Conditioning Greek root allomorphy without spans

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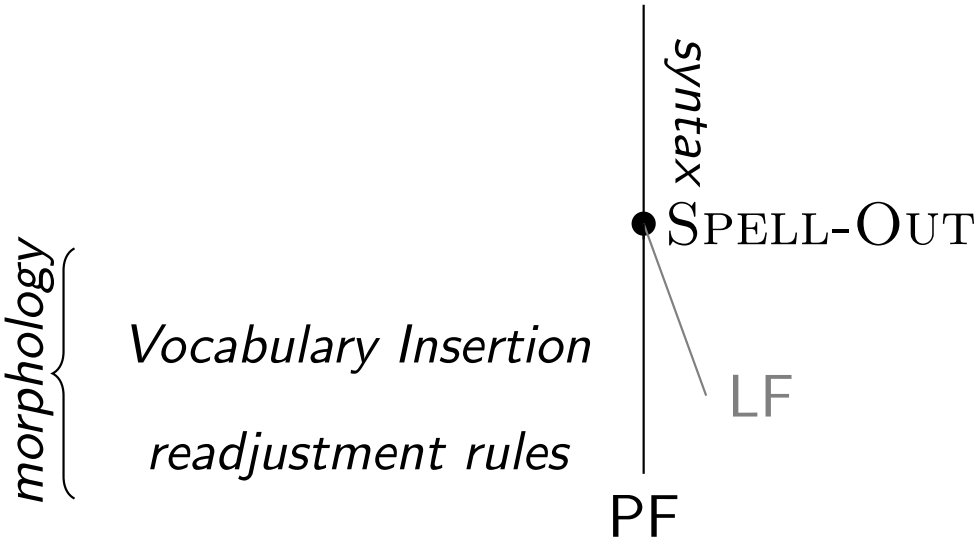
- In (1):
  - α and β are *allomorphs* of each other
  - Y *conditions/triggers* allomorphy on X

Allomorphy in Distributed Morphology



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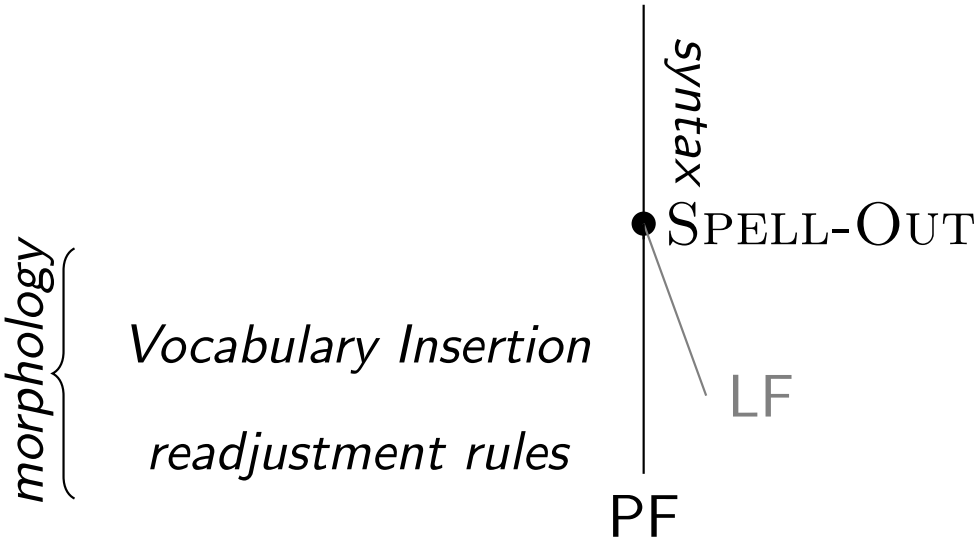

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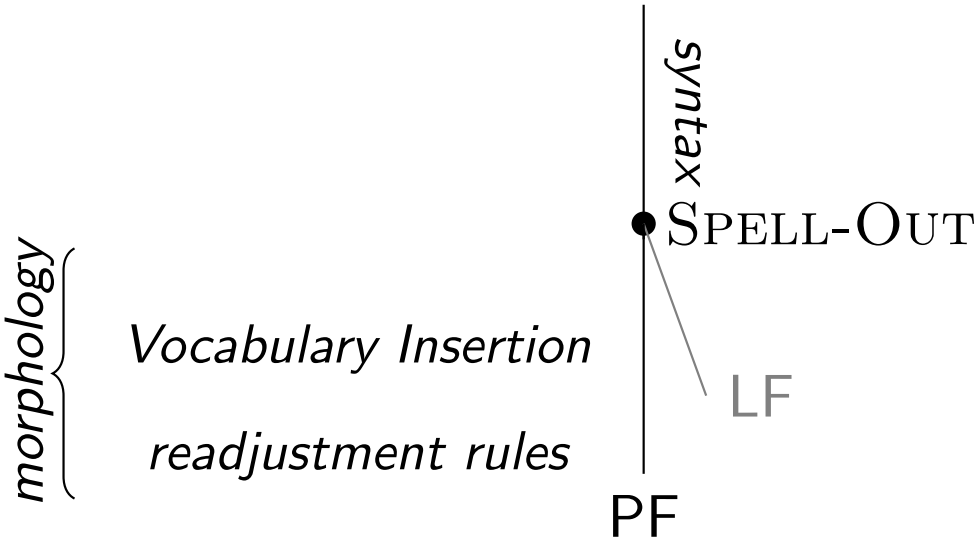

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- ALLOMORPHY may occur at and/or after *Vocabulary Insertion*, where phonological material is added to the derivation.
- Theoretical question:
  What are grammatical restrictions imposed on the conditioning of allomorphy?

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  1. Greek verbal root allomorphy: a challenge for the Node Adjacency Hypothesis?

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     We offer a way of looking at the Greek data in line with the Node Adjacency Hypothesis, which also allows us to capture the correlation between overtness of verbalizers and root-allomorphy.

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  5. Conclusions and future directions

Part I

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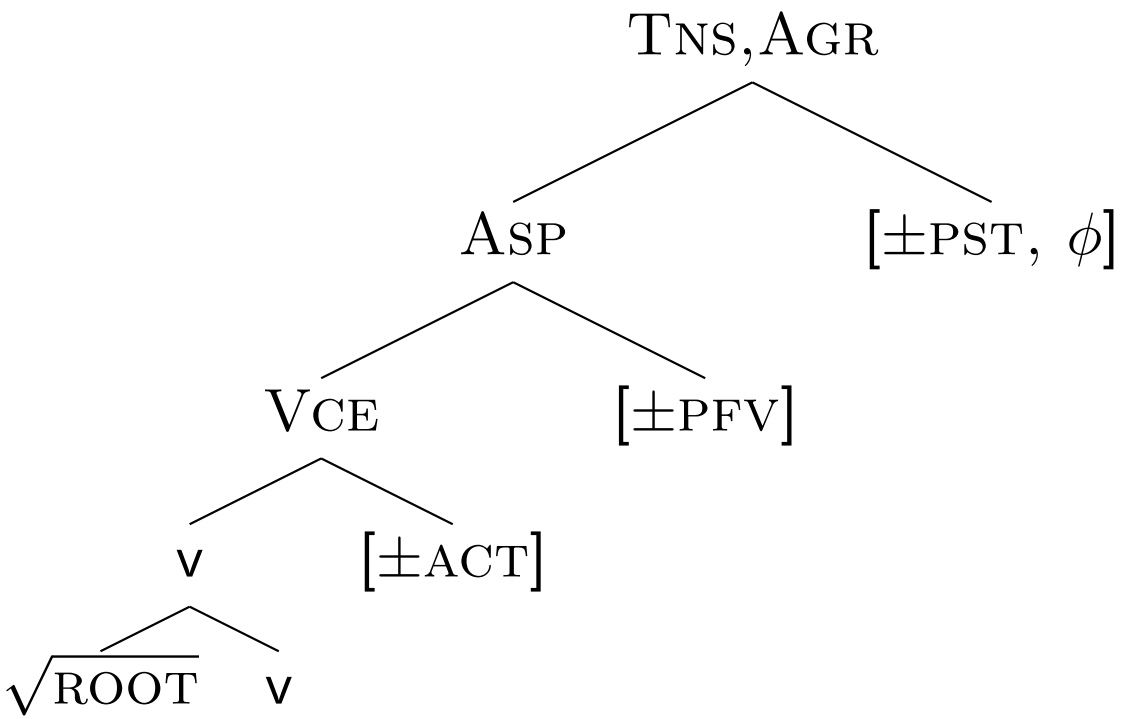
a challenge for the Node Adjacency Hypotheses?

