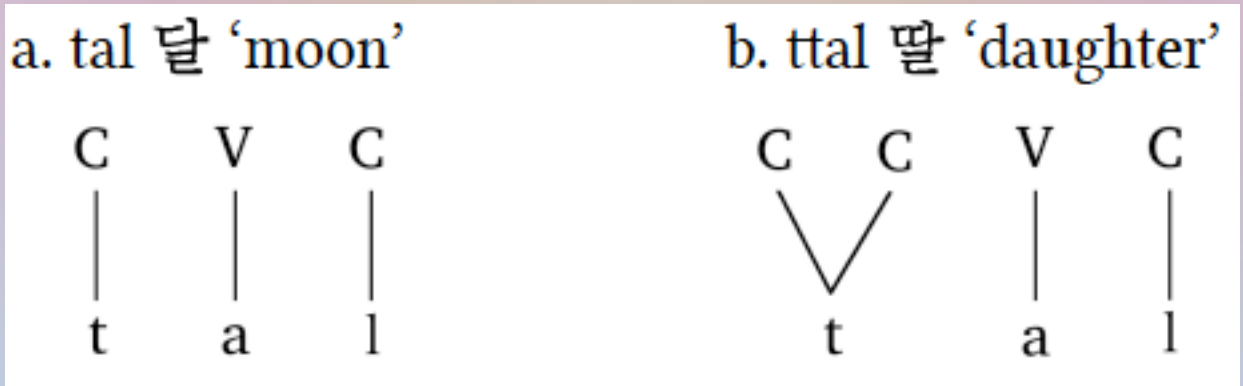
- these tense consonants are viewed by some phonologists as having two slots on the skeletal tier (cf. Jun 1994)
- this may be represented as below, where the geminate [t'] in *ttal* 'daughter' contrasts with the single [t] of *tal* 'moon'



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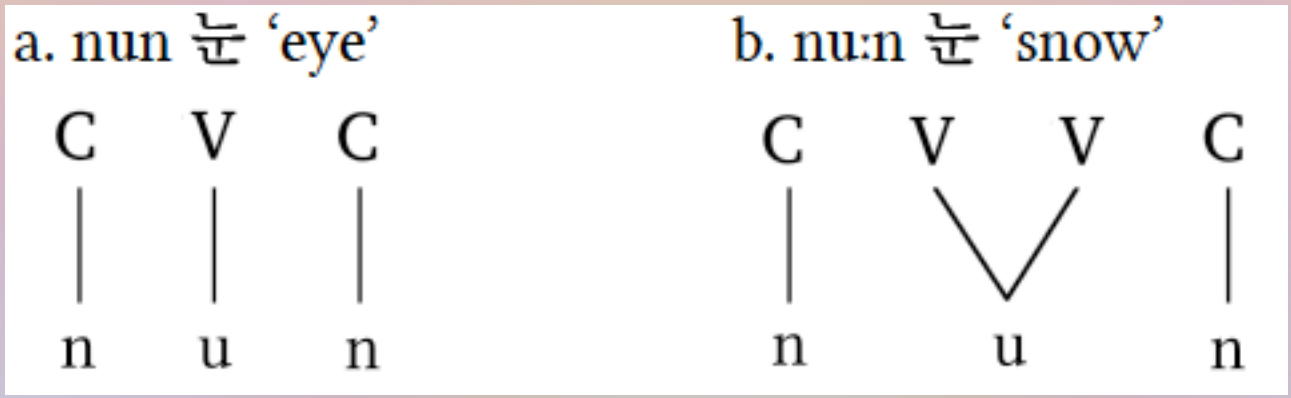

# Compensatory Lengthening

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- demonstrated by the case of Luganda

a. be:laba

| | | |
|---|---|---|
| ba- | e- | laba |
| they- | themselves- | see |

'they see themselves'

b. twe:laba

| | | |
|---|---|---|
| tu- | e- | laba |
| we- | ourselves- | see |

'we see ourselves'

c. bje:laba

| | | |
|---|---|---|
| bi- | e- | laba |
| they- | themselves- | see |

'they (e.g., animals) see themselves'

