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Fusion, pruning or spanning: Which
account for locality restrictions in Romance
GO suppletion?



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1. Introduction

Latin *ī-re* ‘(to) go’: present and perfect system (Leumann, Hofmann & Szantyr. ²1972, ⁵1977)

Table 1:	1sg	2sg	3sg	1pl	2pl	3pl
present indicative	<i>e-ō</i>	<i>ī-s</i>	<i>i-t</i>	<i>ī-mus</i>	<i>ī-tis</i>	<i>e-unt</i>
imperfect indicative	<i>ī-bam</i>	<i>ī-bās</i>	<i>ī-bat</i>	<i>ī-bāmus</i>	<i>ī-bātis</i>	<i>ī-bant</i>
future	<i>ī-bo</i>	<i>ī-bis</i>	<i>ī-bit</i>	<i>ī-bimus</i>	<i>ī-bitis</i>	<i>ī-bunt</i>
present subjunctive	<i>e-am</i>	<i>e-ās</i>	<i>e-at</i>	<i>e-āmus</i>	<i>e-ātis</i>	<i>e-ant</i>
imperfect subjunctive	<i>ī-rem</i>	<i>ī-rēs</i>	<i>ī-ret</i>	<i>ī-rēmus</i>	<i>ī-rētis</i>	<i>ī-rent</i>
imperative I		<i>ī</i>			<i>ī-te</i>	
imperative II		<i>ī-tō</i>	<i>ī-tō</i>		<i>ī-tōte</i>	<i>e-untō</i>
perfect	<i>i-(v)ī</i>	<i>ī-(vi)stī</i>	<i>i-(v)it</i>	<i>i-imus</i>	<i>ī-stis</i>	<i>i-ērunt</i>
future II	<i>i-erō</i>	<i>i-eris</i>	<i>i-erit</i>	<i>i-erimus</i>	<i>i-eritis</i>	<i>i-erint</i>
pluperfect	<i>i-eram</i>	<i>i-erās</i>	<i>i-erat</i>	<i>i-erāmus</i>	<i>i-erātis</i>	<i>i-erant</i>
perfect subjunctive	<i>i-erim</i>	<i>i-eris</i>	<i>i-erit</i>	<i>i-erimus</i>	<i>i-retis</i>	<i>i-erint</i>
pluperfect subjunctive	<i>ī-ssem</i>	<i>ī-ssēs</i>	<i>ī-sset</i>	<i>ī-ssēmus</i>	<i>ī-ssētis</i>	<i>ī-ssent</i>

Quite regular paradigm despite the following facts:

- Stems from Indo-European **athematic** verbs, i.e. many forms have no thematic vowel (Th) between the stem and the verbal ending → the lack of Th is responsible for (stem) allomorphy (see e.g. the so-called *Wurzelablaut*);
- Stem allomorphy: in the present system **/i:/** before C (the form *it* is phonologically readjusted) and **/e/** before V; in the perfect system **/i/** (forms with long [i:] are readjusted).


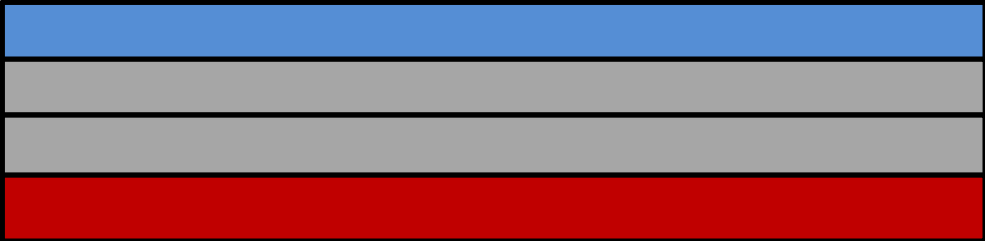




1. Introduction

The Romance varieties all started with the loss of verbal forms of Lat. *īre* – indeed, there is no Romance variety that retained the full paradigm – but reached different solutions.

- (1) Italian
 - a. *vado, vai, va, andiamo, andate, vanno* (present)
 - b. *andavo, andavi, andava, andavamo, andavate, andavano* (imperfect)
 - c. *andrò, andrai, andrà, andremo, andrete, andranno* (future)
- (2) Spanish
 - a. *voy, vas, va, vamos, vais, van* (present)
 - b. *iba, ibas, iba, íbamos, ibais, iban* (imperfect)
 - c. *iré, irás, irá, iremos, iréis, irán* (future)
 - e. *fui, fuiste, fue, fuimos, fuisteis, fueron* (indefinido/preterite)
- (3) French
 - a. *je vais, tu vas, il va, nous allons, vous allez, ils vont* (present)
 - b. *j'allais, tu allais, il allait, nous allions, vous alliez, ils allaient* (impf.)
 - c. *j'irais, tu iras, il ira, nous irons, vous irez, ils iront* (future)
- (4) Lombard*
 - vo, vet, va, vem, andé, van* (present)
- (5) Old Tuscan
 - vado, vai, va, gimo, gite, vanno* (present)
- (6) Engadinish
 - veñ, vaš, va, yáin, yáivat, van* (present)

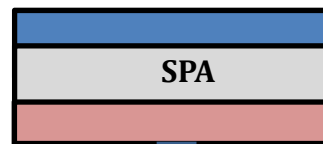
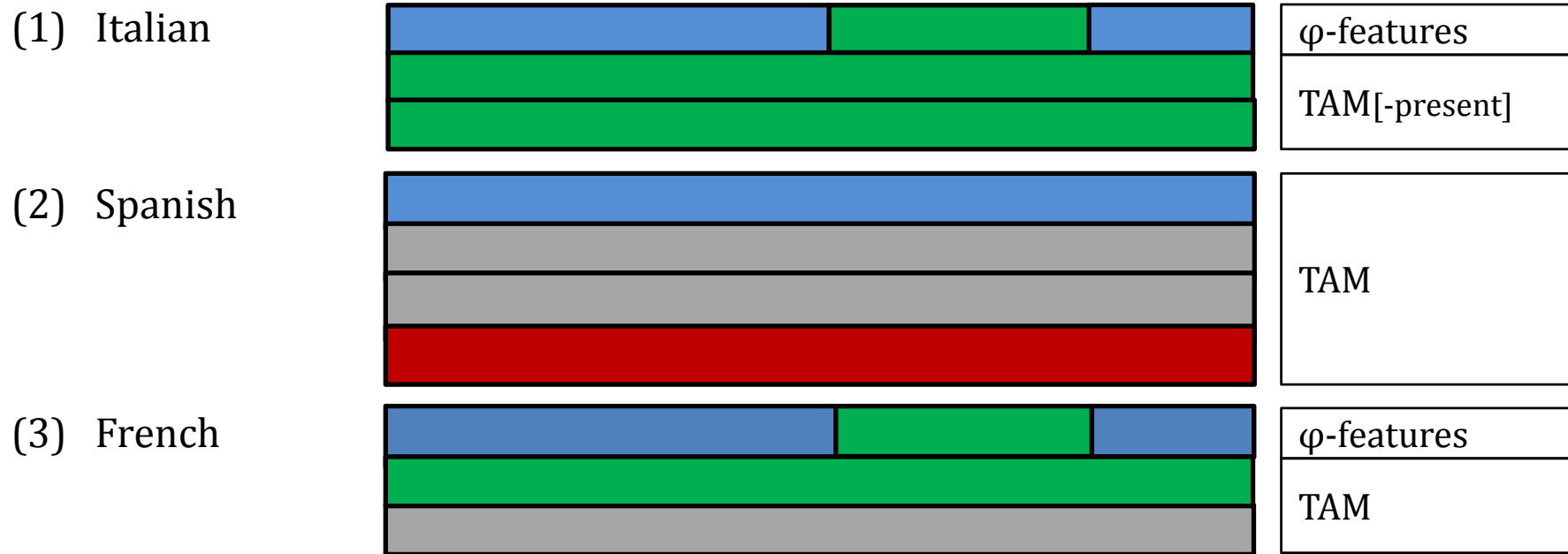
⇒ Suppletion: Different data samples

1. Introduction

(1) Italian		φ -features TAM[-present]
(2) Spanish		TAM
(3) French		φ -features TAM
(4) Lombard*		$\varphi = 2\text{pl}$
(5) Old Tuscan		$\varphi = 1/2\text{pl}$
(6) Engadinisch		$\varphi = 1\text{sg} \ \& \ 1/2\text{pl}$

Suppletion in the verbal forms of GO is sensitive to TAM and/or person and number, but the latter only in the present tense.

1. Introduction



Categorical & overlapping suppletion



Non-categorical (=contextual) suppletion



Non-categorical & categorial suppletion

1. Introduction: Aim of this talk

- An analysis of suppletion in the forms of Romance GO within the framework of Distributed Morphology (DM).
- How can **TAM** triggered root suppletion be modelled?
- How can suppletion triggered by **φ -features** be implemented?
- The overall aim is to investigate the **cumulative exponence** (CE) of these verbal forms and the **contextual conditions** (CC) for root suppletion.

1. Introduction

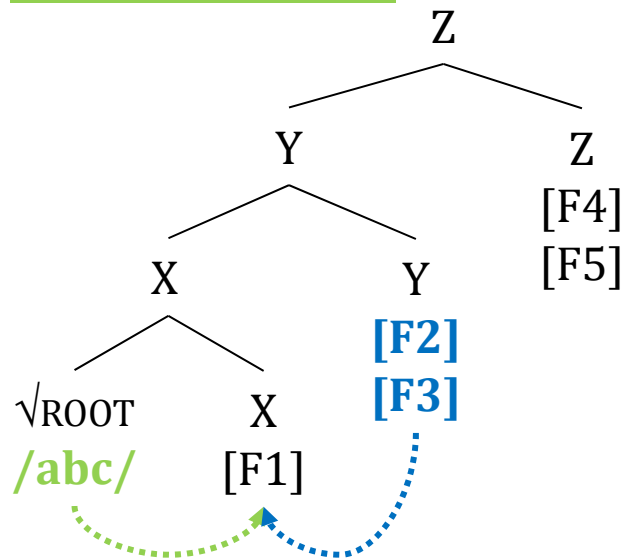
Outline of the talk

1. Introduction
- 2. Cumulative exponence (CE) and contextual conditions (CC) for root allomorphy**
 - 2.1 Fusion
 - 2.2 Allomorphic closeness and Pruning
 - 2.3 Spanning
3. Romance GO: A DM-analysis
 - 3.1 Spanish
 - 3.2 Italian
 - 3.3 French
4. Conclusions

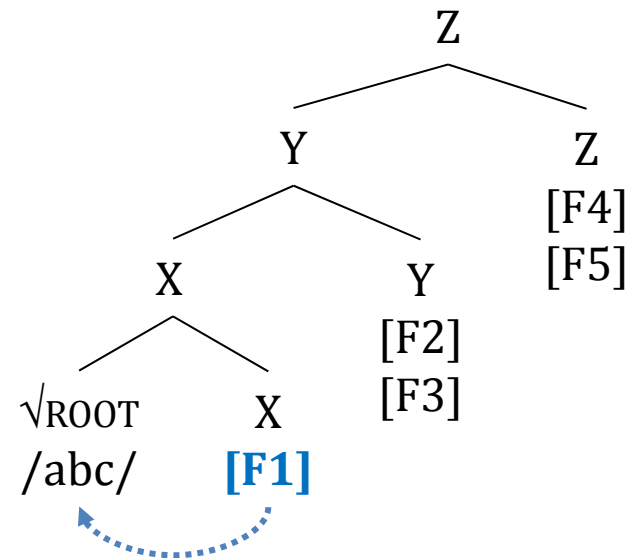
2. CE and CC for root allomorphy

- The term *allomorphy* stands in a broad sense for any (context induced) surface variation of a morpheme.
- The variation may be triggered by different feature: (i) phonologically conditioned allomorphy vs. (ii) morphosyntactically / grammatically conditioned allomorphy.

