Masaryk University
Faculty of Arts
Department of Czech Language

The Nanosyntax of Friulian Verbs

An Analysis of the Present and Past in Tualis Friulian

Doctoral Thesis

Maria Cortiula

Supervisor: Michal Starke
Co-supervisor: Pavel Caha

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Contents

List of Tables

Abstract

This dissertation proposes an account for root and suffix allomorphy in the Friulian verbal domain. More specifically, I analyze the synthetic indicative forms of the present and past tense in a Carnic dialect, which I refer to as Tualis Friulian. The aim is to combine a detailed empirical description with a theoretical account in terms of Nanosyntax.

The theoretical novelty of this dissertation is in its application of a new spellout algorithm to the inflectional system of the Friulian verbs. The new spellout algorithm (due to Starke 2022) differs from the previous versions in that it allows sub-extractions.

The first step was to collect the data based on the native speaker's judgments. The main goal of Chapter 1 is to identify the complete set of morphologically distinct inflectional classes in Tualis Friulian. The chapter separates phonologically predictable alternations from those that involve different allomorphs and arrives at 13 different inflectional classes.

Those verb paradigms differ in the inflectional suffixes and in the distribution of root allomorphs. The main research question in Chapters 2 and 3 is whether the correct pairing of roots and suffixes can be achieved without postulating language-specific inflectional class features. A solution is offered by the framework of Nanosyntax with its phrasal lexicalization and spellout algorithm (Starke 2009, 2018, 2022). Different roots can vary both in their size and shape. As in Caha et al. (2019), when roots differ in size, they can lexicalize a different amount of features in the syntactic structures. Crucially, this leaves a different amount of features to be spelled out by affixes. Different suffixes will then take over in the lexicalization. I also propose roots of different shapes: trees with a Complex Left Branch, as in Blix (2021). Those roots can lexicalize the same amount of features, but differ in the features arrangement. This difference also allows for the correct root-suffix pairing.

In Chapter 4, I show that the same technology can also account for the distribution of different root allomorphs. There is no irregularity in syntax: the variation is in the lexicon, which contains items of different sizes that share the same concept.

The dissertation also provides a comprehensive account of and explanation for syncretism across verb classes. Some verb classes share the same suffixes in most of the forms but differ in some cells of their paradigms, combining with a different thematic vowel. I also accounted for syncretism within a paradigm, e.g. in the singular of the present tense, which shows a puzzling ABA pattern of syncretism in Tualis Friulian.

Abbreviations

π	person
#	number
1	first person
2	second person
3	third person
ADD	additive
ASP	aspect
CLB	complex left branch
FAM	familiar
FSEQ	functional sequence
IND	indicative
INF	infinitive
INIT	initiation
PART	participant
PL	plural
PROC	process
PRS	present indicative
PST	imperfect
RES	result
SCL	subject clitic
SG	singular
SPKR	speaker
SUBJ	subjunctive
TF	Tualis Friulian
TV	thematic vowel
T	tense
UR	underlying representation

Chapter 1

The data

The goal of this work is to understand the distribution of allomorphs in Carnic Friulian verbs, spoken in the Degano valley area.[1] More precisely, the informant resides in Tualis, a little village of 115 inhabitants, located in the Alpine area in the north of the region Friuli-Venezia Giulia (Map 1.1). I refer to this variety as Tualis Friulian (TF).

Figure 1.1: Map of the Degano valley area (Roseano, 2018:53)

[1]The Friulian speaking area is subdivided into three main subvarieties: (i) Central-Eastern (ii) Western and (iii) Carnic. For each of these major areas, further internal distinctions are made. For a detailed classification of Friulian varieties, see, e.g., Francescato (1966), Frau (1984), Roseano (2015).

I take into account the synthetic indicative forms of the present and past tense. This leaves us with two forms: the present indicative (PRS) and imperfect (PST).[2]

In this chapter, I present the data and their cleaning up.[3] After taking phonology into account, a total of 13 verb patterns are attested in TF.

1.1 Verb paradigms

Traditionally, there are two ways to group Friulian verb paradigms. One option is to split them into four classes based on their infinitive (INF) suffix, which can be *-â*, *-ê*, *-i*, or *-î* (see, e.g., Rizzolatti 1981,Benincà & Vanelli 2005).[4]

(1) INF
klam-â ('to call')
val-ê ('to value')
bat-i ('to hit')
sint-î ('to hear')

The other option is to group them all into three main groups based on their thematic vowel (TV), which can be *-a*, *-e*, or *-i*, as shown by the 2PL PRS forms (see, e.g., della Porta 1922, Benincà & Vanelli 2016).[5]

(2) 2PL PRS
klam-a-is ('you call')
bat-e-is ('you hit')
sint-i-is[6] ('you hear')

[2]The preterite forms are not analysed in the current work since they are not used in spoken TF.

[3]The data comes from a Friulian grammar (della Porta 1922) and from the online dictionary of Friulian-Italian (CLAAP (n.d.)), which puts together the *Grant Dizionari Bilengâl Talian Furlan* (Ceschia et al. 2011) and the *Dizionari Ortografic Furlan* (Carrozzo 2008). The list of verbs has been checked with a native speaker. The following verbs are not taken into consideration in the current analysis: (i) those that have fallen out of common usage to the extent that intuitions about their forms are unclear; (ii) verbs that are not used in the native speaker's dialect; (iii) verbs that lack some cells of their paradigm.

[4]In Friulian orthography, vowel length is marked by the diacritic ˆ. The relevant sound-grapheme correspondences are as follows: [aː] = <â>, [eː] = <ê>, [iː] = <î>, [oː] = ô, [uː] = û.

[5]Under this option, verbs ending in *-ê* and *-i* in the infinitive fall in the same group as they both show an *-e* thematic vowel.

[6]The surface form is *sintîs*. As pointed out in Benincà & Vanelli (2016:148), the 2PL PRS suffix of *i*-verbs could be analysed either as a single unsegmented suffix, i.e. *-îs*, or as two *I*-s, i.e. the thematic vowel /i/ and the initial /i/ of the 2PL suffix *-is*. I adopt the second option for three

Under either classification, various sub-classes have to be recognized, because members of these broad classes do not behave in a uniform way.

I group verb paradigms based on the 2PL and 3SG PRS forms. These are the two forms to identify a class and predict the additional properties of each class. In morphology, these are the so-called principled parts. In the 2PL all the verbs show the TV:

(3) 2PL PRS
*klam-**a**-is* ('you call')
*bat-**e**-is* ('you hit')
*sint-**i**-is* ('you hear')

However, verbs with the same TV may differ on the basis of the 3SG PRS. For example, the verbs *sintî* ('to hear') and *finî* ('to finish') combine with the same TV in the 2PL, but differ in the 3SG: one verb shows no suffix, while the other takes an *-iʃ* suffix.

(4) 2PL PRS
a. *sint-**i**-is*
b. *fin -**i**-is*

(5) 3SG PRS
a. *sint*
b. *fin -**iʃ***

The combination of these two forms allows us to define a verb class and to predict the other inflectional suffixes throughout the paradigm. For example, a verb like *sintî* ('to hear') combines with the suffix *-in* in the 3PL PRS, while a *finî*-like verb shows the suffix *-iʃ* before *-in*:

(6) 3PL PRS
a. *sint -in*
b. *fin -**iʃ**-in*

In addition to that, I also consider the root component, i.e. the distribution of different root allomorphs throughout the paradigm. The verbs *sintî* ('to hear') and *vegni* ('to come') show the same set of suffixes throughout the paradigm, but *vegni* has two root allomorphs (i.e. */vinj/* and */venj/*).

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reasons. First, the suffix *-is* appears among different verb classes, e.g., *klam-a-is* ('you call'), *bat-e-is* ('you hit'). In addition to that, the suffix *-is* is found among different moods and tenses, i.a. in the conditional, e.g., *sintaress-is* ('you would hear'), and in the imperfect, e.g. *sint-i-v-is* ('you used to hear'). Last but not least: the TV found in the PST is also attested in the PRS. In this case, *i*-verbs show an *-i* thematic vowel in the PST: *sint-**i**-v-is*. Segmenting the long /i/ into two *i*-s in the 2PL PRS keeps the system perfectly regular since the same TV of the PST is thus attested.

(7) 2/3PL PRS
   a. ***sint**-i-is*
   b. ***sint**-in*

(8) 2/3PL PRS
   a. ***vinj**-i-is*
   b. *venj-in*

Given that, these verbs belong to two different verb classes.

This way of grouping verb paradigms leads us to recognize 13 verb classes. Among these, 5 verb patterns differ only for the suffixes they combine with. The remaining 8 patterns show root allomorphies and/or missing suffixes.

In the next sections, we look at each paradigm in detail. In § 1.2 I present paradigms that exhibit differences only in the inflectional suffixes. In § 1.3 three verb patterns show root allomorphy only, whereas in § 1.4 four patterns show both root allomorphy and/or missing inflectional suffixes.

1.2 Inflectional patterns

Five verb classes are defined based on the suffixes found in the 3SG and 2PL PRS. While looking at each paradigm, we will also examine verbs that turned out to look 'irregular' only because of their phonology. Once phonology has been taken into account, these verbs can be assigned to one of the five patterns, which include the majority of TF verbs.

1.2.1 A-verbs

Verbs typically described as class I pattern like:[7]

		PRS	PST
SG	1	klam-i	klam-a-v-i
	2	klam-a-s	klam-a-v-a-s
	3	klam-**a**	klam-a-v-a
PL	1	klam-in	klam-a-v-in
	2	klam-**a**-is	klam-a-v-is
	3	klam-in	klam-a-v-in

Table 1.1: *klamâ*, 'to call'

[7]The data will be given in pseudo-IPA, so as to avoid orthographical confounds, and will come from TF, in particular from the native judgments of the informant. Deciding on the exact transcriptions is sometimes delicate, but not in ways that affect our analysis. Segmental length is marked by a triangular colon [ː]. For now, we are not discussing the stress placement, so it is not marked in the paradigms.

Both the 3SG and 2PL show the suffix *-a*, as highlighted in bold. I am going to analyse the two *A*s as two different suffixes. We can see them both in the 3SG PST: *klam-a-v-a*. The first /a/ is the TV, while the second one is the 3SG agreement suffix. In the 2PL PRS we find the TV *-a*, whereas in the 3SG PRS - the agreement suffix *-a*.

Based on these two forms, we can predict the other suffixes, which are always the following:

(i) *-i* in the 1SG PRS;

(ii) the agreement suffix *-a* is found also in the 2SG PRS, followed by the *-s* suffix;

(iii) the TV *-a* pops up also in the PST forms, followed by the past marker *-v*.

The 1PL and 3PL PRS are the same across all classes: the root is followed by *-in* in both forms. The same holds for what is found after the suffix *-v*: those suffixes are found in the past forms of all verb classes.

1.2.1.1 J-final roots

Within the *a*-class, some verbs show two root allomorphs on the surface, i.a. *pajâ* ('to pay'), *tabajâ* ('to chat'), *pojâ* ('to lean'), *imbrojâ* ('to cheat'). All these verbs have one vowel-final allomorph (e.g., */pa/*, */po/*) and one glide-final (e.g., */paj/*, */poj/*), as we can see below:

		PRS	PST
SG	1	pa-i	paj-a-v-i
	2	paj-a-s	paj-a-v-a-s
	3	paj-a	paj-a-v-a
PL	1	pa-in	paj-a-v-in
	2	paj-a-is	paj-a-v-is
	3	pa-in	paj-a-v-in

Table 1.2: *pajâ*, 'to pay' (surface)

		PRS	PST
SG	1	po-i	poj-a-v-i
	2	poj-a-s	poj-a-v-a-s
	3	poj-a	poj-a-v-a
PL	1	po-in	poj-a-v-in
	2	poj-a-is	poj-a-v-is
	3	po-in	poj-a-v-in

Table 1.3: *pojâ*, 'to lean' (surface)

There are reasons to think that the two root shapes are conditioned by phonology. This is because the vowel-final allomorph is found only before /i/. The other form is found elsewhere.

(9) a. *pa-i* ('I pay')
b. *pa-in* ('we/they pay')

(10) a. *po-i* ('I lean')
b. *po-in* ('we/they lean')

There are two logical possibilities how we can understand this distribution:

(i) the root is vowel final and the glide is inserted before all vowels other than */i/*;

(ii) the root has an underlying glide, which is either deleted or assimilated before */i/*.[8]

Option (i) is discarded since vowel-final roots do not show glide insertion before another vowel in TF. That is, for instance, the case of the verb *creâ* ('to create'). The root */kre/* is followed by another vowel without the glide insertion.

(11) a. Jo i **cre-i** figuras di legn.
I SCL create.1SG figures of wooden
'I create wooden figures.'

b. Lui al **cre-a** figuras di legn.
he SCL create.3SG figures of wooden
'He creates wooden figures.'

This leaves us with only one possibility, i.e. (ii). Under that option, the root always has a glide underlyingly:

(12) a. *paj-in* ⇒ *pain*
b. *poj-in* ⇒ *poin*

So, taking phonology into account, these verbs have only one root underlyingly and behave as *klamâ* ('to call').

		PRS	PST
SG	1	paj-i	paj-a-v-i
	2	paj-a-s	paj-a-v-a-s
	3	paj-a	paj-a-v-a
PL	1	paj-in	paj-a-v-in
	2	paj-a-is	paj-a-v-is
	3	paj-in	paj-a-v-in

Table 1.4: *pajâ*, 'to pay'

		PRS	PST
SG	1	poj-i	poj-a-v-i
	2	poj-a-s	poj-a-v-a-s
	3	poj-a	poj-a-v-a
PL	1	poj-in	poj-a-v-in
	2	poj-a-is	poj-a-v-is
	3	poj-in	poj-a-v-in

Table 1.5: *pojâ*, 'to lean'

[8] I analyse this alternation as glide deletion. Another possibility would be to treat it as an *i*-deletion. However, this second option would lead to potential issue with verbs like *scuignî* ('to have to') since those verbs do not show *i*-deletion after a glide, e.g. *skwuinj-in* ('we/they have to').

1.2.2 E-verbs

This verb class shows the TV *-e* in the 2PL and no suffix in the 3SG PRS. Here is the full paradigm of the *e*-verbs:

		PRS	PST
SG	1	bat	bat-e-v-i
	2	bat-s	bat-e-v-a-s
	3	**bat**	bat-e-v-a
PL	1	bat-in	bat-e-v-in
	2	bat-**e**-is	bat-e-v-is
	3	bat-in	bat-e-v-in

Table 1.6: *bati*, 'to hit'

E-verbs show the following behaviour in the other forms:

(i) the 1SG PRS is syncretic with the 3SG PRS;

(ii) the 2SG PRS shows only the suffix *-s*;

(iii) the TV *-e* is found also in all the PST forms.

1.2.2.1 Cuei and Lei

There are some verbs in this class (i.e., with the same set of suffixes) that show two different root allomorphs on the surface. As an example, consider the verbs *lei* ('to read') and *cuei* ('to cook'). Their paradigms are shown below.

		PRS	PST
SG	1	lej	lej-e-v-i
	2	lej-s	lej-e-v-a-s
	3	lej	lej-e-v-a
PL	1	le-in	lej-e-v-in
	2	lej-e-is	lej-e-v-is
	3	le-in	lej-e-v-in

Table 1.7: *lei*, 'to read' (surface)

		PRS	PST
SG	1	kwej	kwej-e-v-i
	2	kwej-s	kwej-e-v-a-s
	3	kwej	kwej-e-v-a
PL	1	kwe-in	kwej-e-v-in
	2	kwej-e-is	kwej-e-v-is
	3	kwe-in	kwej-e-v-in

Table 1.8: *cuei*, 'to cook' (surface)

The vowel-final allomorph is found only before /i/, while the *j*-allomorph elsewhere. This is the same alternation of *pajâ*-like verbs, which was found in the same environments (cf. § 1.2.1.1).

It follows that the same analysis applies: the roots are underlyingly */lej/* and */kwej/* throughout the paradigm. When the root is followed by an /i/, the two collapse into one.

(13) *lej-in* ⇒ *lein*

Taking phonology into account, the paradigms of these two verbs are identical to *bati* ('to hit').

		PRS	PST
SG	1	lej	lej-e-v-i
	2	lej-s	lej-e-v-a-s
	3	lej	lej-e-v-a
PL	1	lej-in	lej-e-v-in
	2	lej-e-is	lej-e-v-is
	3	lej-in	lej-e-v-in

Table 1.9: *lei*, 'to read'

		PRS	PST
SG	1	kwej	kwej-e-v-i
	2	kwej-s	kwej-e-v-a-s
	3	kwej	kwej-e-v-a
PL	1	kwej-in	kwej-e-v-in
	2	kwej-e-is	kwej-e-v-is
	3	kwej-in	kwej-e-v-in

Table 1.10: *cuei*, 'to cook'

1.2.3 I-verbs

The class of *i*-verbs shows an *-i* thematic vowel in the 2PL PRS and no suffix in the 3SG PRS (Table 1.11). Comparing the paradigm of *i*-verbs with an *e*-verb like *bati* ('to hit'), we can see that the *i*-verbs and *e*-verbs share all their suffixes, except for the TV in the 2PL PRS and PST forms.

		PRS	PST
SG	1	sint	sint-**i**-v-i
	2	sint-s	sint-**i**-v-a-s
	3	**sint**	sint-**i**-v-a
PL	1	sint-in	sint-**i**-v-in
	2	sint-**i**-is	sint-**i**-v-is
	3	sint-in	sint-**i**-v-in

Table 1.11: *sintî*, 'to hear'

		PRS	PST
SG	1	bat	bat-**e**-v-i
	2	bat-s	bat-**e**-v-a-s
	3	bat	bat-**e**-v-a
PL	1	bat-in	bat-**e**-v-in
	2	bat-**e**-is	bat-**e**-v-is
	3	bat-in	bat-**e**-v-in

bati, 'to hit'

1.2.3.1 Vaî

The verb *vaî* ('to cry') shows two different root allomorphs on the surface:

		PRS	PST
SG	1	vaj	va-i-v-i
	2	vaj-s	va-i-v-a-s
	3	vaj	va-i-v-a
PL	1	va-in	va-i-v-in
	2	va-i-is	va-i-v-is
	3	va-in	va-i-v-in

Table 1.12: *vaî*, 'to cry' (surface)

As before for *pajâ*-like and *lei*-like verbs (see § 1.2.1.1 and § 1.2.2.1), there are reasons to think that the two root shapes are conditioned by phonology. This is because the vowel-final allomorph is found only before /i/, while the *j*-allomorph elsewhere.

(14) a. *va-in* ('we/they cry')
b. *va-i-is* ('you cry')

The two root shapes, i.e. *va-* and *vaj-*, are conditioned by phonology: the root has an underlying glide, which is either eliminated or assimilated before /i/:

(15) *vaj-in* ⇒ *vain*

So, the paradigm of *vaî* ('to cry') is completely regular and behaves exactly as the one of *sintî* ('to hear').

		PRS	PST
SG	1	vaj	vaj-i-v-i
	2	vaj-s	vaj-i-v-a-s
	3	vaj	vaj-i-v-a
PL	1	vaj-in	vaj-i-v-in
	2	vaj-i-is	vaj-i-v-is
	3	vaj-in	vaj-i-v-in

Table 1.13: *vaî*, 'to cry'

1.2.3.2 Scuignî

The verb *scuignî* ('to have to') also belongs to the *i*-verbs. At first sight, however, it shows two allomorphs on the surface: */skwin/* and */skwinj/*.

		PRS	PST
SG	1	skwin	skwinj-i-v-i
	2	skwin-s	skwinj-i-v-a-s
	3	skwin	skwinj-i-v-a
PL	1	skwinj-in	skwinj-i-v-in
	2	skwinj-i-is	skwinj-i-v-is
	3	skwinj-in	skwinj-i-v-in

Table 1.14: *scuignî*, 'to have to' (surface)

The allomorph */skwin/* is found in the SG PRS forms, while */skwinj/* appears elsewhere.[9] The latter is always followed by a vowel. This suggests that the glide is pronounced only when followed by a vowel. Such intuition is supported by the corresponding interrogative forms, e.g.,:[10]

(16) a. Lui al **scuin** lâ.
he SCL have.to.3SG go.INF
'He has to go.'

b. Lui **scuinj**-el lâ?
he have.to=he go.INF
'Does he have to go?'

As we can see, the glide pops up again when followed by the vowel-initial subject clitic (16b). The distribution of the two allomorphs is thus phonological: the root is underlyingly */skwinj/* in all the forms. Under this analysis, the verb *scuignî* ('to have to') behaves exactly as an *i*-verb (cf. Table 1.11). It has only one allomorph throughout the paradigm, and it takes the TV *-i* in the 2PL, while no suffix in the 3SG PRS.

[9] In those forms the glide is followed by the vowel /i/. That might be unexpected based on what we have seen up to now for *j*-final roots, e.g., *pajâ* (§ 1.2.1.1), *leî* (§ 1.2.2.1) and *vaî* (§ 1.2.3.1). In all these verbs, when the /j/ is followed by the vowel /i/, it is not pronounced. In *scuignî*, however, the /j/ is pronounced when followed by the /i/, e.g., *skwinj-in* ('we/they have to'). The crucial difference is that in the former cases the glide is found in intervocalic positions, e.g. *pa-j-in* ('we/they pay'). On the other hand, in the latter case the glide follows a consonant. In this case, the glide affects the preceding consonant. That difference leads to a different behaviour of the glide.

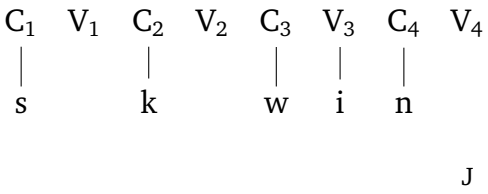
[10] The formation of interrogative forms is not discussed since it is out of the scope of the research.

		PRS	PST
SG	1	skwinj	skwinj-i-v-i
	2	skwinj-s	skwinj-i-v-a-s
	3	skwinj	skwinj-i-v-a
PL	1	skwinj-in	skwinj-i-v-in
	2	skwinj-i-is	skwinj-i-v-is
	3	skwinj-in	skwinj-i-v-in

Table 1.15: *scuignî*, 'to have to'

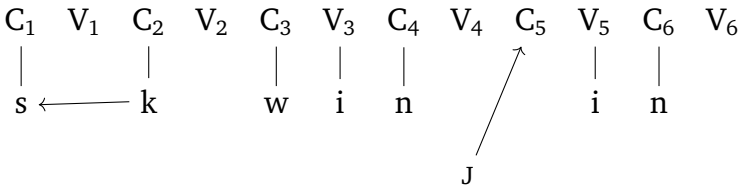
One possible implementation of this analysis is presented in the next paragraph, but other alternative analyses are also conceivable. My proposal is that the /j/ is a floating segment, namely a segment that is associated to no prosodic node, as shown by the underlying representation (UR) below.[11] The representations employed are those of strict CV (Lowenstamm 1996, Scheer 2004).

(17) UR of *scuignî*



As a floating segment, the glide gets pronounced only when associated to a prosodic node. In the representation in (18), the root */skwinj/* is concatenated with the suffix *-in*. The phonological exponent of 3PL PRS is represented as a CVCV structure, where the first C is empty and the V contains /i/. This allows for the surfacing of the floating /j/, which can be pronounced on the empty C.

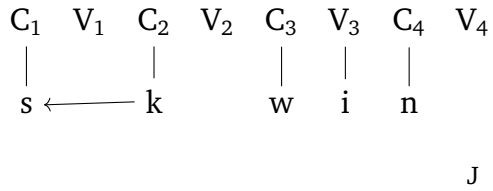
(18) 3PL PRS of *scuignî*



[11] A simpler analysis of such phonological alternation would be the following: the glide is dropped when word-final or followed by another consonant. However, in TF the glide is attested in both environments, e.g., *vuadanj* ('gain'), *senj* ('sign'), *vuadanjs* ('gains').

When there is no empty C position available, the glide keeps floating and is not pronounced, as it happens in (19).

(19) 1/3SG PRS of *scuignî*



1.2.4 Iʃ-verbs

Verbs such as *finî* ('to finish') combine with the TV *-i* in the 2PL, as *sintî* ('to hear'), but show the suffix *-iʃ* in the 3SG PRS.

		PRS	PST
SG	1	fin-iʃ	fin-i-v-i
	2	fin-i-s	fin-i-v-a-s
	3	fin-**iʃ**	fin-i-v-a
PL	1	fin-in	fin-i-v-in
	2	fin-**i**-is	fin-i-v-is
	3	fin-iʃ-in	fin-i-v-in

Table 1.16: *finî*, 'to finish' (surface)

There are reasons to think that also the 2SG form has the suffix *-iʃ* before the ending *-s*. The difference between the 1/3SG and 2SG PRS is minimal: the latter differ only in not showing the /ʃ/. This suggests that the 2SG form undergoes the following phonological process:

(20) ʃs ⇒ s
finiʃ- s ⇒ *finis*

The final consonant /ʃ/ is thus either dropped or assimilated before the *-s* suffix. This phenomenon is attested also outside the verbal domain: when a noun ends with the palatal-alveolar sibilant /ʃ/ and the plural endings *-s* is added, the /ʃ/ is not pronounced, as in (21)-(23) (see, e.g., Rizzolatti (1981:42), Benincà (2005:55)).

(21) a. *lûʃ*, 'light'
b. *lûʃ-s* ⇒ *lûs*, 'lights'

(22) a. *crôʃ*, 'cross'
b. *crôʃ-s* ⇒ *crôs*, 'crosses'

(23) a. *câʃ*, 'circumstance'
b. *câʃ-s* ⇒ *câs*, 'circumstances'

The underlying paradigm is shown in Table 1.17. The suffix *-iʃ* appears in the SG and 3PL PRS forms.

		PRS	PST
SG	1	fin-iʃ	fin-**i**-v-i
	2	fin-iʃ-s	fin-**i**-v-a-s
	3	fin-iʃ	fin-**i**-v-a
PL	1	fin-in	fin-**i**-v-in
	2	fin-**i**-is	fin-**i**-v-is
	3	fin-iʃ-in	fin-**i**-v-in

Table 1.17: *finî*, 'to finish'

Contrary to all previous verb patterns, in Table 1.17 we can see that the 1PL and 3PL forms are not syncretic in *finî*-like verbs. The suffix *-in* attaches to different bases. In the 1PL, the suffix attaches to the root, i.e. *fin-in*; whereas, in the 3PL, the suffix attaches to *-iʃ*, i.e. *fin-iʃ-in*. In the analysis, this will lead me to ultimately propose two different *IN*s: one for the 1PL, one for the 3PL form. Apart from having *-iʃ* in some forms, the verb class displays the same behaviour as the *i*-verbs (cf. *sintî* ('to hear')).

		PRS	PST
SG	1	sint	sint-**i**-v-i
	2	sint-s	sint-**i**-v-a-s
	3	sint	sint-**i**-v-a
PL	1	sint-in	sint-**i**-v-in
	2	sint-**i**-is	sint-**i**-v-is
	3	sint-in	sint-**i**-v-in

sintî, 'to hear'

1.2.5 Long e-verbs

This paradigm group shares the exact same suffixes as *e*-verbs, but it shows root vowel lengthening in the SG PRS forms, as signaled by the colon.

		PRS	PST
SG	1	va:l	val-e-v-i
	2	va:l-s	val-e-v-a-s
	3	**va:l**	val-e-v-a
PL	1	val-in	val-e-v-in
	2	val-**e**-is	val-e-v-is
	3	val-in	val-e-v-in

Table 1.18: *valê*, 'to value' (surface)

		PRS	PST
SG	1	bat	bat-e-v-i
	2	bat-s	bat-e-v-a-s
	3	bat	bat-e-v-a
PL	1	bat-in	bat-e-v-in
	2	bat-e-is	bat-e-v-is
	3	bat-in	bat-e-v-in

bati, 'to hit'

The root vowel lengthening is found in the same environment where the verb *scuignî* ('to have to') shows a different allomorph on the surface (cf. Table 1.14). The */skwinj/* ∼ */skwin/* alternation has been treated phonologically, while the */va:l/* ∼ */val/* alternation does not seem to show a clear phonological analysis in TF.

Traditionally, Friulian vowel length is treated as a predictable phonological alternation (see, e.g., Vanelli 2005, Balsemin 2018). Under that view, a vowel can be long if and only if the following conditions are all true:

(i) the vowel is stressed;

(ii) it is found in a final syllable;

(iii) the syllable must be closed;

(iv) the coda of the syllable must have only one consonant;

(v) that final consonant has to be underlyingly voiced (either an obstruent or a lateral).

However, vowel lengthening in TF does not show the same predictability. In the SG PRS forms, all the conditions are satisfied except for (iv): in the 2SG the coda of the syllable has two consonants, e.g., *va:ls*. This suggests that vowel lengthening is not an automatic phonological process in TF.

Two more hints point towards this direction. The first hint comes from the SG forms of verbs such as *ridi* ('to laugh') and *coregi* ('to correct'), e.g.,:

(24) a. *rit* ('I/she/he laugh(s)')
b. *ridin* ('we/they laugh')

(25) a. *coretʃ* ('I/she/he correct(s)')
b. *coredʒin* ('we/they correct')

In (24a) and (25a) the root vowel is stressed and found in a closed final syllable, whose coda has only one consonant. That one consonant is underlyingly a voiced obstruent, as we see in the 1/3PL forms in (24b) and (25b). So, all the conditions presented above are true, but, crucially the root vowel doesn't lengthen. Again, this suggests that vowel lengthening is not predictable in TF, contrary to other varieties.

The second hint comes from the roots ending with a rhotic, e.g., *cor-i* ('to run') and *par-ê* ('to seem'). Vanelli (2005:162) reports that a vowel is always long before a rhotic. However, in TF that doesn't seem to be the case:

(26) a. *paːr* ('she/he seem')
b. *cor* ('she/he runs')

In (26a) the root vowel is long, as expected. On the other hand, in (26b) the root vowel is short. Again, this contrast suggests that vowel lengthening is not predictable in TF.

If such alternation cannot be explained phonologically, we need to handle this verb class morphosyntactically. Based on that, there are two options to analyse *valê*-like verbs: either the SG forms show root suppletion (*vaːl-*) or the length is a separate morpheme (val-ː). I adopt the second option: the root is the same throughout the paradigm, i.e. */val/*, and the SG PRS forms show a length morpheme that affects the preceding vowel. This option is supported by the productivity in the language since there exists hundreds of verbs in this class.

		PRS	PST
SG	1	val-ː	val-e-v-i
	2	val-ː-s	val-e-v-a-s
	3	val-ː	val-e-v-a
PL	1	val-in	val-e-v-in
	2	val-e-is	val-e-v-is
	3	val-in	val-e-v-in

Table 1.19: *valê*, 'to value'

1.2.5.1 Vivi-like verbs

Within the class of long *e*-verbs, some verbs show both root vowel lengthening and consonant root alternation.

		PRS	PST
SG	1	viːf	viv-e-v-i
	2	viːv-s	viv-e-v-a-s
	3	**viːf**	viv-e-v-a
PL	1	viv-in	viv-e-v-in
	2	viv-**e**-is	viv-e-v-is
	3	viv-in	viv-e-v-in

Table 1.20: *vivi*, 'to live' (surface I)

The root vowel lengthening in the SG forms is treated morphosyntactically, as seen in the previous section: the length is a separate morpheme. This leaves two root allomorphs on the surface: */vif/* and */viv/*.