- if the first vowel is non-high, it is deleted and the empty V-slot links to the second vowel, becoming long
- this is what is known as compensatory lengthening

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- this is also the case with a high front vowel, /i/:

b. *bje:laba* 'they see themselves'

# The Obligatory Contour Principle

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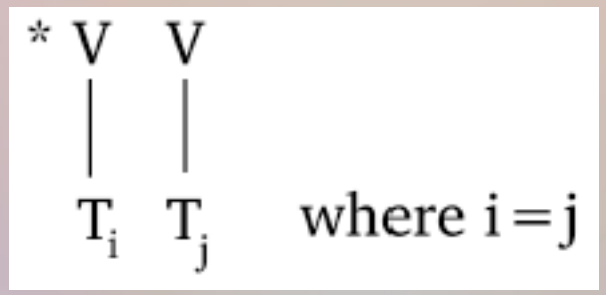

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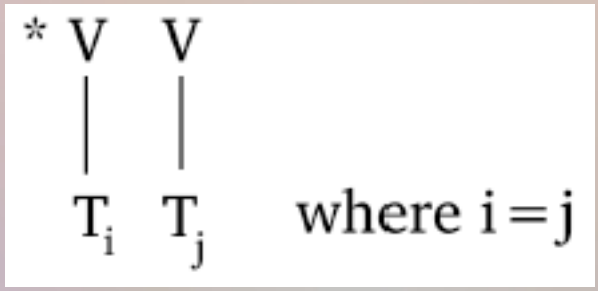

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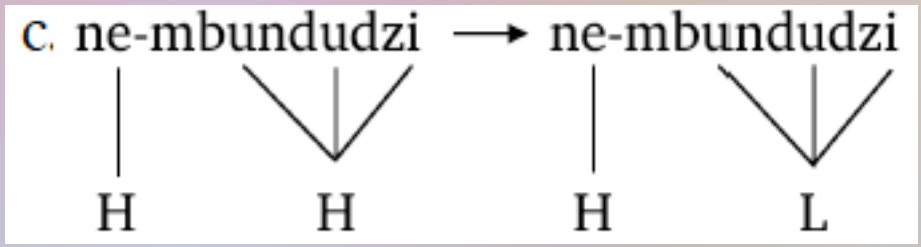

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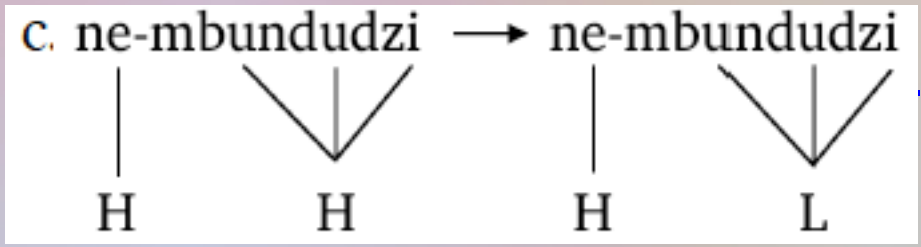


-> né-mbùndùdzì

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- the use of the OCP provides a much more general treatment of the data
- the OCP has been extended to a variety of contexts beyond tone systems, and is regarded by many linguists as a general principle of phonology

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- we will examine several cases of spreading in order to better understand how it works

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- this attaches to feminine forms as in (b)
- subsequent rules delete the final schwa in Standard French, leaving word-final nasals in some cases

- a. bon [bɔ̃] `good (masc.)'
- b. bonne [bɔn(ə)] `good (fem.)'

| | | | |
|---|---|---|---|
| Input Form: | | /bɔn/ | /bɔ.nə/ |
| Nasalization | V → [nasal] / __ [nasal] $ | bɔ̃n | bɔnə |
| Nasal deletion | N → Ø / __ $ | bɔ̃ | — |
| Final ə deletion | ə → Ø / __ # | — | bɔn |
| Output: | | bɔ̃ | bɔn |

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- it also employs the Sonority Hierarchy, along with French phonotactics, which prevent nasals from linking in some cases