Realization of X



Realization of √ROOT

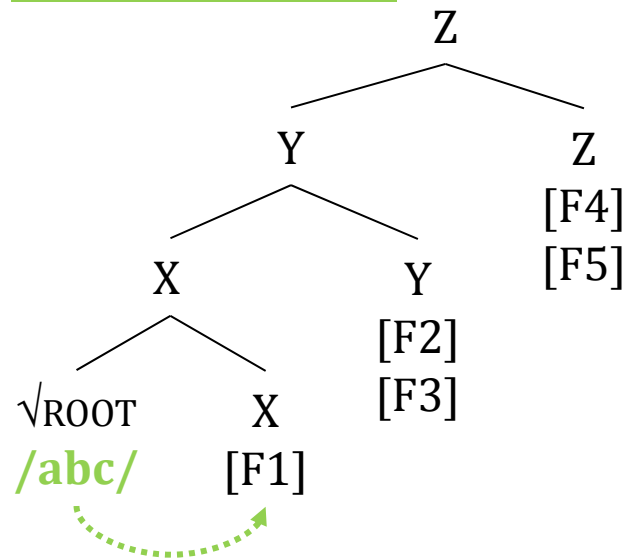


Inward vs. outward context sensitivity (based on Bobaljik 2000)

2. CE and CC for root allomorphy

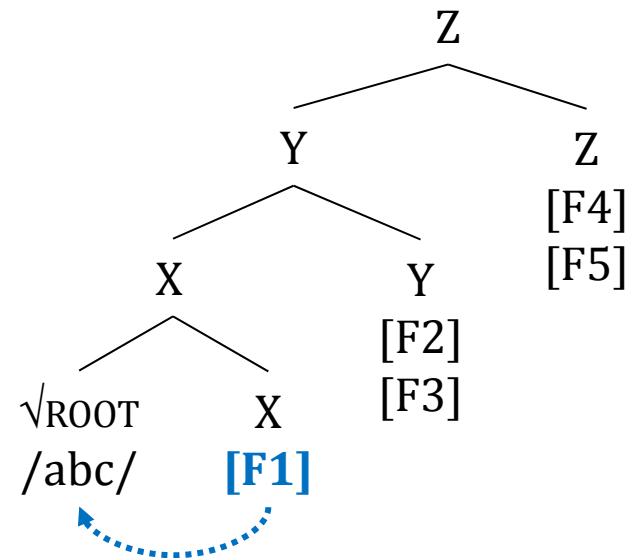
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- The variation may be triggered by different feature: (i) phonologically conditioned allomorphy vs. (ii) morphosyntactically / grammatically conditioned allomorphy.

Realization of X



The form of an affix (here: X-[F1]) is triggered by the presence of a particular root.

Realization of √ROOT

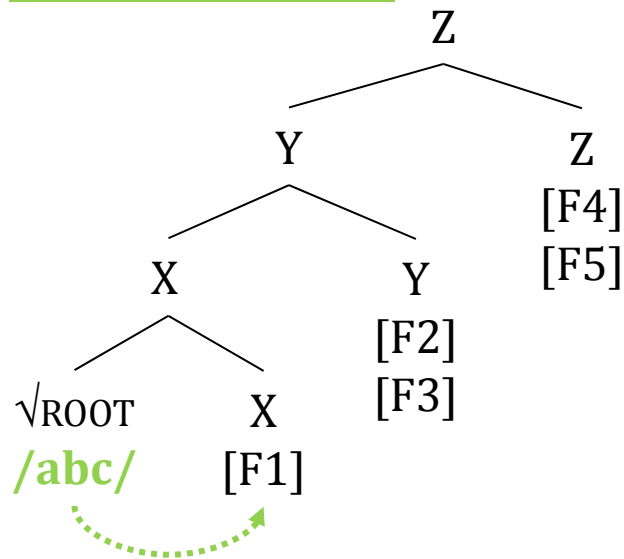


A grammatical feature may trigger √ROOT suppletion.

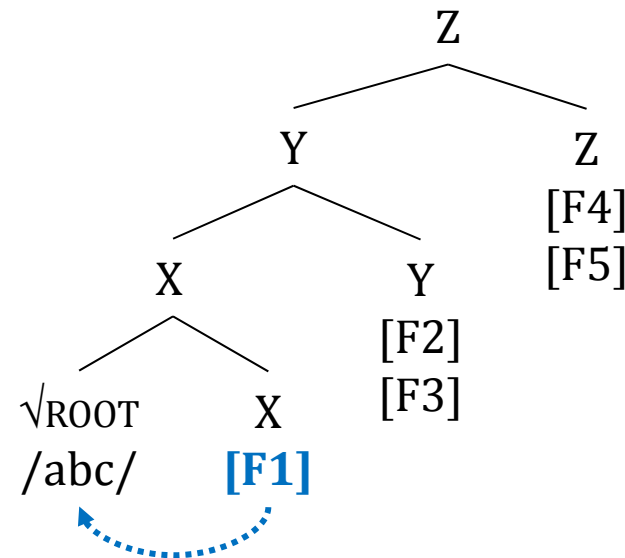
2. CE and CC for root allomorphy

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Realization of X



Realization of $\sqrt{\text{ROOT}}$



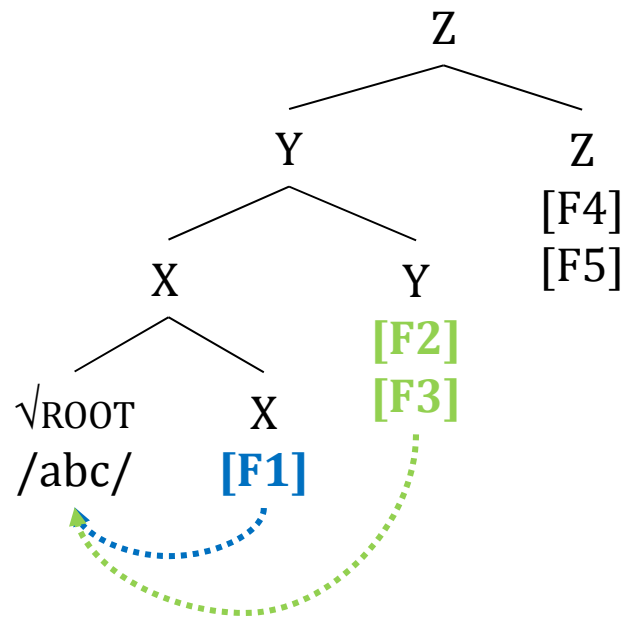
- How can we correctly restrict the occurrence of suppletive roots?
- How far apart can α (here: $\sqrt{\text{ROOT}}$) and β (here: X-[F1]) be? Can Y and/or Z trigger root allomorphy/suppletion as well?

2. CE and CC for root allomorphy

- Possibility I:
 α and β are local if **no XP intervenes** (Bobaljik 2012 and Bobaljik & Harley 2017).
- Possibility II:
 α and β are local if **no overt node intervenes** (Embick 2010, Calabrese 2015).
- Possibility III:
 α and β are local if they **belong to the same phase** (Moskal 2013, 2015, Embick 2010).
- Possibility IV:
 α and β are local if they **form a constituent** (Caha 2017)
- Possibility V:
 α and β are local if they **form a span** (Svenonius 2012, 2016, Merchant 2015).

2. CE and CC for root allomorphy

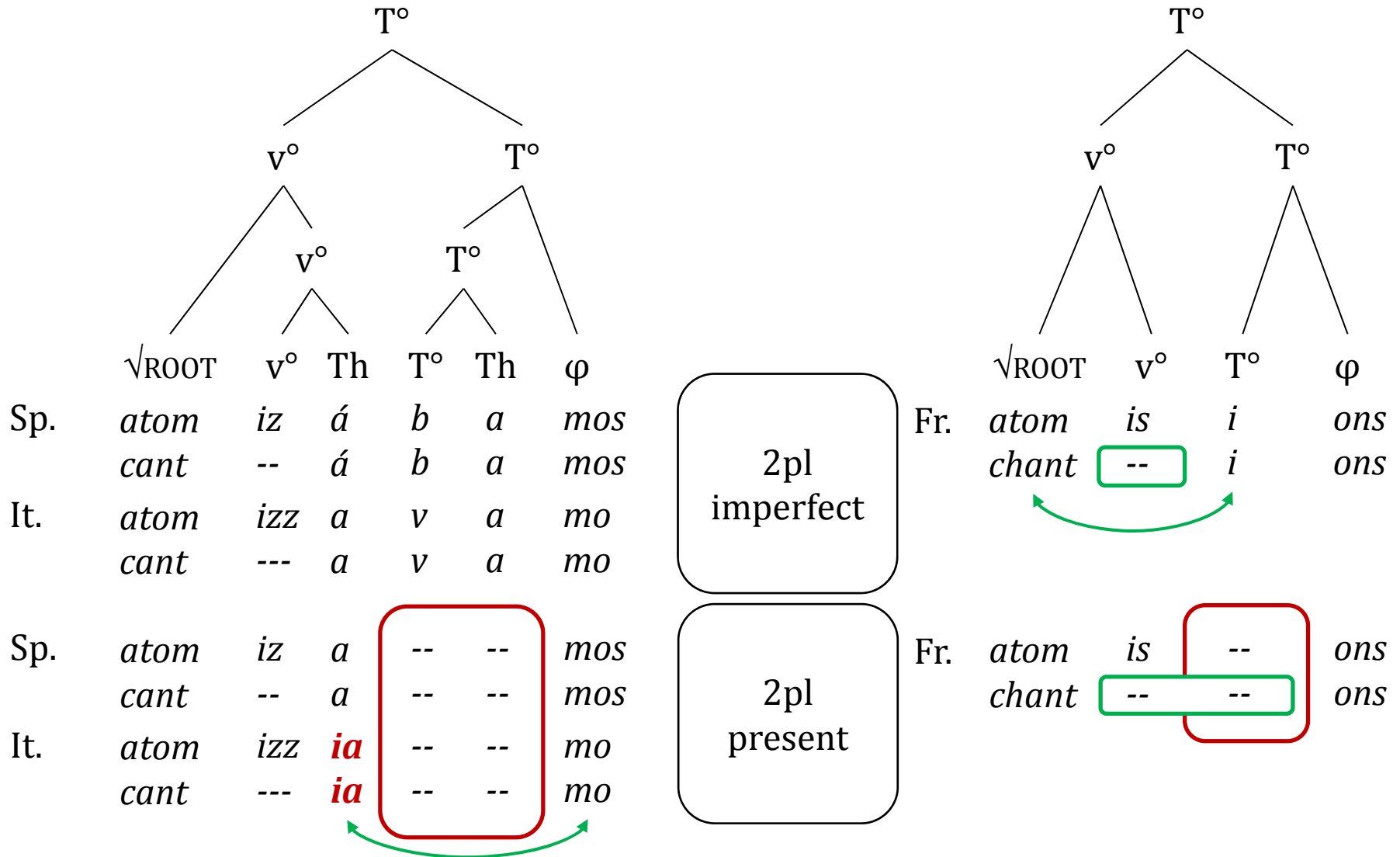
Realization of $\sqrt{\text{ROOT}}$



Can Y trigger root allomorphy / suppletion?