		PRS	PST
SG	1	vif-ː	viv-e-v-i
	2	viv-ː-s	viv-e-v-a-s
	3	vif-ː	viv-e-v-a
PL	1	viv-in	viv-e-v-in
	2	viv-e-is	viv-e-v-is
	3	viv-in	viv-e-v-in

Table 1.21: *vivi*, 'to live' (surface II)

The root allomorph */viv/* is always followed by a suffix, whereas */vif/* is found in word-final position. This alternation is simply the result of the application of a final devoicing process, which is active and widely attested in TF.[12]

[12]The consonants /d/, /g/, /ʒ/, /dʒ/ also undergo final devoicing:

(1) $C[+\text{voice}] \rightarrow C[-\text{voice}]/\_\#$

a. *crod-in* ('you/they believe') ⇒ *croːt* ('I/she/he believe(s)')

b. *fog-ut* ('little fire') ⇒ *fouk* ('fire')

c. *faʒ-in* ('we/they do') ⇒ *faːʃ* ('I/she/he do(es)')

d. *coredʒin* ('we/they correct') ⇒ *coretʃ* ('I/she/he correct(s)')

(27) $v \rightarrow f / \_\_\#$

a. *brave* (good.F.SG)
brâf (good.M.SG)

b. *neveâ* ('to snow')
nêf ('snow')

c. *bevin* ('we/they drink')
bêf ('I/she/he drink(s)')

d. *uliva* ('olive')
ulîf ('olive tree')

The voiced /v/ turns into the corresponding voiceless consonant /f/ when word-final. This is also confirmed by the 3SG interrogative form in (28b): when the root is followed by the subject clitic, it is pronounced /viv/.[13]

(28) a. Lui al **vîf** lontan.
he SCL live far
'He lives far away'

b. **Viv**-el lontan?
live=he away
'Does he live far away?'

So, taking phonology into account, *vivi*-like verbs show the same root allomorph underlyingly, and they behave exactly as *valê* ('to value').

		PRS	PST
SG	1	viv-ː	viv-e-v-i
	2	viv-ː-s	viv-e-v-a-s
	3	viv-ː	viv-e-v-a
PL	1	viv-in	viv-e-v-in
	2	viv-e-is	viv-e-v-is
	3	viv-in	viv-e-v-in

Table 1.22: *vivi*, 'to live'

1.2.6 Intermediate summary I

Here is an overall picture of verb classes we have seen up to now.

[13] It has to be pointed out that there is also a length difference in the vowel of the root: it is long in the affirmative form, whereas it is short in the interrogative form. Such difference is not discussed here as it outside the scope of this analysis.

		PRS	PST
SG	1	klam-i	klam-a-v-i
	2	klam-a-s	klam-a-v-a-s
	3	klam-a	klam-a-v-a
PL	1	klam-in	klam-a-v-in
	2	klam-a-is	klam-a-v-is
	3	klam-in	klam-a-v-in

klamâ, ‘to call’

		PRS	PST
SG	1	bat	bat-e-v-i
	2	bat-s	bat-e-v-a-s
	3	bat	bat-e-v-a
PL	1	bat-in	bat-e-v-in
	2	bat-e-is	bat-e-v-is
	3	bat-in	bat-e-v-in

bati, ‘to hit’

		PRS	PST
SG	1	sint	sint-i-v-i
	2	sint-s	sint-i-v-a-s
	3	sint	sint-i-v-a
PL	1	sint-in	sint-i-v-in
	2	sint-i-is	sint-i-v-is
	3	sint-in	sint-i-v-in

sintî, ‘to hear’

		PRS	PST
SG	1	fin-iʃ	fin-i-v-i
	2	fin-iʃ-s	fin-i-v-a-s
	3	fin-iʃ	fin-i-v-a
PL	1	fin-in	fin-i-v-in
	2	fin-i-is	fin-i-v-is
	3	fin-iʃ-in	fin-i-v-in

finî, ‘to finish’

		PRS	PST
SG	1	val-ː	val-e-v-i
	2	val-ː-s	val-e-v-a-s
	3	val-ː	val-e-v-a
PL	1	val-in	val-e-v-in
	2	val-e-is	val-e-v-is
	3	val-in	val-e-v-in

valê, ‘to value’

These verb paradigms show the same suffixes in several places. The 2SG form always shows the suffix *-s*. Another common behaviour is found in the 1PL PRS form: all verb classes take the suffix *-in*. The same is true also for the 3PL PRS form: the verbal roots combine with the suffix *-in*, which is simply homophonous with the 1PL suffix, as we saw in § 1.2.4.

In all these patterns, the verbal root combines with the TV - */a/*, */e/* or */i/* - in the 2PL PRS, followed by the suffix *-is*. The same root combines with the same TV in all the PST forms, e.g.,:

(29) 2PL PRS

a. klam-**a**-is
b. bat-**e**-is
c. sint-**i**-is
d. fin-**i**-is

(30) PST

a. klam-**a**-v-
b. bat-**e**-v-
c. sint-**i**-v-
d. fin-**i**-v-

Speaking of PST forms, the suffixes found after the TV are the same across all verb classes. The thematic vowels are followed by the past marker *-v*.

(31) PST SUFFIXES

		PST
SG	1	-v-i
	2	-v-a-s
	3	-v-a
PL	1	-v-in
	2	-v-is
	3	-v-in

The suffix *-v* is followed by the same set of suffixes we see in the SG PRS forms of the *a*-verbs.

(32) SG PRS AND PST SUFFIXES OF A-VERBS

PRS	PST
-i	-v-**i**
-a-s	-v-**a**-s
-a	-v-**a**

In the PL PST, after the suffix *-v*, we find the same suffixes of the PRS found in all the inflectional classes, to the exclusion of the TV in the 2PL PST, e.g.:

(33) PRS AND PST SUFFIXES OF A-VERBS

PRS	PST
-i	-v-**i**
-a-s	-v-**a**-s
-a	-v-**a**
-in	-v-**in**
-a-**is**	-v-**is**
-in	-v-**in**

In the 2PL PRS the suffix *-is* is preceded by the TV *-a*. On the other hand, in the 2PL PST, there is no TV between the suffixes *-v* and *-is*, e.g., *klama-v-is* ('you used to call').

1.3 Root allomorphy

In this section, I present four verb classes, which show root allomorphy. Apart from that, they behave as the verb classes in § 1.2 with respect to the inflectional suffixes. All these patterns show mild root suppletion. For instance, the verb *vegni* ('to come') has two root allomorphs, i.e. */venj/* and */vinj/*, which differ only in the root vowel. Despite the subtle difference between the two, such alternation cannot be explained phonologically. However, the distribution of root allomorphs creates environments attested among other verbs (see, e.g., § 1.2.4). This means that we will need to derive those environments morphosyntactically anyway.

1.3.1 Inverted L-pattern with TV *-e*

The verbs from this class have one allomorph for the SG PRS, while the other is found in all the other forms. They show the TV *-e* in the 2PL and no suffix in the 3SG PRS. We will now look at each verb in detail, cleaning up its phonology as much as possible.

1.3.1.1 Podê

The verb *podê* ('can') shows three allomorphs on the surface: */pod/*, */poʃ/*, and */po/*.

		PRS	PST
SG	1	poʃ	pod-e-v-i
	2	po-s	pod-e-v-a-s
	3	poʃ	pod-e-v-a
PL	1	pod-in	pod-e-v-in
	2	pod-e-is	pod-e-v-is
	3	pod-in	pod-e-v-in

Table 1.23: *podê*, 'can' (surface)

The difference between the 1/3SG and 2SG PRS is minimal: the latter differ only in not showing the /ʃ/. This suggests that the 2SG form undergoes the following phonological process:

(34) ʃs ⇒ s
poʃ- s ⇒ pos

The final consonant /ʃ/ is thus either dropped in front of the *-s* suffix or assimilated. As discussed in § 1.2.4, that is an active phonological process in TF. The underlying root is thus the same throughout the SG PRS, and, taking phonology into account only two allomorphs remain: */poʃ/* and */pod/*. It is not clear if this alternation could be due to phonological reasons. It is not a general rule that the /d/ turns into /ʃ/ when word-final. The attested process is that the dental undergoes devoicing being pronounced as /t/ when word-final.

(35) $d \rightarrow t/\_\_\#$

a. *crod-in* ('we/they believe')
crôt ('I/she/he believe(s)')

b. *grand-e* ('big.F.SG')
grant ('big.M.SG')

c. *fraide* ('rotten.F.SG')
frait ('rotten.M.SG')

The SG interrogative forms, however, point towards the opposite conclusion: the allomorph */pod/* is attested when followed by the vowel-initial subject clitics.

(36) a. Lui al **poʃ** vegni.
he SCL can come.INF
'He can come.'

b. Lui **pod**-el vegni?
he can=he come.INF
'Can he come?'

This might suggest that the mutation of the final consonant in the present is due to phonological reasons. However, it is still not clear how to derive a /ʃ/ from the dental. So for now, we need to derive this alternation morphosyntactically.

The underlying paradigm of *podê* is shown in Table 1.24: the distribution of the two allomorphs creates an inverted L-shape in the light gray zone. For this reason, I will refer to this verb pattern as the inverted L-pattern.

		PRS	PST
SG	1	poʃ	pod-e-v-i
	2	poʃ-s	pod-e-v-a-s
	3	poʃ	pod-e-v-a
PL	1	pod-in	pod-e-v-in
	2	pod-e-is	pod-e-v-is
	3	pod-in	pod-e-v-in

Table 1.24: *podê*, 'can'

1.3.1.2 Movi

The verb *movi* ('to move') exhibits the same inverted L-pattern as the verb *podê* ('can'). One allomorph is found in the SG PRS, the other - elsewhere.[14]

		PRS	PST
SG	1	mowv	mov-e-v-in
	2	mowv-s	mov-e-v-a-s
	3	mowv	mov-e-v-a
PL	1	mov-in	mov-e-v-in
	2	mov-e-is	mov-e-v-is
	3	mov-in	mov-e-v-in

Table 1.25: *movi*, 'to move'

Movi shows an alternation between a simple vowel (i.e. */mov/*) and a diphthong (i.e. */mowv/*). The diphthong is found in the SG PRS forms, exactly where long *e*-verbs show the length morpheme. As Benincà & Vanelli (2016:142) point out, in Carnic Friulian varieties lengthening the vowel /o/ results in the falling diphthong /ow/ instead of [oː]. However, this does not seem to apply to TF: the long vowel [oː] is also attested, as shown in the examples below.

[14] One the surface, the 1/3SG root allomorph is */mowf/*. It shows the process of final devoicing: a final /v/ devoices into /f/, as we have seen for *vivi* ('to live') in § 1.2.5.1.

(37) a. [croːt] (‘I/she/he believe(s)’)
b. [loːf] (‘wolf’)

Therefore, the patterns need to be derived morphosyntactically.

1.3.2 Inverted L-pattern with TV *-i*

This verb class shows the same distribution of root allomorphs as *podê* (‘can’) and *movi* (‘to move’). They differ in the selection of the TV: this class displays the TV *-i*, while the previous one - the TV *-e*.

		PRS	PST
SG	1	tʃejr	tʃer-**i**-v-i
	2	tʃejr-s	tʃer-**i**-v-a-s
	3	tʃejr	tʃer-**i**-v-a
PL	1	tʃer-in	tʃer-**i**-v-in
	2	tʃer-**i**-is	tʃer-**i**-v-is
	3	tʃer-in	tʃer-**i**-v-in

Inverted L-pattern and TV *-i*

		PRS	PST
SG	1	poʃ	pod-**e**-v-i
	2	poʃ-s	pod-**e**-v-a-s
	3	poʃ	pod-**e**-v-a
PL	1	pod-in	pod-**e**-v-in
	2	pod-**e**-is	pod-**e**-v-is
	3	pod-in	pod-**e**-v-in

Inverted L-pattern and TV *-e*

1.3.2.1 Ceri

The verb *ceri* (‘to search’) shows the allomorph */tʃejr/* in the SG PRS, while */tʃer/* is found elsewhere.

		PRS	PST
SG	1	tʃejr	tʃer-i-v-i
	2	tʃejr-s	tʃer-i-v-a-s
	3	tʃejr	tʃer-i-v-a
PL	1	tʃer-in	tʃer-i-v-in
	2	tʃer-i-is	tʃer-i-v-is
	3	tʃer-in	tʃer-i-v-in

Table 1.26: *tʃeri*, ‘to search’

The verb *ceri* shows an alternation between the simple vowel /e/ and the diphthong /ej/. The diphthongized root allomorph is found in the SG PRS forms. That is the exact same environment where the length morpheme is found (cf. § 1.2.5). As Benincà & Vanelli (2016:142) point out, Carnic Friulian varieties present the

falling diphthong /ej/, instead of [eː] when the vowel /e/ gets lengthened. However, this does not seem to apply to TF: the long vowel [eː] is also attested.

(38) a. [beːf] ('I/she/he drink(s)')
b. [neːf] ('snow')

Therefore, the patterns need to be derived morphosyntactically.

1.3.2.2 Long i-verbs

This group of verbs show root vowel lengthening in the SG PRS.

		PRS	PST
SG	1	kuːʃ	kuʒ-i-v-i
	2	kuː-s	kuʒ-i-v-a-s
	3	kuːʃ	kuʒ-i-v-a
PL	1	kuʒ-in	kuʒ-i-v-in
	2	kuʒ-**i**-is	kuʒ-i-v-is
	3	kuʒ-in	kuʒ-i-v-in

Table 1.27: *cusî*, 'to sew' (surface)

On the surface, the paradigm in Table 1.27 shows three allomorphs due to phonological reasons. The root */kuʃ/* is */kuʒ/* underlyingly. It simply undergoes devoicing and it turns into */kuʃ/* when word-final.

(39) a. Lui al cûʃ.
he SCL sew
'He sews.'
b. Cuʒ-el lui?
sew=he he
'Does he sew?'

When followed by the 2SG PRS suffix *-s*, the final /ʒ/ is either dropped or gets assimilated. Under both options, it is not pronounced, i.e. *cuːs* ('you sew'). The same phonological process as in *finî* ('to finish') applies (cf. (21)): the postalveolar fricatives /ʃ/ and /ʒ/ are not pronounced when followed by /s/.

(40) ʒs ⇒ s
cuːʒ-s ⇒ *cuːs*

Taking phonology into account, the paradigm looks like *ceri* ('to search'): the distribution of root allomorphs creates an inverted L-shape in the PL PRS and PST forms.

		PRS	PST
SG	1	kuːʒ	kuʒ-i-v-i
	2	kuːʒ-s	kuʒ-i-v-a-s
	3	kuːʒ	kuʒ-i-v-a
PL	1	kuʒ-in	kuʒ-i-v-in
	2	kuʒ-i-is	kuʒ-i-v-is
	3	kuʒ-in	kuʒ-i-v-in

Table 1.28: *cusî*, 'to sew'

Contrary to the long *e*-verbs (§ 1.2.5), I will not introduce a separate class of long *i*-verbs. Instead, root vowel lengthening will be analysed as root suppletion. Due to the fine details of the analysis to be developed, it is not possible to analyse both patterns with root vowel lengthening in the same way. We opted to segment the length out with long *e*-verbs since that group counts hundreds of verbs. On the other hand, there are just a couple of long *i*-verbs.[15]

1.3.3 The T-pattern

In this verb class, the verbs show two allomorphs throughout their paradigm: one is found in the SG and 3PL PRS, whereas the other is used elsewhere. This distribution of root allomorphs creates a T-shape in the 1/2PL PRS and PST forms. The same shape is found in the *iʃ*-verbs for the distribution of the *-iʃ* suffix.

		PRS	PST
SG	1	venj	vinj-i-v-i
	2	venj-s	vinj-i-v-a-s
	3	venj	vinj-i-v-a
PL	1	vinj-in	vinj-i-v-in
	2	vinj-i-is	vinj-i-v-is
	3	venj-in	vinj-i-v-in

vegni, 'to come'

		PRS	PST
SG	1	fin-iʃ	fin-i-v-i
	2	fin-iʃ-s	fin-i-v-a-s
	3	fin-iʃ	fin-i-v-a
PL	1	fin-in	fin-i-v-in
	2	fin-i-is	fin-i-v-is
	3	fin-iʃ-in	fin-i-v-in

finî, 'to finish'

[15] Another possibility could be to treat the lengthening of *cusî* phonologically. That is, however, not the case in TF. Recall the discussion in § 1.2.5.

With respect to the suffixes, the 2PL form displays an *-i* TV. The 3SG PRS takes no suffix. We will now look at each verb in detail, cleaning up its phonology.

1.3.3.1 Vegni and Tegni

The verbs *vegni* ('to come') and *tegni* ('to keep') show three allomorphs on the surface:

		PRS	PST
SG	1	ven	vinj-i-v-i
	2	ven-s	vinj-i-v-a-s
	3	ven	vinj-i-v-a
PL	1	vinj-in	vinj-i-v-in
	2	vinj-i-is	vinj-i-v-is
	3	venj-in	vinj-i-v-in

Table 1.29: *vegni*, 'to come' (surface)

		PRS	PST
SG	1	ten	tinj-i-v-i
	2	ten-s	tinj-i-v-a-s
	3	ten	tinj-i-v-a
PL	1	tinj-in	tinj-i-v-in
	2	tinj-i-is	tinj-i-v-is
	3	tenj-in	tinj-i-v-in

Table 1.30: *tegni*, 'to keep' (surface)

The *j*-allomorph is always followed by a vowel, e.g., *venj-in*, while the *n*-allomorph appears elsewhere, e.g., *ven, ven-s*. This alternation is the same of *scuignî* ('to have to'): */skwinj/* and */skwin/*. It follows that the same analysis holds: the roots are underlyingly */venj/* and */tenj/* in the SG PRS, as shown in the paradigms below.

		PRS	PST
SG	1	venj	vinj-i-v-i
	2	venj-s	vinj-i-v-a-s
	3	venj	vinj-i-v-a
PL	1	vinj-in	vinj-i-v-in
	2	vinj-i-is	vinj-i-v-is
	3	venj-in	vinj-i-v-in

Table 1.31: *vegni*, 'to come'

		PRS	PST
SG	1	tenj	tinj-i-v-i
	2	tenj-s	tinj-i-v-a-s
	3	tenj	tinj-i-v-a
PL	1	tinj-in	tinj-i-v-in
	2	tinj-i-is	tinj-i-v-is
	3	tenj-in	tinj-i-v-in

Table 1.32: *tegni*, 'to keep'

On analogy to *scuignî* ('to have to') (cf. § 1.2.3.2), one possible implementation of such analysis is that the final /j/ is a floating segment.

(41) UR of *vegni*

C_1	V_1	C_2	V_2
|	|	|	
v	e	n	
			j

The glide can be pronounced only when it associates to a C position. That happens in the 3PL, for instance. On the contrary, when there is no C position available, the glide keeps floating and cannot be pronounced, as it happens in the SG PRS forms. For a detailed discussion, the reader can refer back to § 1.2.3.2

Taking phonology into account reduces the number of allomorphs to two, i.e.:

(42) a. */venj/* ∼ */vinj/*
b. */tenj/* ∼ */tinj/*

As Benincà & Vanelli (2016:142) point out, many Friulian varieties present a process of vowel harmony: the mid vowel /e/ raises to /i/ when followed by a tonic high vowel, e.g., ['bɛstje] ('beast') ∼ [bisti'ute] ('little beast'). This seems to be the same alternation found in the present tense of *vegni* and *tegni*: the mid vowel /e/ raises to /i/ when followed by a stressed high vowel, e.g., ['venj-a] ∼ [vinj-'in]. However, such process does not seem to be active in TF: the mid vowel does not always raise to /i/: ['bestje] ∼ [beste'ute]. Furthermore, not all verbs with the root vowel /e/ show such alternation. For instance, the verb *temê* ('to fear') does not show vowel raising in that environment, e.g., [tem-'in]. So, the alternation between /e/ and /i/ cannot be treated phonologically in this variety.

1.3.3.2 Durmî

The verb *durmî* ('to sleep') exhibits the same pattern of *vegni* ('to come') and *tegni* ('to keep'). As we can see in Table 1.33, it shows three allomorphs on the surface: */durm/*, */dwarm/* and */dwar/*. Taking phonology into account will reduce them to two, showing the same T-shape of *vegni* ('to come') and *tegni* ('to keep').

		PRS	PST
SG	1	dwar	durm-i-v-i
	2	dwar-s	durm-i-v-a-s
	3	dwar	durm-i-v-a
PL	1	durm-in	durm-i-v-in
	2	durm-i-is	durm-i-v-is
	3	dwarm-in	durm-i-v-in

Table 1.33: *durmî*, 'to sleep' (surface)

Two allomorphs differ only in having the /m/ or not. The root allomorph */dwar/* is found when the root has no suffix or is followed by a consonant.

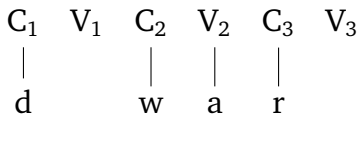
(43) a. *dwar* ('I/she/he sleep(s)')
b. *dwar-s* ('you sleep')

On the other hand, */dwarm/* is always followed by a vowel, e.g., *dwarm-in* ('they sleep'). This suggests that the /m/ is pronounced only when followed by a vowel. This hypothesis is confirmed by the interrogative forms of the SG PRS forms:

(44) a. Lui al **duar**.
he SCL sleep
He is sleeping.
b. **Duarm**-el?
sleep=he
Is he sleeping?

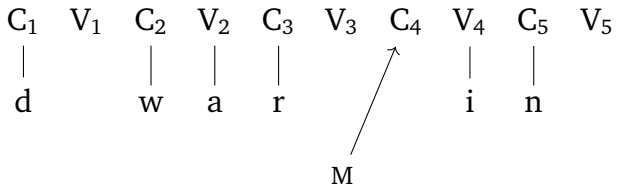
When the root is followed by the vowel-initial subject clitic, the /m/ pops up again. The behaviour of the final consonant /m/ is the same of the /j/ in the previously described cases (cf. § 1.2.3.2, § 1.3.3.1). So, I analyse this root alternation in the same way: the root is underlyingly */dwarm/* and the /m/ is a floating segment:[16]

(45) UR OF DWARM



The floating /m/ is pronounced only when it can be linked to a C position. That happens in the 3PL PRS form.

(46) 3PL PRS OF DURMÎ



[16]A simpler analysis of such phonological alternation would be the following: the /m/ is dropped when word-final or followed by another consonant. However, in TF the /m/ is attested in both environments, e.g., *calm* ('calm'), *rem* ('oar'), *calms* ('calm.PL'), *rems* ('oars').

In the other cases, the /m/ keeps floating and cannot be pronounced, as shown in the example below.

(47) 1/ 3SG PRS OF DURMÎ

C_1	V_1	C_2	V_2	C_3	V_3
|		|	|	|	
d		w	a	r	
					M

As promised, taking phonology into account reduces the number of allomorphs to two: /dwarm/ and /durm/.[17] The updated paradigm of *durmî* is shown below. The distribution of the two root allomorphs creates a T-shape in the light gray area.

		PRS	PST
SG	1	dwarm	durm-i-v-i
	2	dwarm-s	durm-i-v-a-s
	3	dwarm	durm-i-v-a
PL	1	durm-in	durm-i-v-in
	2	durm-i-is	durm-i-v-is
	3	dwarm-in	durm-i-v-in

Table 1.34: *durmî*, 'to sleep'

1.3.4 Murî

With respect to the suffixes, the verb *murî* ('to die') takes the TV *-i* in the 2PL PRS and no suffix in the 3SG PRS. With respect to root allomorphy, it shows three allomorphs: */mowr/*, */mor/*, */mur/*. Here is the full paradigm:

[17] The allomorph */durm/* is never stressed, whereas */dwarm/* is always stressed. This might suggest a correlation between the stress position and the root alternation: the diphthongized root turns into */durm/* when the root is unstressed. However, this process is not attested in this variety. As shown in (1), the diphthong is preserved in unstressed positions.

(1) a. ['pwarta] ('door')
[pwar'ton] ('front door')

b. [ri'kwart] ('memory')
[rikwar'da:] ('to remember')

		PRS	PST
SG	1	mowr	mur-i-v-i
	2	mowr-s	mur-i-v-a-s
	3	mowr	mur-i-v-a
PL	1	mur-in	mur-i-v-in
	2	mur-i-is	mur-i-v-is
	3	mor-in	mur-i-v-in

Table 1.35: *murî*, 'to die'

Despite the subtle differences among these forms, the alternations cannot be accounted for in phonology. As we have seen for *movi* ('to move') (§ 1.3.1.2), the alternation between the diphthong /ow/ and the mid vowel /o/ is not phonological in TF. The same applies to the alternation between /o/ and /u/. As we have seen for *vegni* ('to come') and *tegni* ('to keep') (§ 1.3.3.1), some Friulian varieties present a process of vowel harmony: the mid vowel /o/ raises to /u/ when followed by a stressed high vowel. That is the environment where we find the allomorph */mur/* (48). So, this might suggest that the root is underlyingly */mor/* and that the root vowel raises to /u/ when followed by the stressed high vowel /i/.

(48) a. *mur-'in* ('we die')
b. *mur-'ivin* ('we died')

Assuming this phonological process would predict such alternation for all the verbs with the root vowel /o/. That is however a wrong prediction. There are verbs that do not show root vowel raising in that environment:

(49) *cond-'in* ('we season')

(50) *cond-'ivin* ('we seasoned')

I will analyse this alternation as a morphosyntactic one rather than a phonological one since there is no active process of vowel harmony in TF.

The three root allomorphs of *murî* ('to die') create three environments:

(i) the T-shape in the 1/2PL PRS and PST forms;

(ii) the SG PRS;

(iii) the 3PL PRS.

1.3.5 Intermediate summary II

To recapitulate, here is an overall picture of the four verb patterns that show root allomorphy. In most of the cases, the alternating root allomorphs differ only in the root vowel (e.g., */venj/∼/vinj/*). However, such alternations cannot be derived phonologically. The only option left is thus to derive those patterns morphosyntactically.

(51) INVERTED L-PATTERN WITH TV - E

		PRS	PST
SG	1	poʃ	pod-e-v-i
	2	poʃ-s	pod-e-v-a-s
	3	poʃ	pod-e-v-a
PL	1	pod-in	pod-e-v-in
	2	pod-e-is	pod-e-v-is
	3	pod-in	pod-e-v-in

(52) INVERTED L-PATTERN WITH TV - I

		PRS	PST
SG	1	tʃejr	tʃer-i-v-i
	2	tʃejr-s	tʃer-i-v-a-s
	3	tʃejr	tʃer-i-v-a
PL	1	tʃer-in	tʃer-i-v-in
	2	tʃer-i-is	tʃer-i-v-is
	3	tʃer-in	tʃer-i-v-in

(53) T-PATTERN

		PRS	PST
SG	1	venj	vinj-i-v-i
	2	venj-s	vinj-i-v-a-s
	3	venj	vinj-i-v-a
PL	1	vinj-in	vinj-i-v-in
	2	vinj-i-is	vinj-i-v-is
	3	venj-in	vinj-i-v-in

(54) MURÎ

		PRS	PST
SG	1	mowr	mur-i-v-i
	2	mowr-s	mur-i-v-a-s
	3	mowr	mur-i-v-a
PL	1	mur-in	mur-i-v-in
	2	mur-i-is	mur-i-v-is
	3	mor-in	mur-i-v-in

All four patterns show one zone in common, i.e. the SG forms. Interestingly, these verb classes show root suppletion exactly where the long *e*-verbs show the length morpheme (cf. § 1.2.5). In Chapter 4, we will see why there is a correlation between root suppletion and lacking of the length morpheme.

Out of these patterns, two show the inverted L-shape, which is highlighted in light gray in the PL PRS and PST forms (51 and 52). The other two patterns do not show that shape since the 3PL PRS is not syncretic with the 1/2PL and PST forms. In one pattern, the SG PRS is syncretic with the 3PL PRS (53), while in the other it is not syncretic with anything (54).

1.4 Crazy verbs

The so-called "crazy" verbs are those that show both root allomorphy and missing inflectional suffixes. For these verb patterns, it is not possible to predict all the forms based on the usual principled parts, i.e. 2PL and 3SG PRS.

In the following sections, we examine each verb in detail. Tualis Friulian has seven crazy verbs in total and they can be grouped into four different verb patterns. Some assumptions on the segmentation of some of their forms will be clarified and argued for in Chapter 4.

1.4.1 Lâ-like verbs

1.4.1.1 Lâ

The verb *lâ* ('to go') displays the paradigm below:

		PRS	PST
SG	1	voj	l-a-v-i
	2	vaː-s	l-a-v-a-s
	3	va	l-a-v-a
PL	1	l-in	l-a-v-in
	2	l-a-is	l-a-v-is
	3	van	l-a-v-in

Table 1.36: *lâ*, 'to go' (surface)

The distribution of the root allomorphs of *lâ* creates these four environments:

(i) the 1/2PL PRS and PST forms with */l/*;

(ii) 2/3SG and 3PL PRS with */va/*;

(iii) the 1SG PRS with */voj/*.

(iv) the 3PL PRS with */van/*.[18]

[18]As we will see in more detail in Chapter 4, § 4.5.1, the 1SG and 3PL PRS forms cannot be decomposed. The form */voj/* could be segmented as follows: the allomorph */vo/* followed by the suffix *-i*. The latter is found in the 1SG PRS forms of *a*-verbs (§ 1.2.1), and in the 1SG PST forms of all paradigms. It would thus be tempting to segment */voj/*, but this segmentation does not work in the current analysis. I thus keep it unsegmented and leave the issue open for further research. The same holds for the 3PL. One might try to segment */van/* as *va-n*, showing the same root allomorph attested in the 2/3SG PRS. However, that is not possible with the current analysis of TF verb classes.

Let us now spend some time on the segmentation of the 2/3SG.

(55) a. *vaːs*
b. *va*

There are two logical options for segmenting these forms: /a/ is either a root vowel or the same suffix *-a* found in the *a*-verbs. One hint points towards the first option. It comes from the interrogative forms. For the *a*-verbs, the suffix /a/ is not preserved in the corresponding interrogative form:

(56) a. Lui al **kjal**-a las stelas.
he SCL look.at.3SG the stars
'He looks at the stars.'
b. Ce **kjal**-el lui?
what look.at=he he
'What does he look at?'

On the other hand, the /a/ is attested in the interrogative forms of *lâ*:

(57) a. Lui al **va** a scuela.
he SCL go.3SG to school
'He goes to school.'
b. Dula **va**-el?
where go=he
'Where does he go?'

This suggests that the /a/ of the *a*-verbs is different from the one attested in the 2/3SG PRS of *lâ*. This means that it cannot be the same suffix, but the root vowel.

With respect to the suffixes, in the 2PL forms the allomorph *l-* combines with an *-a* thematic vowel, whereas in the 3SG PRS the root takes no suffix.

		PRS	PST
SG	1	voj	l-a-v-i
	2	vaːs	l-a-v-a-s
	3	**va**	l-a-v-a
PL	1	l-in	l-a-v-in
	2	l-**a**-is	l-a-v-is
	3	van	l-a-v-in

lâ, 'to go'

I will analyse 1SG and the 3PL PRS forms as not containing a suffix, contrary to other verbs with an *-a* thematic vowel.

Notice also that the 2SG PRS form shows root vowel lengthening, i.e. *vâs* ('you go'). In this case, the length can be analysed as a templatic effect of the 2SG PRS. More specifically, the suffix *-s* attaches only to forms that weigh at least two morae, e.g.:

(58) 2SG PRS
   a. *ama-s*
   b. *bat-s*
   c. *sint-s*

The root */va/*, however, weighs only one mora. To meet the requirement of two morae, the root vowel /a/ has to lengthen. This process is attested in all the forms that weigh one mora:

(59) a. *va-s* ⇒ *vaː-s*
   b. *da-s* ⇒ *daː-s*
   c. *a-s* ⇒ *aː-s*
   d. *sa-s* ⇒ *saː-s*
   e. *sta-s* ⇒ *staː-s*

The roots are thus underlyingly short and get lengthened only in this form in order to meet the templatic constraint.