(4)



(Rivero, 1990)

Greek verbal root allomorphy

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'FOUND'	+ACT		−ACT	
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(5) *Relevant Vocabulary Items*

a. $[-\text{ACT}] \leftrightarrow$ θ / ___ $[+\text{PFV}]$

b. $[+\text{PFV}] \leftrightarrow$ ik / $[-\text{ACT}]$ ___ $[+\text{PST}]$

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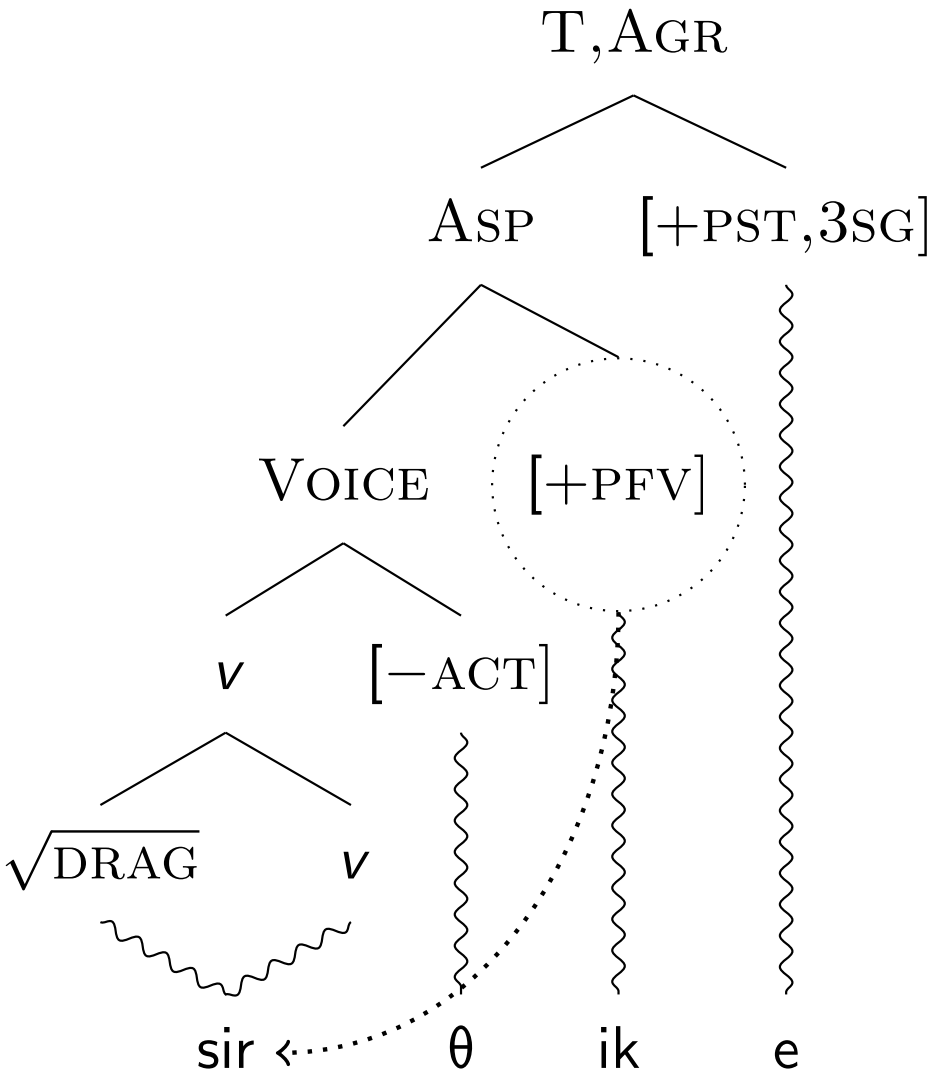

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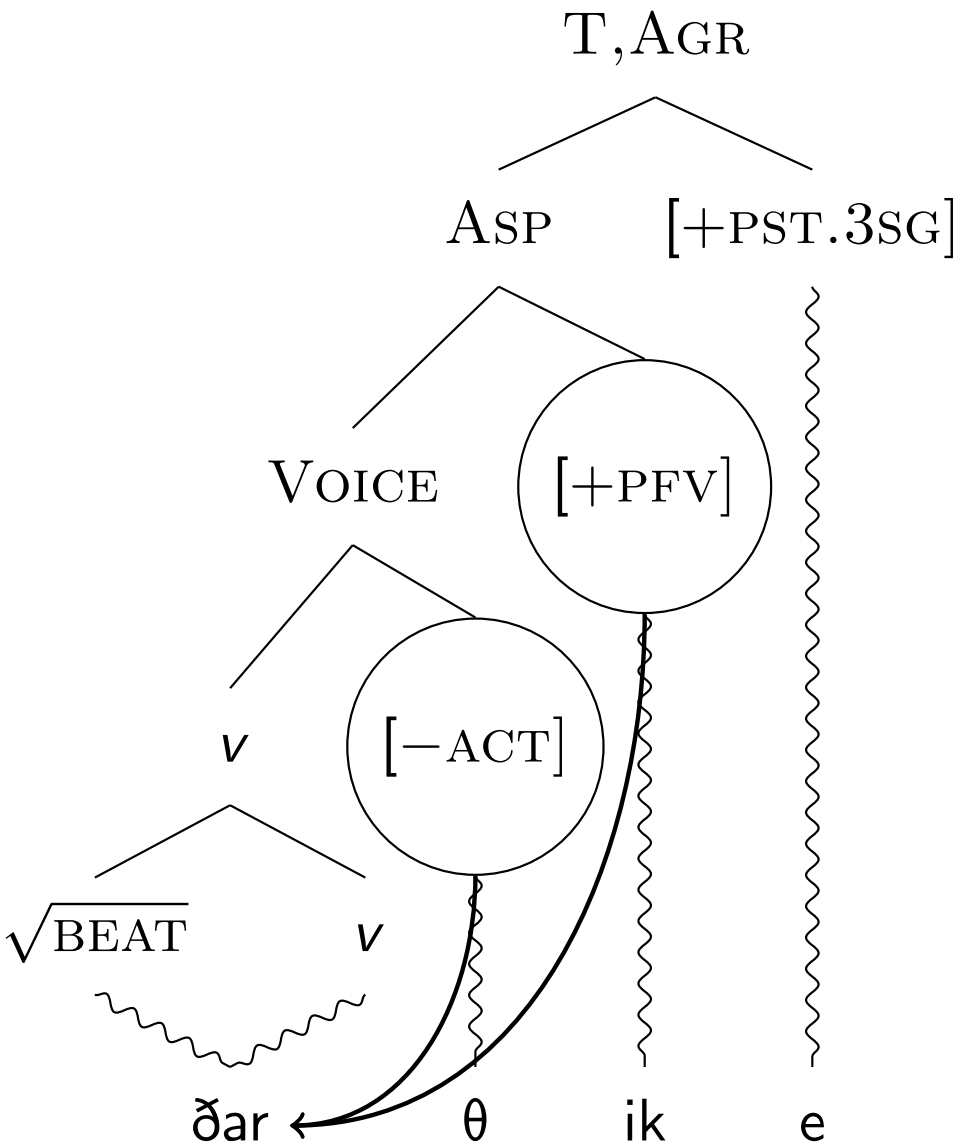