- **Fusion:**
Y can trigger root allomorphy only if it fuses with X and appears thus closer to the root
- **Pruning:**
Y triggers root allomorphy only if X is non-overt and is thus deleted/pruned
- **Spanning:**
Y triggers root allomorphy only if it is an adjacent span. For this, root and X (or X and Y) have to be realized not as terminal nodes, but as a span.

2. CE and CC for root allomorphy



1. Introduction

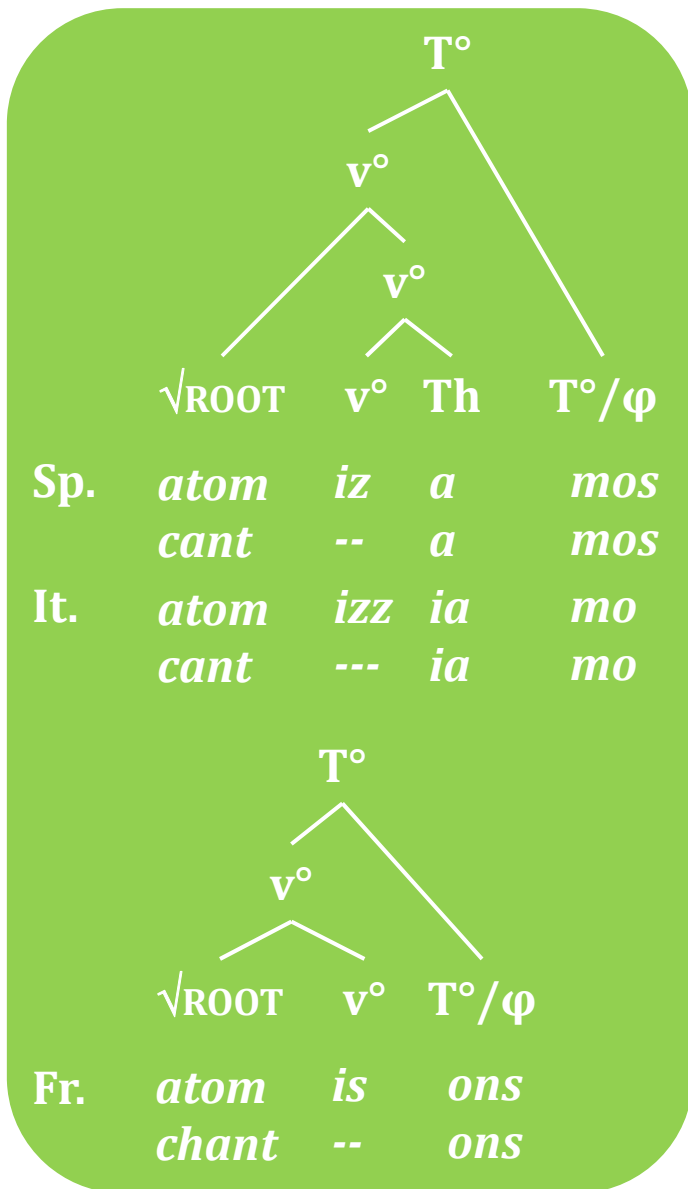
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2.1 Fusion

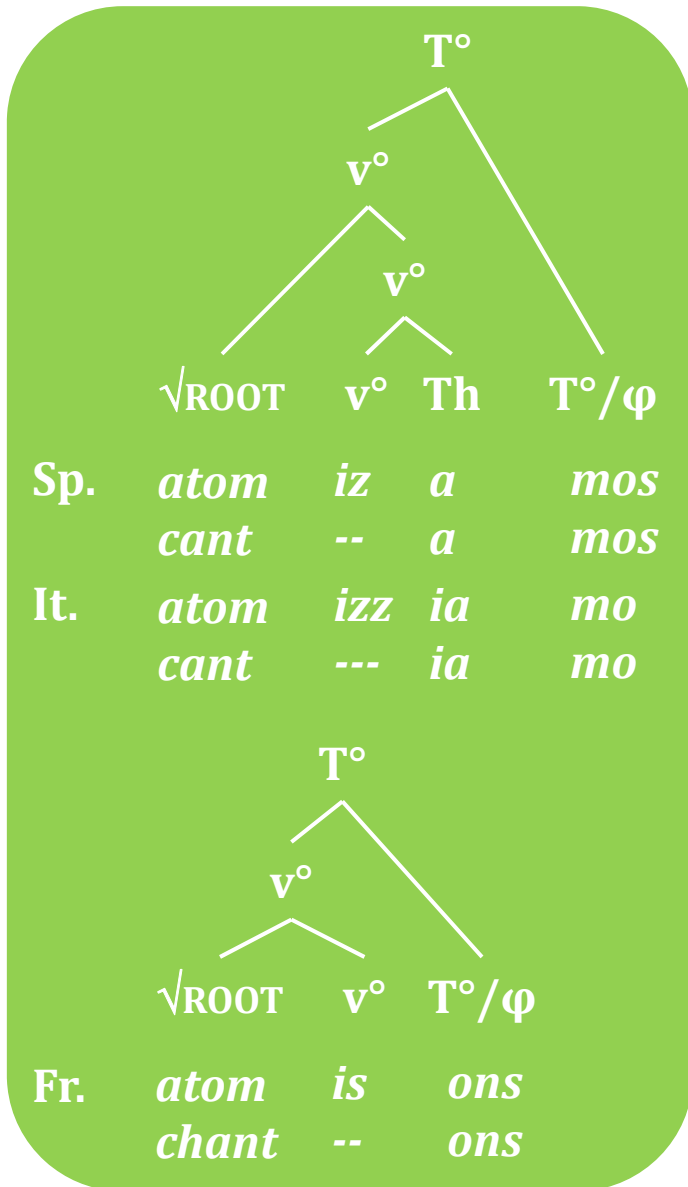
- Morphological complexity stands in direct relation to the syntactic-semantic features of the respective forms (Oltra-Massuet 1999, Arregi 2000).
- It is therefore not surprising that the forms of the unmarked present tense (e.g. *cant-a-mos*) are shorter than other tenses (e.g. *cant-á-ba-mos*) (Oltra-Massuet 1999, Arregi 2000).
- Implementation:
 - T° fuses with φ since it encodes a semantically unmarked tense features, i.e. a tense feature that is also morphophonologically never realised.
 - Fusion, a post-syntactic morphological process, causes that there are less nodes for Vocabulary Insertion and, consequently, the resulting form is morphophonologically shorter.

2.1 Fusion



- As a result of fusion, the phi-features are structurally (and linearly) closer to $\sqrt{\text{ROOT}}$.
- Being encoded now in the sister node of v° , the φ -features may impinge on v° and all other elements contained in v° , i.e. also the $\sqrt{\text{ROOT}}$.
- We have assumed in a previous work that the question why non-categorial suppletion is restricted to the present tense in Romance can be answered as follows: in the present tense T° and φ fuse and only due to this fusion φ influences the realization of its sister node v° which entails the “ $\sqrt{\text{ROOT}}$ ” (Pomino & Remberger 2019).

2.1 Fusion



Problems:

- Apart from the fact that fusion is rejected by many linguistics, it remains unclear whether the elements are really close enough to regulate allomorphy.
- Even after fusion the phi-features are neither structurally nor (in most cases) linearly adjacent to the root.
- What is more, in DM, ϕ is not a syntactic head, but a position added post-syntactically for the realization of the person and number features encoded in T° .
- Thus, fusion does not really alter the closeness of ϕ to other elements; fusion just prevents to realize the person and number features of T° in a separate slot or independently from TAM. 20

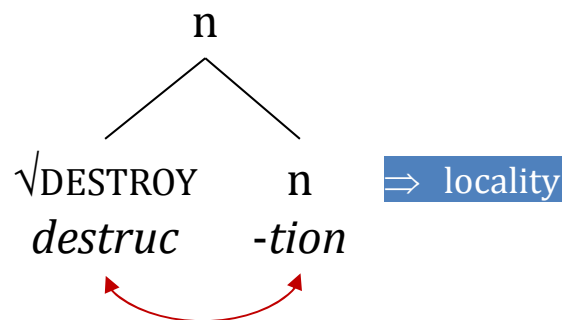
2.2 Allomorphic closeness and Pruning

- Embick (2010) assumes that contextual allomorphy is restricted in two ways:

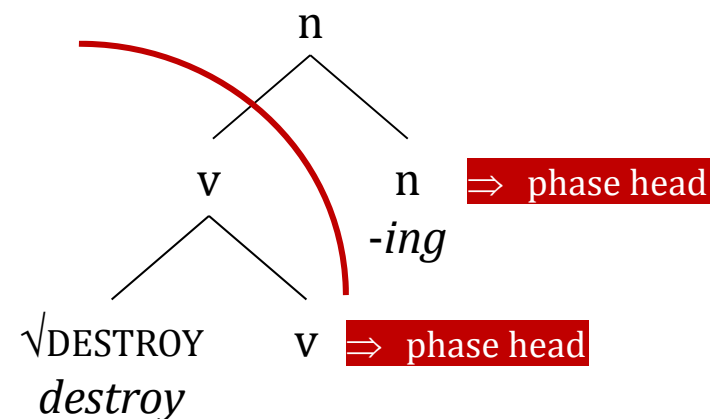
(1) Domain Hypothesis

In order for a node A to trigger allomorphy on a node B, A and B must be within the same domain.

(cf. Ingason & Sigurðsson 2015:4; also Marantz 2013, Embick 2014)



The root and the nominalizer can condition allomorphy on each other in derived nominals.



The nominalizer and the root cannot condition allomorphy on each other in a gerund, because v is an intervening phase head.

2.2 Allomorphic closeness and Pruning

- Embick (2010) assumes that contextual allomorphy is restricted in two ways:

(1) Domain Hypothesis

In order for a node A to trigger allomorphy on a node B, A and B must be within the same domain.