The underlying paradigm of *lâ* can be updated as follows:

		PRS	PST
SG	1	voj	l-a-v-i
	2	va-s	l-a-v-a-s
	3	va	l-a-v-a
PL	1	l-in	l-a-v-in
	2	l-a-is	l-a-v-is
	3	van	l-a-v-in

Table 1.37: *lâ*, 'to go'

1.4.1.2 Dâ and Stâ

The verbs *dâ* ('to give') and *stâ* ('to be') share the same paradigm of *lâ* ('to go').

		PRS	PST
SG	1	doj	d-a-v-i
	2	daː-s	d-a-v-a-s
	3	da	d-a-v-a
PL	1	d-in	d-a-v-in
	2	d-a-is	d-a-v-is
	3	dan	d-a-v-in

Table 1.38: *dâ*, 'to give'

		PRS	PST
SG	1	stoj	st-a-v-i
	2	staː-s	st-a-v-a-s
	3	sta	st-a-v-a
PL	1	st-in	st-a-v-in
	2	st-a-is	st-a-v-is
	3	stan	st-a-v-in

Table 1.39: *stâ*, 'to be'

The same argument holds for the segmentation of the 2/3SG and 3PL PRS forms: we still find the /a/ in the interrogative forms.

(60) a. Lui al ti **da** un libri.
he SCL to.you give-I a book
'He gives you a book.'

b. Ce ti **da**-el?
what to.you give-he
'What does he give you?'

As for *lâ*, this suggests that the /a/ is part of the root and not a separate suffix. These two verbs behave like *lâ* ('to go') also with respect to the suffixes:

(i) the 2PL PRS and PST forms show the TV *-a*;

(ii) the 3SG PRS shows no suffix;

(iii) the 1SG and 3PL PRS show one different allomorph each;

(iv) the 2SG PRS form displays root vowel lengthening due to the templatic constraint.

1.4.2 Savê-like verbs

Only two verbs exhibit this pattern: *vê* ('to have') and *savê* ('to know'). These two verbs show the same zones of root allomorphy as *lâ* ('to go'), *dâ* ('to give') and *stâ* ('to be'). The thematic vowel is the only difference between the two patterns: one shows the TV *-a*, the other - the TV *-e*, as highlighted in the tables below.

		PRS	PST
SG	1	saj	sav-**e**-v-i
	2	sa-s	sav-**e**-v-a-s
	3	sa	sav-**e**-v-a
PL	1	sav-in	sav-**e**-v-in
	2	sav-**e**-is	sav-**e**-v-is
	3	san	sav-**e**-v-in

savê, 'to know'

		PRS	PST
SG	1	voj	l-**a**-v-i
	2	va-s	l-**a**-v-a-s
	3	va	l-**a**-v-a
PL	1	l-in	l-**a**-v-in
	2	l-**a**-is	l-**a**-v-is
	3	van	l-**a**-v-in

lâ, 'to go'

Let us now look at the two verbs of this class in detail.

1.4.2.1 Vê

The verb *vê* ('to have') shows the paradigm below:

		PRS	PST
SG	1	aj	v-e-v-i
	2	aː-s	v-e-v-a-s
	3	a	v-e-v-a
PL	1	v-in	v-e-v-in
	2	v-**e**-is	v-e-v-is
	3	an	v-e-v-in

Table 1.40: *vê*, 'to have' (surface)

The distribution of the root allomorphs creates four different environments:

(i) the root allomorph */v/* is found in the T-zone, i.e. 1/2PL PRS and in the PST forms;

(ii) */a/* is found in the 2/3SG;

(iii) the 3PL PRS with */van/*;

(iv) the 1SG PRS with the root allomorph */aj/*.[19]

With respect to the suffixes, the verb *vê* behaves as an *e*-verb in the two principled forms: in the 2PL PRS the root allomorph */v/* combines with the thematic vowel *-e*, and in the 3SG PRS the root allomorph */a/* takes no suffix. As expected, the PST root is syncretic with the one found in the 1/2PL, and it is followed by the TV.

[19] As for *lâ-like verbs*, both the 1SG and 3PL PRS cannot be decomposed in the current analysis.

(61) a. *v-**e**-is* (‘you have’)
b. ***a*** (‘she/he has’)
c. *v-**e**-v-i* (‘I used to have’)

(62) a. *bat-**e**-is* (‘you hit’)
b. ***bat*** (‘she/he hits’)
c. *bat-**e**-v-i* (‘I used to hit’)

In the other forms, however, the verb behaves unexpectedly. The 1SG PRS is not syncretic with the 3SG PRS form, contrary to the *e*-verbs, e.g.,:

(63) a. *ai* (‘I have’)
b. *a* (‘she/he has’)

(64) a. *bat* (‘I hit’)
b. *bat* (‘she/he hits’)

In addition to that, the 3PL PRS does not show the expected suffix *-in*, which has been attested in all the non-crazy patterns (see, e.g., 65a, 65b).

(65) a. *bat-**in*** (‘they hit’)
b. *klam-**in*** (‘they call’)

As the previous verb class, the 2SG PRS shows root vowel lengthening, i.e. *a:s* (‘you have’). The same analysis applies: the root vowel has to lengthen due to a templatic constraint of the 2SG PRS: the suffix *-s* attaches only to forms of at least two morae. Hence, the root in question is underlyingly short. Here is the underlying paradigm of *vê* (‘to have’):

		PRS	PST
SG	1	aj	v-e-v-i
	2	a-s	v-e-v-a-s
	3	a	v-e-v-a
PL	1	v-in	v-e-v-in
	2	v-e-is	v-e-v-is
	3	an	v-e-v-in

Table 1.41: *vê*, ‘to have’

1.4.2.2 Savê

The verb *savê* (‘to know’) behaves as *vê* (‘to have’):

		PRS	PST
SG	1	saj	sav-e-v-i
	2	sa-s	sav-e-v-a-s
	3	sa	sav-e-v-a
PL	1	sav-in	sav-e-v-in
	2	sav-e-is	sav-e-v-is
	3	san	sav-e-v-in

Table 1.42: *savê*, 'to know'

		PRS	PST
SG	1	aj	v-e-v-i
	2	a-s	v-e-v-a-s
	3	a	v-e-v-a
PL	1	v-in	v-e-v-in
	2	v-e-is	v-e-v-is
	3	an	v-e-v-in

vê, 'to have'

The four root allomorphs create the following environments:

(i) the 1/2PL PRS and PST forms with */sav/*;

(ii) 2/3SG PRS with */sa/*;[20]

(iii) the 1SG PRS with */saj/*;

(iv) the 3PL PRS with */san/*

As for the other crazy verbs, there are two logical possibilities for the segmentation of the 2/3SG PRS forms: (i) either the root */s/* is followed by the the suffix *-a*, (ii) or the root is */sa/*. The same hint as before points towards the latter option. The hint comes from the interrogative forms. An *a*-verb like *kjalâ* ('to look at') shows the TV in the affirmative forms (66a). The *-a* disappears in the corresponding interrogative form (66b).

(66) a. Lui al **kjal**-a las stelas.
he SCL look.at the stars
'He looks at the stars.'

b. Ce **kjal**-el lui?
what look.at=he he
'What does he look at?'

On the other hand, *savê* shows the /a/ in both forms (67a-67b).

(67) a. Lui al **sa** la rispuesta.
he SCL know the answer
'He knows the answer.'

[20]The root vowel surfaces as long due to the templatic constraint of the 2SG PRS, i.e. *sa:-s* ('you know')

b. **Sa**-el lui la rispuesta?
know=he he the answer
'Does he know the answer?'

This suggests that the /a/ in *savê* is part of the root.

Let us now briefly go through the unexpected forms of *savê* ('to know').

		PRS	PST
SG	1	saj	sav-e-v-i
	2	sa-s	sav-e-v-a-s
	3	sa	sav-e-v-a
PL	1	sav-in	sav-e-v-in
	2	sav-e-is	sav-e-v-is
	3	san	sav-e-v-in

savê, 'to know'

In the 2PL PRS the root allomorph combines with an *-e* thematic vowel, and in the 3SG the allomorph *sa* takes no suffix. The two principled forms behaves exactly as an *e*-verb. From those we can correctly predict the 2SG PRS: it is syncretic with the 3SG with the additional suffix *-s*, i.e. *sa-s*. The PST forms show the same allomorph of the 2PL PRS and the same TV, e.g. *sav-e-vi*. However, we cannot correctly predict the behaviour of the remaining forms, which behaves unexpectedly:

(i) the 1SG PRS is not syncretic with the 3SG;

(ii) the 3PL takes no suffix.

1.4.3 Volê

The verb *volê* ('to want') shows the paradigm in Table 1.43. As the verb *movi* ('to move'), the verb *volê* shows the inverted L-shape created by the PL PRS and PST forms. In that zone, we find the root allomorph */vol/*.

		PRS	PST
SG	1	voj	vol-e-v-i
	2	vows	vol-e-v-a-s
	3	vowl	vol-e-v-a
PL	1	vol-in	vol-e-v-in
	2	vol-e-is	vol-e-v-is
	3	vol-in	vol-e-v-in

Table 1.43: *volê*, 'to want'

		PRS	PST
SG	1	mowv	mov-e-v-in
	2	mowv-s	mov-e-v-a-s
	3	mowv	mov-e-v-a
PL	1	mov-in	mov-e-v-in
	2	mov-e-is	mov-e-v-is
	3	mov-in	mov-e-v-in

movi, 'to move'

Contrary to *movi*, the SG PRS forms show a different root allomorph each: */voj/*, */vows/*, */vowl/*. The 2SG PRS cannot be decomposed despite the fact that it shows what looks like the 2SG agreement suffix *-s*. This decision has been taken to avoid a misprediction given the set-up of the analysis. We will see that in detail in Chapter 4, § 4.5.3.

1.4.4 Essi

Here is the paradigm of the verb *essi* ('to be'):

		PRS	PST
SG	1	soj	er-i
	2	seːs	er-a-s
	3	e	er-a
PL	1	s-in	er-in
	2	s-e-is	er-is
	3	son	er-in

Table 1.44: *essi*, 'to be'

The SG PRS forms show a different root allomorph for each person: */soj/*, */seːs/* and */e/*.[21] The 3PL PRS does not show the expected suffix *-in*, but a suppletive root with no suffix. In addition to that, the verb *essi* is the only one that does not show the T-pattern in the 1/2PL PRS and PST forms. The PST forms show a different allomorph, i.e. */er/*. That suppletive root is not followed by neither the TV nor the PST marker *-v*.

[21] As for *volê*, 2SG PRS cannot be decomposed despite the fact that it shows what looks like the 2SG agreement suffix *-s*. This decision has been taken to avoid a misprediction given the set-up of the analysis.

1.4.5 Intermediate summary III

Below I present the overall picture of the so-called "crazy" verbs:

(68) LÂ-LIKE VERBS

		PRS	PST
SG	1	voj	l-a-v-i
	2	va-s	l-a-v-a-s
	3	va	l-a-v-a
PL	1	l-in	l-a-v-in
	2	l-a-is	l-a-v-is
	3	van	l-a-v-in

(69) SAVÊ-LIKE VERBS

		PRS	PST
SG	1	saj	sav-e-v-i
	2	sa-s	sav-e-v-a-s
	3	sa	sav-e-v-a
PL	1	sav-in	sav-e-v-in
	2	sav-e-is	sav-e-v-is
	3	san	sav-e-v-in

(70) VOLÊ

		PRS	PST
SG	1	voj	vol-e-v-i
	2	vows	vol-e-v-a-s
	3	vowl	vol-e-v-a
PL	1	vol-in	vol-e-v-in
	2	vol-e-is	vol-e-v-is
	3	vol-in	vol-e-v-in

(71) ESSI

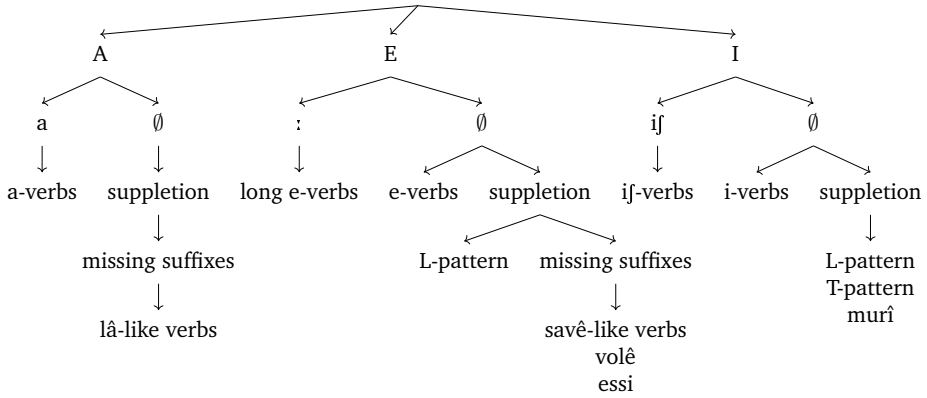
		PRS	PST
SG	1	soj	er-i
	2	seːs	er-a-s
	3	e	er-a
PL	1	s-in	er-in
	2	s-e-is	er-is
	3	son	er-in

1.5 Overall picture

When looking at the PRS and PST forms, TF verbs fall into 13 classes. All the verb patterns show a thematic vowel in the 2PL PRS and that can be *-a*, *-e* or *-i*, as indicated in the first row of the diagram in (72).

To classify TF verb patterns, the second principled form is the 3SG. In that form, four possibilities are attested, i.e. *-a*, *-ː*, *-iʃ* or nothing.

(72) TF VERB PATTERNS



The only option attested in combination with all the three thematic vowels is the "no suffix" one, as indicated by the ∅ in the second row of (72). And, only that combination of principled forms - TV+∅ - shows root suppletion. Those patterns are shown in the fourth and fifth row. Taking the suffixes *-a*, *-ː* or *-iʃ* seems to block root suppletion. The first generalization can be thus formulated:

(73) GENERALIZATION I
Root suppletion is attested only in the verb patterns with no suffix in the 3SG PRS.

The suppletive patterns show a different amount of "irregular" layers. To better see that, here I organize the paradigm table differently, i.e. from number 3 to 1.

Irregularity is added to inflectional patterns in two ways: either in the SG PRS forms only or in the SG+3PL PRS. These different irregularities create the so-called inverted L and T-patterns, respectively.

(74) INVERTED L-PATTERN WITH TV - E

		PRS	PST
SG	3	mowv	mov-e-v-a
	2	mowv-s	mov-e-v-a-s
	1	mowv	mov-e-v-i
PL	3	mov-in	mov-e-v-in
	2	mov-e-is	mov-e-v-is
	1	mov-e-in	mov-e-v-in

movi, 'to move'

(75) INVERTED L-PATTERN WITH TV - I

		PRS	PST
SG	3	tʃejr	tʃer-i-v-a
	2	tʃejr-s	tʃer-i-v-a-s
	1	tʃejr	tʃer-i-v-i
PL	3	tʃer-in	tʃer-i-v-in
	2	tʃer-i-is	tʃer-i-v-is
	1	tʃer-in	tʃer-i-v-in

tʃeri, 'to search'

(76) T-PATTERN

		PRS	PST
SG	3	venj	vinj-i-v-a
	2	venj-s	vinj-i-v-a-s
	1	venj	vinj-i-v-i
PL	3	venj-in	vinj-i-v-in
	2	vinj-i-is	vinj-i-v-is
	1	vinj-i-in	vinj-i-v-in

vegni, 'to come'

A second degree of irregularity is found in *murî* ('to die'). Its paradigm is derived from *vegni*-like verbs by adding a third allomorph in the 3PL only.

(77) MURÎ

		PRS	PST
SG	3	mowr	mur-i-v-a
	2	mowr-s	mur-i-v-a-s
	1	mowr	mur-i-v-i
PL	3	mor-in	mur-i-v-in
	2	mur-i-is	mur-i-v-is
	1	mur-i-in	mur-i-v-in

When one more level of irregularity is added, we get the patterns of *lâ* (‘to go’) and *savê* (‘to know’). These patterns show a fourth allomorph:

(78) LÂ-LIKE VERBS

		PRS	PST
SG	3	va	l-a-v-a
	2	va-s	l-a-v-a-s
	1	voj	l-a-v-i
PL	3	van	l-a-v-in
	2	l-a-is	l-a-v-is
	1	l-a-in	l-a-v-in

(79) SAVÊ-LIKE VERBS

		PRS	PST
SG	3	sa	sav-e-v-a
	2	sa-s	sav-e-v-a-s
	1	saj	sav-e-v-i
PL	3	san	sav-e-v-in
	2	sav-e-is	sav-e-v-is
	1	sav-in	sav-e-v-in

The verb *volê* (‘to want’) shows one different root allomorph for each SG form. Its irregular pattern is derived from the inverted-L pattern.

(80) VOLÊ

		PRS	PST
SG	3	vowl	vol-e-v-a
	2	vows	vol-e-v-a-s
	1	voj	vol-e-v-i
PL	3	vol-in	vol-e-v-in
	2	vol-e-is	vol-e-v-is
	1	vol-in	vol-e-v-in

The last degree of "irregularity" is found in *essi* (‘to be’). There we find a different root allomorph for each form in the SG PRS+3PL. In addition to that, it has a root specialized only for the PST forms.

(81) ESSI

		PRS	PST
SG	3	e	er-a
	2	seːs	er-a-s
	1	soj	er-i
PL	3	son	er-in
	2	s-e-is	er-is
	1	s-in	er-in

So, with respect to root suppletion, the "irregularity" is monotonously added in a regular way.

Another regular aspect of TF verbs patterns is that the root is always followed by the TV in the 2PL PRS. And, no matter how "crazy" a verb is, that root is syncretic with the 1PL PRS.

(82) GENERALIZATION II
The roots of the 2PL and 1PL are always syncretic.

The same root is also found in the PST forms: the root allomorph is suffixed by the same TV of the 2PL. The only exception is the verb *essi*: the 2PL PRS root allomorph is not syncretic with the PST allomorph:

(83) a. *s-e-is*
b. *er-is*

However, in the PST, the TV is missing. So, a different allomorph can occur in the PST only when the TV is missing.

(84) GENERALIZATION III
When the PST forms combine with the same TV found in the 2PL PRS, those forms are syncretic with the 1/2PL PRS.

Chapter 2

Towards the analysis

The aim of this chapter is to develop the basic proposal to provide a nanosyntactic account for TF verb classes without resorting to language-specific features. We will look at the puzzles that emerge in the TF verbal system. We will address the following questions:

(i) how does a root select the correct suffix?

(ii) how do we account for syncretism across paradigms?

(iii) how do we account for syncretism within a paradigm?

(iv) how come that some suffixes are found both in the present and past tense?

Answering these questions will allow us to introduce the Nanosyntactic tools employed in the analysis. We will see that technology in action with two verb classes of TF: the *e*-verbs and *i*-verbs.

In the following section, we start by looking at the first puzzle, introducing two main ingredients of the analysis.

2.1 Verb classes

The *e*-verb *bati* ('to hit') and the *i*-verb *sintî* ('to hear') differ in the 2PL PRS and in the PST forms:

(1) 2PL PRS
   a. *bat-**e**-is* ('you hit')
   b. *sint-**i**-is* ('you hear')

(2) 2PL PST
   a. *bat-**e**-v-is* ('you hit')
   b. *sint-**i**-v-is* ('you heard')

In those forms, one verb combines with an *-e* thematic vowel, while the other takes the *-i* thematic vowel. There is no clear phonological or semantic difference that can be extended to all the members of each verb class. As there is no generalization to differentiate the two verb classes, the pairing of roots and thematic vowels seems to be arbitrary.

The standard approach to account for different paradigms is to assign arbitrary class indexes (see, e.g., Halle 1997, Halle & Vaux 1998, Williams 1981, Oltra-Massuet 1999, Oltra-Massuet & Arregi 2005). Following this direction, we would assign the class index II to *e*-verbs (e.g., *bati* ('to hit')), which are typically described as second conjugation, and the class index III to the *i*-verbs (e.g., *sintî* ('to hear')), which are traditionally described as third conjugation.

(3) VERB CLASS FEATURES
   a. bat ⇔ [II]
   b. sint ⇔ [III]

The thematic vowels would then be responsible for lexicalizing a particular head - labelled as X here - in the context of 2PL PRS and PST forms. In addition to that, they would also be specified for the verb class they combine with:

(4) SUFFIXES FEATURES
   a. e ⇔ X /_ [II]
   b. i ⇔ X/_ [III]

This restricts the thematic vowel *-e* to class II verbs only, while *-i* can combine with class III verbs only. So, it is not possible to derive the wrong combination of verbal root and thematic vowel:

(5) 2PL PRS
   a. **bat-i-is* ('you hit')
   b. **sint-e-is* ('you hear')

Such an approach, however, introduces language-specific class features, weakening the idea of a universal grammar. The goal of this work is to provide an account for verb classes without language-specific verb class features, but adopting two main ingredients: a universal functional sequence (§ 2.1.1) and the universal lexicalization procedure of Nanosyntax (§ 2.1.2).

2.1.1 The functional sequence

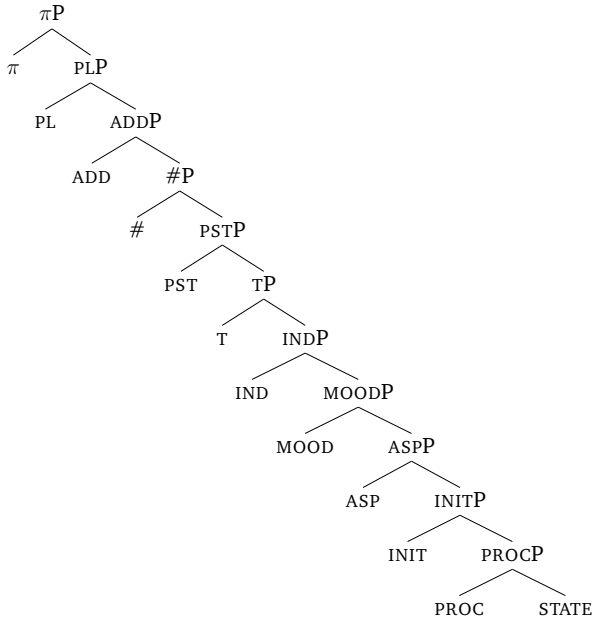
The features used in this analysis have been proposed for the first time in Starke (2020) for the French verbal system. They have been also adopted in various

studies of the verbal system across languages (see, e.g., Starke & Cortiula 2021a for Brazilian Portuguese, Starke & Cortiula 2021b for European Portuguese, Starke et al. 2021 for Czech, Starke et al. 2022 for Ukrainian). Adopting features identified in independent studies makes sure to avoid language-specific features. More specifically, it is proposed that each feature occupies a head in the morphosyntactic tree. Moreover, those features are privative, i.e. their presence indicates the presence of a particular grammatical meaning, whereas their absence indicates the absence of that meaning. For instance, in the past forms, the PST feature will be present. On the other hand, such feature will be missing in the PRS forms.

(6) TENSE FEATURES
   a. [T + PST] = past
   b. [T] = present

With this in mind, let us see in detail which features we found in the functional sequence (FSEQ) and how they are hierarchically organized. The tree in (7) contains the maximum number of tense (T) and number (#) features, expressing a 3PL PST.

(7) FSEQ, 3PL PST



At the bottom of the structure, we find the features for the verbal root. I use the labels STATE, process (PROC) and initiation (INIT), following Ramchand (2008).[1]

[1]Ramchand (2008) uses the label result (RES) instead of STATE to express the meaning of a

Above them, we find the aspect (ASP) node, followed by mood layers (MOOD and IND). The indicative (IND) mood is expressed by two features: mood and indicative.[2]

(8) MOOD FEATURES
[MOOD + IND] = indicative

Moving up in the tree, we find the tense zone with T and PST. The present tense is expressed by the feature T, assuming that it is the tense by default. On the other hand, when syntax builds a past form, it will add the PST feature.

(9) TENSE FEATURES
a. [T] = present
b. [T + PST] = past

Higher up in the structure, we find the agreement features, consisting of number and person features.[3] I follow Starke (2020) in having the number features below person features.[4]

result state. We use a different label, but the encoded grammatical meaning is exactly the same. It has to be pointed out that the INIT projection would be missing in the FSEQ of some intransitive verbs. For instance, the unaccusative verb *disfâsi* ('to melt') would lack the INITP. On the other hand, in the same verb class, *cori* ('to run') will encode that meaning. The membership in the class is thus not determined by the argument structure, and such difference will not influence how the syntactic derivation works.

[2]As discussed first in Starke (2020), Starke (2021) for French, and then in Starke & Cortiula (2021a), the IND is the marked mood compared to the subjunctive (SUBJ). These two moods have different semantics, which is expressed by different features. The distinction between IND and SUBJ will come down to the presence versus absence of at least one feature. So, either the IND has that extra feature or the SUBJ does. The semantic, syntactic and morphological properties point towards the fact that the SUBJ is an impoverished version of the IND. Semantically, indicatives can have their own time reference, whereas subjunctives cannot. Syntactically, indicatives can stand alone in a root clause, whereas subjunctives cannot. Morphologically, Starke (2020) and Starke (2021) argue that French verbal morphological alternations favor indicatives having an additional feature compared to the subjunctive. This turned out to be true also in Brazilian Portuguese in Starke & Cortiula (2021a).

[3]The existence of the AGR projection in the verbal domain has been motivated in Pollock (1989) and Belletti (1990) given its effect on verb placement. Following this track, both Starke (2020) and Blix (2020) decompose the AGR projection into several features in their works on French and Georgian verbal agreement, respectively. Notice that this view contrasts with Chomsky (1995) and with most of the current approaches (see, e.g., Carstens 2001, Norris 2012, Bayırlı 2017). For them, agreement features have no semantic contribution, and, as a consequence, they do not have a dedicated head in the FSEQ. A more detailed discussion on concord is offered in Caha (2023a).

[4]The opposite ordering of person below number features is proposed in i.a. Harbour (2016), Ackema & Neeleman (2018), and Vanden Wyngaerd (2018). Those works focus mainly on the FSEQ of the pronouns. It could thus be that the verbal spine differ in the hierarchy of person and number.

In the system, the number meanings will be encoded as shown in (10).[5]

(10) NUMBER FEATURES
  a. [#]
  b. [# + PL]
  c. [# + ADD + PL]

The feature # is the default number node, and, on its own, it expresses a singular form. Above it, we can find: (i) either the plural (PL) feature only; (ii) or the feature additive (ADD) followed by the PL feature. In the former case, the combination of [# + PL] expresses an associative plural that refers to a group consisting of X and other individuals associated to X. That is the case of 1PL and 2PL. It has been noted that those forms do not express a plurality of speakers or participants, but they add one or many others to a speaker and participant, respectively (see, i.a. Zwicky 1977, Noyer 1992, Corbett 2000, Cysouw 2009, Moravcsik 2003, Siewierska 2004, Kratzer 2009, Starke 2023). That is represented in (11a)-(11b). Contrary to those forms, the 3PL can express a plurality that refers: (i) to a person and many others; (ii) to a plurality of persons (11d).

(11) a. 1PL = I + others; *many I-s
  b. 2PL = you + others; *many you-s
  c. 3PL = she/he + others
  d. 3PL = many she/he-s

To express such asymmetry, I introduce a feature that is found only when syntax builds a 3PL: ADD.[6] The 3PL forms will thus have both plural features: ADD and PL.

Two options are possible for ordering these two feature in the FSEQ:

(12) a. ADD > PL
  b. PL > ADD

Both options lead to a correct and successful derivation of TF verb patterns. However, I adopt the first ordering, i.e. ADD below PL, based on two hints. First, having ADD lower than PL makes the derivations simpler. Under this option, less backtracking is required. A second hint seems to come from Cinque (2018). He shows that the additive and associative plural are merged into two different positions within the extended projection of the NP. Cross-linguistic evidence led Cinque to order the additive plural morpheme below the associative one.

[5] I leave aside the inclusive-exclusive distinction since it is not present in TF.

[6] This feature is not present in the FSEQ adopted in the already mentioned cross-linguistic studies.

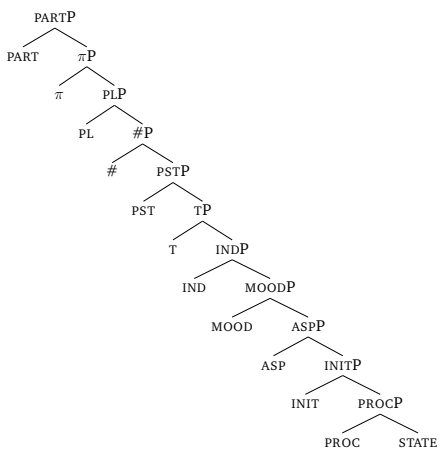
Above number features we find person features. All the adopted features are shown in (13) (see also Béjar 2003, Vanden Wyngaerd 2018, Starke 2021).

(13) PERSON FEATURES

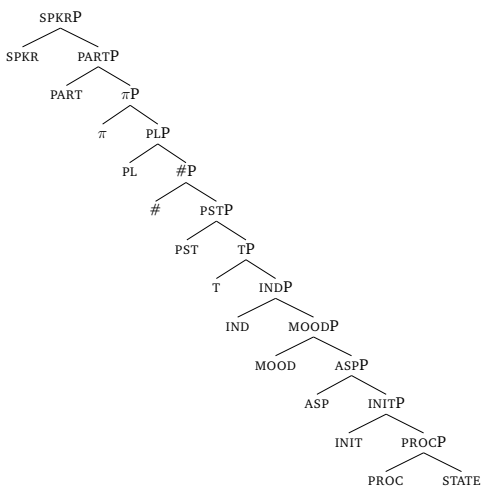
$[\pi]$	=	3rd person
$[\pi + \text{PART}]$	=	2nd person
$[\pi + \text{PART} + \text{SPKR}]$	=	1st person

Third person expressions are those with only the person node (person (π)), as in the FSEQ in (7). A second person is a π, who happens to be a participant (PART). Compared to the second person, the first person expressions have an additional feature: the speaker (SPKR). That person is a π, who happens to be a PART, who happens to be a SPKR. The examples in (14) and (15) show the FSEQ for a 2PL and 1PL form, respectively.

(14)

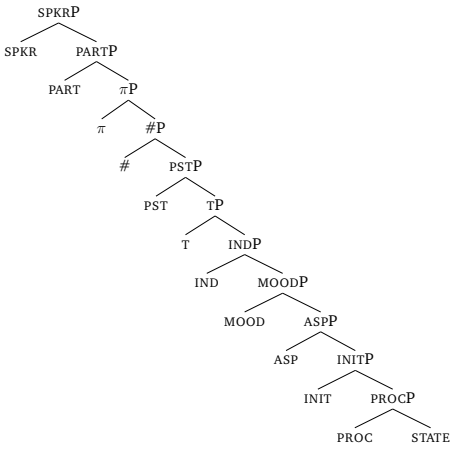


(15)

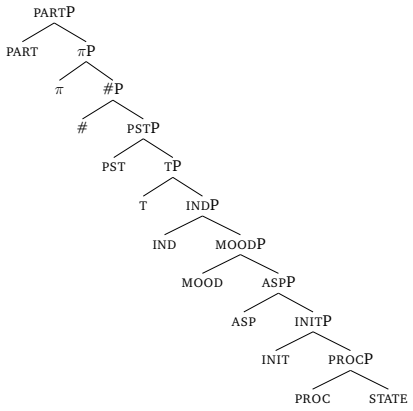


If the PL feature is missing, we get the FSEQ of the corresponding singular forms (16)-(17).