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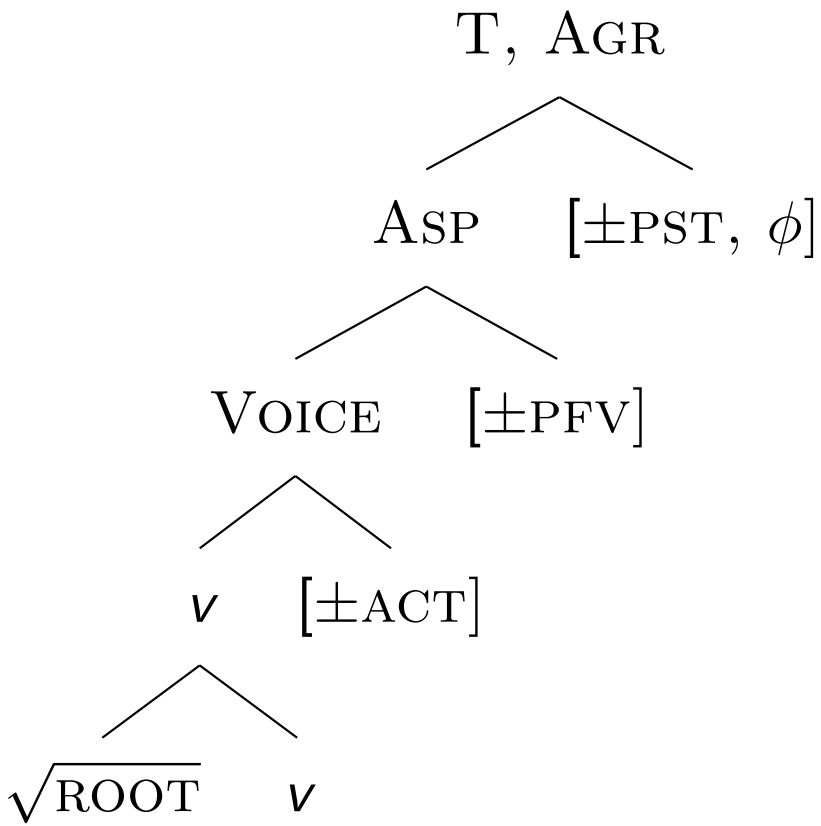

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- Taking this cases of allomorphy as conditioned by $\text{V}_{\text{CE}}+\text{A}_{\text{SP}}$ leads to the loss of any empirical power of SAH.
- We are then forced to *weaken* Merchant's hypothesis:

Spans can condition allomorphy, but no adjacency is required (similarly to Moskal and Smith, 2016).

Greek verbal allomorphy

Adjacency effects with verbalizers

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- This has to be seen as an accident under an approach that takes adjacency to be irrelevant for the locality of allomorphy.

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- Coming up: Part II

Part II

Overview of Part II

1. The span <Voice,Aspect> is not just any span, but has a special status in Greek morphology as compared to other spans.
2. A tighter relation such as Fusion/re-bracketing between Voice and Aspect is required to capture its specialness.
3. The assumption of Fusion/re-bracketing between Aspect and Voice also allows us to interpret the root-allomorphy patterns in line with the Node-Adjacency Hypothesis.
4. The correlation between the overtness of verbalizers and the absence of root allomorphy falls right out.

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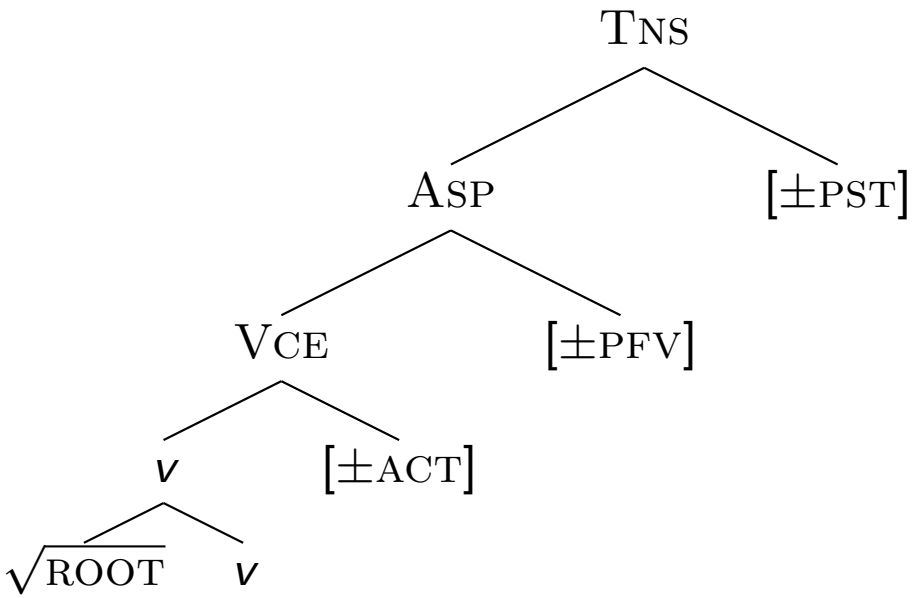

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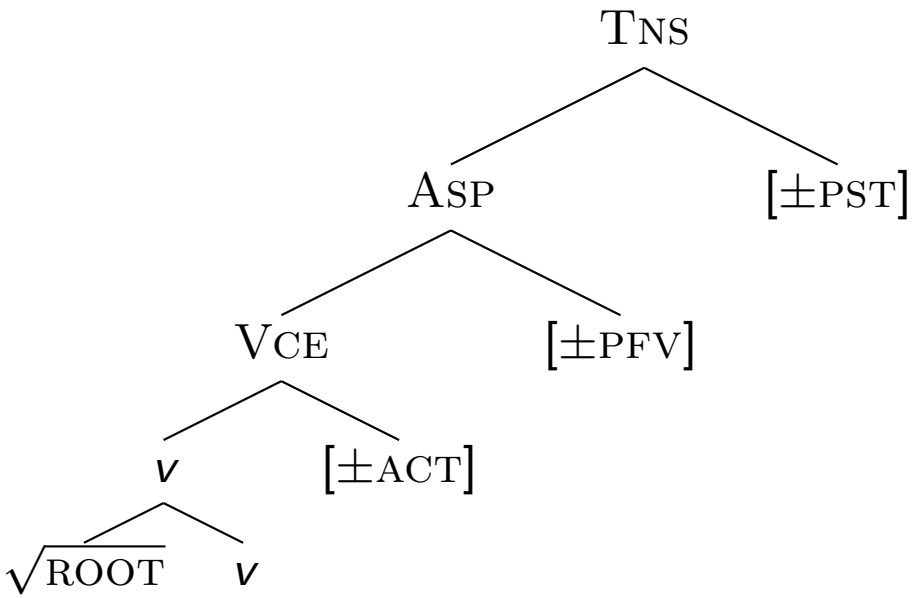