(2) Adjacency Hypothesis

In order for a node A to trigger allomorphy on a node B, A and B must be linearly adjacent (concatenated).

- Three generalizations about **allomorphic closeness** (based on Embick 2010; applied here on the Romance verb structure):

- G1: Being a cyclic head, v° can see the $\sqrt{\text{root}}$. Unproblematic for G0 suppletion

- G2: The non-cyclic head T° can see the $\sqrt{\text{root}}$ in spite of intervening cyclic v° only when v° is non-overt. ?????

- G3: When there are two cyclic heads v° and n° , for example, in structures $[[\sqrt{\text{root}} v^\circ] n^\circ]$, n° cannot see the $\sqrt{\text{root}}$, even if v° is not overt.

Unproblematic for G0 suppletion

2.2 Allomorphic closeness and Pruning

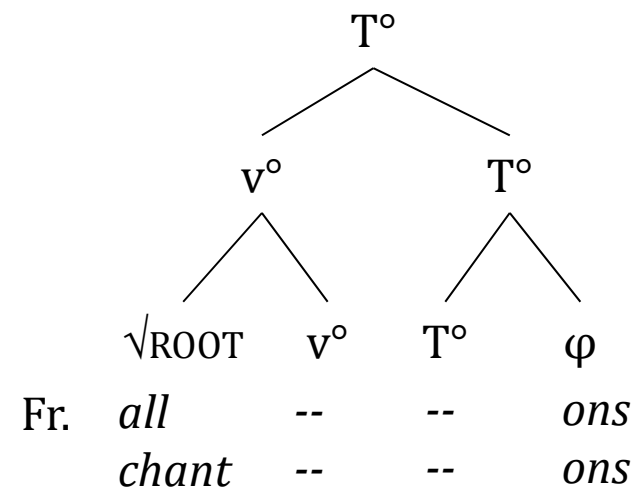
- According to Embick, VI takes place at the linearized structure and nodes that are not exponed with phonological material are removed from the structure with a direct effect on linear adjacency (Embick 2003, 2010).

- **Pruning rule:**

$\sqrt{\text{root}} \hat{[x, -\emptyset]}, [x, -\emptyset] \hat{Y} \rightarrow \sqrt{\text{root}} \hat{Y}$


(‘if x is not realized, it is pruned so that $\sqrt{\text{root}}$ and Y become linearly adjacent to each other’)

- This proposal seems to work out for French: Since v° and T° are not exponed in the French present tense forms, they are pruned and thus φ results to be linearly adjacent to the root making phi-triggered root allomorphy possible, according to Embick (2010).



2.2 Allomorphic closeness and Pruning

Derivation French *allons* based on Embick's assumptions:

- a. Linearization: $\sqrt{\text{root}} \hat{[v]}, [v] \hat{T}[\text{pres}], T[\text{pres}] \hat{\varphi}[1\text{pl}]$
- b. VI at v° : $\sqrt{\text{root}} \hat{[v,-\emptyset]}, [v,-\emptyset] \hat{T}[\text{pres}], T[\text{pres}] \hat{\varphi}[1\text{pl}]$
- c. Pruning: $\sqrt{\text{root}} \hat{[v,-\emptyset]}, [v,-\emptyset] \hat{T}[\text{pres}], T[\text{pres}] \hat{\varphi}[1\text{pl}]$
 $\rightarrow \sqrt{\text{root}} \hat{T}[\text{pres}], T[\text{pres}] \hat{\varphi}[1\text{pl}]$
- d. VI at T° : $\sqrt{\text{root}} \hat{T}[\text{pres,-}\emptyset], T[\text{pres,-}\emptyset] \hat{\varphi}[1\text{pl}]$
- e. Pruning: $\sqrt{\text{root}} \hat{T}[\text{pres,-}\emptyset], T[\text{pres,-}\emptyset] \hat{\varphi}[1\text{pl}]$
 $\rightarrow \sqrt{\text{root}} \hat{\varphi}[1\text{pl}]$ 
- f. VI at $\sqrt{\text{root}}$: $[al-] \hat{\varphi}[1\text{pl}]$
- g. VI at φ : $[al-] \hat{[-\tilde{5}]}$
allons $[al\tilde{5}]$

2.2 Allomorphic closeness and Pruning

Problems:

- To make Embick's proposal work, instead of a fusion rule one has to postulate a pruning rule.
- Other necessary postulation are:
 - v° has to be subject to VI before the $\sqrt{\text{root}}$ is realized phonologically (NB: It is standardly assumed that VI start in the most embedded element, i.e. the $\sqrt{\text{root}}$), otherwise φ can no longer trigger allomorphy on the $\sqrt{\text{root}}$ (once it is realized).
 - The root must, furthermore, be subject to VI before φ is realized since these features must still be present in order to trigger the correct realization of the root (NB: the features are no longer available after VI).
 - In sum, the post-syntactic derivation must follow different ordered steps.

2.2 Allomorphic closeness and Pruning

Problems:

pres.	va-do	va-i	va	and-ia-mo	and-a-te	va-nno
imp.	and-a-vo	and-a-vi	and-a-va	and-a-va-mo	and-a-va-te	and-a-va-no

- If we look only at the present tense forms, one could think that 1pl and 2pl trigger allomorphy on the root since all the other forms are based on *va-*.
- In Embick's view this would not be possible, because in these cases φ and the $\sqrt{\text{root}}$ are not linearly adjacent to each other: *-ia-* and *-a-* intervene between them (see also the imperfect forms).
- Yet, one can also assume that *and-* is the default realization for $\sqrt{\text{GO}}$ and that φ triggers allomorphy on the root in the 1/2/3sg and 3pl (= where $\sqrt{\text{GO}}$ and φ are linearly adjacent to each other).
- Note that in these *va-*-based forms there is no intervening exponent and φ and the $\sqrt{\text{root}}$ are linearly adjacent.

2.2 Allomorphic closeness and Pruning

	<i>va-i</i>	<i>and-a-te</i>
Linear.:	$\sqrt{\text{go} \wedge \text{v}, \text{v} \wedge \text{Th}, \text{Th} \wedge \text{T}, \text{T} \wedge \text{Th}, \text{Th} \wedge \varphi [2\text{sg}]}$	$\sqrt{\text{go} \wedge \text{v}, \text{v} \wedge \text{Th}, \text{Th} \wedge \text{T}, \text{T} \wedge \text{Th}, \text{Th} \wedge \varphi [2\text{pl}]}$
VI at v:	$\sqrt{\text{go} \wedge \text{v}:\emptyset, \text{v}:\emptyset \wedge \text{Th}, \text{Th} \wedge \text{T}, \text{T} \wedge \text{Th}, \text{Th} \wedge \varphi [2\text{sg}]}$	$\sqrt{\text{go} \wedge \text{v}:\emptyset, \text{v}:\emptyset \wedge \text{Th}, \text{Th} \wedge \text{T}, \text{T} \wedge \text{Th}, \text{Th} \wedge \varphi [2\text{pl}]}$
Pruning:	$\sqrt{\text{go} \wedge \text{Th}, \text{Th} \wedge \text{T}, \text{T} \wedge \text{Th}, \text{Th} \wedge \varphi [2\text{sg}]}$	$\sqrt{\text{go} \wedge \text{Th}, \text{Th} \wedge \text{T}, \text{T} \wedge \text{Th}, \text{Th} \wedge \varphi [2\text{pl}]}$
VI at Th:	$\sqrt{\text{go} \wedge \text{Th}:\emptyset, \text{Th}:\emptyset \wedge \text{T}, \text{T} \wedge \text{Th}, \text{Th} \wedge \varphi [2\text{sg}]}$	$\sqrt{\text{go} \wedge \text{Th}:\text{a}, \text{Th}:\text{a} \wedge \text{T}, \text{T} \wedge \text{Th}, \text{Th} \wedge \varphi [2\text{pl}]}$
Pruning:	$\sqrt{\text{go} \wedge \text{T}, \text{T} \wedge \text{Th}, \text{Th} \wedge \varphi [2\text{sg}]}$	---
VI at T:	$\sqrt{\text{go} \wedge \text{T}:\emptyset, \text{T}:\emptyset \wedge \text{Th}, \text{Th} \wedge \varphi [2\text{sg}]}$	$\sqrt{\text{go} \wedge \text{Th}:\text{a}, \text{Th}:\text{a} \wedge \text{T}:\emptyset, \text{T}:\emptyset \wedge \text{Th}, \text{Th} \wedge \varphi [2\text{pl}]}$
Pruning:	$\sqrt{\text{go} \wedge \text{Th}, \text{Th} \wedge \varphi [2\text{sg}]}$	$\sqrt{\text{go} \wedge \text{Th}:\text{a}, \text{Th}:\text{a} \wedge \text{Th}, \text{Th} \wedge \varphi [2\text{pl}]}$
VI at Th:	$\sqrt{\text{go} \wedge \text{Th}:\emptyset, \text{Th}:\emptyset \wedge \varphi [2\text{sg}]}$	$\sqrt{\text{go} \wedge \text{Th}:\text{a}, \text{Th}:\text{a} \wedge \text{Th}:\emptyset, \text{Th}:\emptyset \wedge \varphi [2\text{pl}]}$
Pruning:	$\sqrt{\text{go} \wedge \varphi [2\text{sg}]}$	$\sqrt{\text{go} \wedge \text{Th}:\text{a}, \text{Th}:\text{a} \wedge \varphi [2\text{pl}]}$
VI at $\sqrt{\text{go}}$:	$\sqrt{\text{go}:\text{va} \wedge \varphi [2\text{sg}]}$	$\sqrt{\text{go}:\text{and} \wedge \text{Th}:\text{a}, \text{Th}:\text{a} \wedge \varphi [2\text{pl}]}$
VI at φ:	$\sqrt{\text{go}:\text{va} \wedge \varphi [2\text{sg}]: \text{i}}$	$\sqrt{\text{go}:\text{and} \wedge \text{Th}:\text{a}, \text{Th}:\text{a} \wedge \varphi [2\text{pl}]: \text{te}}$
	[va _i]	[andate]

2.2

Why is v° -Th realized by /a/ in one case and not in the other?

- Most probably, it depends on the phonological realization of the root, but VI at $\sqrt{\text{root}}$ is one of the latest steps.
- Or: v° and its Th are not present in *vai* (cf. pre-VI pruning, Calabrese 2019).