(16) 1SG PST

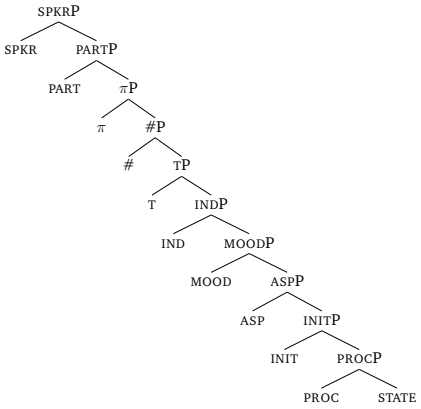


(17) 2SG PST

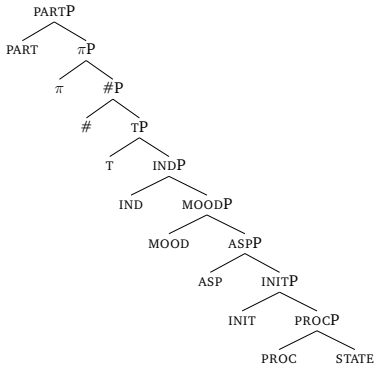


If the PST feature is missing, a present form is derived, as shown in as in (18)-(19).

(18) 1SG PRS



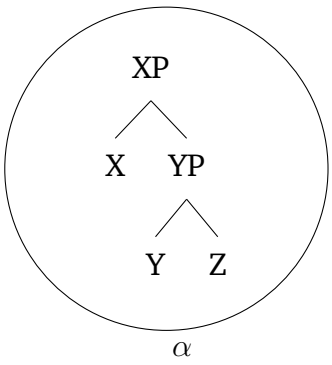
(19) 2SG PRS



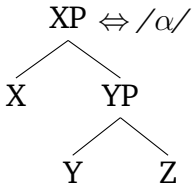
2.1.2 Phrasal lexicalization

The second ingredient of the analysis is phrasal lexicalization as developed within the nanosyntactic framework (Starke 2009, 2018, 2022, Baunaz & Lander 2018, Taraldsen 2019, Caha (to appear)). In Nanosyntax, lexicalization targets phrasal nodes, as illustrated in (20). There, a full syntactic phrase containing multiple terminals is pronounced by a single lexical item. The item α can lexicalize the structure in (20) only if such item exists in the lexicon. As shown in (21), lexical items are stored syntactic tree paired with phonology.

(20)

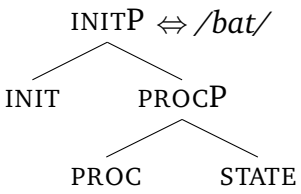


(21)

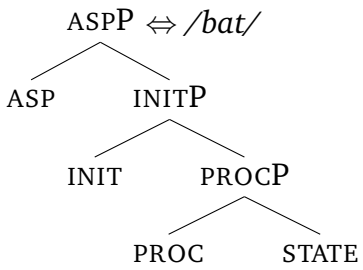


Let us now work with a concrete case. Consider, for instance, verbal roots, which typically lexicalise the lower thematic layers, as in (22), perhaps along with some aspectual features, as in (23).[7]

(22)



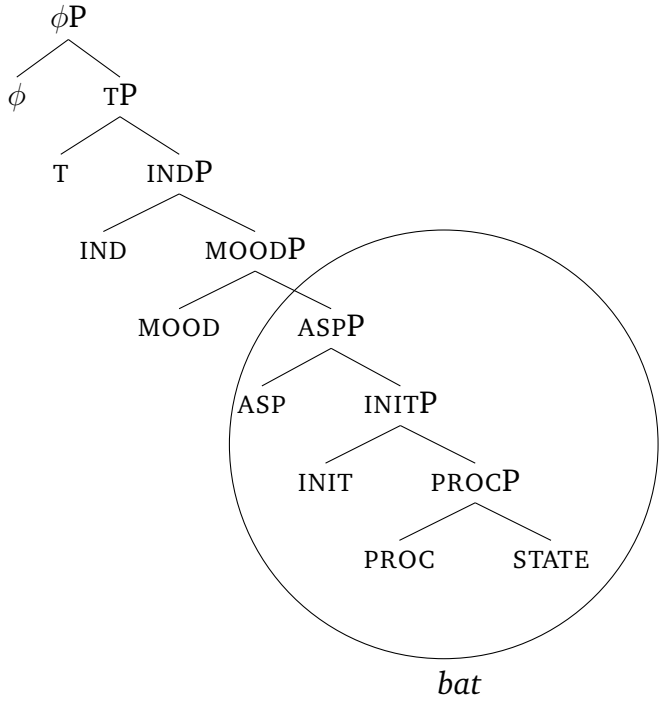
(23)



In order for a lexeme to lexicalize a syntactic representation, the syntactic tree must exactly match a constituent of the tree stored inside the lexeme (SUPERSET PRINCIPLE, Starke 2009). When syntax builds a structure like in (24), the lexical entry in (23) exactly matches the tree up to ASP, and leaves the features from MOOD to be lexicalized.

[7]We will not take into consideration the verbal argument structure since it is not relevant in the current research.

(24)

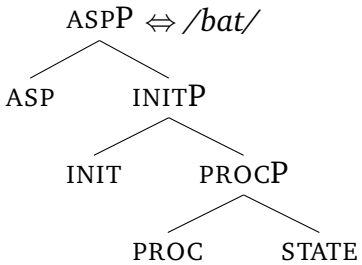


In the next section, we will see that adopting phrasal lexicalization leads to a principled solution for our first puzzle, i.e. how does a root combine with the correct suffix?

2.1.3 Root size

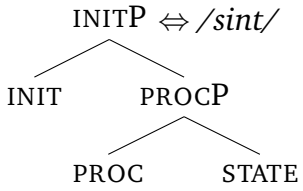
One consequence of phrasal lexicalization is that lexical items can be of different syntactic sizes (see, e.g., Caha et al. 2019). We have just seen that a root like */bat/* might have the lexical entry below:

(25)



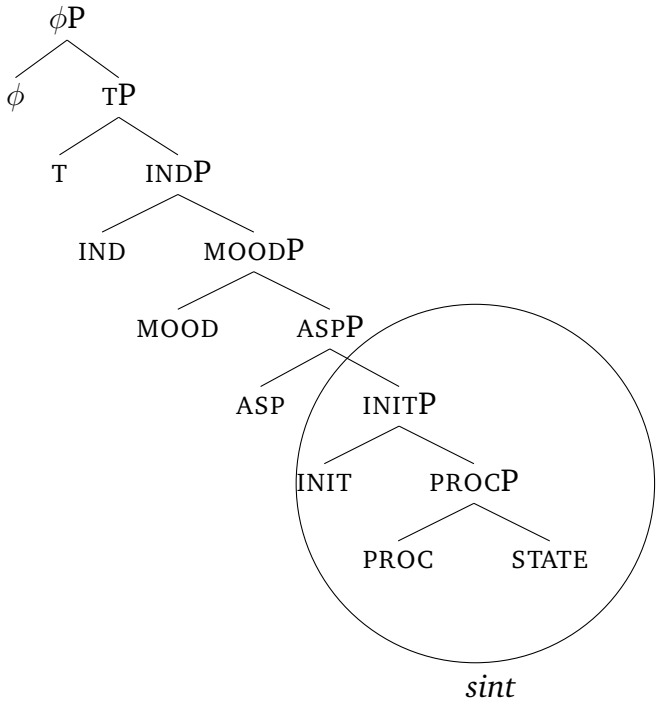
Now let us see what would happen if there was a different class of roots, with the lexical entry of the type:

(26)



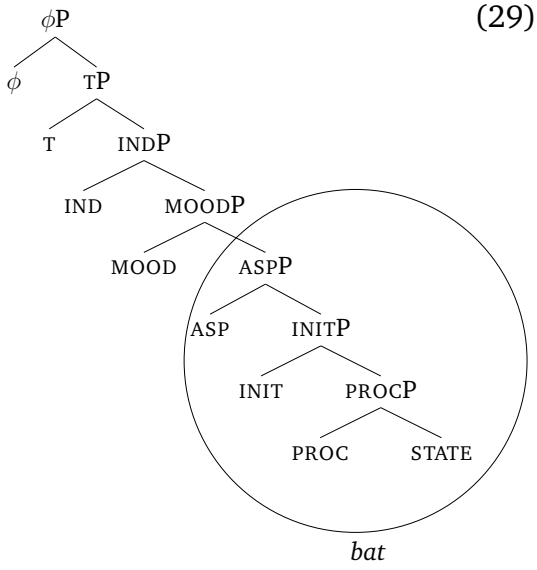
When syntax builds the tree in (27), the full lexical entry of the root */sint/* (26) is an exact match for the syntactic structure up to INIT, leaving the features from ASP to be lexicalized.

(27)

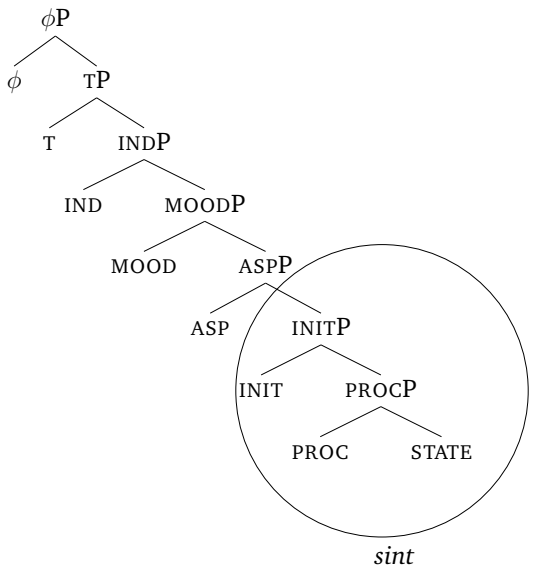


Crucially, the roots */bat/* and */sint/* lexicalize a different amount of features: the first grows all the way up to ASP, whereas the other stops at INIT. *I*-roots are thus smaller than *e*-roots. This leaves a different amount of features to be lexicalized. For convenience, the trees are repeated in comparison below.

(28)



(29)



From now on, we will also use lexicalization tables as (30) to easily visualize the result of spellout. The header of the table contains the grammatical features. In the rows, we find the representation of the trees above (cf. (28)-(29)), indicating which features are lexicalized by each root, as encoded by the shading.

(30) LEXICALIZATION TABLE OF BATI AND SINTÎ, ROOTS

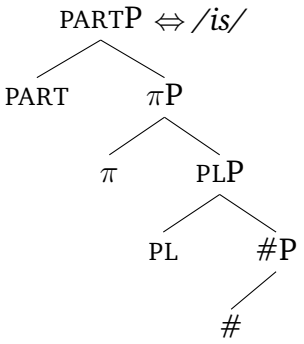
STATE	PROC	INIT	ASP	MOOD	IND	T	...
bat							
sint							

As already mentioned, these two roots differ in the 2PL PRS and PST forms. We will first focus on the 2PL PRS:

(31) a. *bat-**e**-is* ('you hit')
b. *sint-**i**-is* ('you hear')

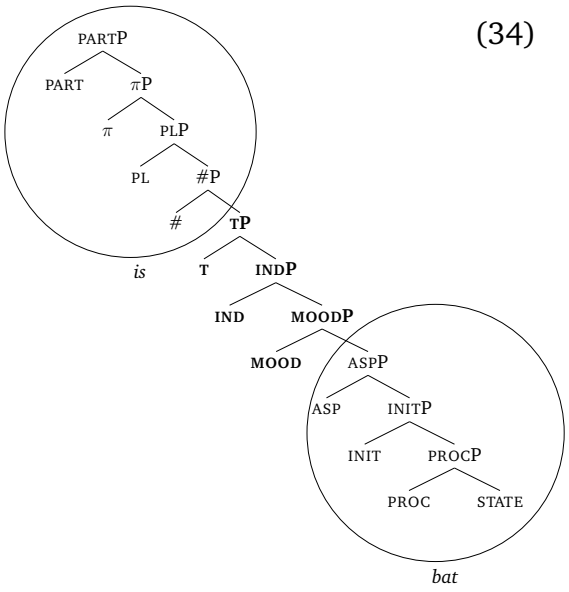
The only difference between the two verb classes is the thematic vowel, which is followed by the suffix *-is* in both cases. The suffix *-is* is responsible for lexicalizing the ϕ features in all 2PL forms, starting at # and reaching all the way up to PART. Its lexical entry is shown in (32).

(32) LEXICAL ENTRY OF -IS

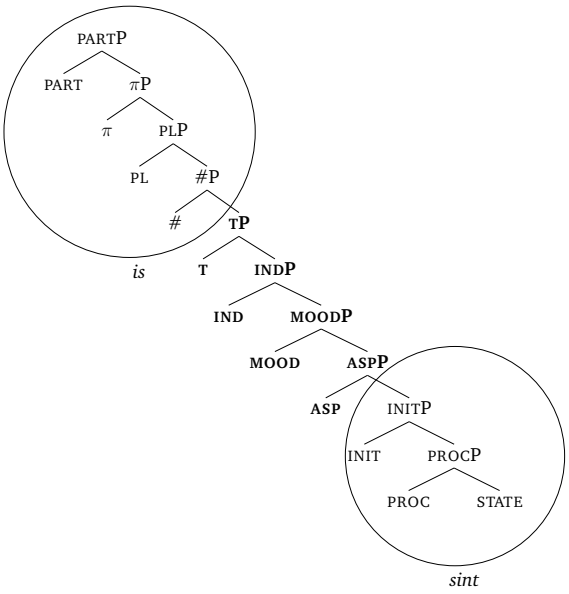


We now know what can be lexicalized both by the roots and the agreement suffix *-is*. Putting together these two pieces, the trees will look this:

(33)



(34)



The corresponding lexicalization table is displayed below:

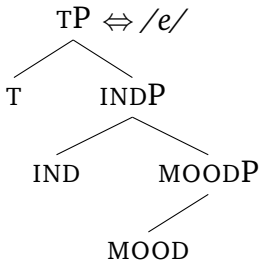
(35) LEXICALIZATION TABLE OF BATI AND SINTÎ, 2PL PRS

STATE	PROC	INIT	ASP	MOOD	IND	T	#	PL	π	PART
bat							is			
sint							is			

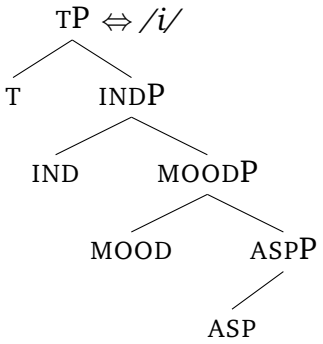
A different amount of features remains to be lexicalized between the roots and the agreement suffix *-is*. For the *e*-roots, the constituent [T[IND[MOOD]]] needs to be lexicalized, while [T[IND[MOOD[ASP]]]] - for the *i*-roots. This difference

allows us to understand why the two roots will combine with two different suffixes, in this case with two different thematic vowels that will lexicalize those constituents, i.e.:

(36) LEXICAL ENTRY OF -E



(37) LEXICAL ENTRY OF -I



So, when syntax builds a 2PL form with an *e*-root, the thematic vowel *-e* will take over at MOOD. On the other hand, the thematic vowel *-i* will do the job from ASP to T with an *i*-root like */sint/*.[8]

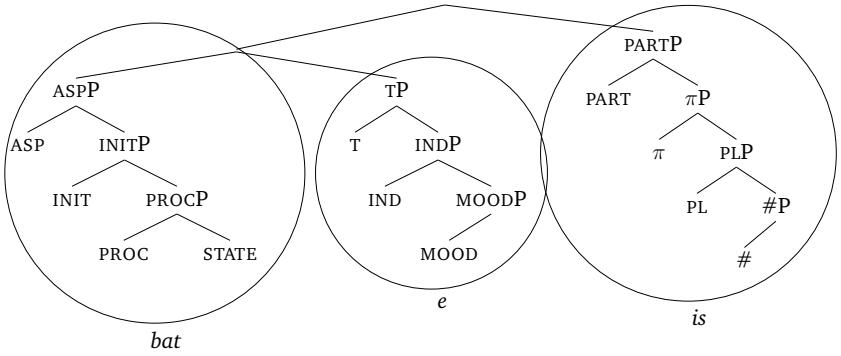
(38) LEXICALIZATION TABLE OF BATI AND SINTÎ, 2PL PRS

STATE	PROC	INIT	ASP	MOOD	IND	T	#	PL	π	PART
bat				e			is			
sint			i				is			

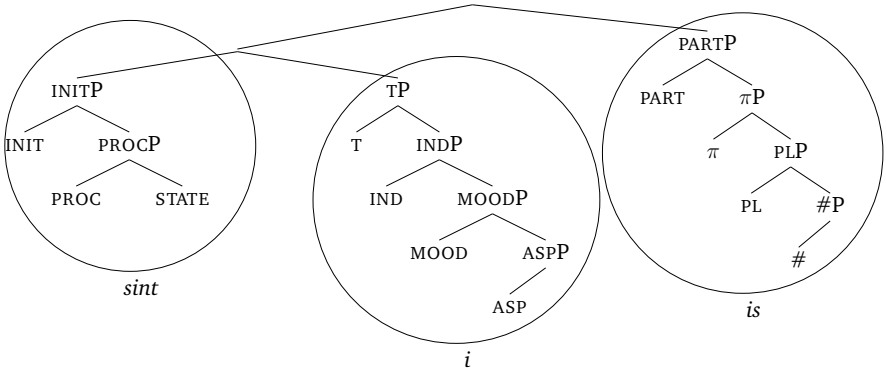
This produces the structures below. The correct order of morphemes is derived through movement. We will go through the derivations in the next sections.

[8]It has to be pointed out that there is no concrete reason to assume that *i*-roots are smaller than *e*-roots. Under this option, the TV *-e* starts higher than *-i*. The reverse could be postulated as well: *i*-roots are bigger than *e*-roots. As a consequence, *-i* will now start higher than *-e* in the FSEQ. When we introduce into the picture the *a*-verbs with the third TV *-a*, the number of possibilities for root sizes and ordering of the thematic vowels will increase. Out of the 6 mathematically possible orders I adopted the following: i.e. $i > e > a$. Again, there are no concrete reasons to assume such order. Looking at other finite and non-finite forms might shed some light on the root sizes, and, consequently on the height of each TV in the FSEQ.

(39) DERIVATION OF BATI, 2PL PRS, FINAL FORM



(40) DERIVATION OF SINTÎ, 2PL PRS, FINAL FORM



Under this view, the difference between *e*-verbs and *i*-verbs is captured with no need to postulate language-specific features such as arbitrary class indexes. It is the difference in root size that allows the correct root-suffix pairing.

2.2 Syncretism across paradigms

In the previous section, we derived why two root types - *e*-roots and *i*-roots - combine with different suffixes, e.g., in the 2PL PRS. However, there are forms in which the two verb classes are syncretic. Among those forms, we find the 3SG and 2SG PRS.

(41) 3SG PRS
- a. *bat* ('she/he hits')
- b. *sint* ('she/he hears')

(42) 2SG PRS
- a. *bat-s* ('you hit')
- b. *sint-s* ('you hear')

Both verb classes show no suffix in the 3SG and the suffix *-s* in the 2SG PRS. Given the difference in the 2PL between the two classes, how come that they behave the same in those forms? Let us sketch the solution step by step.

The 3SG PRS forms of *e*-verbs and *i*-verbs - *bat* ('she/he hits') and *sint* ('she/he hears')- show no suffix. This means that both roots should be able to lexicalize all the features of a 3SG PRS form, i.e. up to π, as shown in the lexicalization table below.

(43) LEXICALIZATION TABLE OF BATI AND SINTÎ, 3SG PRS

STATE	PROC	INIT	ASP	MOOD	IND	T	#	π
bat								
sint								

At first sight, however, this seems to contradict what we have seen for the 2PL PRS forms. In that form, the roots lexicalize only lower layers in the derivation, stopping either at ASP or INIT. Then, the thematic vowels *-e* and *-i* take over up to T.

(44) LEXICALIZATION TABLE OF BATI AND SINTÎ, 2PL PRS

STATE	PROC	INIT	ASP	MOOD	IND	T	#	PL	π	PART
bat				e			is			
sint			i				is			

This leads to an additional puzzle then: how come both roots can lexicalize the entire tree when syntax builds a 3SG, but need the thematic vowel in 2PL to reach the agreement suffix *-is*? To better visualize the issue, the lexicalization tables below compare the two forms for both verb classes. There, the black cell indicates that such a feature is missing in the tree built by syntax. More specifically, the PL feature is not present when syntax is building a SG form.

(45) LEXICALIZATION TABLE OF BATI AND SINTÎ, 3SG AND 2PL PRS

STATE	PROC	INIT	ASP	MOOD	IND	T	#	PL	π	PART
bat										
bat				e			is			

STATE	PROC	INIT	ASP	MOOD	IND	T	#	PL	π	PART
sint										
sint			i				is			

In both verb classes, the roots seem to contain a sub-constituent that would match the tree up to T in the 2PL PRS, i.e. [T [IND [MOOD [ASP [INIT [PROC STATE]]]]]]. Given the Superset Principle (46), this would lead us to the expectation that the roots */bat/* and */sint/* lexicalize all the features up to T in the 2PL PRS.

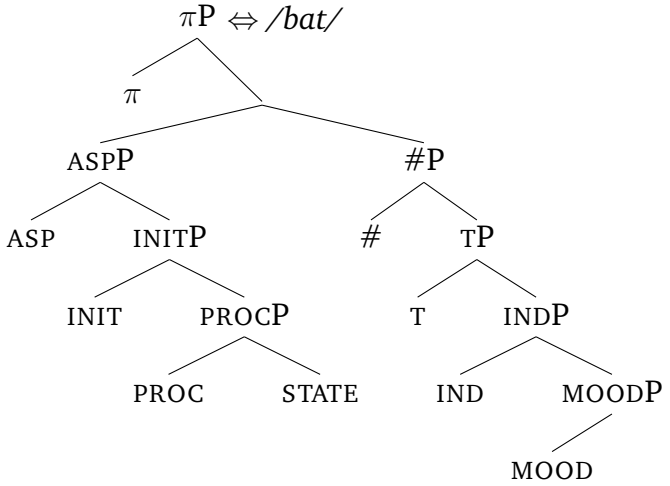
(46) SUPERSET PRINCIPLE, Starke (2009)
A lexically stored tree matches a syntactic node iff the lexically stored tree contains the syntactic node.

To solve this paradox, we need to revise the lexical entries for *e*- and *i*-verbs introducing a new type of lexical entries: trees with a complex left branch (CLB). We will see that the lexically stored trees of */bat/* and */sint/* do not contain a sub-constituent being able to match the tree up to T in the 2PL.

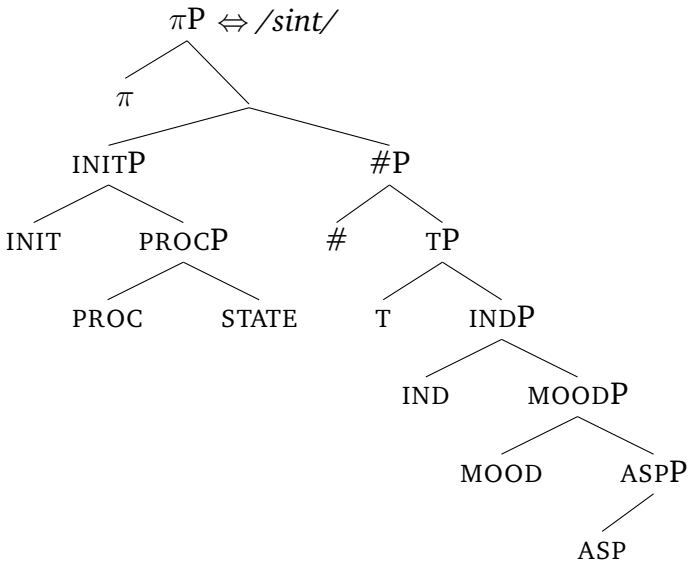
2.2.1 Complex Left Branches

Lexical entries with a complex left branch (CLB) has been explored for the first time in Blix (2021) and adopted also in Caha (2021a, 2023b), Janků (2022). The name comes from the idea that the features are structured in a way that entails the application of movement on the left branch of the tree. Adopting that device, I suggest the following entries for the roots */bat/* and */sint/*.

(47) UPDATED LEXICAL ENTRY OF BAT



(48) UPDATED LEXICAL ENTRY OF SINT



On the left branch, the roots keep the same size of the previously proposed lexical entries reaching up to ASP and INIT, respectively (cf. (25)-(26)). On the right branch both roots grow up to #. In addition to that, the lexical entries are stored with π as the topmost feature.

So, the updated lexical entries of */bat/* and */sint/* reach up to the same feature, i.e. π, but they differ in their shape, encoding movement of a different constituent within the functional sequence: *e*-verbs like *bati* ('to hit') show the [ASP [INIT [PROC STATE]]] constituent on the left branch, whereas *i*-verbs like *sintî* ('to hear') show a different constituent on the left branch, i.e. [INIT [PROC STATE]]. This difference in the size of the left branch is enough to encode the different behaviour in the 2PL PRS between the two verb classes.

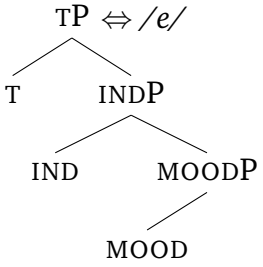
2.2.2 Derivations

Let us now see how the current lexical entries solve the puzzling pattern shown in (45). We will start by looking at the *e*-verbs:

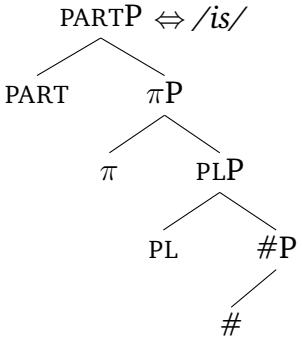
(49) E-VERBS, 3SG AND 2PL PRS
   a. *bat* ('she/he hits')
   b. *bat-e-is* ('you hit')

Before proceeding to show the derivation, let us repeat the lexical entries for the thematic vowel *-e* and the 2PL agreement suffix *-is*.

(50) LEXICAL ENTRY OF -E



(51) LEXICAL ENTRY OF -IS

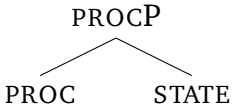


The derivation starts by merging STATE and PROC, creating PROCP. At each merge, the structure must be successfully spelled out. This means that at each cycle the lexicon is checked for a matching lexical item to successfully lexicalize the structure built by syntax, as stated in (52).

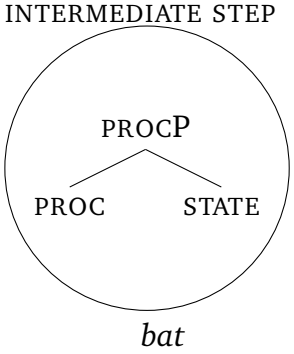
(52) CYCLIC PHRASAL SPELLOUT, cited from Caha (2021b):
Spell out must successfully apply to the output of every Merge F operation. After successful spellout, the derivation may terminate, or proceed to another round of Merge F.

In this case, the lexical entry of the root */bat/* contains the [PROC STATE] constituent, so PROCP is spelled out as */bat/*.

(53) DERIVATION OF BATI, 3SG PRS, INTERMEDIATE STEP

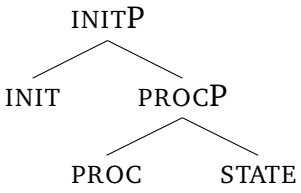


(54) DERIVATION OF BATI, 3SG PRS, INTERMEDIATE STEP

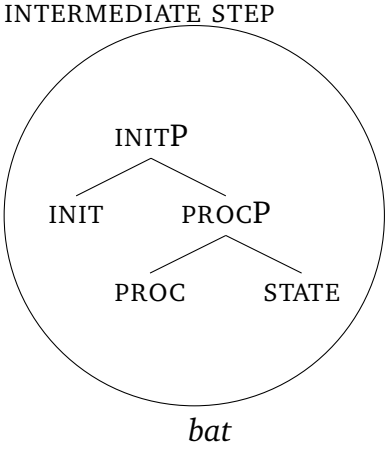


The next step is to merge INIT. The lexicon is consulted, and the structure is successfully lexicalized by the lexical entry of the root */bat/*. The spellout at INITP overrides the previous spellout of PROCP. That is called Cyclic Override (see Starke 2009).

(55) DERIVATION OF BATI, 3SG PRS, INTERMEDIATE STEP

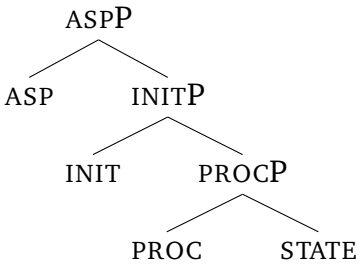


(56) DERIVATION OF BATI, 3SG PRS, INTERMEDIATE STEP

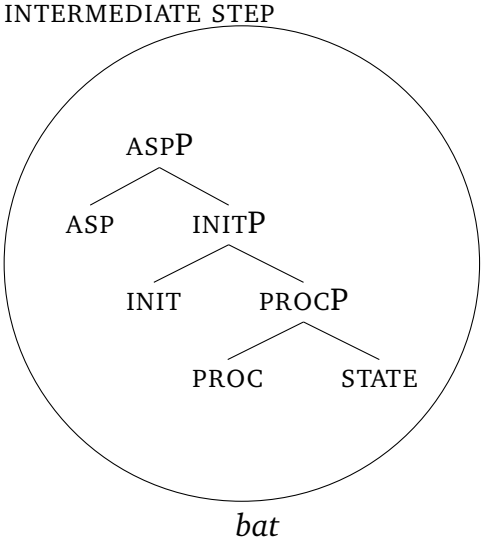


The derivation continues like that until ASP:

(57) DERIVATION OF BATI, 3SG PRS, INTERMEDIATE STEP

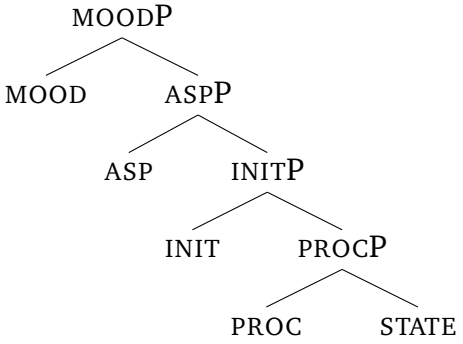


(58) DERIVATION OF BATI, 3SG PRS, INTERMEDIATE STEP



At this point, syntax merges the MOOD feature, yielding the structure (59).

(59) DERIVATION OF BATI, 3SG PRS, INTERMEDIATE STEP



However, the lexical entry for */bat/* is no longer able to lexicalize the entire structure, and there is no other matching item in the lexicon. In Nanosyntax, this is when movement occurs and the algorithm below is followed:

(60) THE SPELLOUT ALGORITHM, Starke (2022), cited from Caha (2023b):[9]

(a) Merge F and spell out

(b) If fail, move the closest non-remnant labelled constituent

(c) If fail, move the immediately dominating constituent and spell out (Recursive)

(d) If fail, go back to the previous cycle and try the next option for that cycle (backtracking)

Since (a) failed, syntax tries to rescue the derivation by applying the first possible spellout-driven movement. That is to move the closest non-remnant labelled

[9]This spellout algorithm has been explored for the first time in Starke (2022) and adopted in Caha (2023b), whose formulation is proposed here. The adopted algorithm differs from the one presented in Starke (2018) (cf. (1)) by allowing sub-extraction inside the specifier. This type of movement has been explored in different shapes in previous works: Pantcheva (2011) and Wiland (2019), respectively. Pantcheva (2011) assumes the possibility to move what is inside a specifier only when that node is marked for extraction. In Wiland (2019) the sub-extraction is the last option in the algorithm.