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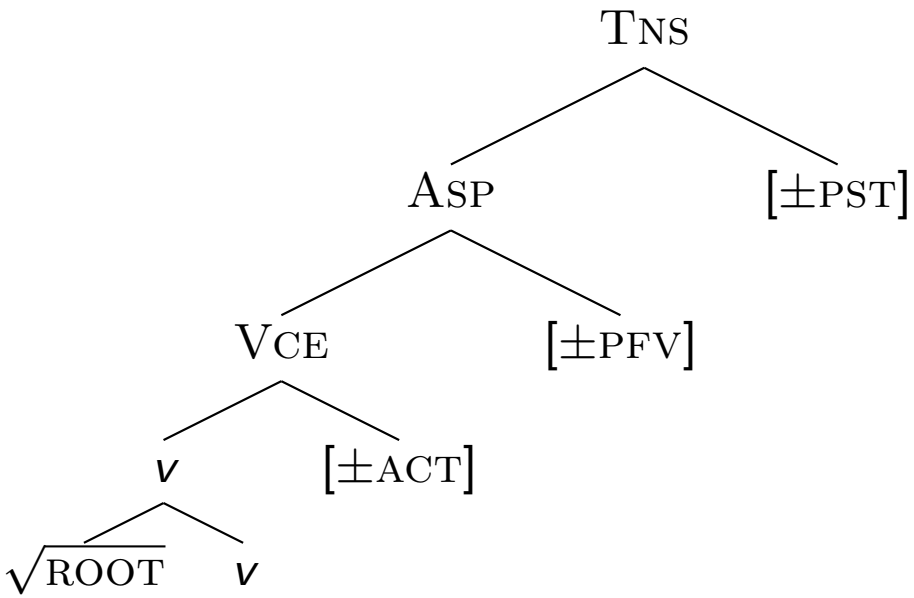

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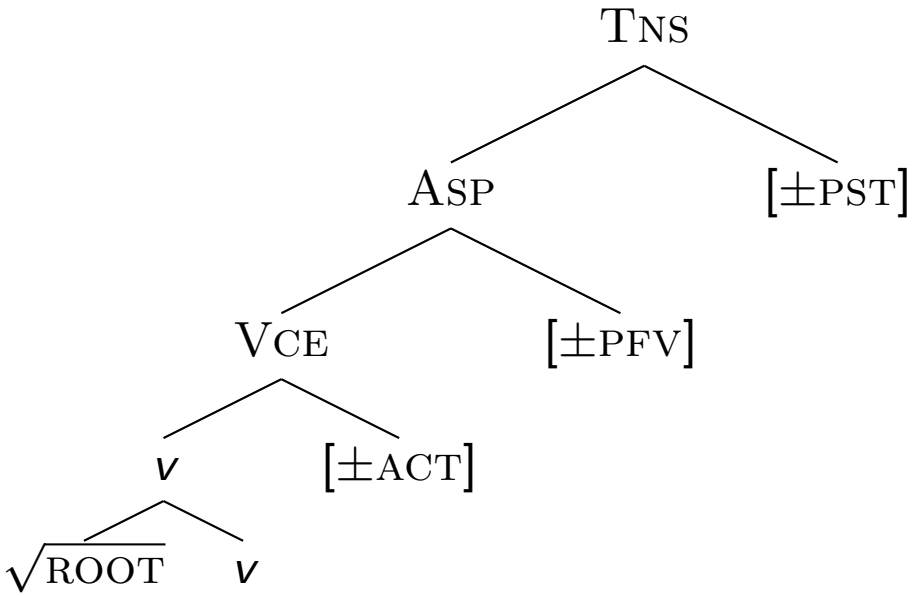
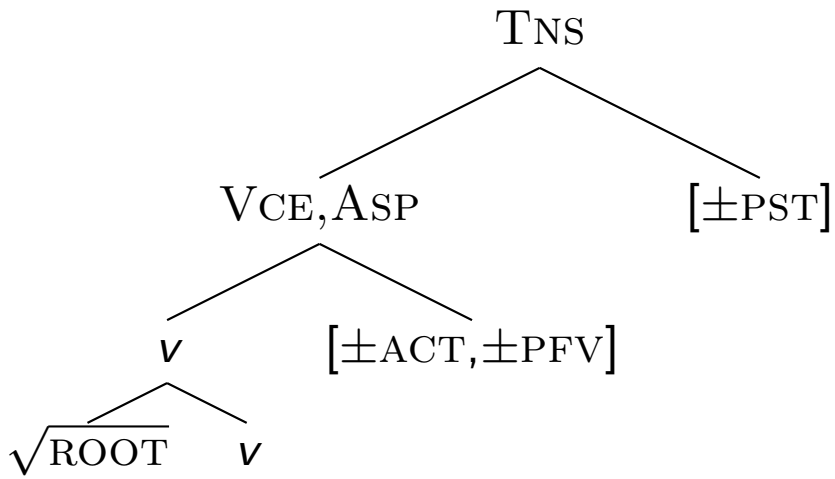


- **H2:** Vce *and* Asp *are fused.*



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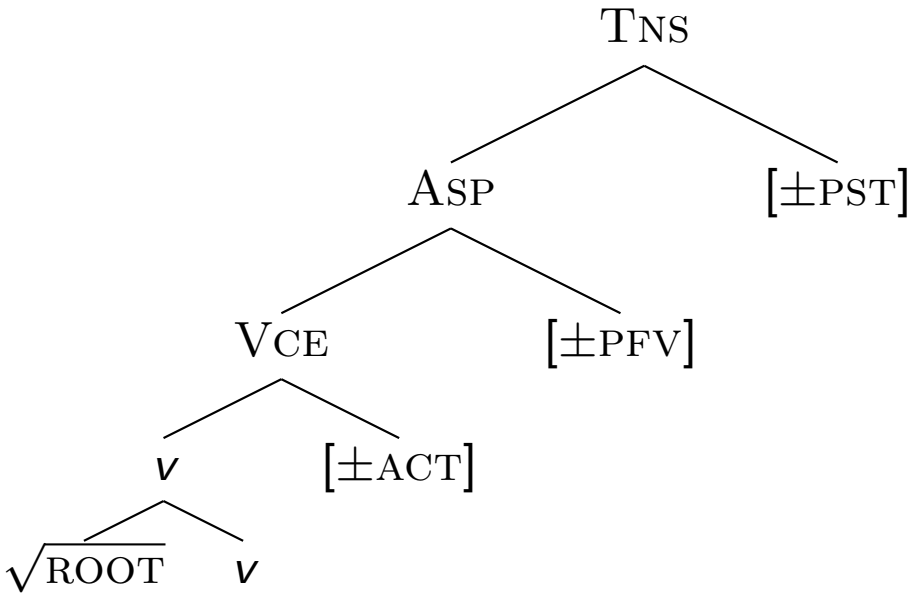