Linear.:	$\sqrt{\text{go}} \wedge v, v \wedge \text{Th}, \text{Th} \wedge \text{T}, \text{T} \wedge \text{Th}, \text{Th} \wedge \varphi [2\text{sg}]$	$\sqrt{\text{go}} \wedge v, v \wedge \text{Th}, \text{Th} \wedge \text{T}, \text{T} \wedge \text{Th}, \text{Th} \wedge \varphi [2\text{pl}]$
VI at v:	$\sqrt{\text{go}} \wedge v:\emptyset, v:\emptyset \wedge \text{Th}, \text{Th} \wedge \text{T}, \text{T} \wedge \text{Th}, \text{Th} \wedge \varphi [2\text{sg}]$	$\sqrt{\text{go}} \wedge v:\emptyset, v:\emptyset \wedge \text{Th}, \text{Th} \wedge \text{T}, \text{T} \wedge \text{Th}, \text{Th} \wedge \varphi [2\text{pl}]$
Pruning:	$\sqrt{\text{go}} \wedge \text{Th}, \text{Th} \wedge \text{T}, \text{T} \wedge \text{Th}, \text{Th} \wedge \varphi [2\text{sg}]$	$\sqrt{\text{go}} \wedge \text{Th}, \text{Th} \wedge \text{T}, \text{T} \wedge \text{Th}, \text{Th} \wedge \varphi [2\text{pl}]$
VI at Th:	$\sqrt{\text{go}} \wedge \text{Th}:\emptyset, \text{Th}:\emptyset \wedge \text{T}, \text{T} \wedge \text{Th}, \text{Th} \wedge \varphi [2\text{sg}]$	$\sqrt{\text{go}} \wedge \text{Th}:a, \text{Th}:a \wedge \text{T}, \text{T} \wedge \text{Th}, \text{Th} \wedge \varphi [2\text{pl}]$
Pruning:	$\sqrt{\text{go}} \wedge \text{T}, \text{T} \wedge \text{Th}, \text{Th} \wedge \varphi [2\text{sg}]$	---
VI at T:	$\sqrt{\text{go}} \wedge \text{T}:\emptyset, \text{T}:\emptyset \wedge \text{Th}, \text{Th} \wedge \varphi [2\text{sg}]$	$\sqrt{\text{go}} \wedge \text{Th}:a, \text{Th}:a \wedge \text{T}:\emptyset, \text{T}:\emptyset \wedge \text{Th}, \text{Th} \wedge \varphi [2\text{pl}]$
Pruning:	$\sqrt{\text{go}} \wedge \text{Th}, \text{Th} \wedge \varphi [2\text{sg}]$	$\sqrt{\text{go}} \wedge \text{Th}:a, \text{Th}:a \wedge \text{Th}, \text{Th} \wedge \varphi [2\text{pl}]$
VI at Th:	$\sqrt{\text{go}} \wedge \text{Th}:\emptyset, \text{Th}:\emptyset \wedge \varphi [2\text{sg}]$	$\sqrt{\text{go}} \wedge \text{Th}:a, \text{Th}:a \wedge \text{Th}:\emptyset, \text{Th}:\emptyset \wedge \varphi [2\text{pl}]$
Pruning:	$\sqrt{\text{go}} \wedge \varphi [2\text{sg}]$	$\sqrt{\text{go}} \wedge \text{Th}:a, \text{Th}:a \wedge \varphi [2\text{pl}]$
VI at $\sqrt{\text{go}}$:	$\sqrt{\text{go}}:va \wedge \varphi [2\text{sg}]$	$\sqrt{\text{go}}:and \wedge \text{Th}:a, \text{Th}:a \wedge \varphi [2\text{pl}]$
VI at φ:	$\sqrt{\text{go}}:va \wedge \varphi [2\text{sg}]:i$	$\sqrt{\text{go}}:and \wedge \text{Th}:a, \text{Th}:a \wedge \varphi [2\text{pl}]:te$
	[vai]	[andate]

2.2 Allomorphic closeness and Pruning

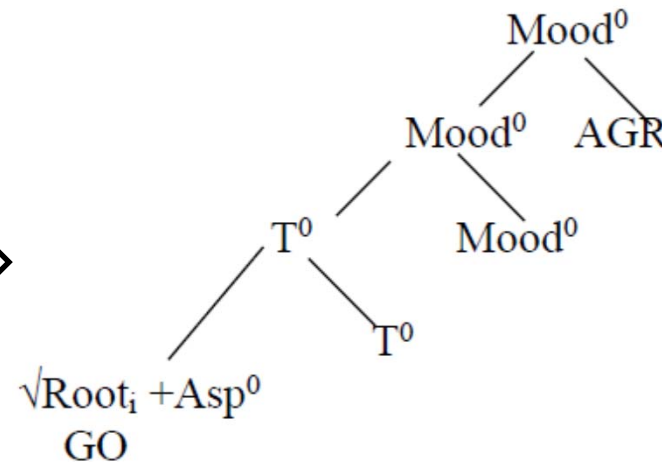
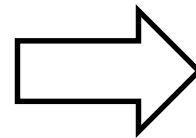
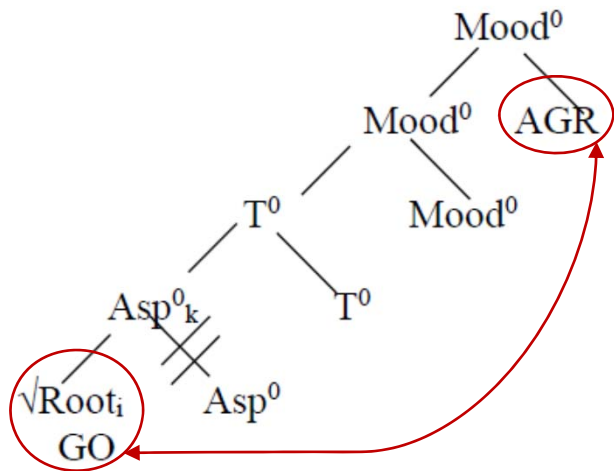
Calabrese (2019)

pres.	va-do	va-i	va	and-ia-mo	and-a-te	va-nno
imp.	and-a-vo	and-a-vi	and-a-va	and-a-va-mo	and-a-va-te	and-a-va-no

- Calabrese (2019) assumes that suppletion is not conditioned by the φ -features, it is rather triggered by the present tense feature.
- He proposes that there is a special case of node pruning that applies before VI: **Pre-VI pruning**.
- This pruning is not sensitive to the phonological null status of the pruned category, it is rather triggered by a **the diacritic [+suppletive]** encoded in some special roots (e.g. $\sqrt{GO^{[+suppl]}}$).
- The non-appearance of the *va*-forms for the 1 and 2pl is due to an additional rule, an impoverishment rule.

2.2 Allomorphic closeness and Pruning

Calabrese (2019)



- Pre-VI pruning of Asp^o (and Fut^o) due to the diacritic [+suppl(ative)] encoded in the root.
- Downward floating of features.
- In the 1st and 2nd pl, the diacritic [+suppletive] is deleted. As a consequence, pruning cannot apply.

Vocabulary Items:

vad- ↔ [$\sqrt{\text{GO}}^{[+\text{suppl}]} + \text{Asp}(+\text{Fut})$] / ___ [-past]_{T^o}

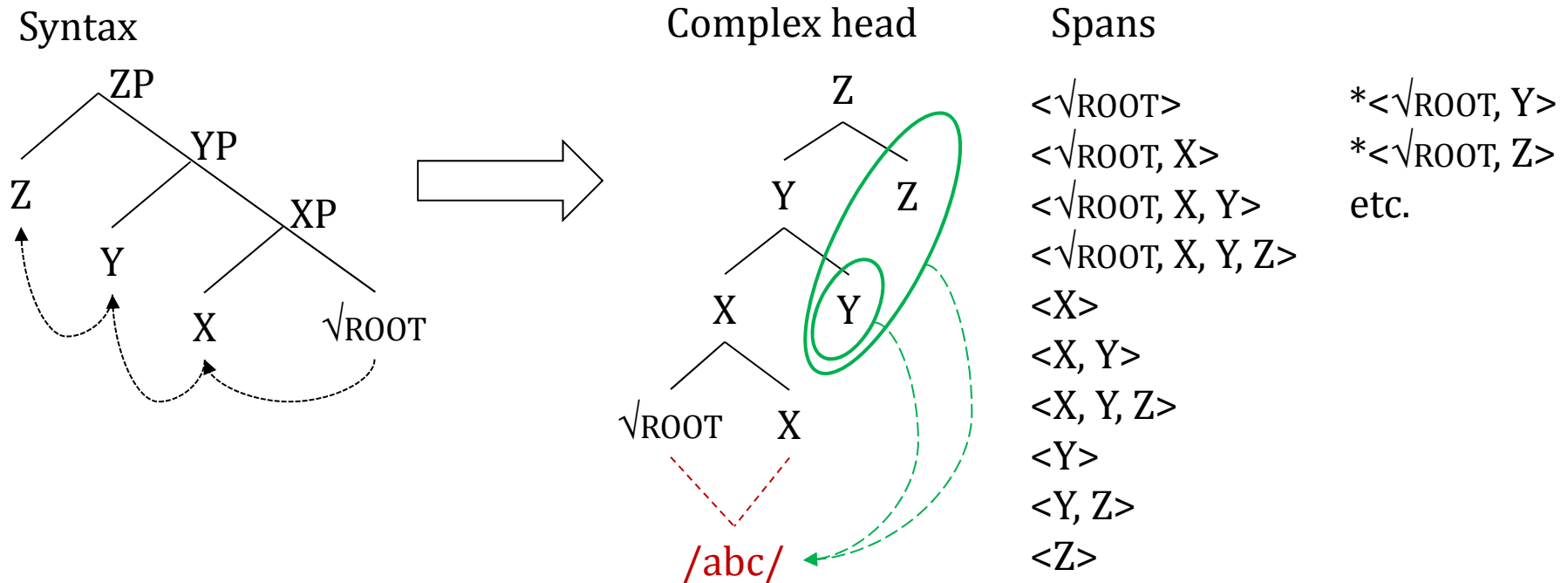
and- ↔ [$\sqrt{\text{GO}}$] (elsewhere)

How are the present tense forms *andiamo* and *andate* derived?

Why (and how) is pruning restricted to the present tense?

2.3 Spanning

- In Spanning, VI operates over the hierarchical structure allowing to insert phonological material not just in one terminal node at a time but also in spans of terminal nodes (that are in a complement relation with each other) (Williams 2003, Svenonius 2012, Merchant 2015).



- **Span Adjacency Hypothesis:** Allomorphy is conditioned only by an adjacent span.
- I.e. a node may exhibit allomorphy triggered by a nonadjacent head (here: Z) if and only if any and all intervening heads (here: Y) also participate in the allomorphy selection.