(1) THE SPELLOUT ALGORITHM, based on Starke (2018), cited from Caha (to appear)

(a) Merge F and spell out.

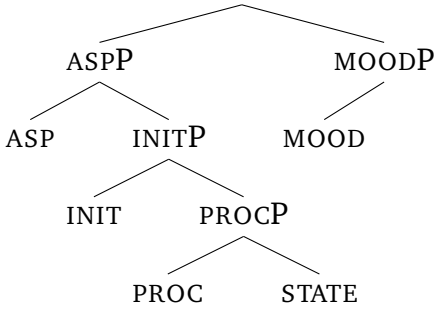
(b) If (a) fails, move the Spec of the complement and spell out.

(c) If (b) fails, move the complement of F and spell out.

(d) If (c) fails, go back to the previous cycle and try the next option for that cycle (backtracking).

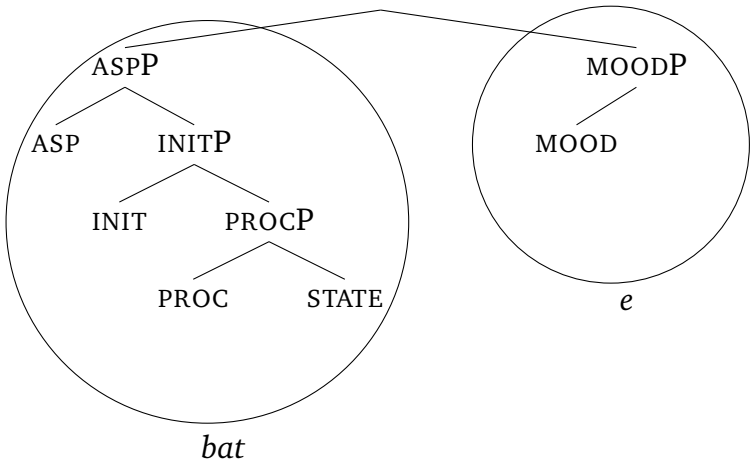
node. In our case, syntax selects ASPP as it is a non-remnant constituent, i.e. a constituent from which nothing has been moved out. Moreover, this constituent is also labelled, as stated in the algorithm. Notice that (i) spellout-driven movements leave no traces, (ii) when a node results from movement, it does not project a label.

(61) DERIVATION OF BATI, 3SG PRS, INTERMEDIATE STEP



Syntax now tries to lexicalize the entire structure with one lexical item. However, there is no matching item. The lexeme of the root */bat/* does contain the MOODP, but it does not contain a sub-constituent that matches the highest node in (61). The right branch is missing the IND, T and # features (see (47)). The matching procedure will thus be the following: the left branch can still be lexicalized by */bat/* as before, while the right branch on its own can be spelled out by the thematic vowel *-e*.[10]

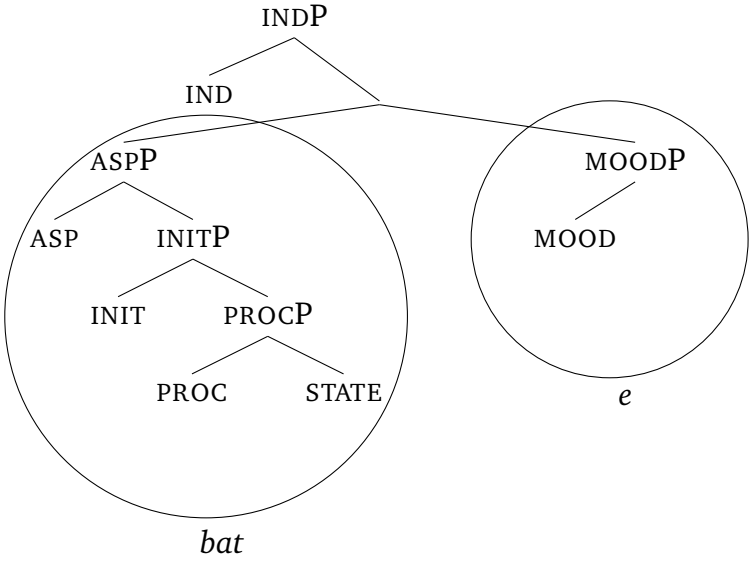
(62) DERIVATION OF BATI, 3SG PRS, INTERMEDIATE STEP



[10]The root could spell out both the left and the right branch, deriving the form *bat-bat*. However, the root */bat/* competes with the TV *-e* to lexicalize MOODP. Given the Elsewhere Principle (125), the TV wins the competition over the root since its lexical entry has the least amount of unused features.

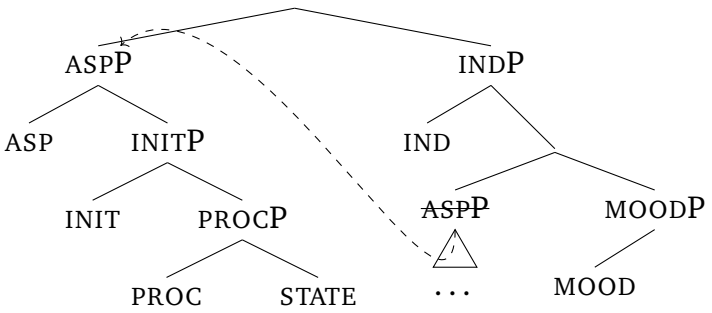
The same logic applies when syntax merges the next feature, i.e. IND.

(63) DERIVATION OF BATI, 3SG PRS, INTERMEDIATE STEP



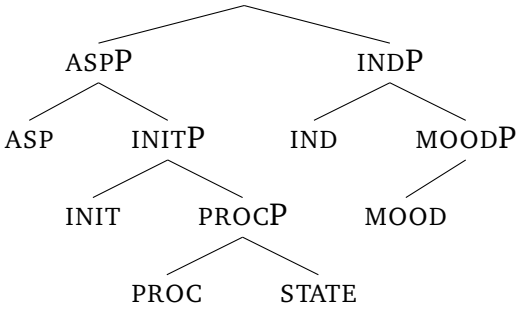
Again, there is no matching item in the lexicon for the structure built in syntax. So, movement gets triggered. Following the spellout algorithm, the closest non-remnant constituent in the tree gets moved. That is again the ASPP node, as shown in (64). Syntax cannot move the entire complement since it is unlabelled. It cannot move the MOODP either: it is labelled, but a remnant constituent. ASPP is thus selected and moved across INDP.

(64) DERIVATION OF BATI, 3SG PRS, INTERMEDIATE STEP



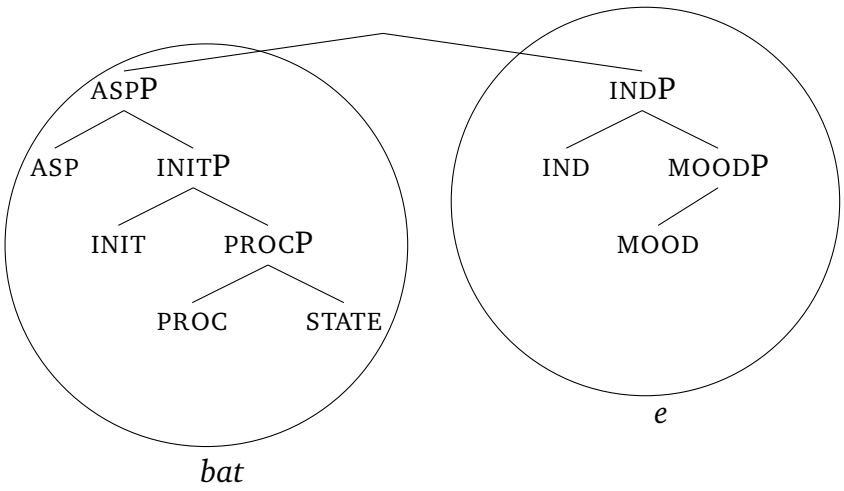
This movement leads to the configuration in (65).

(65) DERIVATION OF BATI, 3SG PRS, INTERMEDIATE STEP



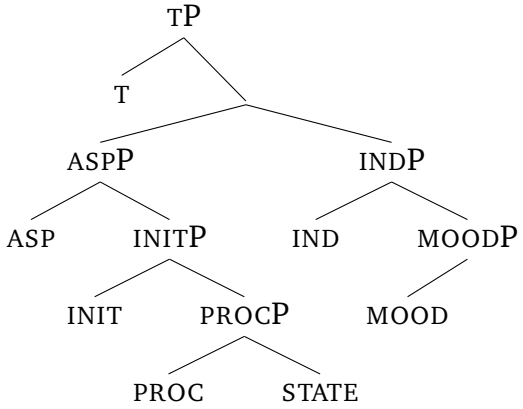
As before, there is no match for the entire structure in the lexicon, but the left branch can still be spelled out as */bat/* and the right one as the thematic vowel *-e*.

(66) DERIVATION OF BATI, 3SG PRS, INTERMEDIATE STEP



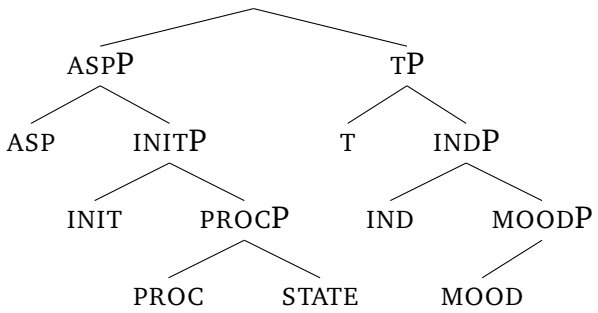
The derivation continues by merging T:

(67) DERIVATION OF BATI, 3SG PRS, INTERMEDIATE STEP



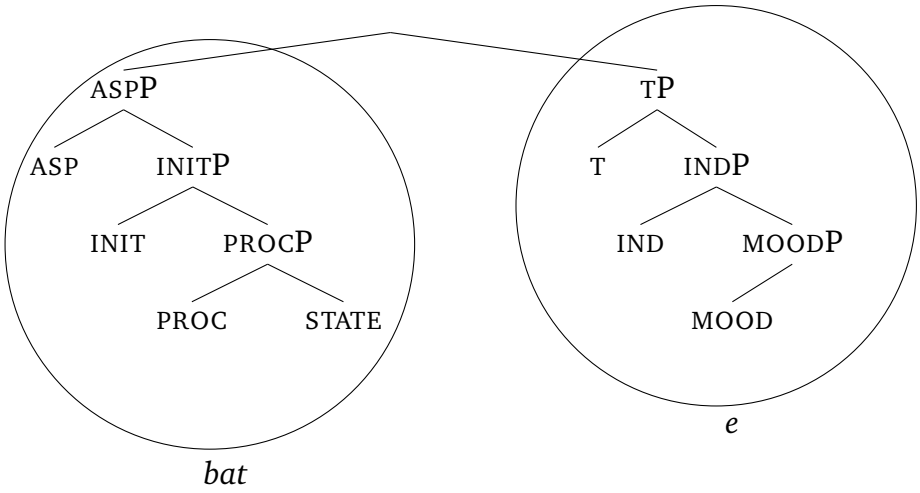
Again, there is no matching item that is able to lexicalize the whole structure. Following the spellout algorithm, syntax tries to move the closest non-remnant labelled node first. That is not the entire complement since it is unlabelled. It cannot be the INDP either since that is a remnant constituent. The ASPP is the only one that fulfills all the requirements. It thus gets moved across TP, leading to the structure below.

(68) DERIVATION OF BATI, 3SG PRS, INTERMEDIATE STEP



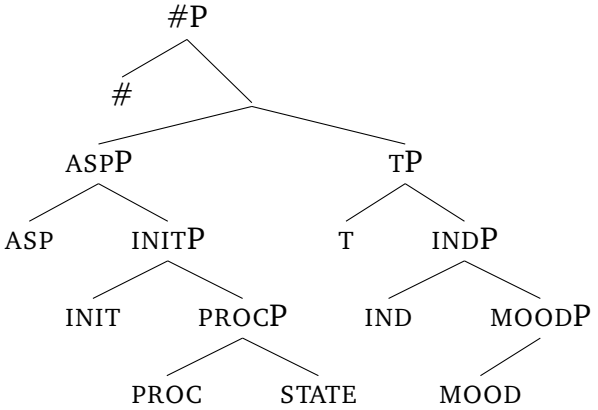
After movement took place, the left branch can be lexicalized by the root */bat/*, while the thematic vowel *-e* is now a perfect match for the right branch.

(69) DERIVATION OF BATI, 3SG PRS, INTERMEDIATE STEP



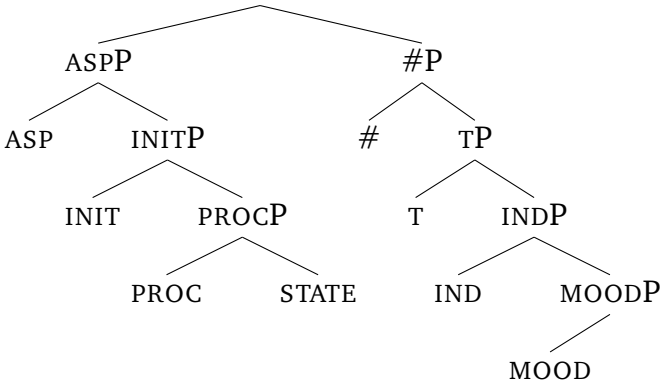
At this point syntax merges the # feature (70). As at each cycle, syntax checks the lexicon, but there is no matching item. So, movement is triggered.

(70) DERIVATION OF BATI, 3SG PRS, INTERMEDIATE STEP



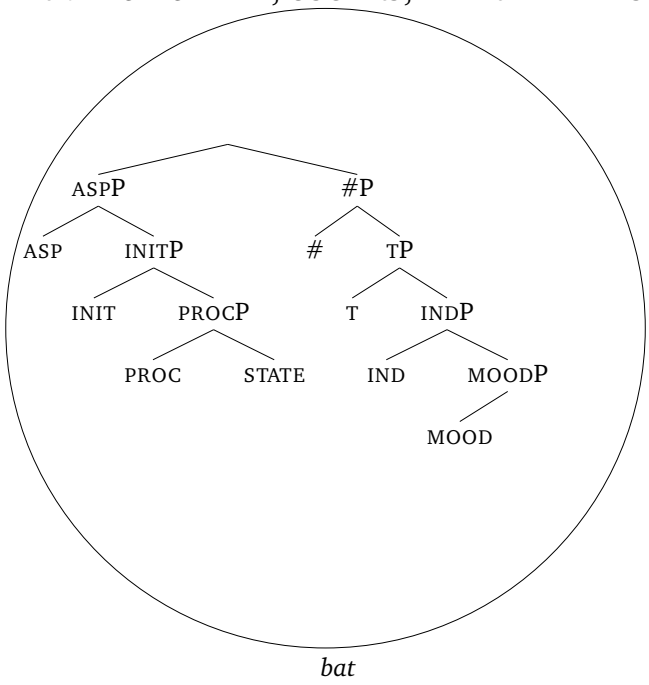
The first possible movement leads to:

(71) DERIVATION OF BATI, 3SG PRS, INTERMEDIATE STEP



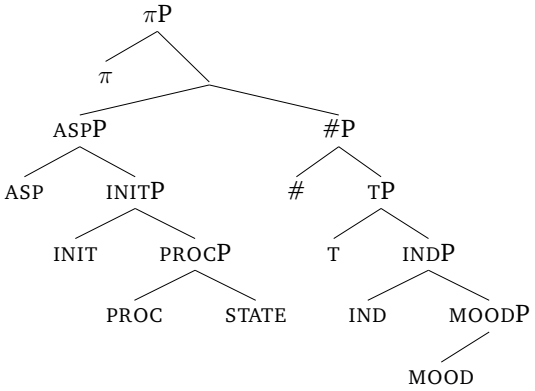
Now the whole structure gets spelled out as */bat/*:.

(72) DERIVATION OF BATI, 3SG PRS, INTERMEDIATE STEP



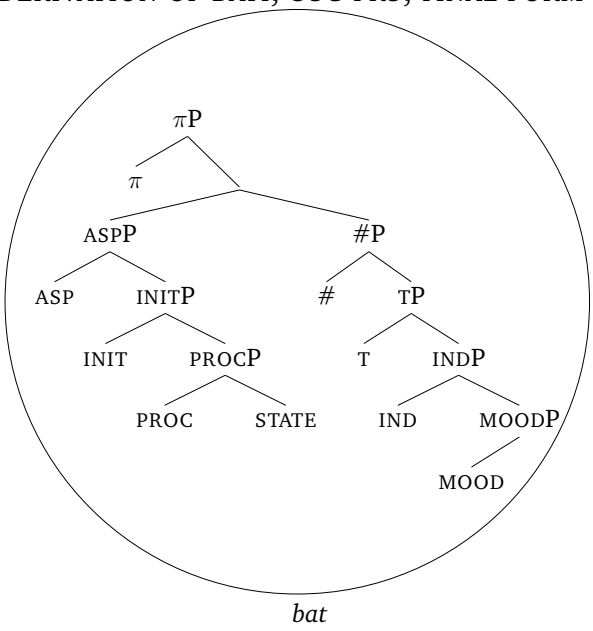
When syntax is building a 3SG, π is the feature merged after #, leading to the tree in (73).

(73) DERIVATION OF BATI, 3SG PRS, INTERMEDIATE STEP



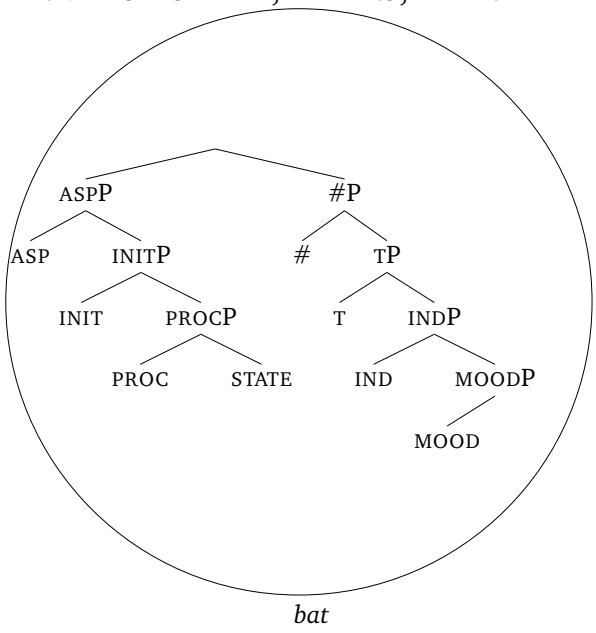
After adding π, the lexical entry of */bat/* is a perfect match for the tree. The root */bat/* can therefore pronounce all the features contained in the 3SG PRS structure.

(74) DERIVATION OF BATI, 3SG PRS, FINAL FORM



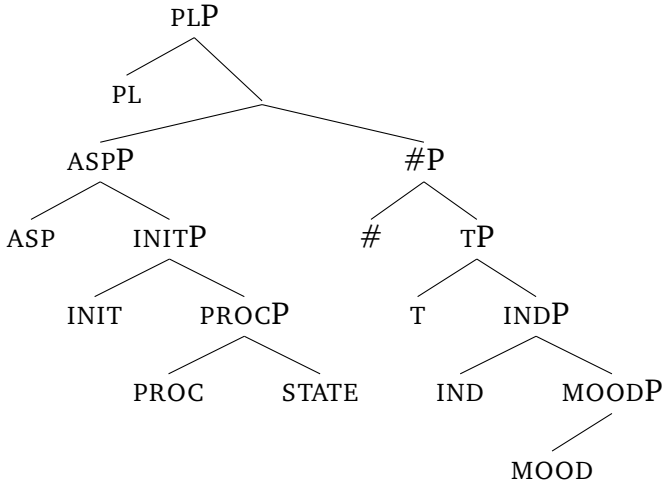
What happens when syntax is building a 2PL instead? The derivation will proceed in the same way as the 3SG up to #:

(75) DERIVATION OF BATI, 2PL PRS, INTERMEDIATE STEP



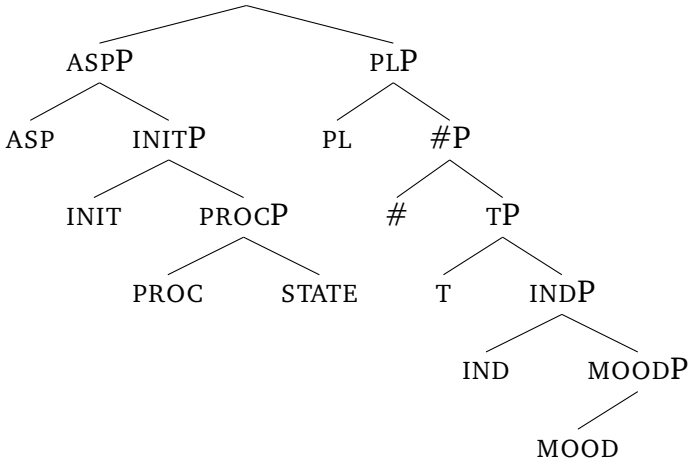
Contrary to the derivation of a 3SG, this time the PL feature is merged above #.

(76) DERIVATION OF BATI, 2PL PRS, INTERMEDIATE STEP



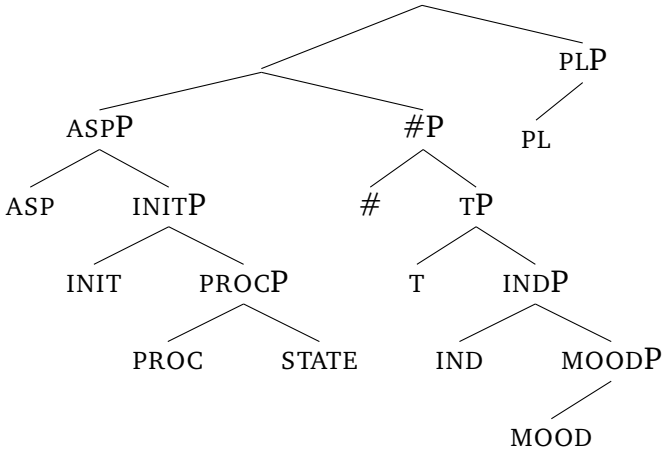
At this stage, syntax checks the lexicon for a matching item, but there is none. So, movement is triggered. Following the algorithm, we first try to move the closest non-remnant labelled node in the tree, i.e. ASPP.

(77) DERIVATION OF BATI, 2PL PRS, INTERMEDIATE STEP



This attempt fails since there is no matching lexical item for (77). We thus undo that movement and try the next step of the algorithm: move the ASPP with pied-piping, i.e. move the immediately dominating node across PLP (78).

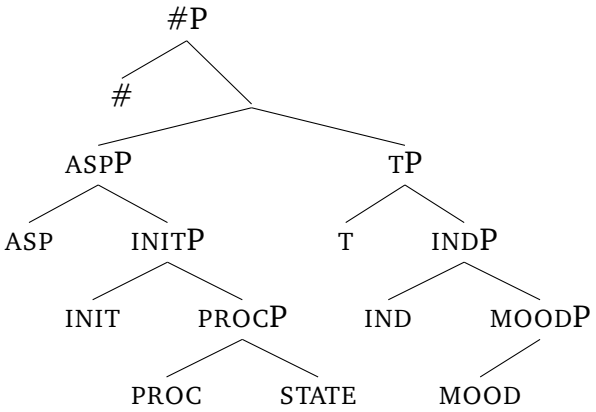
(78) DERIVATION OF BATI, 2PL PRS, INTERMEDIATE STEP



However, that movement also fails to rescue the derivation: the root could still lexicalize the left part of the tree, but in our lexicon there is no item that matches the PLP.

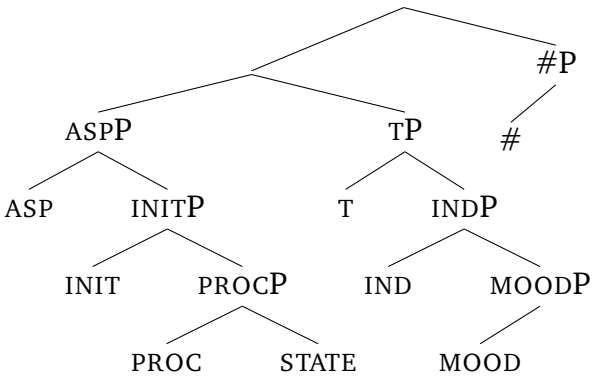
Since all the possible movements failed, we are left with the last option of the algorithm: backtracking, which says to go back to the previous cycle and try the next option for that cycle. We thus need to undo the merging of PL, and go to the previous cycle, which is merging #.

(79) DERIVATION OF BATI, 2PL PRS, BACKTRACKING



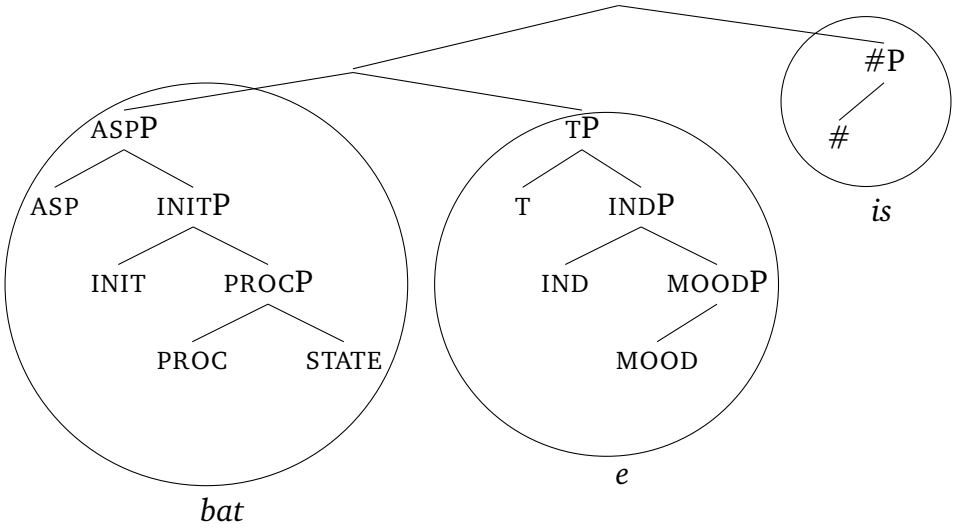
Before we spelled out # by moving ASPP. However, this will lead to an unlexicalizable structure later on. Based on the backtracking procedure, we try the next option for this cycle, i.e. movement of ASPP with pied-piping of the immediately dominating constituent.

(80) DERIVATION OF BATI, 2PL PRS, BACKTRACKING



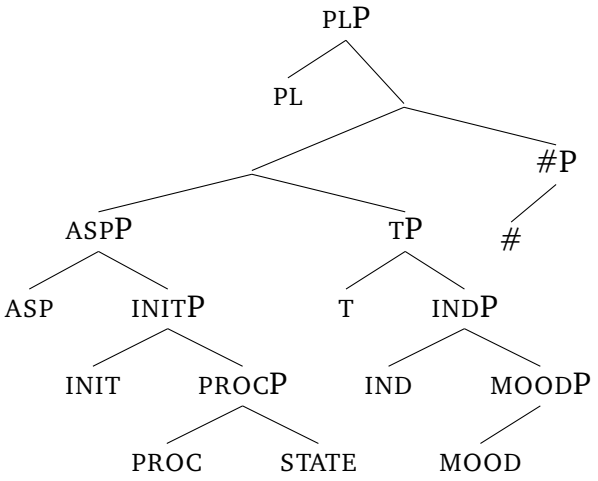
We now check our lexicon for a matching item to lexicalize the tree built in syntax. There is no matching item able to lexicalize the whole structure. So, the matching procedure will be the following: the root */bat/* matches the ASPP, while the thematic vowel *-e* is a perfect match for the TP. The #P gets lexicalized by the agreement suffix *-is*. Notice that we are back to a configuration where the thematic vowel is needed to lexicalize TP.

(81) DERIVATION OF BATI, 2PL PRS, INTERMEDIATE STEP



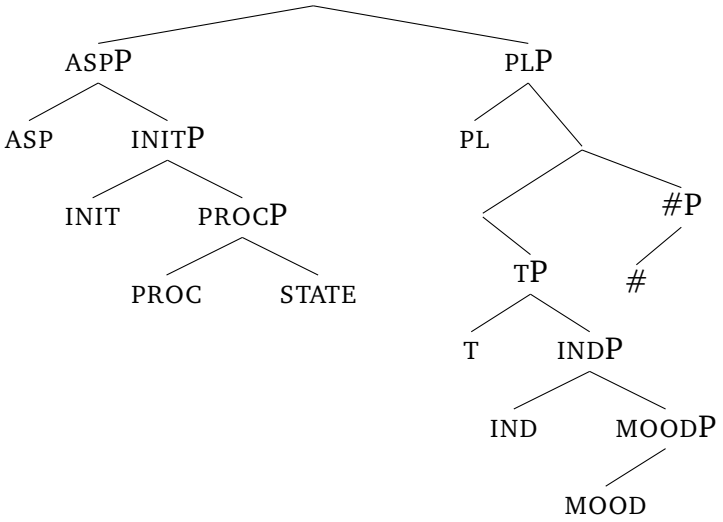
The derivation proceeds by merging the next feature, which is PL.