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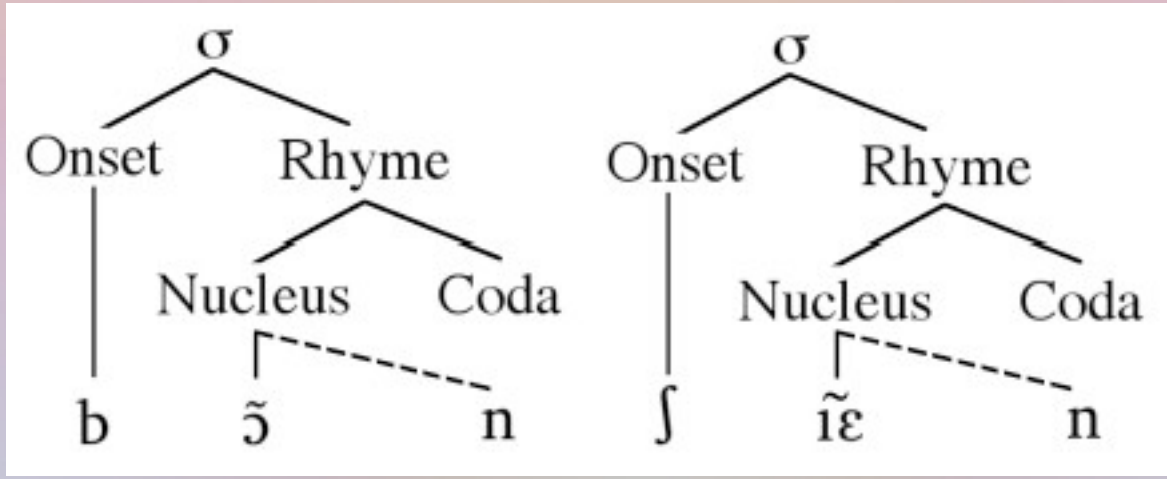
- instead, the vowels in both words are nasalized



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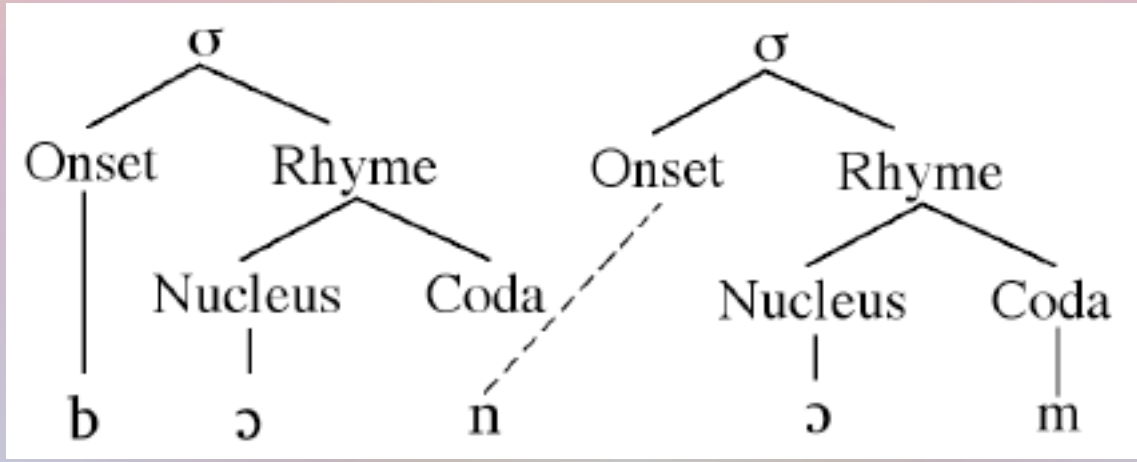
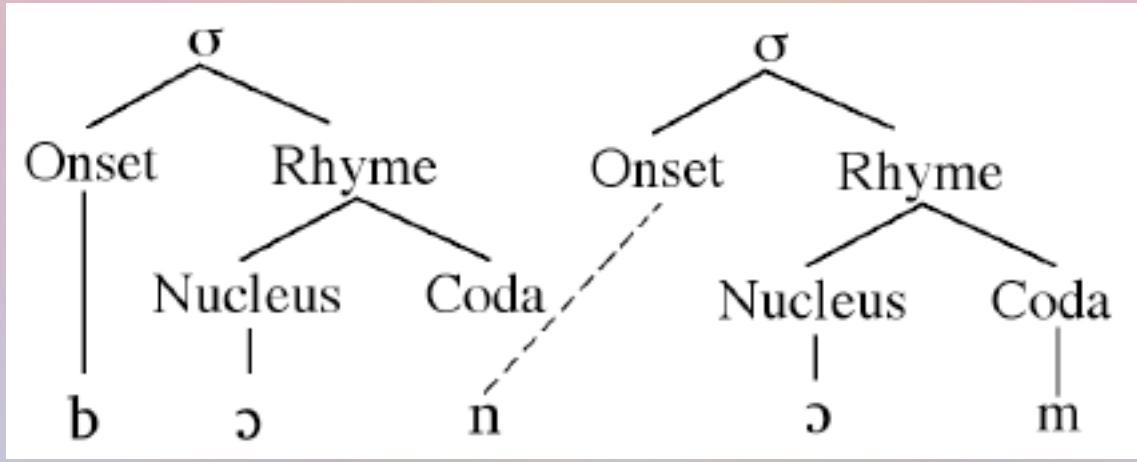
- consider this spreading of the [nasal] feature to the preceding vowel
- the phrase, *bon homme* ‘good man (masc.)’ contains two words also, but the second word has no onset: [bɔnɔm]