1. Introduction

Outline of the talk

1. Introduction
2. Cumulative exponence (CE) and contextual conditions (CC) for root allomorphy
 - 2.1 Fusion
 - 2.2 Allomorphic closeness and Pruning
 - 2.3 Spanning
3. **Romance GO: A DM-analysis**
 - 3.1 Spanish
 - 3.2 Italian
 - 3.3 French
4. Conclusions

3.1 Synchronic analysis: Spanish

(A) Two source verbs: *vādere, īre* (and *esse*; overlapping suppletion)

(B+C) Only „inherent“ suppletion (TAM), categorial suppletion*

(D) Resulting forms are segmentable (+ analogical process for 1sg), but „athematic“ in the present tense (since the root ends in vowel)

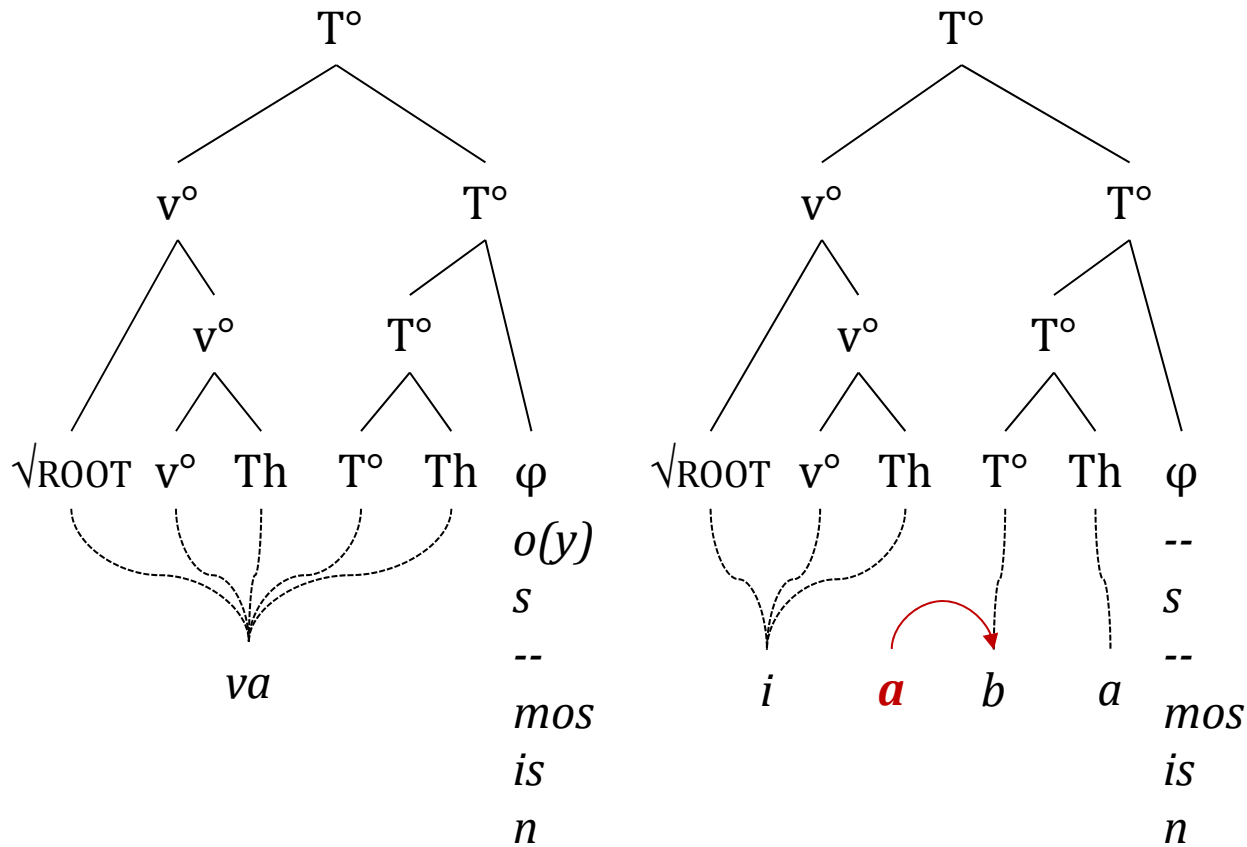
(7) Sp.	a.	<i>v-o-y</i>	<i>va-s</i>	<i>va</i>	<i>va-mos</i>	<i>va-is</i>	<i>va-n</i>
	b.	<i>i-b-a</i>	<i>i-b-a-s</i>	<i>i-b-a</i>	<i>í-b-a-mos</i>	<i>i-b-a-is</i>	<i>i-b-a-n</i>
	c.	<i>cant-o</i>	<i>cant-a-s</i>	<i>cant-a</i>	<i>cant-a-mos</i>	<i>cant-á-is</i>	<i>cant-a-n</i>
	d.	<i>d-o-y</i>	‘(I) give’				
		<i>s-o-y</i>	‘(I) am’				
		<i>est-o-y</i>	‘(I) am/stay’				
		<i>ha-y</i>	‘there is’				(originally: ‘have.3SG-there.CL’)

The present tense forms of Spanish *ir* are segmentable, but only into two (instead of three) parts:

√root + φ (athematic forms)

With the sole exception of the imperative (¡ve!* ‘go.SG!’ vs. *¡id!* ‘go.PL!’)

3.1 Synchronic analysis: Spanish



Vocabulary Items:

- < $\sqrt{\text{GO}}$, v , Th , T :pres, Th > \leftrightarrow /ba/
- < $\sqrt{\text{GO}}$, v > \leftrightarrow /i/
- < ϕ :1sg> \leftrightarrow /o/
- < ϕ :2sg> \leftrightarrow /s/
- < ϕ :1pl> \leftrightarrow /mos/

- < ϕ :2pl> \leftrightarrow /is/
- < ϕ :3pl> \leftrightarrow /n/

< T :impf> \leftrightarrow /b/

Only after theme vowel *a*:

cantábamos

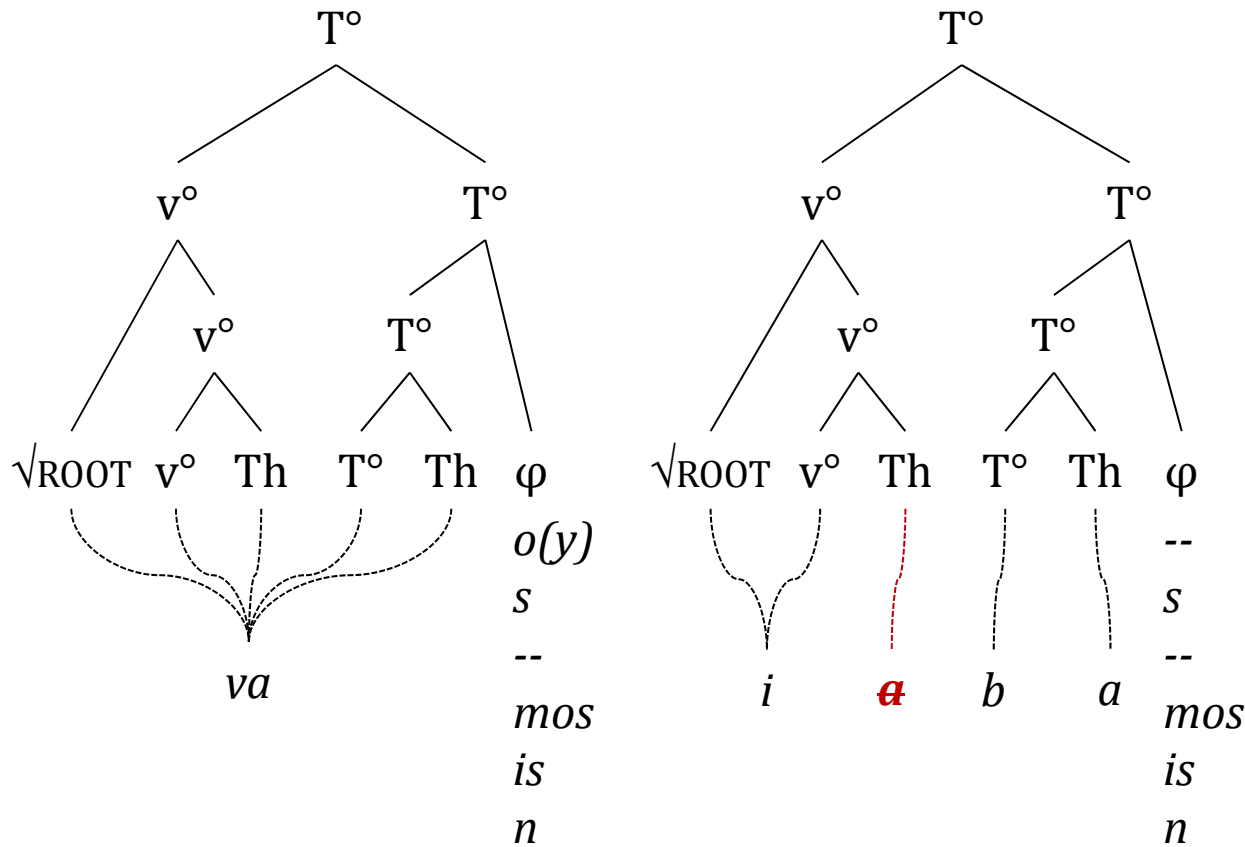
bebíamos

**bebíbamos*

mentíamos

**mentíbamos*

3.1 Synchronic analysis: Spanish



- Different “spanning” of the relevant Vocabulary items.
- In the present tense spanning reaches the whole structure but φ .
- In the other tenses (with the exception of the *indefinido*) this is not the case; T has a proper exponent.

Vocabulary Items:

< $\sqrt{\text{GO}}$, v , Th , $T:\text{pres}$, Th > \leftrightarrow /ba/

< $\sqrt{\text{GO}}$, v > \leftrightarrow /i/

< $\varphi:1\text{sg}$ > \leftrightarrow /o/

< $\varphi:2\text{sg}$ > \leftrightarrow /s/

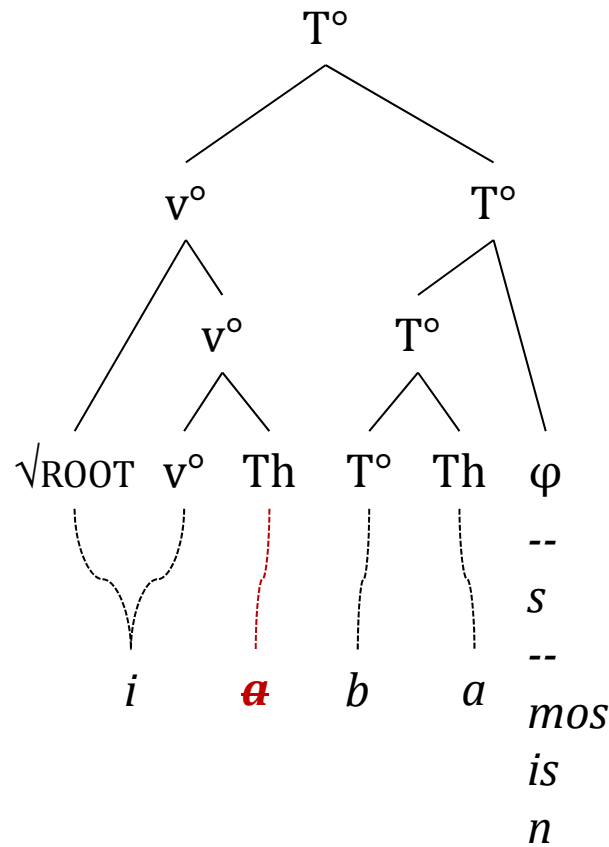
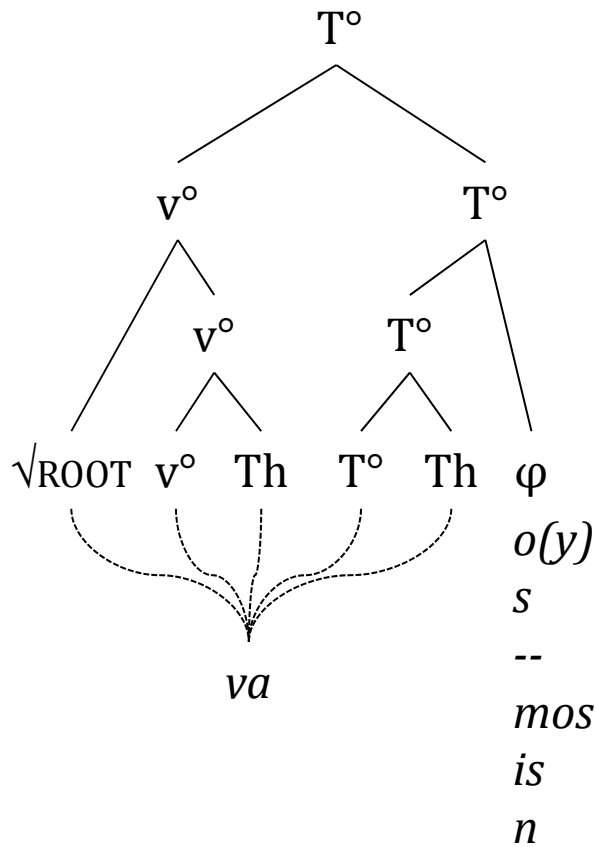
< $\varphi:1\text{pl}$ > \leftrightarrow /mos/