(82) DERIVATION OF BATI, 2PL PRS, INTERMEDIATE STEP



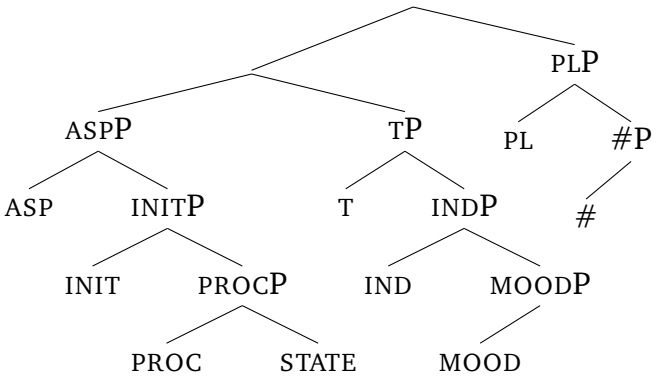
Again, there is no matching item for the syntactic tree in (82), so movement is triggered. The first rescue operation is to move the closest non-remnant labelled constituent. Going down from PLP, syntax will encounter an unlabelled node, which is thus discarded. The same reason holds for the lower unlabelled node. The TP constituent is labelled, but movement has occurred inside. That means it is a remnant constituent. It follows that is also not a good candidate for movement. The only constituent that meets all the requirements is ASPP, which is labelled and non-remnant. ASPP is thus sub-extracted:

(83) DERIVATION OF BATI, 2PL PRS, INTERMEDIATE STEP



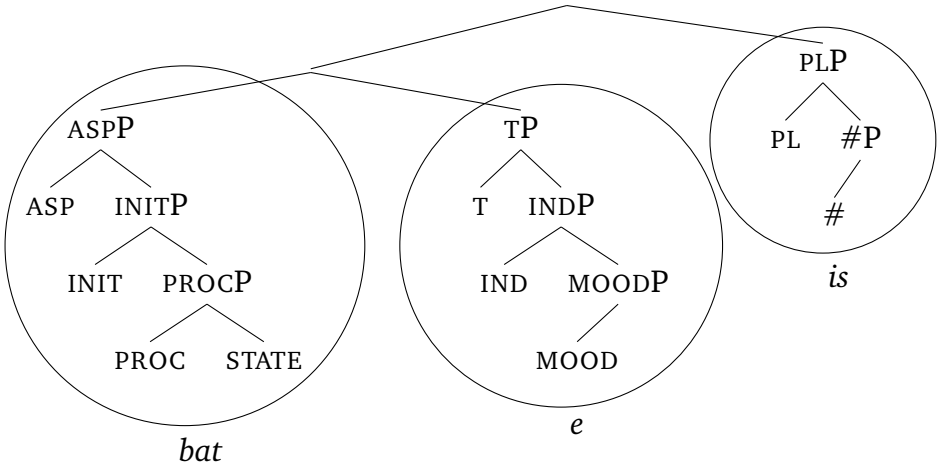
This movement, however, does not lead to a successful lexicalization. We thus undo the previous movement and try the next option: move ASPP with pied-piping of the immediately dominating node. The result is shown below:

(84) DERIVATION OF BATI, 2PL PRS, INTERMEDIATE STEP



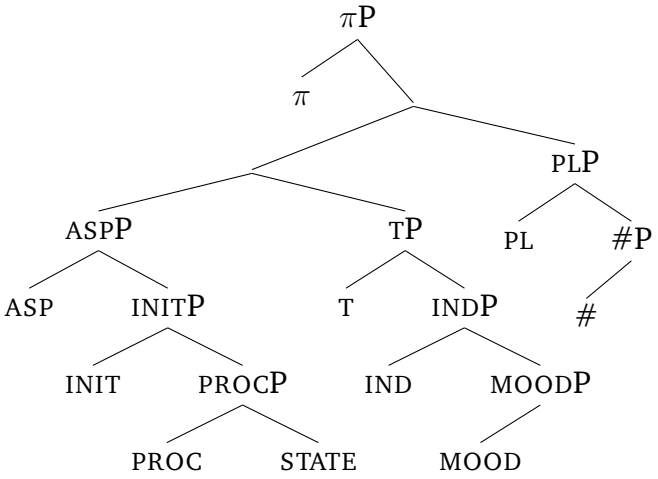
The structure can be successfully lexicalized as indicated by the circles in (85).

(85) DERIVATION OF BATI, 2PL PRS, INTERMEDIATE STEP



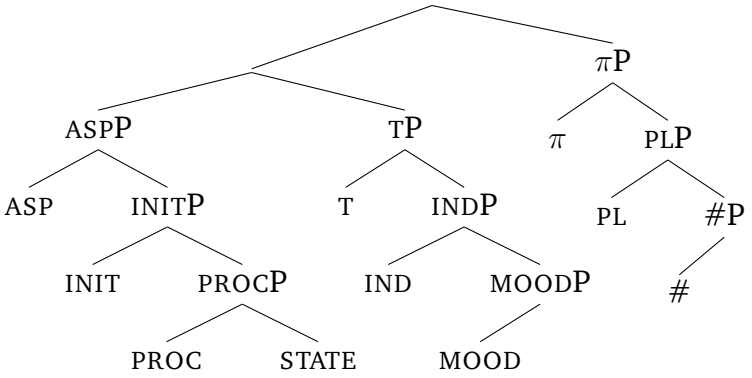
The derivation of the 2PL would continue by adding the π feature.

(86) DERIVATION OF BATI, 2PL PRS, INTERMEDIATE STEP



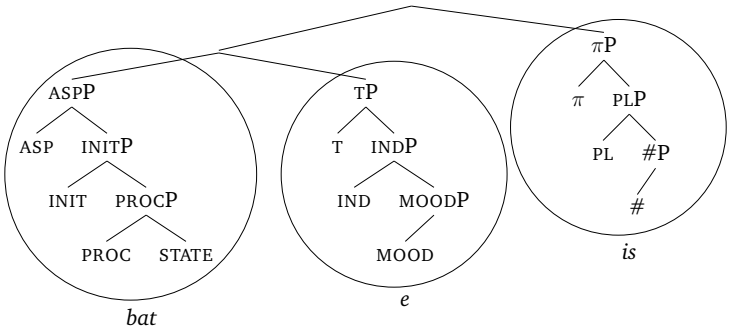
As in the previous cycle, movement gets triggered. First, we try to sub-extract ASPP. When that fails, we move the whole Spec, leading to (87).

(87) DERIVATION OF BATI, 2PL PRS, INTERMEDIATE STEP



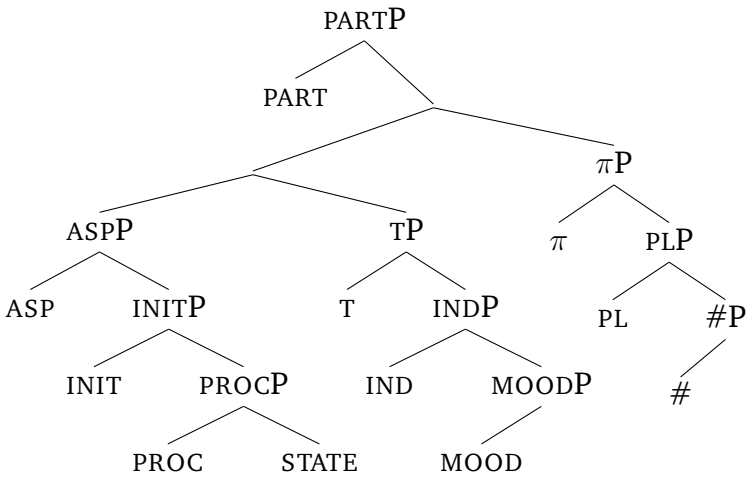
As we have seen before, at this point we try to spell out the highest node, but that fails. So, spellout goes lower: ASPP is spelled out by */bat/*, whereas TP by the TV *-e*. The lexical entry of *-is* matches the πP. In (88) we can see how the syntactic structure gets lexicalized.

(88) DERIVATION OF BATI, 2PL PRS, INTERMEDIATE STEP



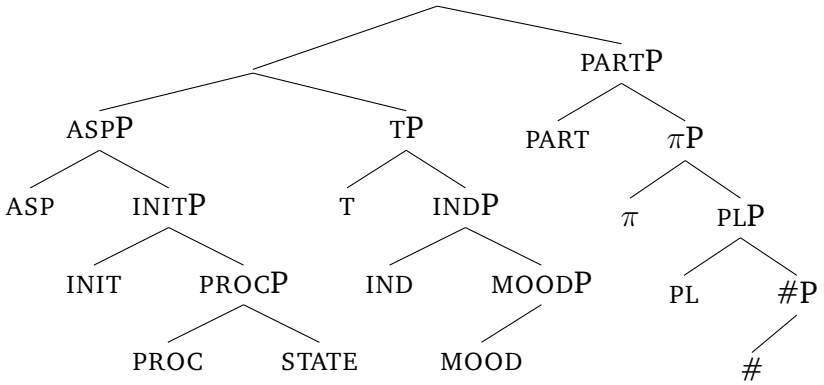
After that, the last feature is merged, i.e. PART:

(89) DERIVATION OF BATI, 2PL PRS, INTERMEDIATE STEP



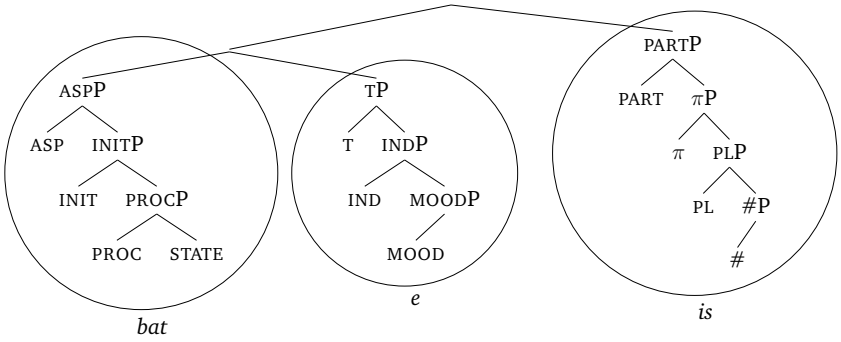
After trying to evacuate the ASPP from the Spec, the next available movement yields the structure in (90).

(90) DERIVATION OF BATI, 2PL PRS, INTERMEDIATE STEP



The ASPP node can still be spelled out as */bat/*, while the TP as *-e*. The lexical entry of *-is* is a perfect match for PARTP.

(91) DERIVATION OF BATI, 2PL PRS, FINAL FORM



We therefore correctly derive the fact that *e*-verbs combine with the TV in the 2PL, but not in the 3SG form. The shape of the lexical entry of the root */bat/* allows us to do that.

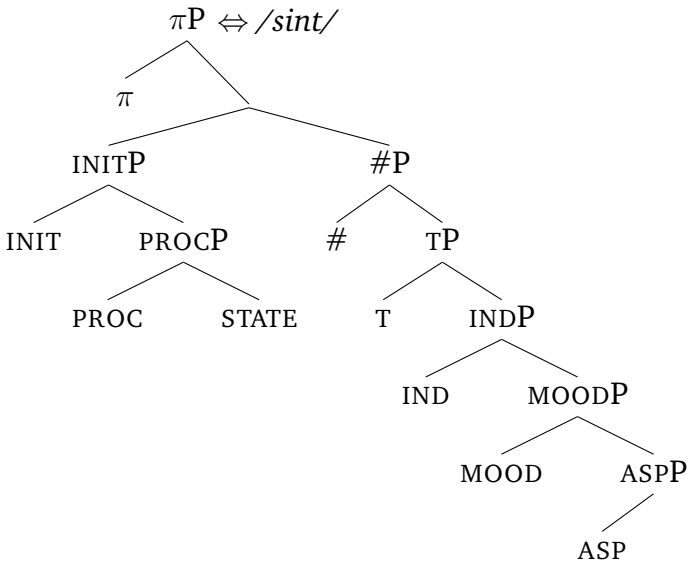
2.2.3 I-verbs

As introduced in § 2.2.1, the same puzzle holds for *i*-verbs: they show the thematic vowel *-i* in the 2PL, but not in the 3SG PRS.

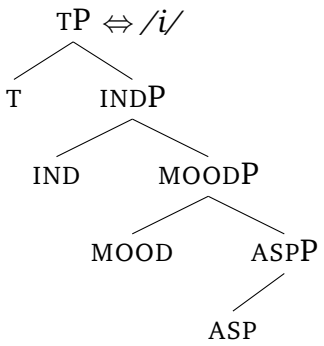
(92) I-VERBS, 3SG AND 2PL
a. *sint* ('she/he hears')
b. *sint-**i**-is* ('you hear')

In § 2.2.1, I suggested the same solution adopted for the *e*-verbs, introducing a lexical entry with a CLB for *i*-roots as well. Now I will run the derivation. Here are the relevant lexical entries for the 3SG and 2PL PRS forms:

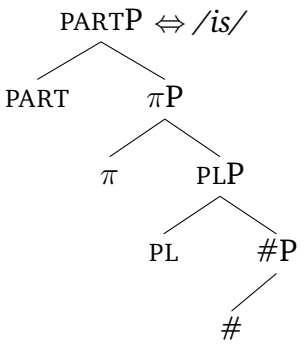
(93) LEXICAL ENTRY OF SINT



(94) LEXICAL ENTRY OF -I

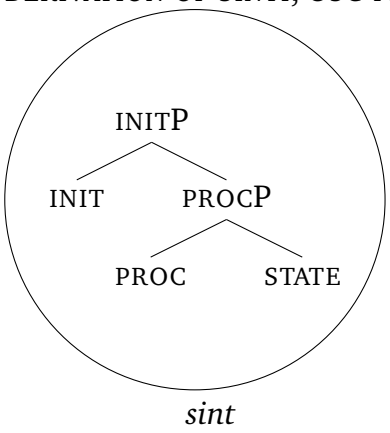


(95) LEXICAL ENTRY OF -IS



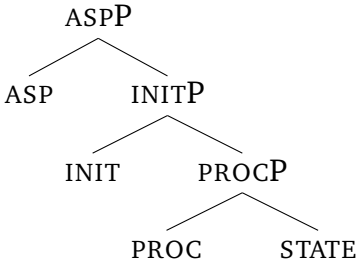
Compared to *e*-roots, *i*-roots show a different constituent on their left branch, i.e. [INIT[PROC STATE]. The ASP constituent is placed on the right branch. The syntactic derivation will proceed exactly as before up to INIT, and the root */sint/* matches the tree.

(96) DERIVATION OF SINTÎ, 3SG PRS, INTERMEDIATE STEP

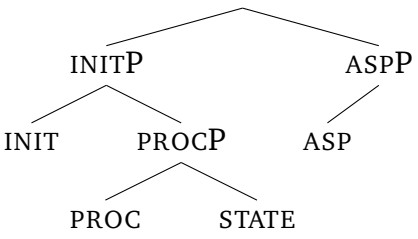


After that, ASP is merged. This time, however, the lexical entry of */sint/* does not match the syntactic structure. So, spellout-driven movement takes place. Following the spellout algorithm, syntax tries to move the closest non-remnant labelled constituent: INITP. This movement yields the tree in (98).

(97) DERIVATION OF SINTÎ, 3SG PRS, INTERMEDIATE STEP



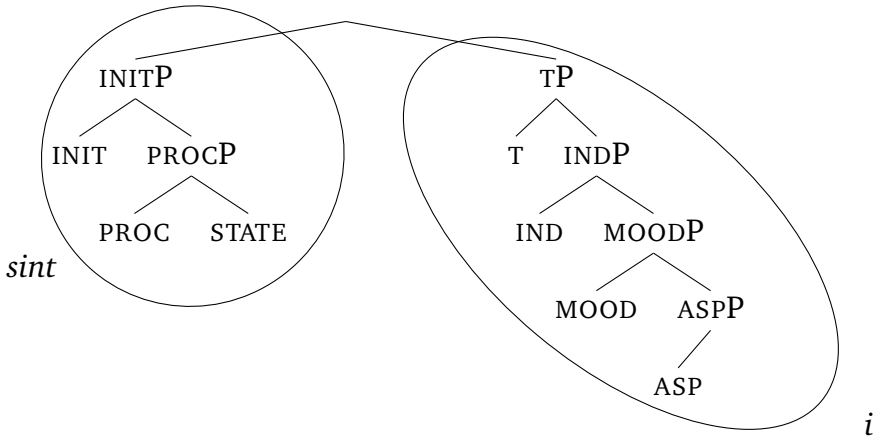
(98) DERIVATION OF SINTÎ, 3SG PRS, INTERMEDIATE STEP



The root */sint/* can still lexicalize the left branch, whereas the right branch is spelled out by the TV *-i*, whose entry contains the ASP constituent.

The derivation will continue in the same way of the *e*-verbs. For this reason, we skip some intermediate steps and directly go to the stage shown in (99).

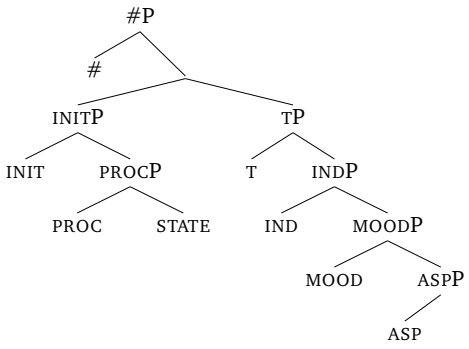
(99) DERIVATION OF SINTÎ, 3SG PRS, INTERMEDIATE STEP



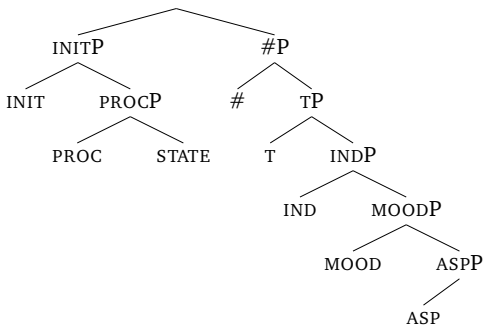
The left side is spelled out by the root, while the lexical entry of *-i* perfectly matches the right side. It is worth to point out that the whole structure cannot be spelled out by the root */sint/*. Despite the fact that its lexical entry contains the ASPP (see (93)). However, it does not contain a sub-constituent that matches the topmost node in (99).

After spelling out (99), syntax merges # (see 100). As it happened for the *e*-verbs, there is no matching lexical item, so movement gets triggered. Moving down from #P, we encounter a node that is unlabelled. It is thus not a good candidate for the first rescue movement. The TP is also not a good candidate as movement has occurred inside it. The only candidate is INITP, which is moved across #P. The tree in (101) shows the result of that movement.

(100) DERIVATION OF SINTÎ, 3SG PRS, INTERMEDIATE STEP

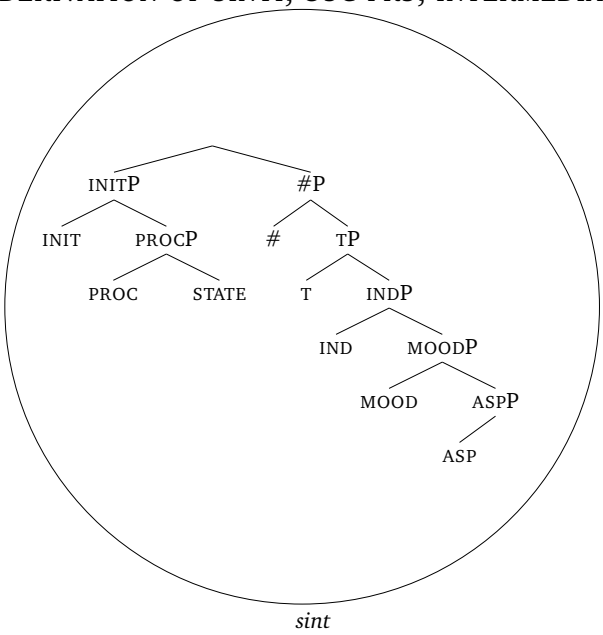


(101) DERIVATION OF SINTÎ, 3SG PRS, INTERMEDIATE STEP



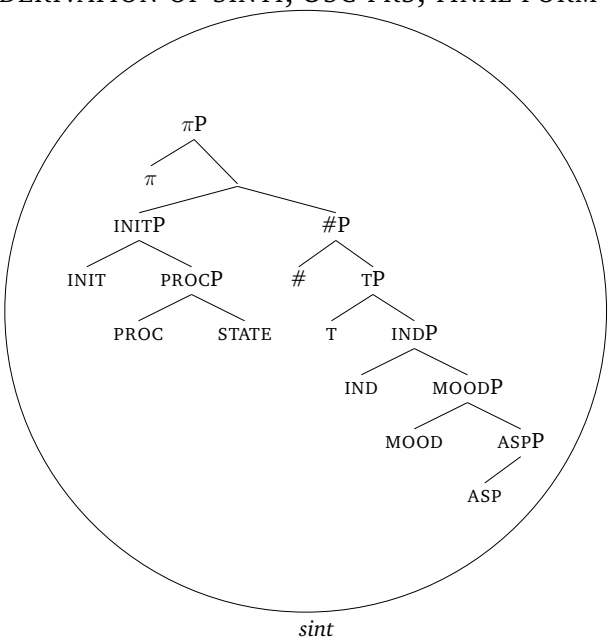
The lexical entry of */sint/* now matches the entire tree.

(102) DERIVATION OF SINTÎ, 3SG PRS, INTERMEDIATE STEP



When syntax is building a 3SG PRS forms, the derivation continues by merging π. We can see that the tree in (103) is identical to the lexical entry of */sint/*, which is thus a perfect match.

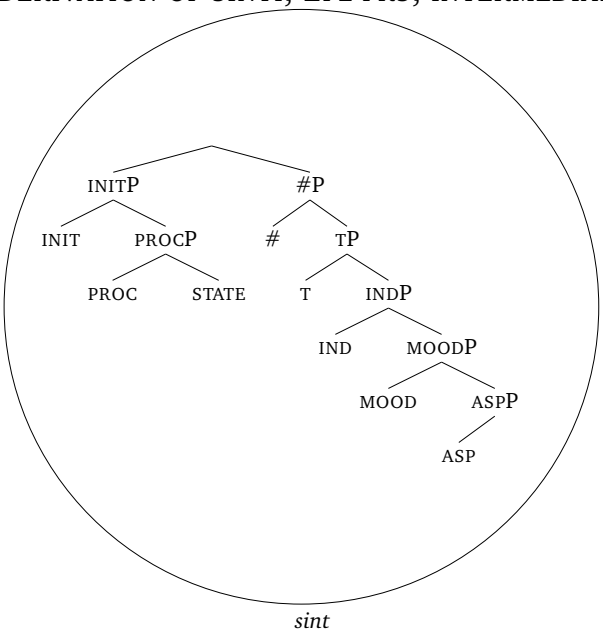
(103) DERIVATION OF SINTÎ, 3SG PRS, FINAL FORM



Let us now see what happens when syntax builds a 2PL PRS. The derivation

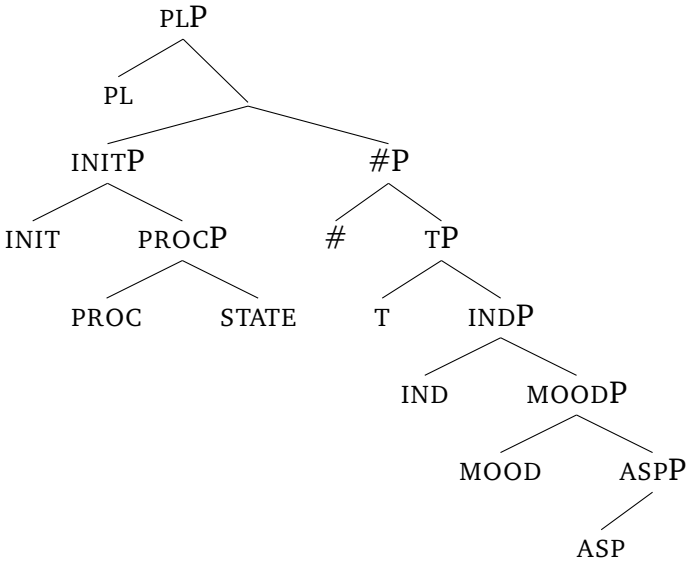
is exactly the same of the 3SG up to #.

(104) DERIVATION OF SINTÎ, 2PL PRS, INTERMEDIATE STEP



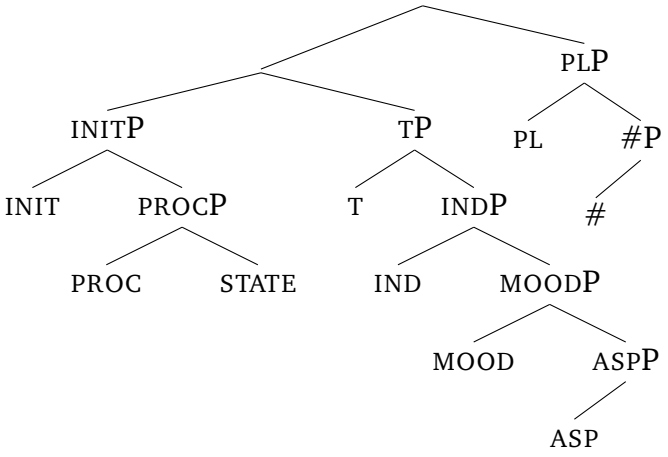
At this point, syntax merges the feature PL.

(105) DERIVATION OF SINTÎ, 2PL PRS, INTERMEDIATE STEP



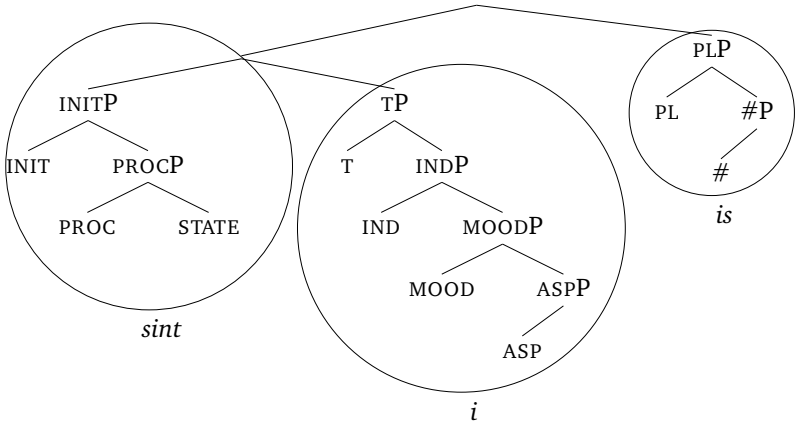
After that, the derivation will get a bit more involved, introducing backtracking. Since the derivation is basically the same as for the *e*-verbs, we will skip the intermediate steps that lead to (106). The reader can refer back to (76)-(91) to go through a step-by-step derivation.

(106) DERIVATION OF SINTÎ, 3PL PRS, INTERMEDIATE STEP



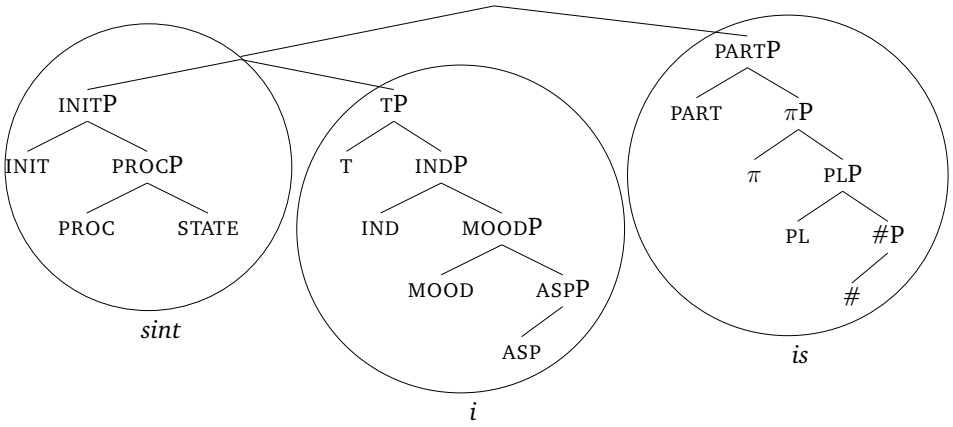
Compared to (103), the root does not match the whole tree anymore, but only the INITP. The remaining constituents are lexicalized by the TV *-i* and the agreement suffix *-is*.

(107) DERIVATION OF SINTÎ, 2PL PRS, INTERMEDIATE STEP



The derivation continues by merging the remaining features, i.e. π and PART. After each merge, movement applies, yielding the structure below, which gets lexicalized as indicated by the circles.

(108) DERIVATION OF SINTÎ, 2PL, FINAL FORM



On analogy to the *e*-verbs, the constituency of the lexical entry of */sint/* allows us to derive the presence/absence of the thematic vowel in the 2PL and 3SG PRS forms of the *i*-verbs.

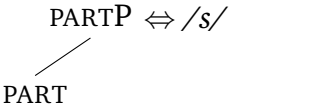
2.2.4 The 2SG PRS

In § 2.2.2 and § 2.2.3 we have seen why the TV pops up in the 2PL in both classes. While doing that, we have also derived that *e*-verbs and *i*-verbs combine with different thematic vowels. That difference is derived due to the different constituent on the left branch of the lexical entries (see 47 and 48). However, this does not prevent the two classes to behave in the same way in other forms throughout their paradigm. For instance, that is the case of the 3SG and 2SG PRS forms. The former has been already derived in the previous section, while we will now examine what happens when syntax builds a 2SG PRS form with these two different root types. Both *e*- and *i*-verbs show the root followed by the suffix *-s*.

(109) 2SG PRS OF E-VERBS AND I-VERBS
- a. *bat-s* ('you hit')
- b. *sint-s* ('you hear')

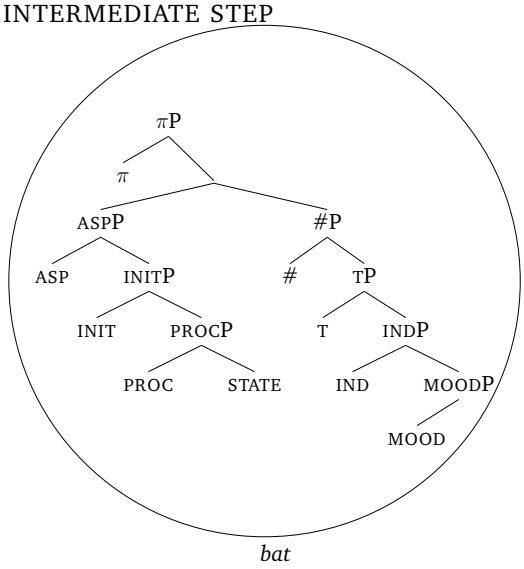
The lexical entries of the roots are shown in (47) and (48). The lexical entry of *-s* is:

(110) LEXICAL ENTRY OF -S

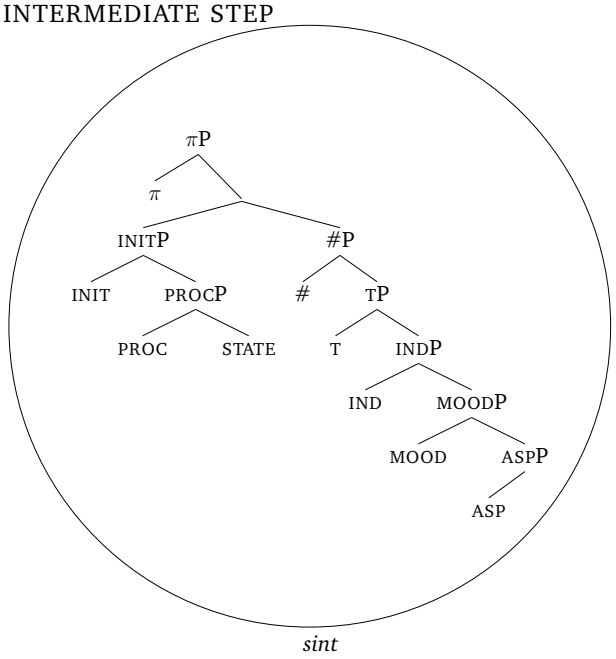


To see what happens when the syntactic engine builds a 2SG PRS, we resume the derivations from this stage:

(111) DERIVATION OF BATI, 2SG PRS, INTERMEDIATE STEP

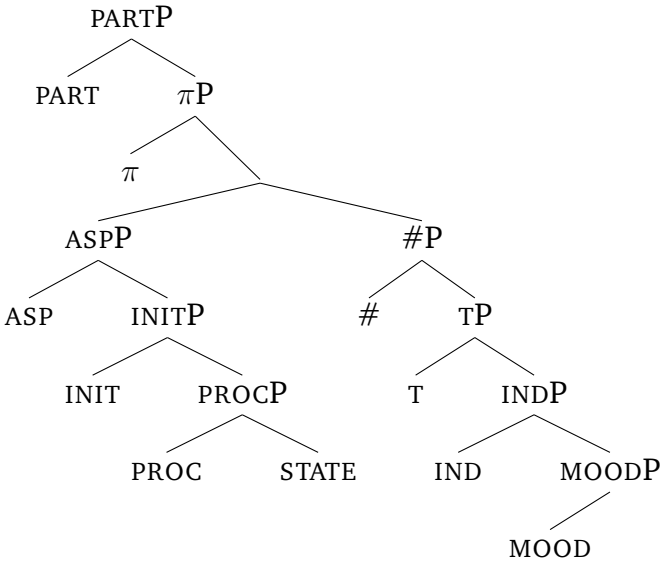


(112) DERIVATION OF SINTÎ, 2SG PRS, INTERMEDIATE STEP

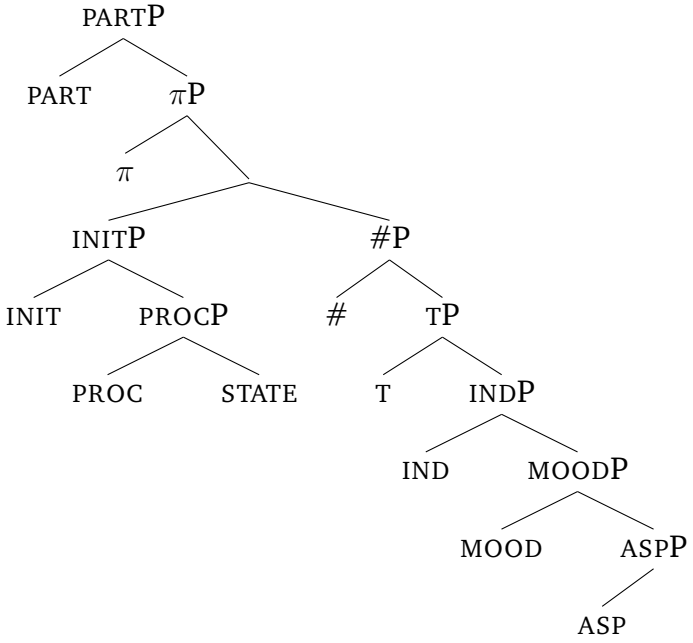


Both */bat/* and */sint/* are a perfect match for the entire syntactic tree. After that, the PART feature is merged in order to build a second person.