- we can see that the /n/ spreads to the following onset, observing the Maximal Onset Principle



- we can see that the /n/ spreads to the following onset, observing the Maximal Onset Principle
- since the /n/ is now linked to an onset, it can't spread its nasality to the preceding vowel, so the vowel remains oral



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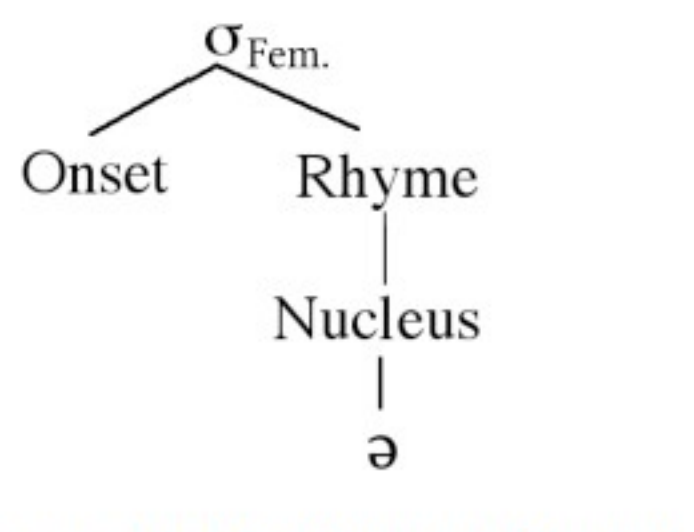


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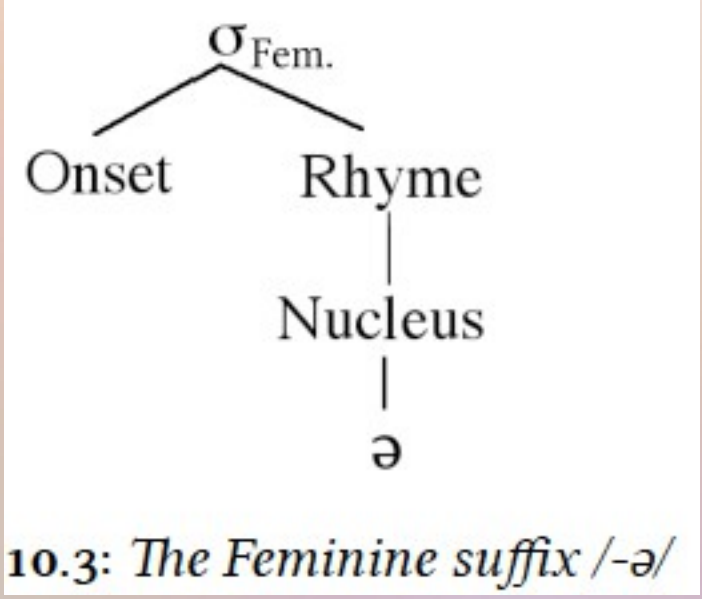
- this morpheme is attached to the end of feminine-class adjectives