< $\varphi:2\text{pl}$ > \leftrightarrow /is/

< $\varphi:3\text{pl}$ > \leftrightarrow /n/

< $T:\text{impf}$ > \leftrightarrow /b/

3.1 Synchronic analysis: Spanish



What blocks the insertion of /i/ in the present tense?

Principle of Maximal Expression (Julien 2015):

When two or more vocabulary items meet the conditions for insertion, the item leaving the smallest number of features in the terminal sequence unexpressed must apply.

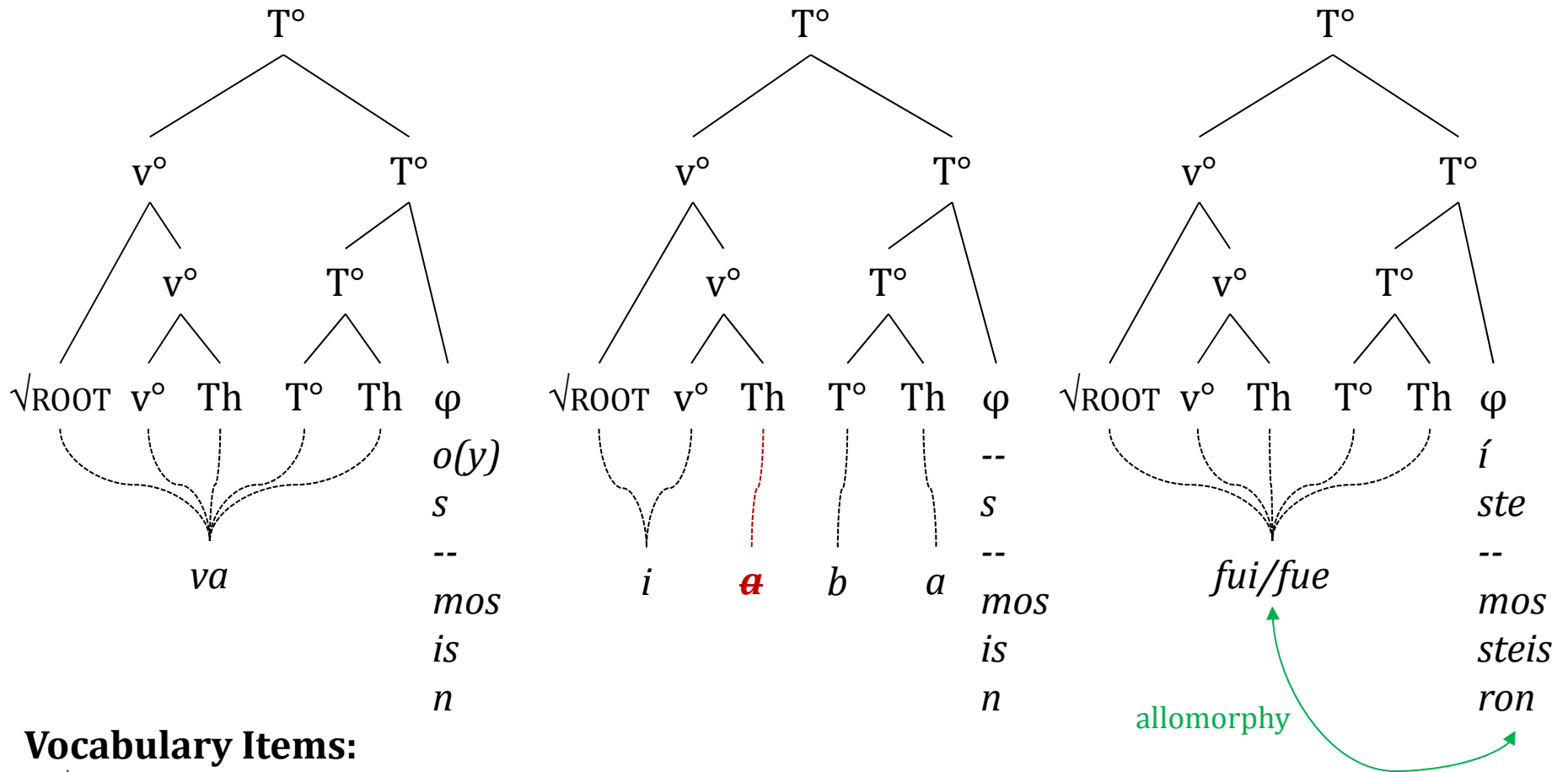
Vocabulary Items:

- < $\sqrt{GO}, v, Th, T:pres, Th$ > \leftrightarrow /ba/
- < \sqrt{GO}, v > \leftrightarrow /i/
- < $\varphi:1sg$ > \leftrightarrow /o/
- < $\varphi:2sg$ > \leftrightarrow /s/
- < $\varphi:1pl$ > \leftrightarrow /mos/

- < $\varphi:2pl$ > \leftrightarrow /is/
- < $\varphi:3pl$ > \leftrightarrow /n/

<T:impf> \leftrightarrow /b/

3.1 Synchronic analysis: Spanish



Vocabulary Items:

- < $\sqrt{\text{GO}}$, v, Th, **T:pres**, Th> \leftrightarrow /ba/
- < $\sqrt{\text{GO}}$, v> \leftrightarrow /i/
- < φ :1sg> \leftrightarrow /o/
- < φ :2sg> \leftrightarrow /s/
- < φ :1pl> \leftrightarrow /mos/

- < φ :2pl> \leftrightarrow /is/
- < φ :3pl> \leftrightarrow /n/

<T:impf> \leftrightarrow /b/

- < $\sqrt{\text{GO}}$, v, Th, **T:indef**, Th> \leftrightarrow /fwe/

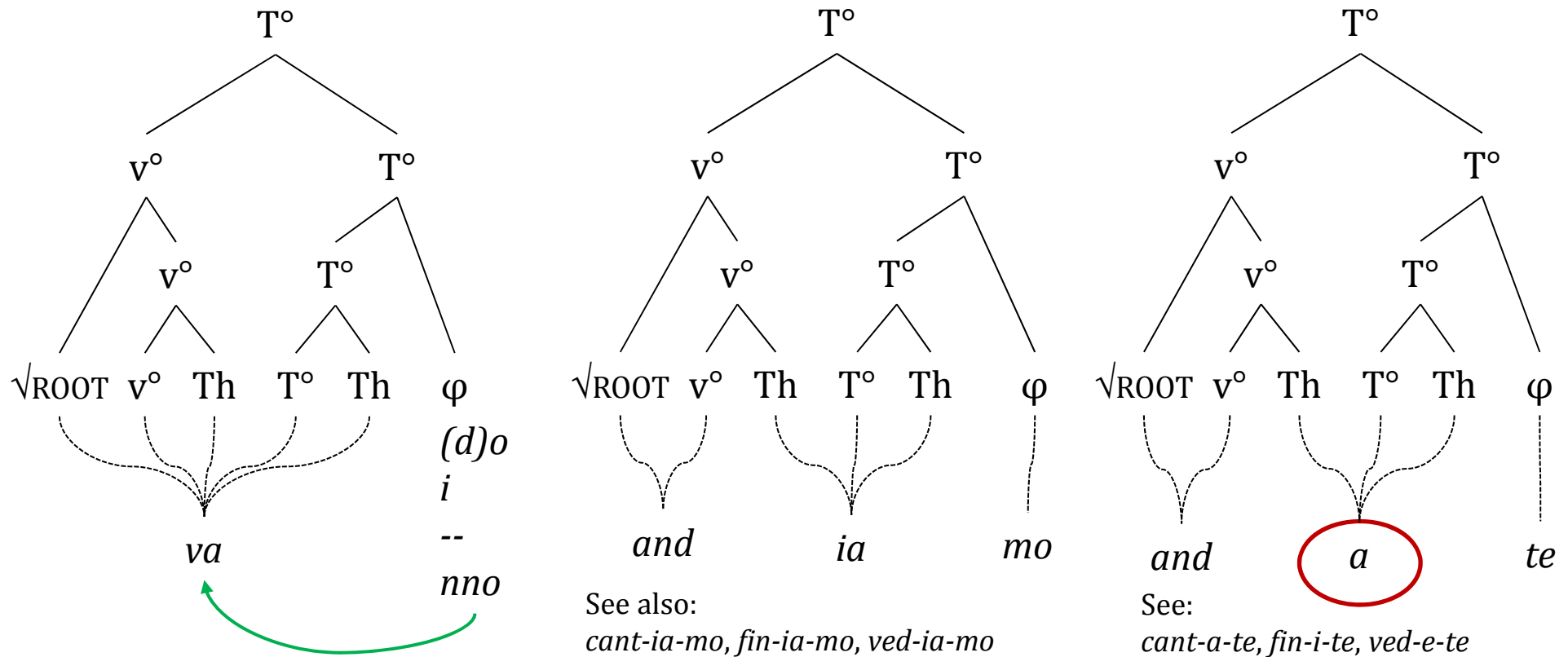
3.2 Synchronic analysis: Italian

- (A) Two source verbs: *vādere, ambulāre/ambitāre* (**allāre, *andāre*)
- (B+C) Only non-categorial suppletion (person, number)
- (D) Segmentability (slightly opaque for 1sg and 3pl), but athematic in some present tense forms
- (11) It. a. *vado, vai, va, andiamo, andate, vanno*
 b. *cant-o, canti, canta, cantiamo, cantate, cantano*