(113) DERIVATION OF BATI, 2SG PRS, INTERMEDIATE STEP

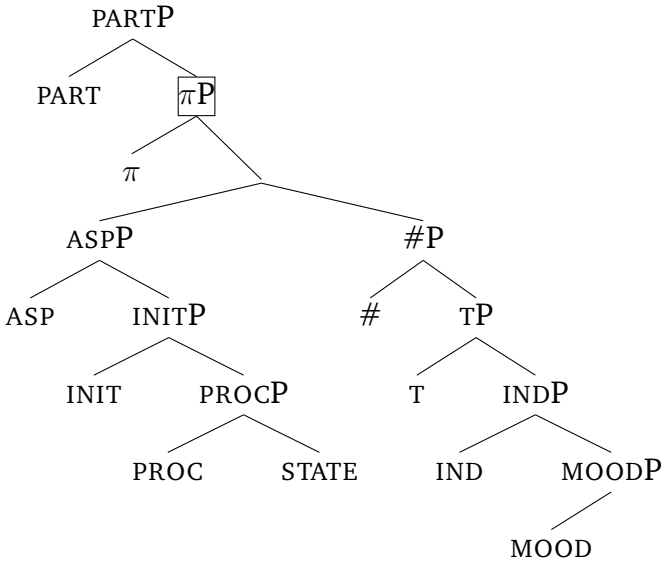


(114) DERIVATION OF SINTÎ, 2SG PRS, INTERMEDIATE STEP

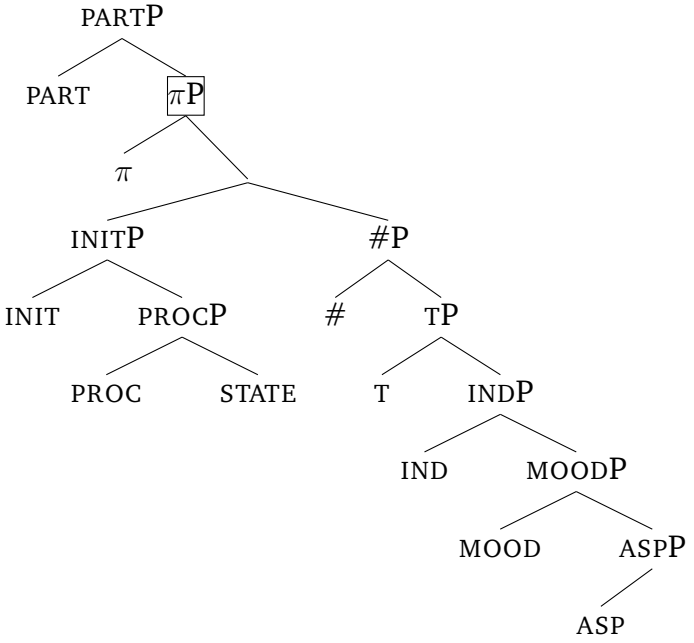


There is no matching item in the lexicon for neither of the two syntactic structures. So, movement is triggered. Following the spellout algorithm, syntax searches for the closest non-remnant labelled constituent first. Looking down from PARTP, it finds πP, which is the perfect candidate for movement.

(115) DERIVATION OF BATI, 2SG PRS, INTERMEDIATE STEP

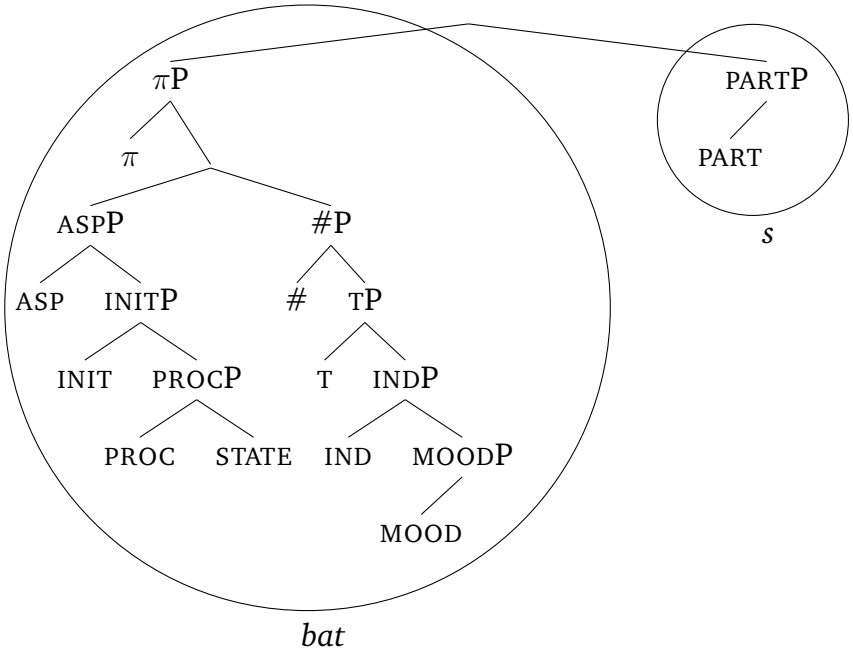


(116) DERIVATION OF SINTÎ, 2SG PRS, INTERMEDIATE STEP

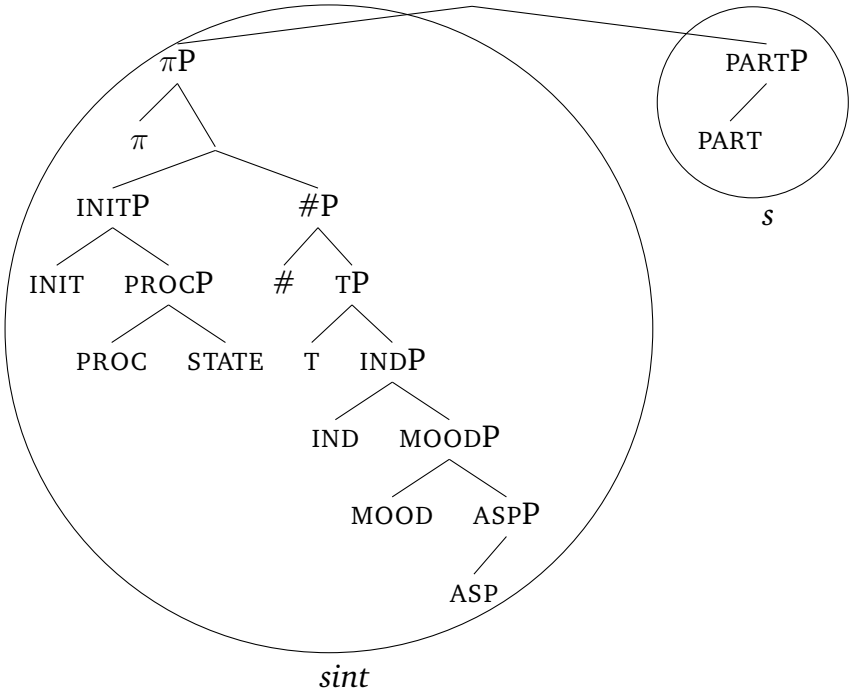


Moving πP leads to a successful lexicalization. The full lexical entries of */bat/* and */sint/* are an exact match for the left branch of the syntactic tree, while the lexical entry of *-s* is a perfect match for the right branch.

(117) DERIVATION OF BATI, 2SG PRS, INTERMEDIATE STEP



(118) DERIVATION OF SINTÎ, 2SG PRS, INTERMEDIATE STEP



We thus derived the syncretic forms across paradigms: *e*- and *i*-roots are both followed by the agreement suffix *-s* in the 2SG. Both classes show only the root in the 3SG. While doing that, we also derived why they differ in the 2PL PRS form.

2.3 Syncretism within a paradigm

E-verbs and *i*-verbs display also syncretism within their paradigm: the 1SG and 3SG PRS are syncretic in both classes.

(119)

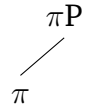
		e-verbs	*i*-verbs
SG	1	bat	sint
	3	bat	sint

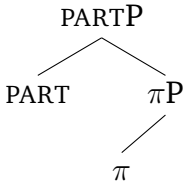
When we place the forms into the context of 2SG, we get the following table:

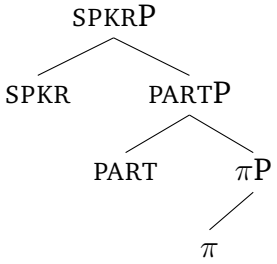
(120)

		e-verbs	*i*-verbs
SG	1	bat	sint
	2	bat-s	sint-s
	3	bat	sint

Given our assumptions about the morphosyntactic structure of the three persons (see 121), this pattern seems a violation of the *ABA constraint. We assume that the 3SG shows the simplest structure as depicted in (121a). The 2SG, on the other hand, requires an additional feature, i.e. PART. When it comes to the 1SG, one more feature is added: SPKR.

(121) a. 

b. 

c. 

The structures in (121) are motivated by empirical evidence in Cysouw (2009) and the investigation of attested syncretisms for person marking in independent pronouns by Vanden Wyngaerd (2018). Starke (2021) proposes the same three privative features for inflectional person marking in French verbs.

The number of features grows from the 3SG to 1SG: the tree of a 3SG contains the π feature only; a 2SG tree contains the same feature plus the PART; a 1SG form shows the same two features plus the SPKR. In (122), each row corresponds to the trees in (121).

(122) CUMULATIVE FEATURE DECOMPOSITION

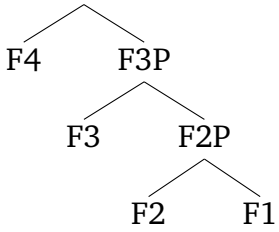
PERSON	FEATURES
3	π
2	π, PART
1	π, PART, SPKR

The features are ordered in terms of growing complexity. As we have seen in (120), TF shows an instance of an ABA pattern in those forms. However, when

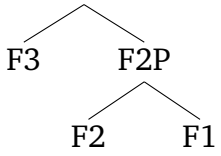
morphosyntactic structures exhibit containment relations such as in (121), we expect to find the so-called *ABA constraint on syncretism (see, e.g., Starke 2009, Caha 2009, Bobaljik 2012). In Nanosyntax, the explanation of such constraint follows from the combination of the Superset Principle and the Elsewhere Condition.

To see that, I set up the abstract lexical entries below (adapted from Caha (to appear)).

(123) a. F4P ⇔ */A/*

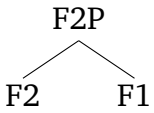


b. F3P ⇔ */B/*



In order to spell out F4P, the entry of A is a perfect match. B, on the other hand, is a perfect match for F3P. What happens when F2P has to be spelled out?

(124)



Based on the Superset Principle, both lexical entries match the tree since they both contain the F2P node. Here we hit on the second principle, i.e. the Elsewhere Condition, which says that:

(125) ELSEWHERE CONDITION, Kiparsky (1973), cited from Caha (2021b)
When two entries can spell out a given node, the more specific entry wins. The more specific entry is the one that has fewer features.

In our mock derivation, the lexical entry for B is the one with fewer features. It thus wins the competition over A, creating an ABB pattern. The ABA pattern cannot be derived.

So, how could we derive the attested ABA pattern in the SG forms of TF? The lexicalization tables of the attested ABA patterns are shown below. Notice that the forms are organized from the least to the most complex, i.e. from 3 to 1.

(126) LEXICALIZATION TABLE OF BATI, SG PRS

STATE	PROC	INIT	ASP	MOOD	IND	T	#	π	PART	SPKR
bat										
bat									s	
bat										

(127) LEXICALIZATION TABLE OF SINTÎ, SG PRS

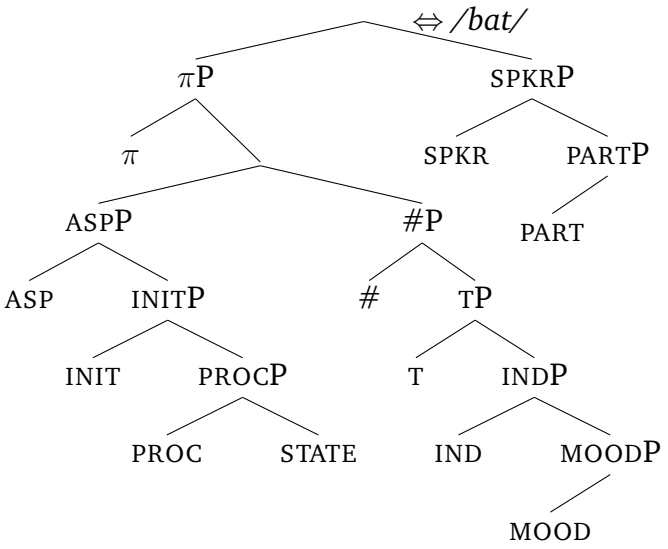
STATE	PROC	INIT	ASP	MOOD	IND	T	#	π	PART	SPKR
sint										
sint									s	
sint										

As shown in the tables (126)-(127), the roots */bat/* and */sint/* can lexicalize all the features contained in a 1SG form. Consequently, their lexical entries contain also the PARTP node. We would then expect the roots */bat/* and */sint/* to be able to lexicalize also the entire syntactic structure of a 2SG PRS. It is thus surprising that the suffix *-s* is needed to spell out exactly that node, leading to a violation of the *ABA pattern on the surface.

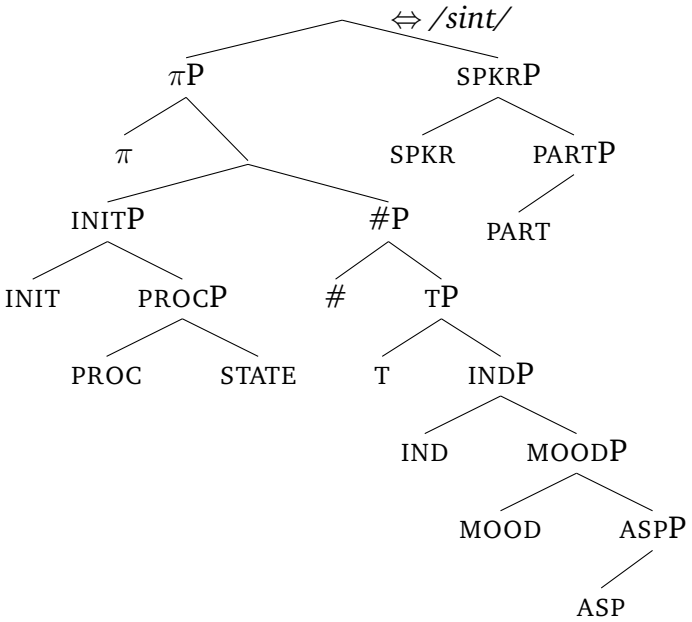
Assuming we want to keep the same FSEQ, there are two logical options.[11] One option is that the roots are actually followed by a null allomorph in the 1SG. The second option is that the roots do not contain a sub-constituent able to match the entire structure built by syntax to express a 2SG PRS in their lexical entry. To avoid zero suffixes, I opt for the second possibility. Under that view, we simply need to update the lexical entries of */bat/* and */sint/* like that:

[11]More logical options would be available if we allow changing the FSEQ. Here I list some possibilities. One option is that the second person is actually the most marked person. This would lead to a different feature hierarchy: [ADDRESSEE [SPKR [π]]]. Another possible solution could be that the PART feature is missing in the 1SG. As pointed out by Starke (2022), this gap approach would deny that feature are cumulative. In addition to these options, one could also assume that the 2SG is not a proper subset of the 1SG, showing an additional feature such as familiar (FAM), as proposed in Taraldsen (2021).

(128) LEXICAL ENTRY OF BAT



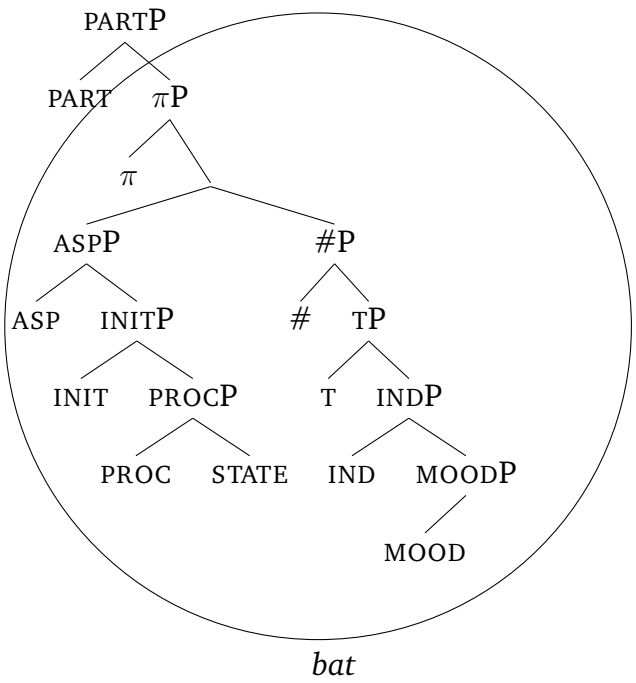
(129) LEXICAL ENTRY OF SINT



Compared to the previously proposed lexemes, the two root types exhibit two additional features on a second right branch, i.e. PART and SPKR. The feature arrangement, however, is such that the lexically stored trees do not contain a subconstituent able to match the entire structure built by syntax to express a 2SG PRS. That is the exact same logic that applies for deriving the presence/absence of the thematic vowels throughout the paradigms (see § 2.2.1).

Let us go through the derivation of the 1SG of an *e*-verb, resuming the derivation from this stage: after successfully lexicalizing a 3SG form, syntax merges the PART feature.

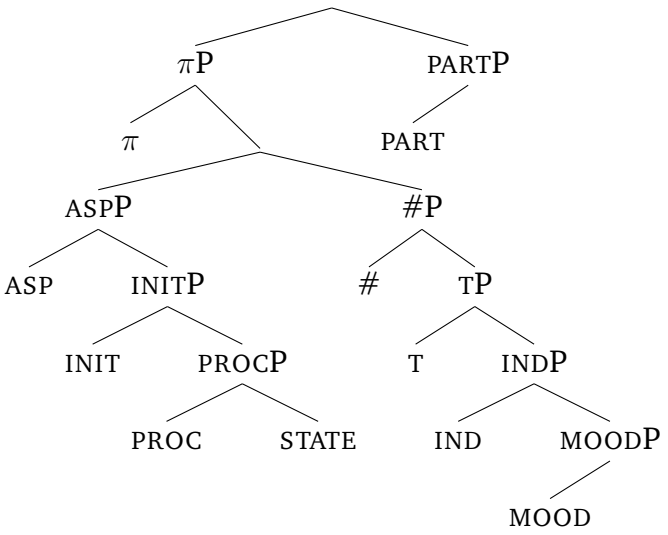
(130)



bat

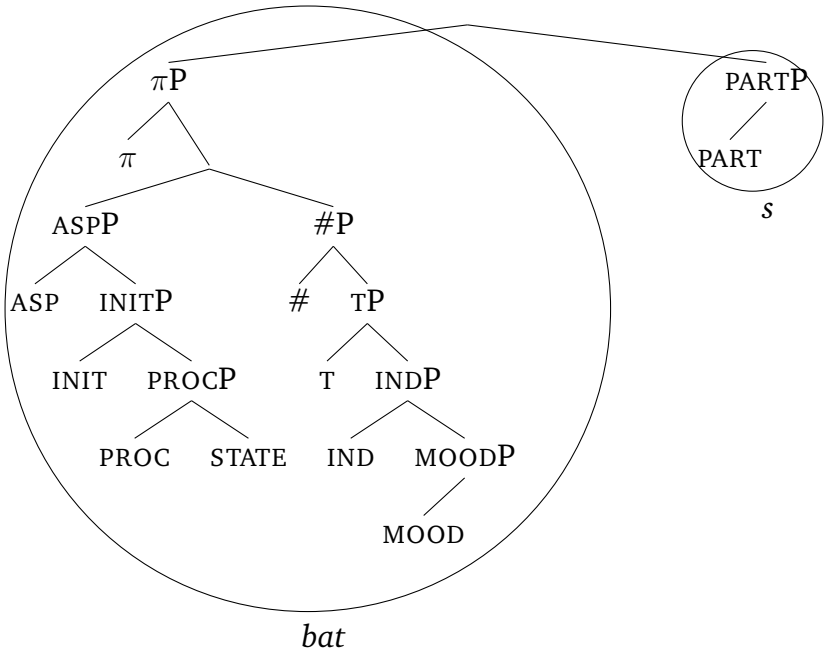
However, there is no matching item in our lexicon, so movement gets triggered, yielding (131).

(131) DERIVATION OF BATI, 1SG PRS, INTERMEDIATE STEP



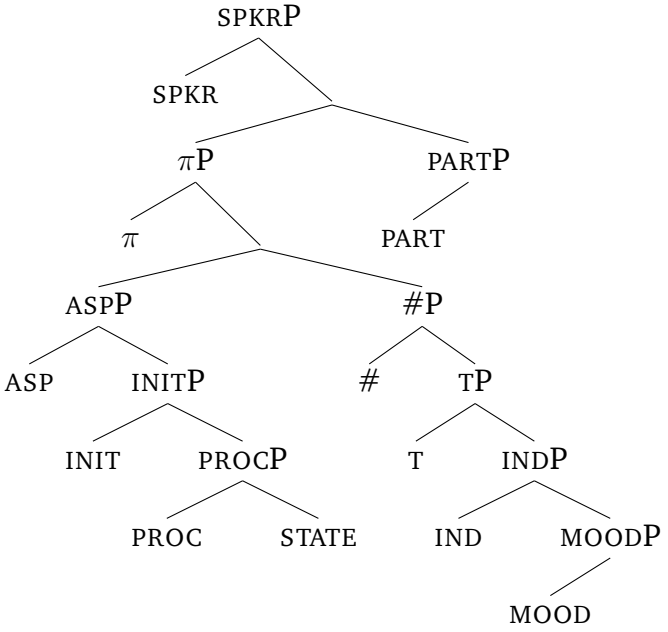
The lexical entry of the root does not contain a sub-constituent that matches the topmost node, but it only matches πP. The PARTP node, on the other hand, gets to be spelled out by the suffix *-s*.

(132) DERIVATION OF BATI, 1SG PRS, INTERMEDIATE STEP



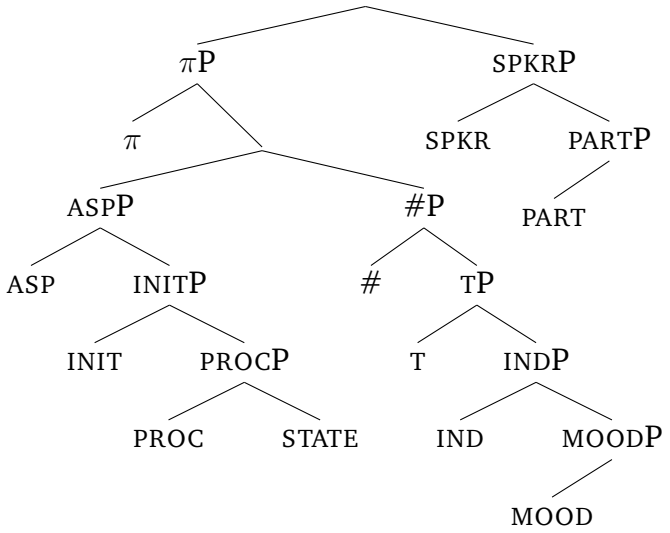
After that, syntax merges the feature SPKR to build a 1SG form.

(133) DERIVATION OF BATI, 1SG PRS, INTERMEDIATE STEP



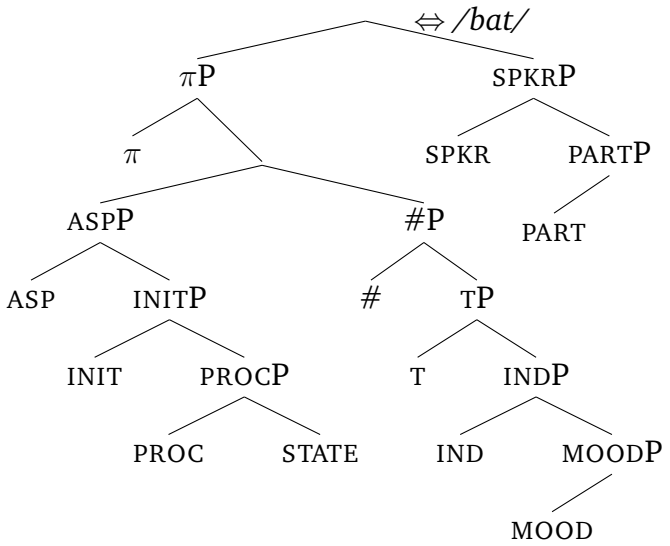
When the lexicon is checked, there is no matching item for (133). So, movement is triggered and the πP node gets moved. That movement results in the structure shown in (134).

(134) DERIVATION OF BATI, 1SG PRS, INTERMEDIATE STEP



This time the root */bat/* is a perfect match for the whole tree: its lexical entry is identical to what syntax has built in (134).

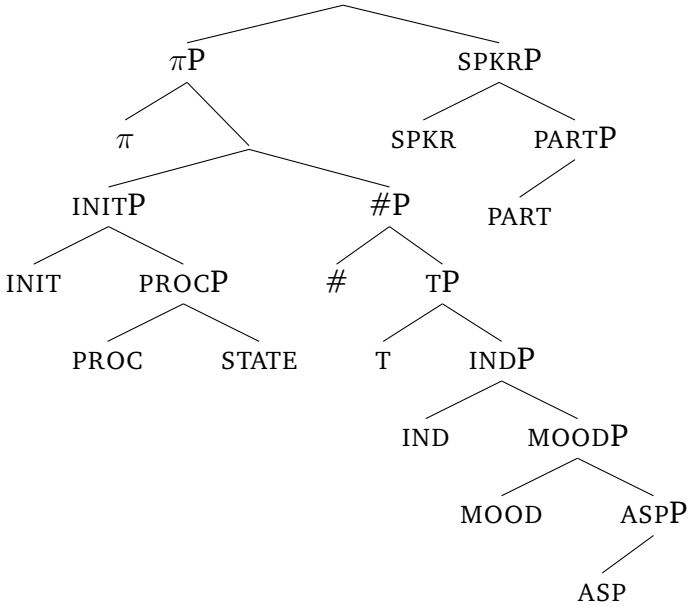
(135) LEXICAL ENTRY OF BAT



We thus derived the ABA pattern attested in the SG PRS forms of the *e*-verbs. The shape of the lexical entries of the *e*-roots creates such pattern.

The same logic holds for the *i*-verbs. Here is the syntactic structure of a 1SG form with an *i*-verb.

(136) DERIVATION OF SINTÎ, 1SG PRS, FINAL FORM



The root */sint/* is a perfect match for the tree in (136), which is spelled out as */sint/*.

To sum up, the roots */bat/* and */sint/* can spell out the whole 3SG. When the PART feature is merged, an additional morpheme is needed to spell out the PART node. On the other hand, when the SPKR is merged, the roots */bat/* and */sint/* re-emerge. It is thus the shape of the lexical entries of *e*- and *i*-roots that allows us to derive the ABA pattern of the type A-Ax-A without backtracking. This property of the system has been shown for the first time in (Blix, 2021), where he accounts for pseudo-ABA patterns.

2.4 Surface similarities, underlying disparities: the 1PL and 3PL PRS

We will now look at the 1PL and 3PL to complete the picture of the present forms for the *e*-verbs and *i*-verbs.

(137) BATI, 1/3PL PRS
a. *bat-in* ('we hit')
b. *bat-in* ('they hit')

(138) SINTÎ, 1/3PL PRS
a. *sint-in* ('we hear')
b. *sint-in* ('they hear')

When we add into the picture the 2PL, an ABA pattern shows up with respect to the suffixes:
(139)

		e-verbs	*i*-verbs
PL	1	bat-in	sint-in
	2	bat-e-is	sint-i-is
	3	bat-in	sint-in

The suffix *-in* is found both in the 1PL and 3PL to the exclusion of the 2PL. This creates an ABA pattern as in the SG forms (see (120)). Despite the similarity with the singular pattern, the same analysis does not hold. In this case, we suggest that the suffixes *-IN*s are an instance of accidental syncretism.

The first reason to treat them differently comes from the stress placement. The two forms differ in the stress position: the stress falls on the suffix in the 1PL form, while it is on the root in the 3PL.

(140) BATI, 1/3PL PRS
a. *bat-* *'in*
b. *'bat-in*

(141) SINTÎ, 1/3PL PRS
a. *sint-* *'in*
b. *'sint-in*

The two *-IN*s trigger a different stress placement. This suggests that they are syncretic only accidentally. However, we will not investigate the mechanism behind stress placement in TF.

The accidental syncretism is confirmed by the behaviour of the *iʃ*-verbs. As shown in (142), the 1PL suffix attaches directly to the root, whereas the 3PL *-in* attaches to the suffix *-iʃ*.

(142) FINÎ, 1/2PL PRS
a. *fin-in* ('we finish')
b. *fin-iʃ-in* ('they finish')

The fact that the two *-IN*s attach to different bases - the root and the suffix *-iʃ*, respectively - suggests that the two suffixes start at two different places in the

functional sequence. As a consequence, the lexicon contains two different lexical entries: one for the 1PL *-in*, the other for the 3PL *-in*.[12]

The same conclusion comes from the so-called mild irregular verbs:

(143) DURMÎ, 1/3PL PRS
- a. *durm-'in* ('we sleep')
- b. *'dwarm-in* ('they sleep')

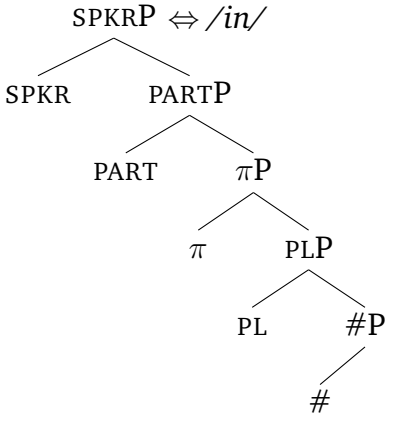
(144) MURÎ, 1/3PL PRS
- a. *mur-'in* ('we die')
- b. *'mor-in* ('they die')

(145) VEGNI, 1/3PL PRS
- a. *vinj-'in* ('we come')
- b. *'venj-in* ('they come')

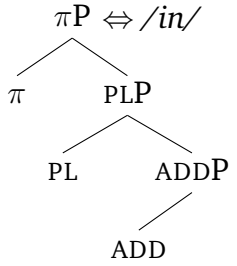
The two suffixes attach to different bases: the 1PL suffix combines with the allomorphs */durm/*, */mur/* and */vinj/*, whereas the 3PL suffix follows the allomorphs */dwarm/*, */mor/* and */venj/*. Again, this suggests that the two suffixes have a different foot.