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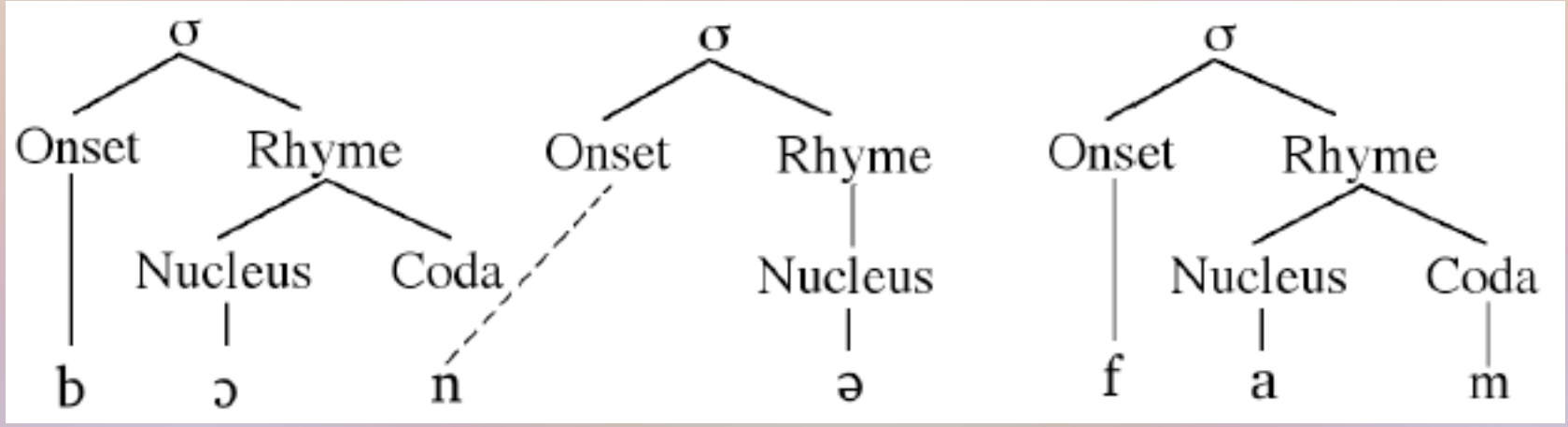
- It provides a place for the consonant to attach, since it requires the projection of an additional syllable with an empty onset



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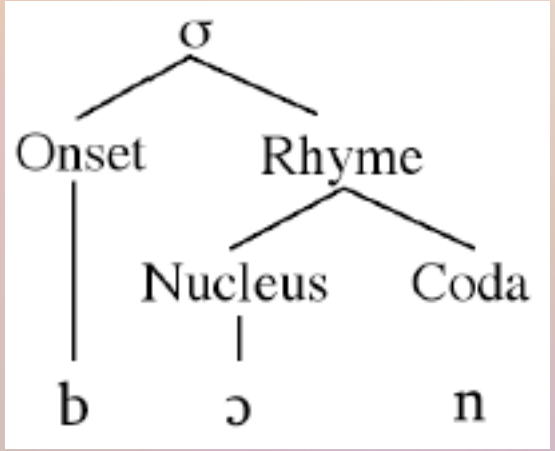

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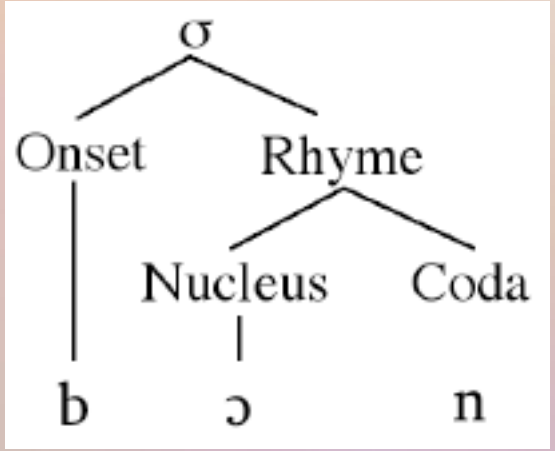