Table 7	1sg	2sg	3sg	1pl	2pl	3pl
<i>andare</i>	<i>va-d-o</i>	<i>va-i</i>	<i>va</i>	<i>and-ia-mo</i>	<i>and-a-te</i>	<i>va-nno</i>
<i>cantare</i>	<i>cant-o</i>	<i>cant-i</i>	<i>cant-a</i>	<i>cant-ia-mo</i>	<i>cant-a-te</i>	<i>cant-a-no</i>

- (12) VIs for ϕ -features in Italian (without the *passato remoto*)
- /mo/ → [1pl] (e.g. *cant-ia-mo*, with readjustment of Th in the present tense)
 - /te/ → [2pl] (e.g. *cant-a-te*)
 - /o/ → [1] (e.g. *cant-Ø-o*, hiat resolution)
 - /i/ → [2] (e.g. *cant-Ø-i*, hiat resolution)
 - /no/ → [pl] (e.g. *cant-a-no*)
- (NB: There is no VI for 3sg)

3.2 Synchronic analysis: Italian

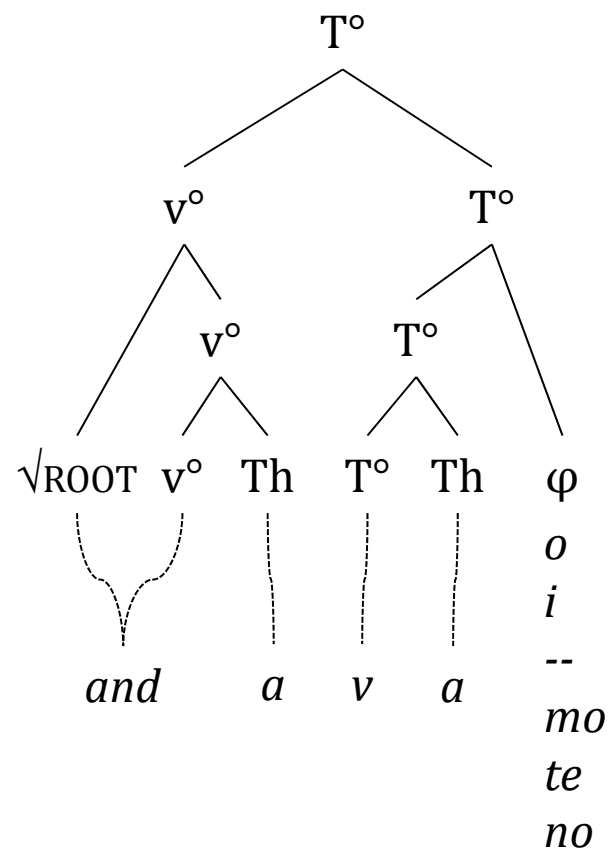
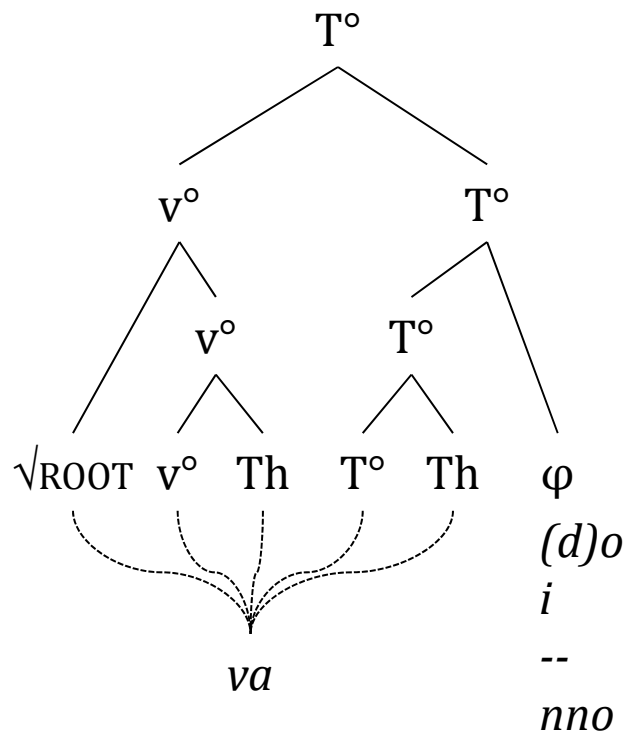


Vocabulary Items:

$\langle \sqrt{\text{GO}}, \text{v}, \text{Th}, \text{T:pres}, \text{Th} \rangle \leftrightarrow /va/$ (if the adjacent span has the features [sg/3pl])

$\langle \sqrt{\text{GO}}, \text{v} \rangle \leftrightarrow /and/$

3.2 Synchronic analysis: Italian



- Different “spanning” of the relevant Vocabulary items.
- In the present tense spanning reaches the whole structure but φ (**with the exception of 1/2pl**).
- In the imperfect this is not the case, since T has a proper exponent.

Vocabulary Items:

$\langle \sqrt{\text{GO}}, v, \text{Th}, \text{T:pres}, \text{Th} \rangle \leftrightarrow /va/$
 $\langle \sqrt{\text{GO}}, v \rangle \leftrightarrow /and/$

3.3 Synchronic analysis: French

- (A) Three source verbs: *īre, vādere, ambulāre/ambitāre* (**allāre, *andāre*)
- (B+C) Non-categorial (person, number) and categorial suppletion (TAM)
- (D) Very reduced segmentability

- (13) Fr. a. *je vais, tu vas, il va, nous allons, vous allez, ils vont* [pr, ind]
 b. *je aille, tu ailles, il aille, nous allions, vous alliez, ils aillent* [pr, sbj]
 c. *j'allais, tu allais, il allait, nous allions, vous alliez, ils allaient* [impf]
 d. *j'irai, tu iras, il ira, nous irons, vous irez, ils iront* [fut]

	sg	pl
1	[vε]	[al-õ]
2	[va]	[al-e]
3		[võ]

	sg	pl
1		[al-j-õ]
2	[aj]	[al-j-e]
3		

	sg	pl
1		[al-j-õ]
2	[al-ε]	[al-j-e]
3		

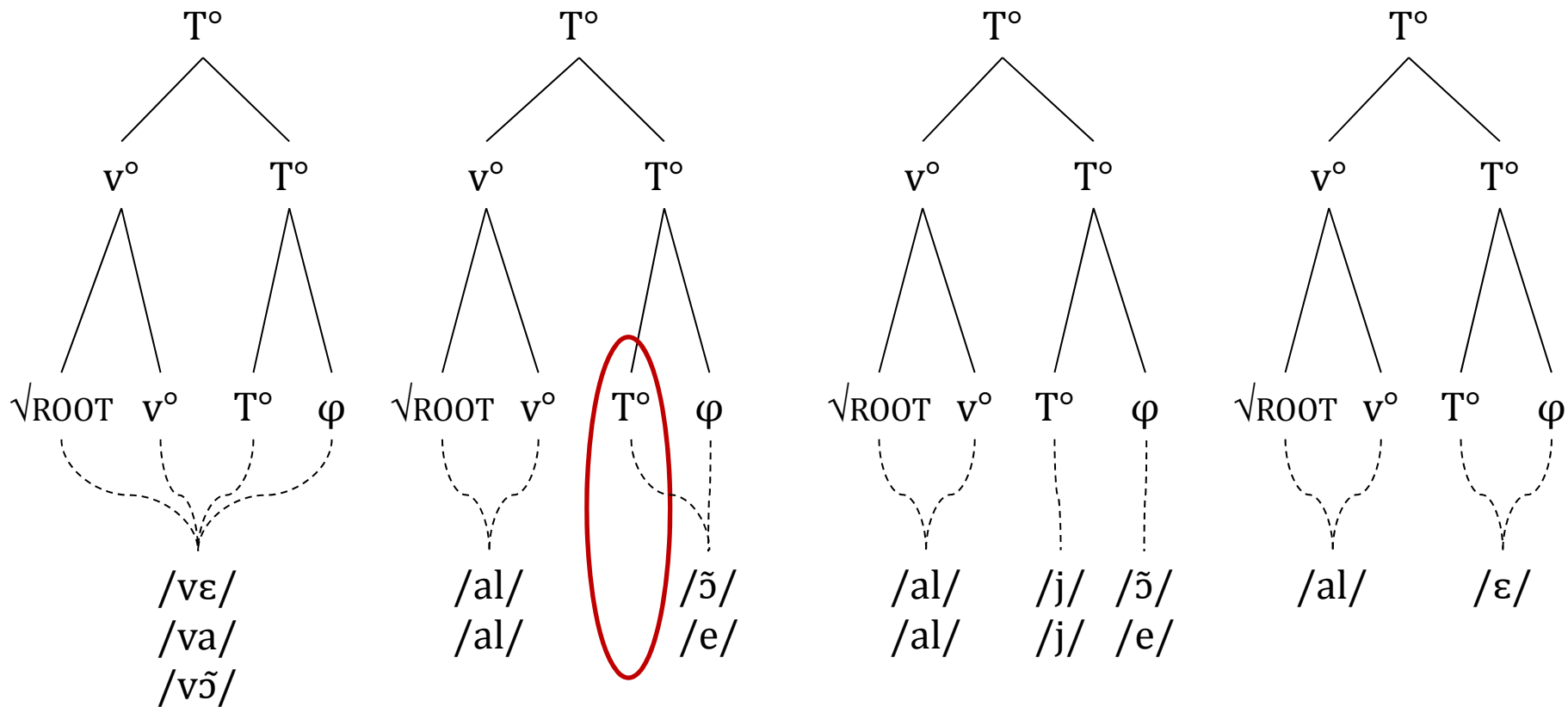
	sg	pl
1	[iB-e]	[iB-õ]
2	[iB-a]	[iB-e]
3		[iB-õ]

- (14) VIs for φ-features in French:

- a. /õ/ → [1pl]
- b. /e/ → [2pl]

NB: In spoken French, the 1pl often is expressed by the impersonal form *on chante* [fãt], *on va* [va] etc. That means that the only remaining VI for φ-features in this case is the 2pl.

3.3 Synchronic analysis: French



Vocabulary Items:

<√GO, v, T:pres, φ: 1sg>	↔	/vε/	<φ:1pl>	↔	/õ/
<√GO, v, T:pres, φ: sg>	↔	/va/	<φ:2pl>	↔	/ẽ/
<√GO, v, T:pres, φ: 3pl>	↔	/võ/	<T:impf>	↔	/j/
<√GO, v>	↔	/al/	<T:impf, φ:sg/3pl>	↔	/ε/

4. Conclusion

- There is no need for an additional process such as fusion or pruning rules.
- TAM-triggered allomorphy is explained via the specification of the Vocabulary Item at issue (in all three languages).
- In Italian, the φ -features do directly trigger root allomorphy.
- In French, the selection of different roots seems rather to be linked to „cumulative exponence“ in the sense that there are several VIs at disposition with different „span sizes“ and different feature specifications.

Outlook:

Which of the three possible analyses mentioned in section 2 is maintainable also from a diachronic perspective?

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Fusion, pruning or spanning: Which
account for locality restrictions in Romance
GO suppletion?

Thank you for your attention!



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