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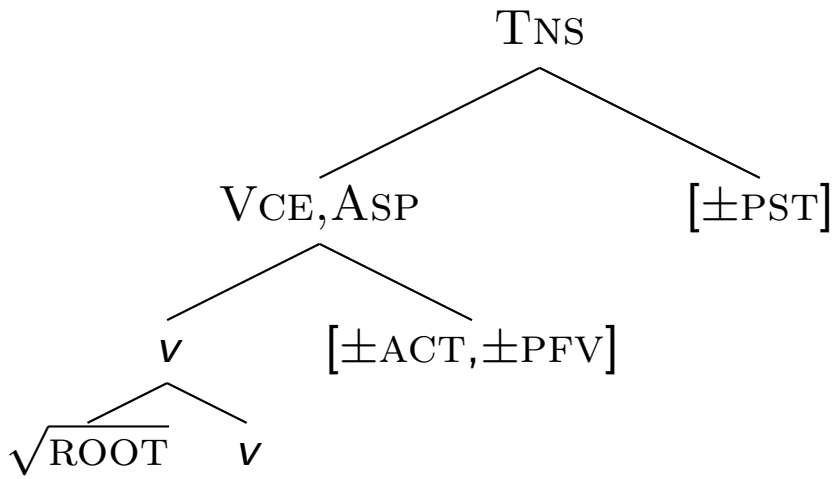
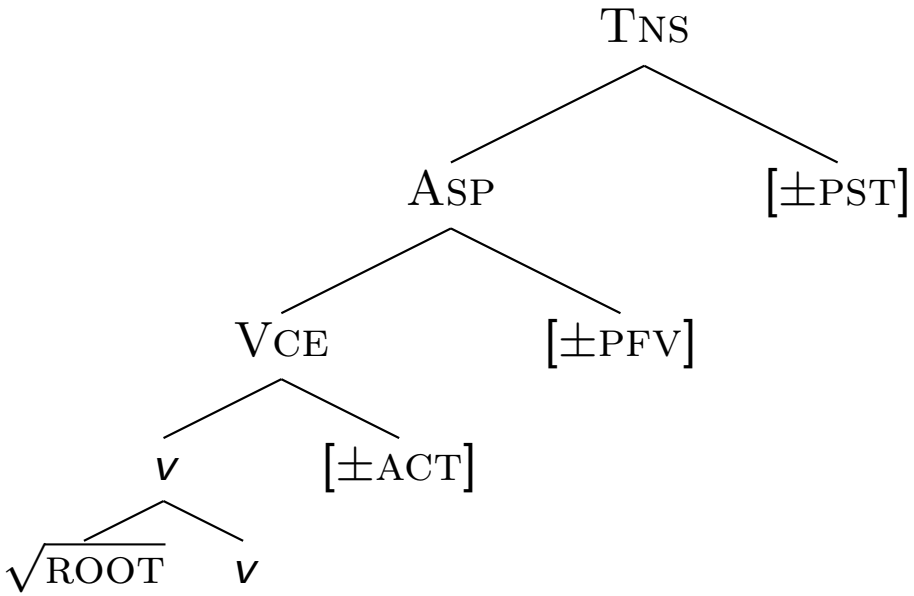


- <VCE,ASP> has a special morphosyntactic status.

Why can r-allomorphy be conditioned by <Vce,Asp>?

- **H1:** Vce *and* Asp *are a span*.



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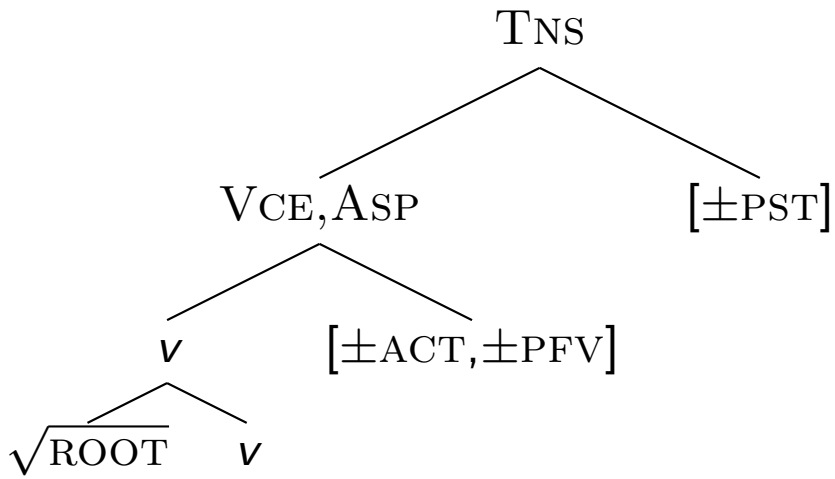


- <Vce,Asp> has a special morphosyntactic status.
- **Prediction:** <Vce,Asp> can be a target for rules, but not <Asp,Tns>.

Other rules referring to <Voice,Asp>

- There are exponents that only appear in specific Voice-Aspect combinations.

	−PFV,+ACT	+PFV,+ACT	−PFV,−ACT	+PFV,−ACT
−PST	iðri-o	iðri-s-o	iðri-ome	iðri-θ-o
	iðri-is	iðri-s-is	iðri-ese	iðri-θ-is
	iðri-i	iðri-s-i	iðri-ete	iðri-θ-i
	iðri-ume	iðri-s-ume	iðri-omaste	iðri-θ-ume
	iðri-ete	iðri-s-ete	iðri-osaste	iðri-θ-ite
	iðri-un	iðri-s-un	iðri-onde	iðri-θ-un
+PST	iðri-a	iðri-s-a	iðri-omun	iðri-θ-ik-a
	iðri-es	iðri-s-es	iðri-osun	iðri-θ-ik-es
	iðri-e	iðri-s-e	iðri-otan	iðri-θ-ik-e
	iðri-ame	iðri-s-ame	iðri-omastan	iðri-θ-ik-ame
	iðri-ate	iðri-s-ate	iðri-osastan	iðri-θ-ik-ate
	iðri-an	iðri-s-an	iðri-ondan	iðri-θ-ik-an

Other rules referring to <Voice,Asp>

- In the imperative forms of a subclass of second conjugation verbs we see optionality in the form of a specific Voice-Aspect combination.

Verb	−PFV,+ACT	+PFV,+ACT		−PFV, −ACT	+PFV,−ACT
'*pull*'	trav-a	trav-a	trav-ik-s-e	—	trav-ik-s-u
'*look*'	kit-a	kit-a	kit-ak-s-e	—	kit-ak-s-u
'*sing*'	trayuð-a	trayuð-a	trayuð-i-s-e	—	trayuð-i-s-u
'*hang*'	krem-a	krem-a	krem-a-s-e	—	krem-a-s-u
'*forget*'	ksex-n-a	ksex-n-a	ksex-a-s-e	—	ksex-a-s-u
'*wear*'	for-a	for-a	for-e-s-e	—	for-e-s-u

Rules that refer to <Asp,Tns>?

Rules that refer to <Asp,Tns>?

- Greek morphology does not care about <Asp,Tns>.

	−PFV,−PST	+PFV,−PST	−PFV,+PST	+PFV,−PST
+ACT	iðri-o	iðri-s-o	iðri-a	iðri-s-a
	iðri-is	iðri-s-is	iðri-es	iðri-s-es
	iðri-i	iðri-s-i	iðri-e	iðri-s-e
	iðri-ume	iðri-s-ume	iðri-ame	iðri-s-ame
	iðri-ete	iðri-s-ete	iðri-ate	iðri-s-ate
	iðri-un	iðri-s-un	iðri-an	iðri-s-an
−ACT	iðri-ome	iðri-θ-o	iðri-omun	iðri-θ-ik-a
	iðri-ese	iðri-θ-is	iðri-osun	iðri-θ-ik-es
	iðri-ete	iðri-θ-i	iðri-otan	iðri-θ-ik-e
	iðri-omaste	iðri-θ-ume	iðri-omastan	iðri-θ-ik-ame
	iðri-osaste	iðri-θ-ite	iðri-osastan	iðri-θ-ik-ate
	iðri-onde	iðri-θ-un	iðri-ondan	iðri-θ-ik-an

Assumptions

1. Fusion/re-bracketing (e.g. Radkevich, 2010) of Voice and Aspect:

   (11) [Aspect [Voice [...]]] → [[Aspect Voice] [...]]