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- this phenomenon is often referred to as ‘linking r’, since when it is followed by a vowel, it may resurface to link the two vowels together

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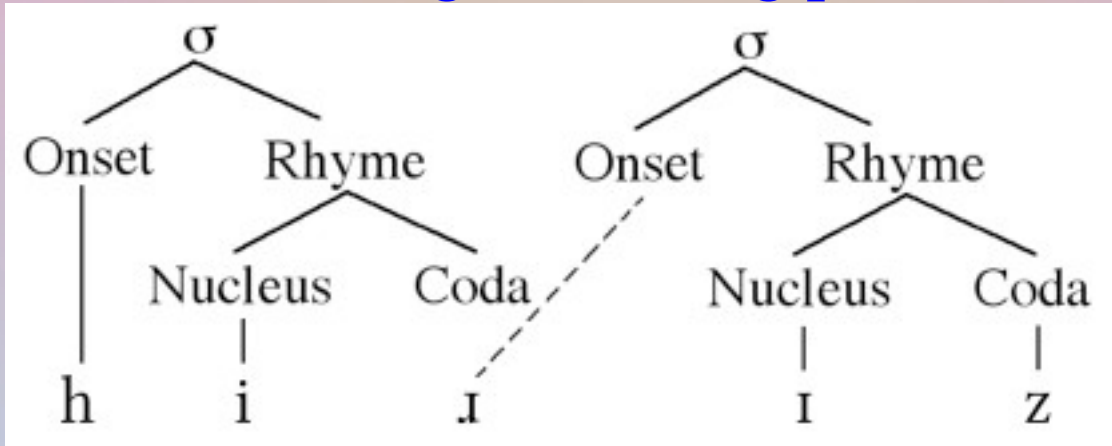

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- this is referred to as ‘intrusive r’
- it is similar to ‘linking r’, except that there is no underlying /ɹ/ in such words