2. The following Vocabulary Items

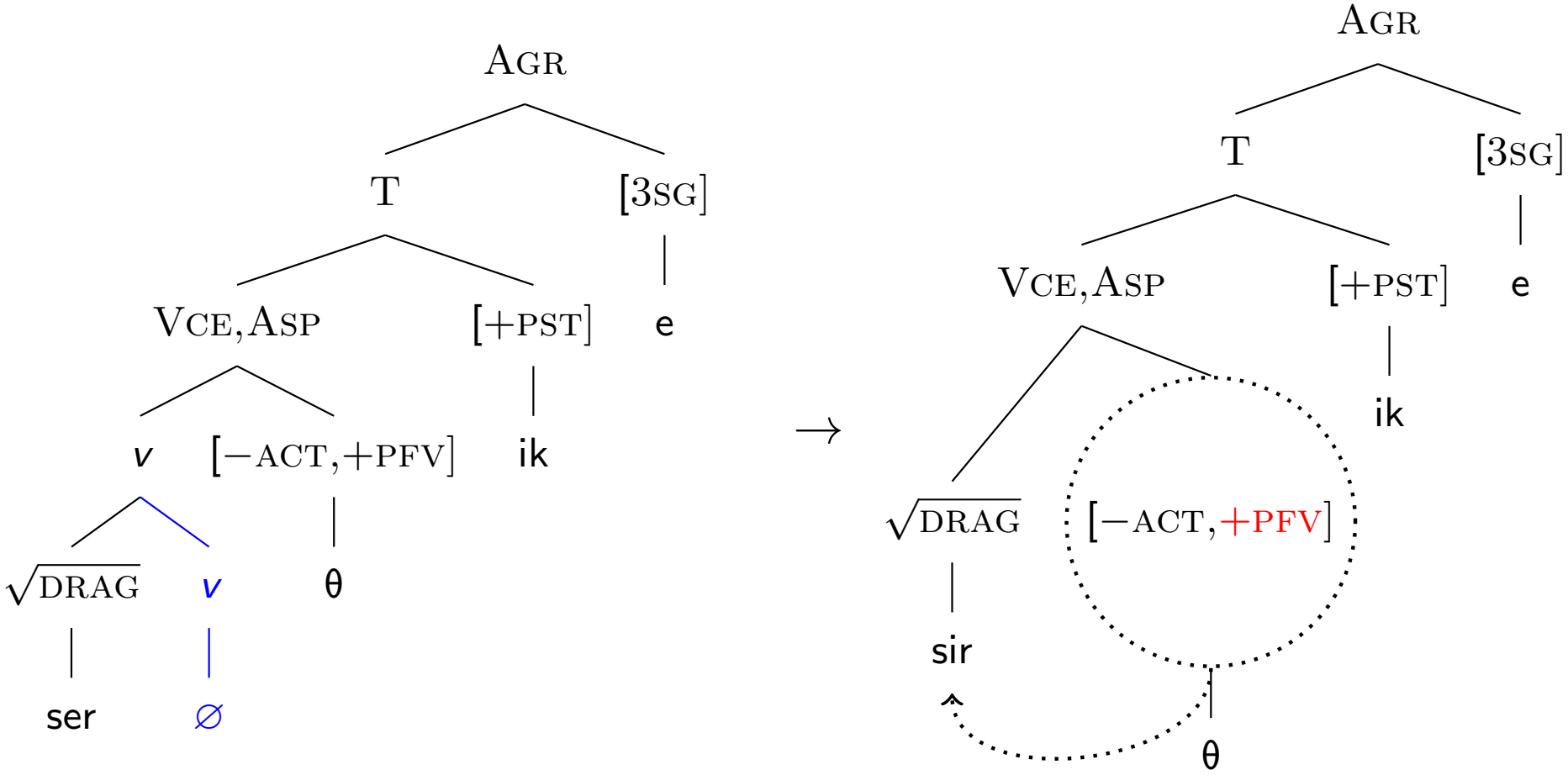
   (12)
   a. [−PFV,+ACT] ↔ ∅
   b. [−PFV,−ACT] ↔ ∅
   c. [+PFV,+ACT] ↔ *s*
   d. [+PFV,−ACT] ↔ *θ*
   e. (i) [3SG,−PST] ↔ *ete* / [−PFV,−ACT] _
      (ii) [3SG,+PST] ↔ *otan* / / [−PFV,−ACT] _
   f. [+PST] → ik / [+PFV,−ACT] _

3. Node adjacency is required for the conditioning of allomorphy.
4. The operation of Pruning eliminates nodes with ∅-exponence cyclically, from inside out.

Accounting for the root-allomorphy patterns

Patterns	+ACT		−ACT	
	−PFV	+PFV	−PFV	+PFV
'DRAG'				
−PST	**ser**-n-i	**sir**-i	**ser**-n-ete	**sir**-θ-i
+PST	e-**ser**-n-e	e-**sir**-e	**ser**-n-otan	**sir**-θ-ik-e
'BEAT'				
−PST	**ðer**-n-i	**ðir**-i	**ðer**-n-ete	**ðar**-θ-i
+PST	e-**ðer**-n-e	e-**ðir**-e	**ðer**-n-otan	**ðar**-θ-ik-e
'PROLONG'				
−PST	para-**tin**-i	para-**tin**-i	para-**tin**-ete	para-**ta**-θ-i
+PST	par-e-**tin**-e	par-e-**tin**-e	para-**tin**-otan	para-**ta**-θ-ik-e
'AVOID'				
−PST	apo-**fevɣ**-i	apo-**fij**-i	apo-**fevj**-ete	apo-**fefx**-θ-i
+PST	ap-e-**fevj**-e	ap-e-**fij**-e	apo-**fevɣ**-otan	apo-**fefx**-θ-ik-e

Accounting for the root-allomorphy patterns



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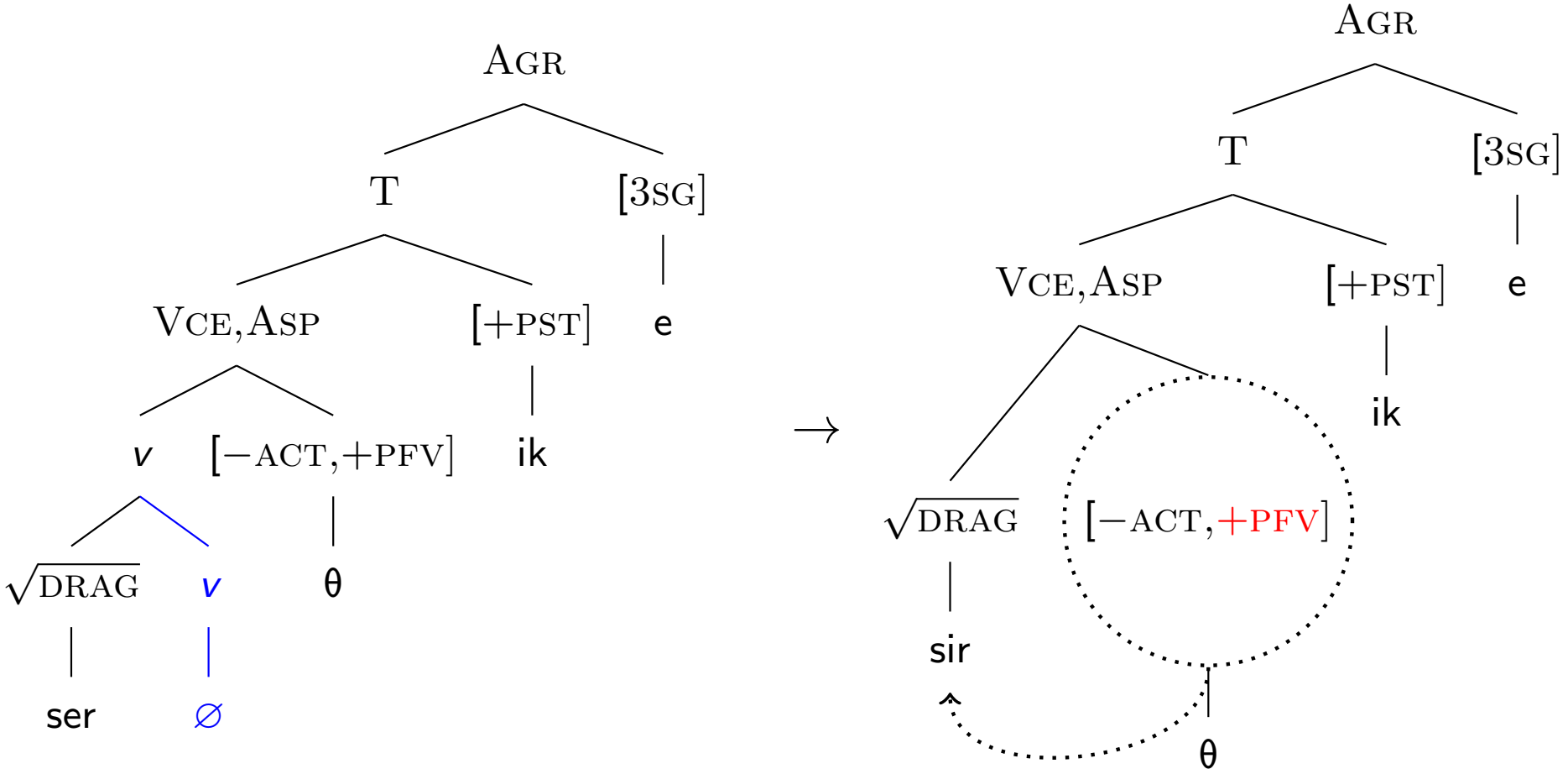

(13) *Possible rules:*

a. $\sqrt{\text{DRAG}} \leftrightarrow$ sir / _ [+PFV]

b. e $\rightarrow$ i / $\_]_{\sqrt{\text{ROOT}_i}}$ [−ACT, +PFV] $\quad \sqrt{\text{ROOT}_i} = \{\sqrt{\text{DRAG}}, \ldots\}$

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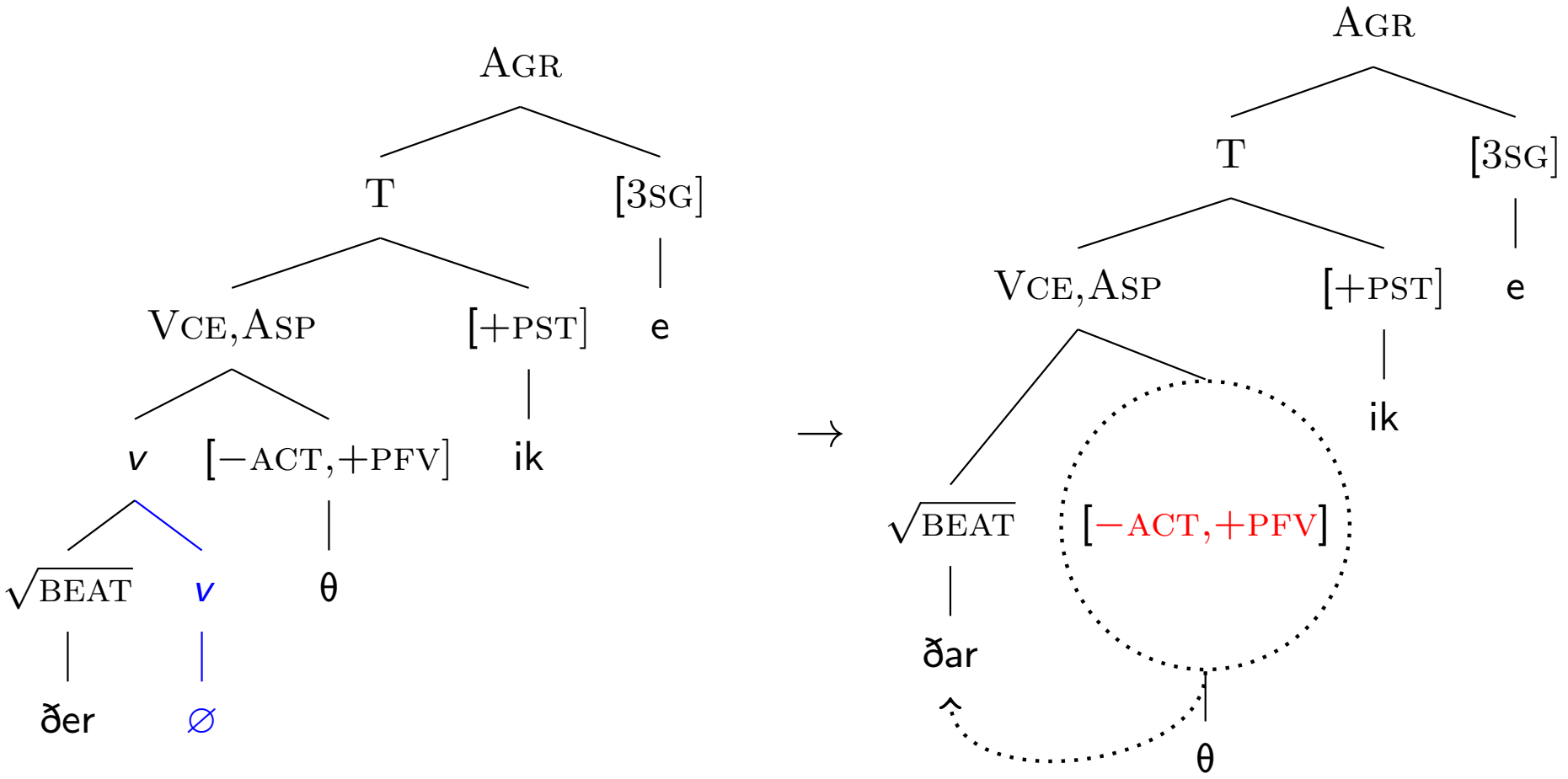
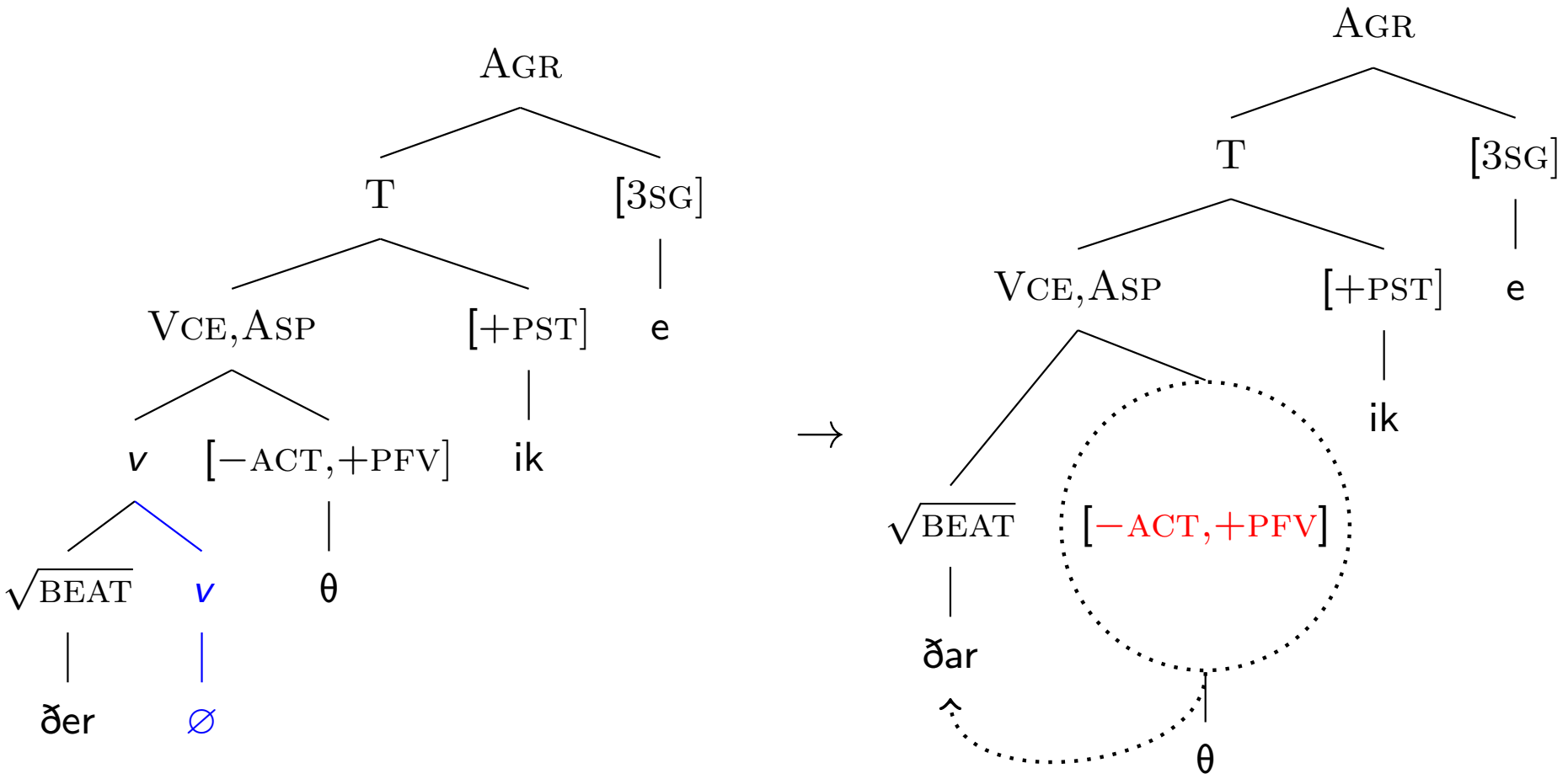