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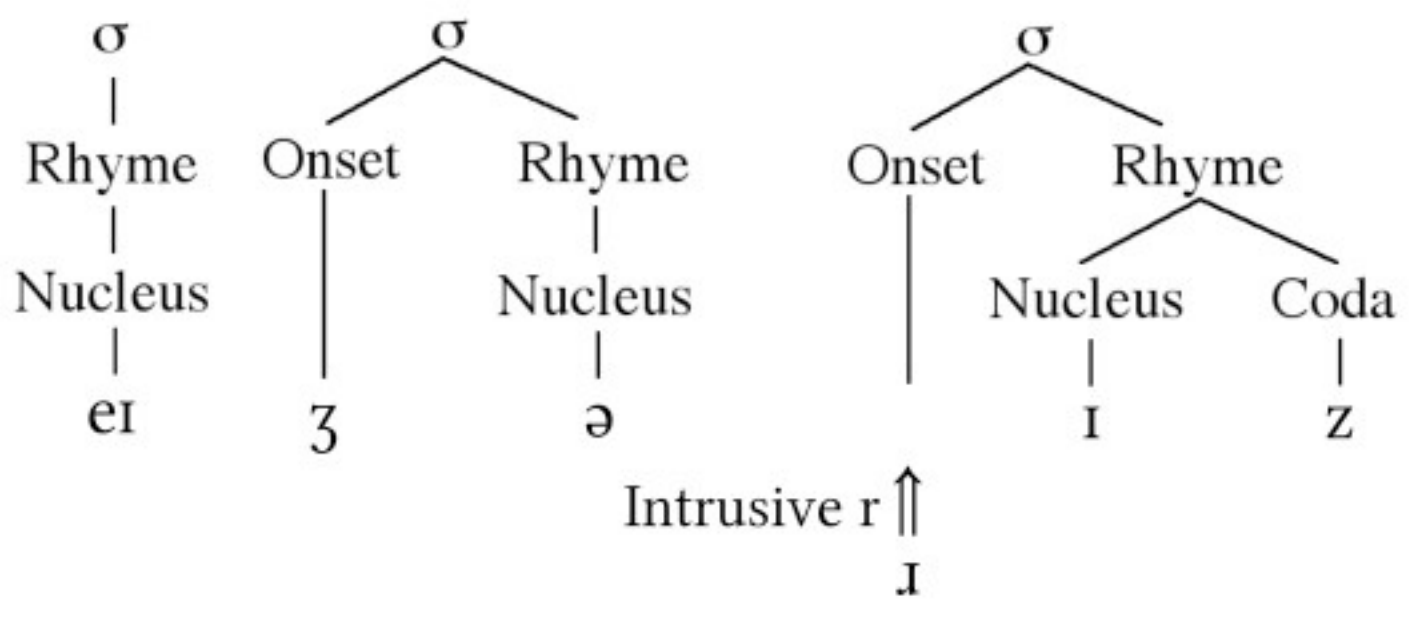
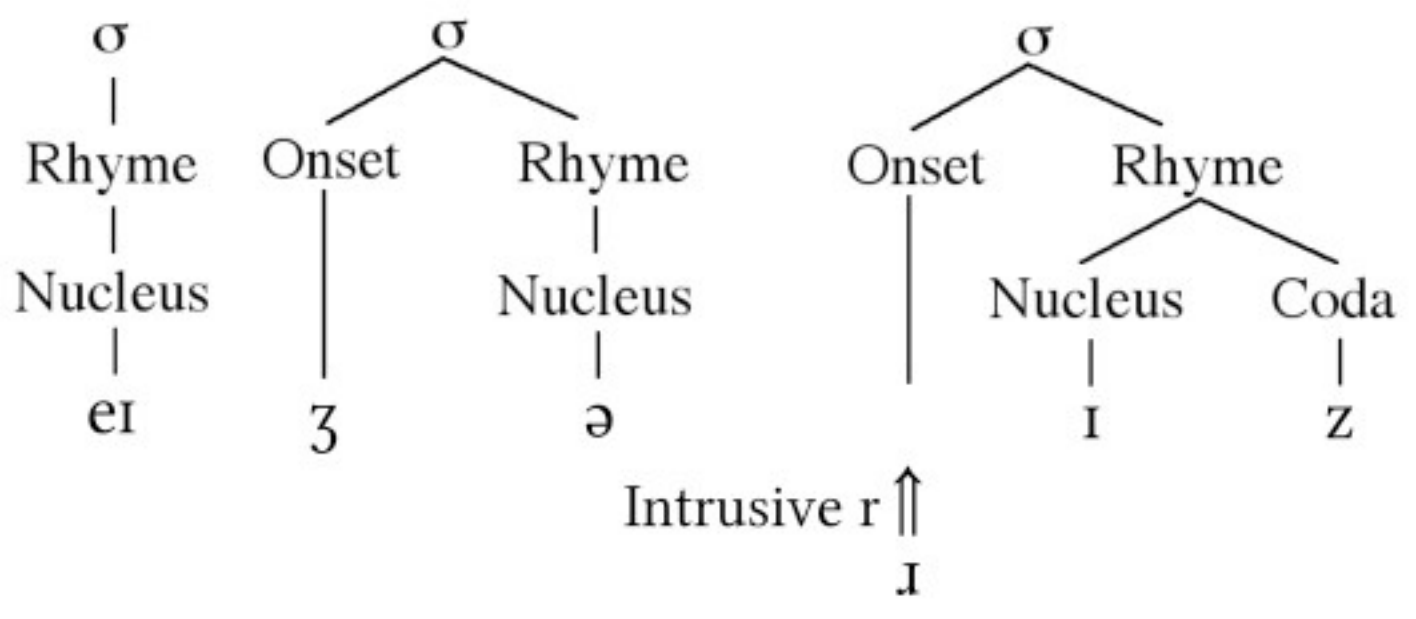


- The [ɹ] is inserted in a similar fashion to the /n/ in ‘an apple’
- the consonant serves to keep the vowels apart



# The End