Accounting for the root-allomorphy patterns



(14) *Possible rules*

a. $\sqrt{\text{BEAT}} \leftrightarrow$ ðar / _ $[-\text{ACT}, +\text{PFV}]$

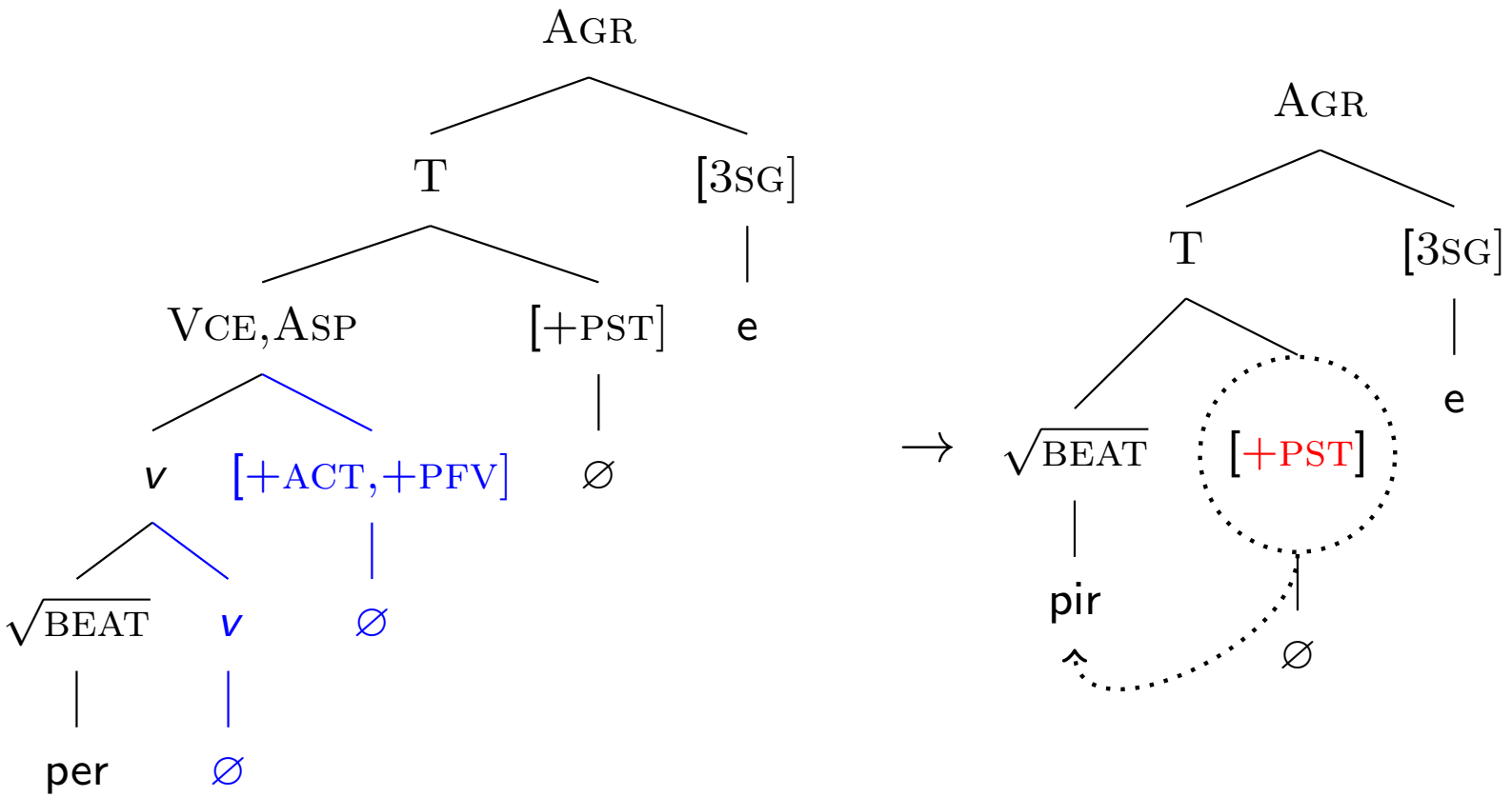
b. a $\rightarrow$ a / _]$_{\sqrt{\text{ROOT}_{ii}}}$ $[-\text{ACT}, +\text{PFV}]$ $\quad \sqrt{\text{ROOT}_i} = \{\sqrt{\text{BEAT}}, \ldots\}$

An example of TENSE-conditioned root-allomorphy

'TAKE'	+ACT		−ACT	
3SG	−PFV	+PFV	−PFV	+PFV
−PST	**per**-n-i	**par**-i	**per**-n-ete	**par**-θ-i
+PST	e-**per**-n-e	**pir**-e	**per**-n-otan	**par**-θ-ik-e

- Notice that Tense-conditioned allomorphy can only target the root in the +PFV,+ACT.
- The rest of the +PST forms involve an overt intervener!

An example of TENSE-conditioned root-allomorphy



(15) *Possible rules:*

a. $\sqrt{\text{TAKE}} \leftrightarrow$ pir / _ [+PST]

b. e $\rightarrow$ i / _]$_{\sqrt{\text{ROOT}_{ii}}}$ [+PST]

$\sqrt{\text{ROOT}_i} = \{\sqrt{\text{TAKE}}, \ldots\}$

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Conclusions

- The span <VOICE,ASPECT> has a special status in Greek morphology and mere span-hood does not capture this fact. Fusion/re-bracketing can.

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  - features can only trigger allomorphy if they are (linearly/structurally) adjacent to the target node

Conclusions

- The span <Voice,Aspect> has a special status in Greek morphology and mere span-hood does not capture this fact. Fusion/re-bracketing can.
- Once we assume re-bracketing of Voice and Aspect, a node-adjacency account of the root-allomorphy patterns becomes possible.
  - features can only trigger allomorphy if they are (linearly/structurally) adjacent to the target node
  - features from multiple nodes may condition allomorphy together only if the relevant nodes are fused.
- The adjacency effects observed with regards to the verbalizers now fall right out of the account.

Open questions

- Can we find evidence in Greek for what kind of adjacency is at play? (linear vs structural)

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- Do all cases of root allomorphy in Greek arise by the same kind of rule? (VIs vs readjustment rules)
- Are other languages that show allomorphy seemingly conditioned by multiple nodes (Veselinova, 2006) also amenable to Fusion accounts?
- What to make of apparent counterexamples to node adjacency in other languages (e.g. Bobaljik, 2000; Moskal and Smith, 2016; Choi and Harley, 2017)?

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