I will refer to these two suffixes as *-in$_1$* and *-in$_3$* from now on. The proposal for their lexical entries is the following:

(146) LEXICAL ENTRY OF -IN$_1$



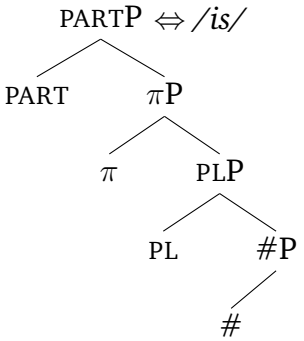
(147) LEXICAL ENTRY OF -IN$_3$



[12] It has to be pointed out that it is theoretically possible that the same suffix triggers a different root allomorph. That is possible with lexical entries with a CLB. Those entries could also match the syntactic trees with their left or right branch only. The suffix could then potentially have two different feet: one in the left branch, the other in the right branch. As a consequence, a different foot can trigger a different allomorph. That is, however, not the case of the suffix *-in*. I thus assume TF lexicon contains two different lexical entries for the suffixes *IN*s.

The 1PL suffix has its foot in # and lexicalizes all the features up to SPKR, i.e. [SPKR [PART [π [PL [#]]]]]. On the other hand, the 3PL suffix has its foot in ADD, and, it lexicalizes [π [PL [ADD]]]. Crucially, the 3PL is not a subset of the 1PL/2PL forms. The lexical entry of the 2PL suffix is repeated below.[13]

(148) LEXICAL ENTRY OF -IS



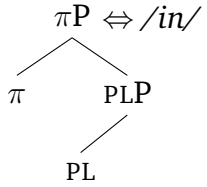
The 3PL suffix is indeed the only one that can lexicalize the feature ADD, which is found below PL. As introduced in § 2.1.1, when syntax builds a 3PL form, it merges the feature ADD, and only after that the PL feature is merged. Recall that the feature ADD expresses a semantics that belongs to the 3PL only, compared to the 1/2PL forms.

It has to be pointed out that this feature is not present in the FSEQ proposed for the verbal system across languages (see, e.g.,Starke 2021 for French, Starke & Cortiula 2021a and Taraldsen 2021 for Brazilian and European Portuguese, Vanden Wyngaerd 2020 for Spanish, Starke et al. 2022 for Ukrainian, Starke et al. 2021 for Czech). However, introducing such feature in Tualis Friulian is necessary to correctly derive the 2PL PRS form. The existence of the lexical entry of *-s* would lead to problems. Remember that in the SG, we could easily derive the second person from the third by adding the suffix *-s* (see § 2.2.4). The same would happen in the plural: the 2PL could be easily derived by adding *-s* on top of the 3PL. To fully understand the issue, let us first see what would go wrong without ADD. Then, we will see what happens when the feature ADD is present in the FSEQ.

Let us make up the following lexical entry for *-in*$_3$:

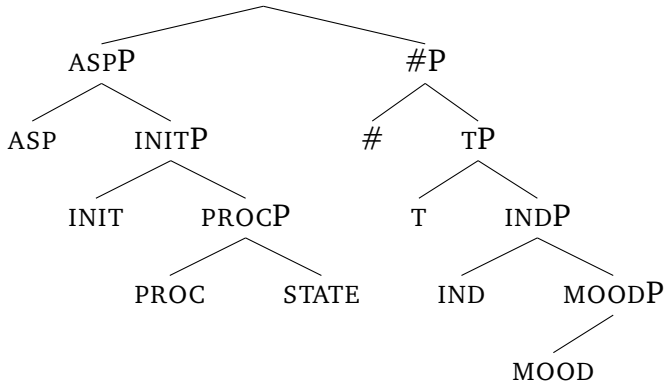
[13]Despite the fact that the 3PL is not a subset of the 1/2PL entries, the system does not predict the absence of syncretism among these forms. Such syncretism can be derived in multiple ways.

(149) INVENTED LEXICAL ENTRY OF -IN$_3$



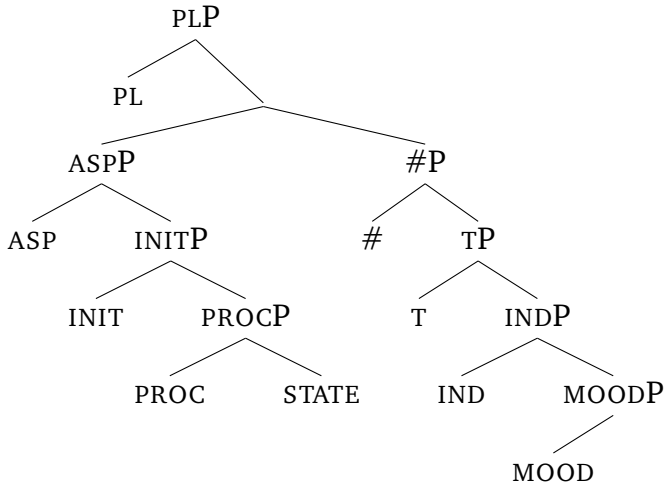
We can now resume what syntax has built up to # with the *e*-verb *bati* ('to hit').

(150) DERIVATION OF BATI, 3PL PRS, INTERMEDIATE STEP



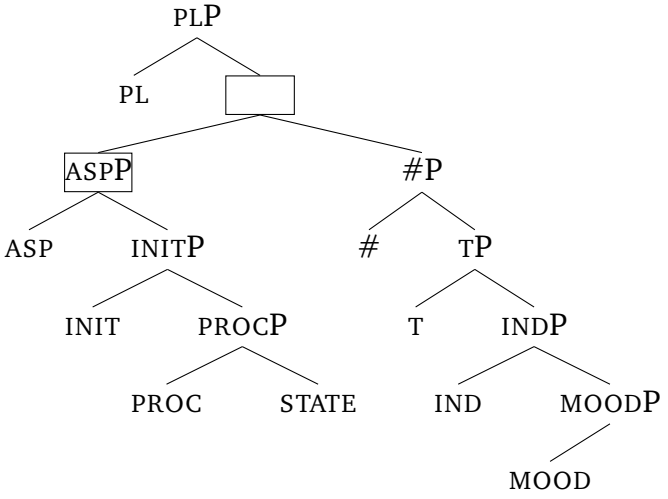
At this point, syntax would merge the feature PL.

(151) DERIVATION OF BATI, 3PL PRS, INTERMEDIATE STEP



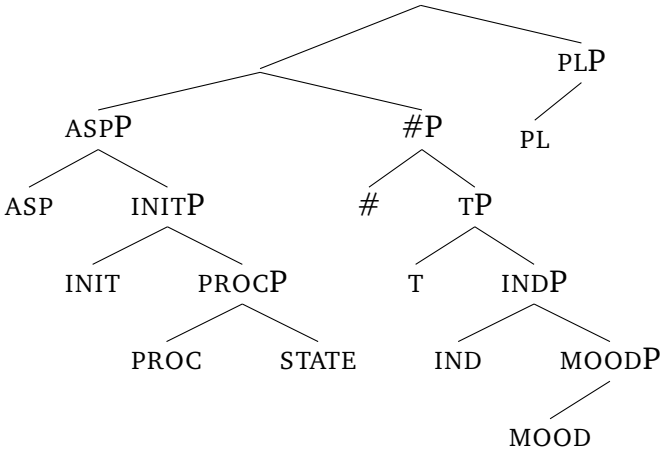
There is no item matching the entire structure built by syntax. So, movement gets triggered. Following the spellout algorithm, the first non-remnant labelled node gets moved. That failed, so the next option is tried, i.e. the dominating unlabelled node gets moved, as highlighted by the square in (152).

(152) DERIVATION OF BATI, 3PL PRS, INTERMEDIATE STEP



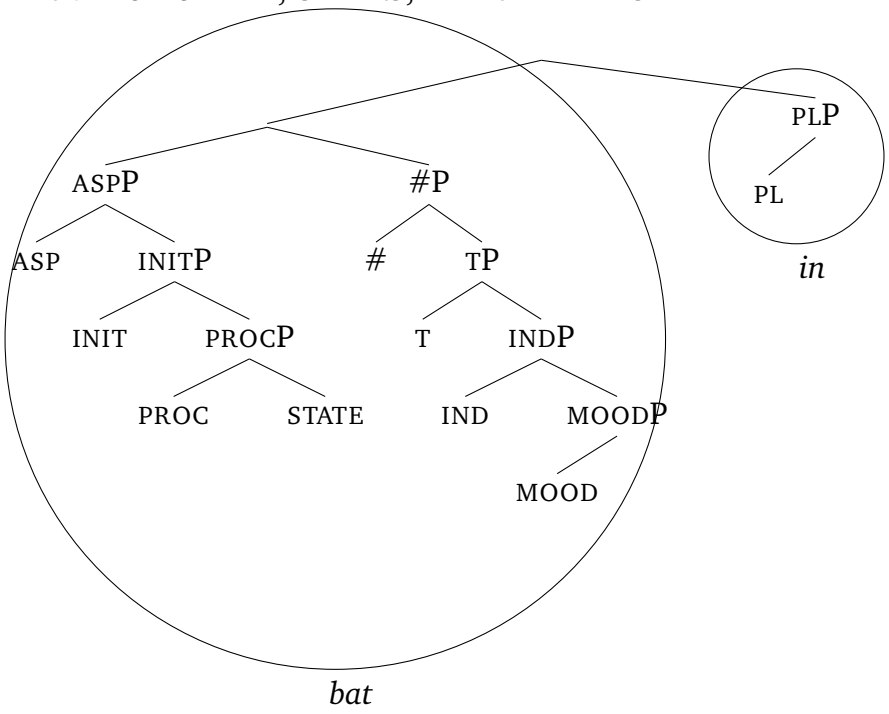
The last movement leads to the structure below:

(153) DERIVATION OF BATI, 3PL PRS, INTERMEDIATE STEP



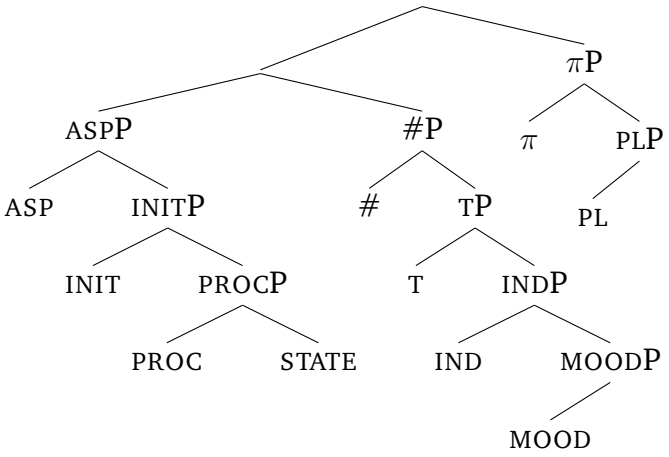
The left branch gets lexicalized by the root */bat/*. The PLP can now be lexicalized by the suffix *-in*$_3$.

(154) DERIVATION OF BATI, 3PL PRS, INTERMEDIATE STEP



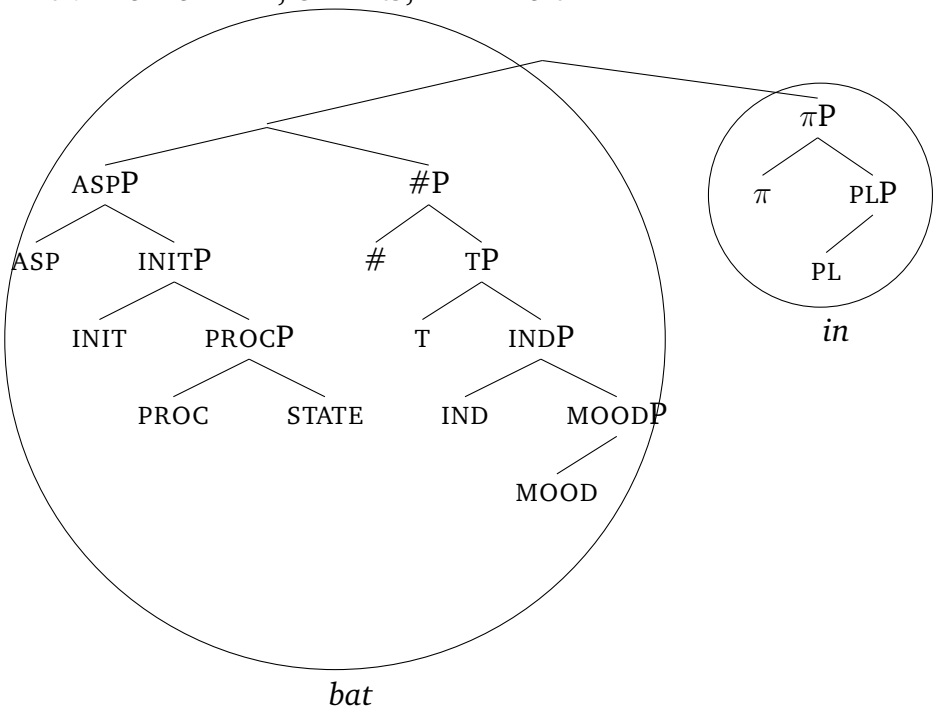
At this point syntax would merge the feature π. As in the previous step, there is no matching item for the whole structure, so movement gets triggered. First, we try to sub-extract the ASPP. Since that fails, we move the entire Spec, yielding the tree in (155).

(155) DERIVATION OF BATI, 3PL PRS, INTERMEDIATE STEP



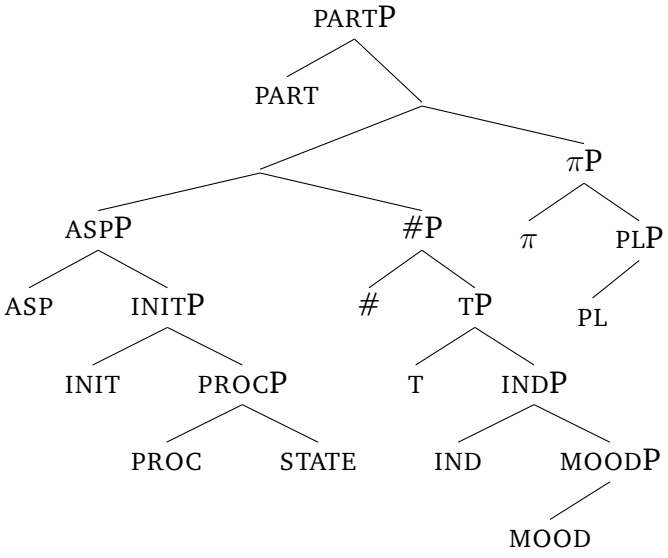
What syntax has built can be successfully lexicalized by the root */bat/* and the suffix *-in₃*. We thus derived the 3PL PRS form: *batin* ('they hit').

(156) DERIVATION OF BATI, 3PL PRS, FINAL FORM



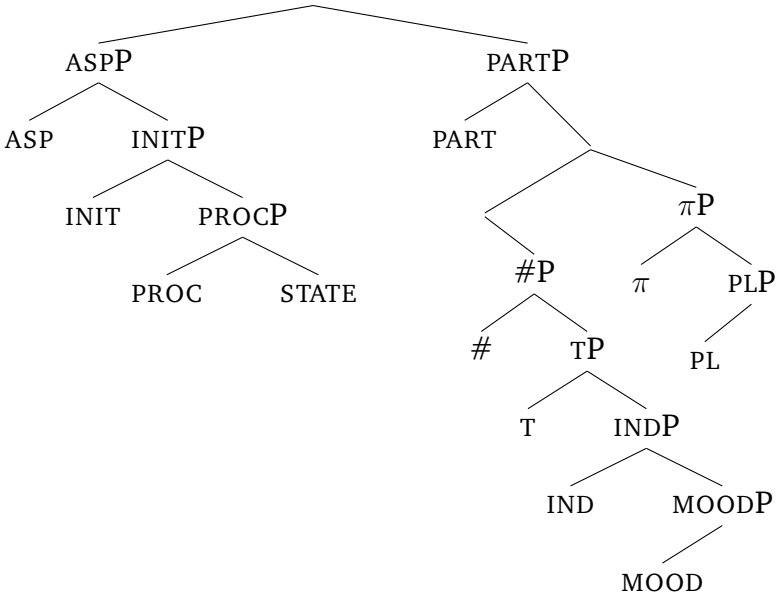
Syntax will continue building a 2PL by merging the feature PART.

(157) DERIVATION OF BATI, 2PL PRS, INTERMEDIATE STEP



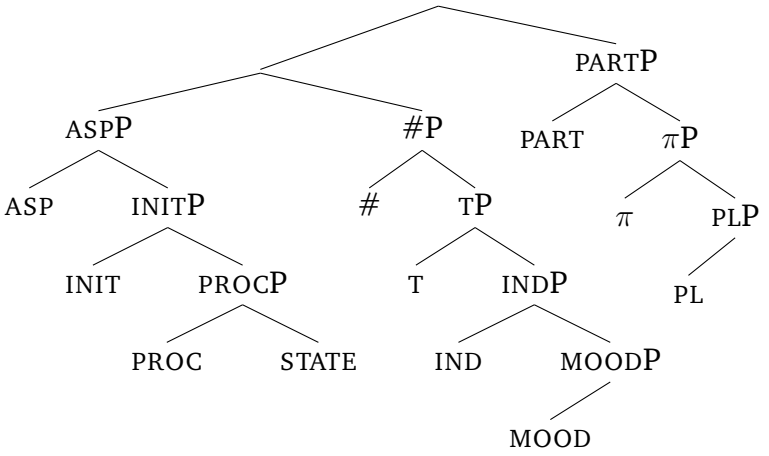
Again, there is no lexical item that could lexicalize the whole structure in (157). So, syntax tries to sub-extract ASPP.

(158) DERIVATION OF BATI, 2PL PRS, INTERMEDIATE STEP



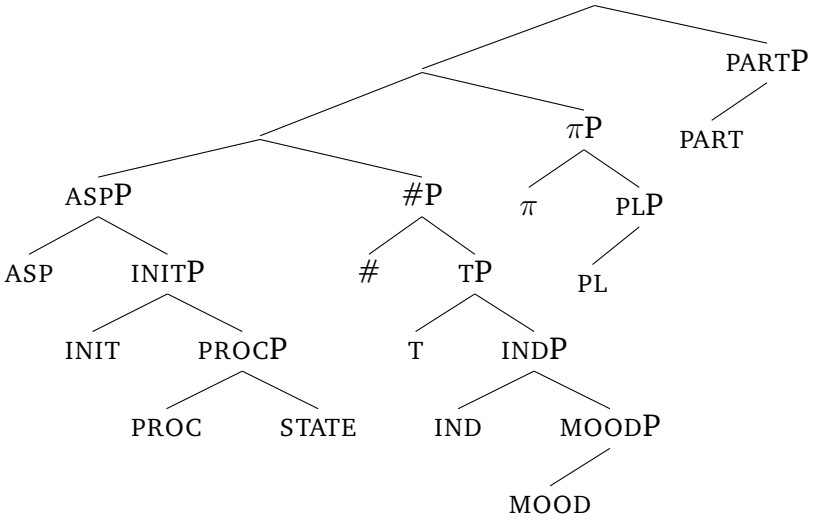
That movement fails, so the next attempt is to move the entire Spec, but that also fails.

(159) DERIVATION OF BATI, 2PL PRS, INTERMEDIATE STEP



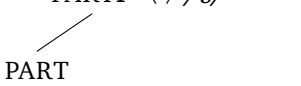
The last possible movement thus occurred, i.e. complement movement:

(160) DERIVATION OF BATI, 2PL PRS, INTERMEDIATE STEP



Syntax checks the lexicon for a matching item. There is no entry that can lexicalize the entire structure. However, while consulting the lexicon, syntax finds the lexical entry of */bat/* that matches the lowest unlabelled node. Then, the suffix *-in$_3$* is a perfect match for the πP node. The remaining PARTP finds a perfect match with the lexical entry of *-s*, whose lexical entry is repeated below.

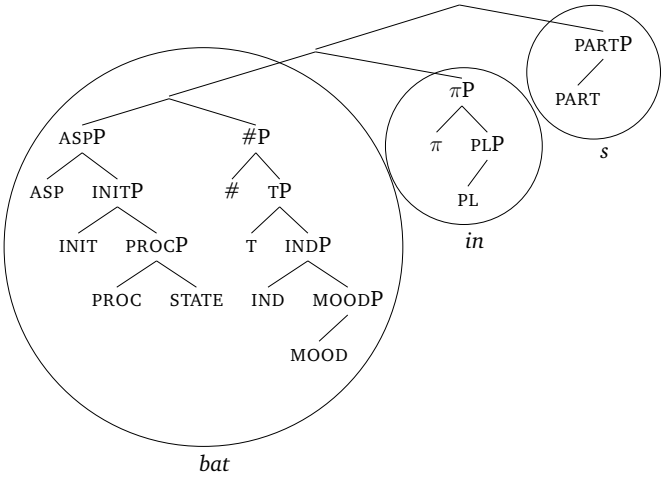
(161) LEXICAL ENTRY OF -S



We thus derived the wrong 2PL form: **bat-in-s*. There is no need of backtracking all the way to #, so the suffix *-is* will never enter the derivation.[14]

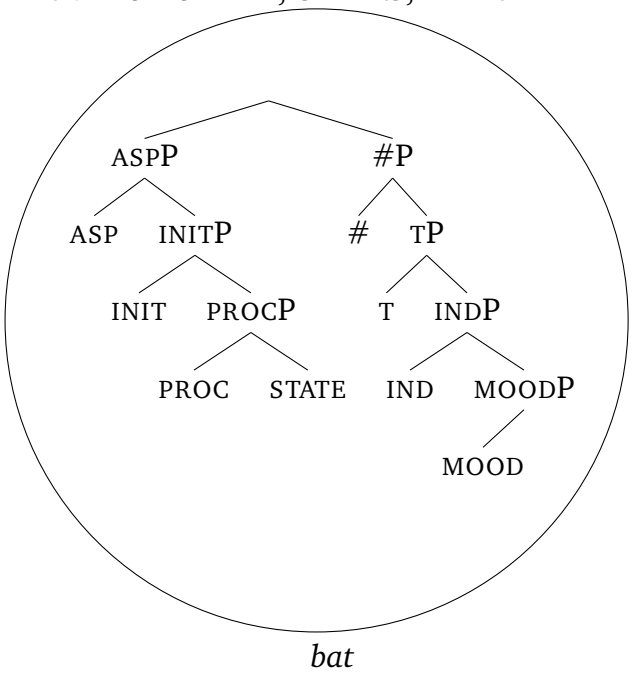
[14]One could argue that the lexical entry could be updated as follows: [PART [π [PL]]]. Under this scenario, the suffix *-is* would be a perfect match for the PARTP in (159). This solution would, however, fail. In our hypothetical scenario, the lexical entry of *-in$_3$* starts also at PL, as the suffix *-is*. Given that, we would predict that the two suffixes - *is* and *in$_3$* - attach to the same base. That is a wrong prediction. The suffix *-is* attaches to the thematic vowel, e.g., *bat-e-is* ('you hit'). On the other hand, the suffix *-in$_3$* attaches directly to the root, e.g., *bat-in* ('they hit'). So, changing the lexical entry of *-is* would not solve the issue shown in (160).

(162) WRONG DERIVATION OF BATI, 2PL PRS, FINAL FORM



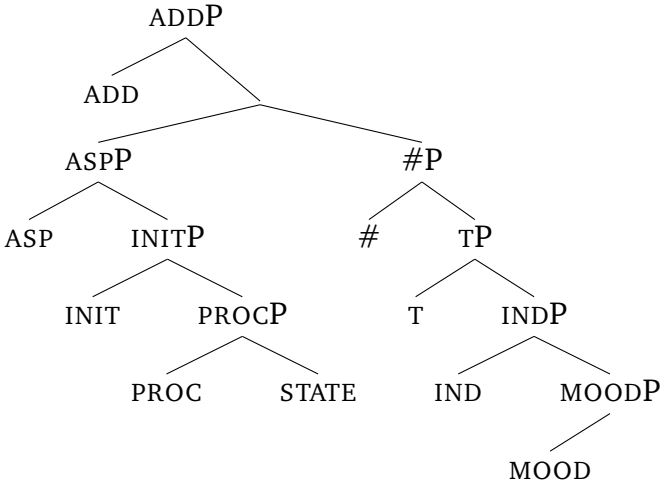
Let us now turn to our actual derivation with the FSEQ and lexical entries I adopted. We start again from the tree in (163). As we have already seen before, the root is a perfect match for the whole structure.

(163) DERIVATION OF BATI, 3PL PRS, INTERMEDIATE STEP



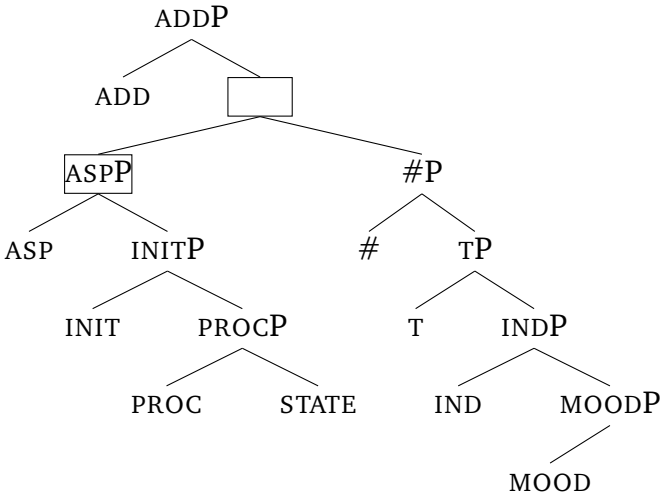
After that, when syntax is building a 3PL, it merges the ADD feature:

(164) DERIVATION OF BATI, 3PL PRS, INTERMEDIATE STEP



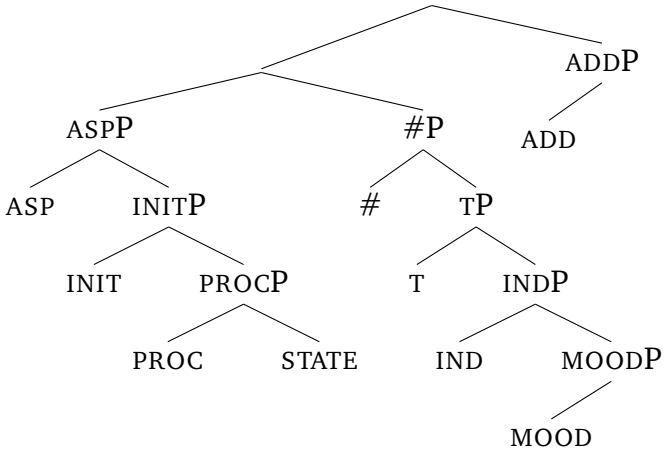
At this point, there is no item matching the entire structure built by syntax. So, movement gets triggered. Following the spellout algorithm, the first non-remnant labelled node gets moved, i.e. ASPP. This fails, so the next option is tried, i.e. the dominating unlabelled node gets moved, as highlighted by the square in (165).

(165) DERIVATION OF BATI, 3PL PRS, INTERMEDIATE STEP



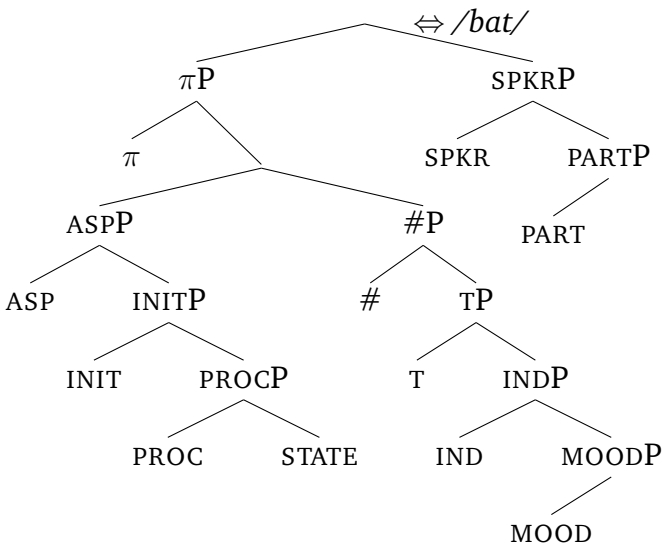
The second movement results in the structure below:

(166) DERIVATION OF BATI, 3PL PRS, INTERMEDIATE STEP

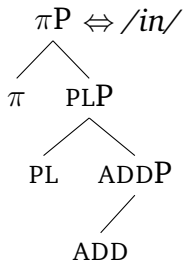


As usual, syntax will look for a lexical item that can match the entire structure, but such item does not exist in the lexicon. However, there is an item matching the left part of the tree, and that is the lexical entry of */bat/*, whose entry is reminded below in (167). Similarly, there is a constituent inside the lexical entry of *-in$_3$* that can lexicalize the right part of the syntactic tree, as we can see in (168). The lexicalization is shown in (169).

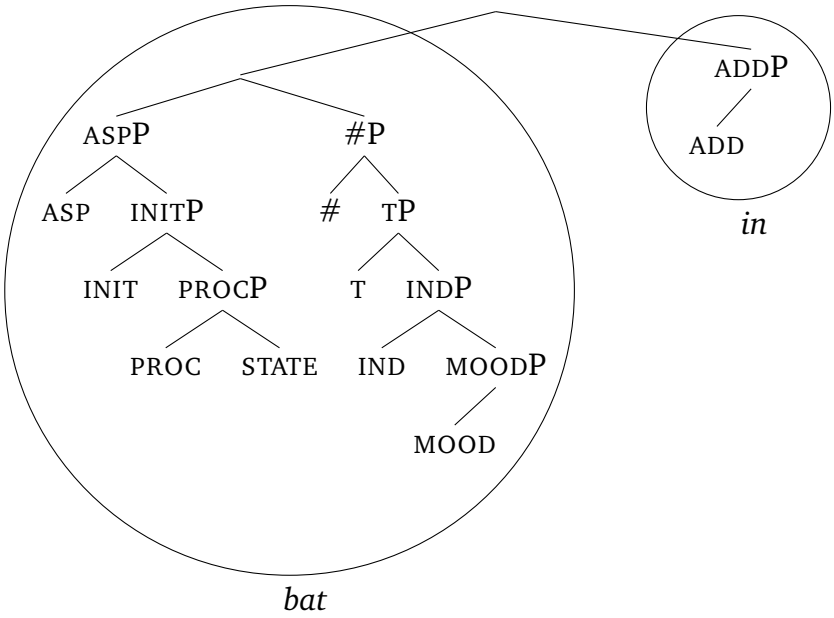
(167) LEXICAL ENTRY OF BAT



(168) LEXICAL ENTRY OF -IN$_3$

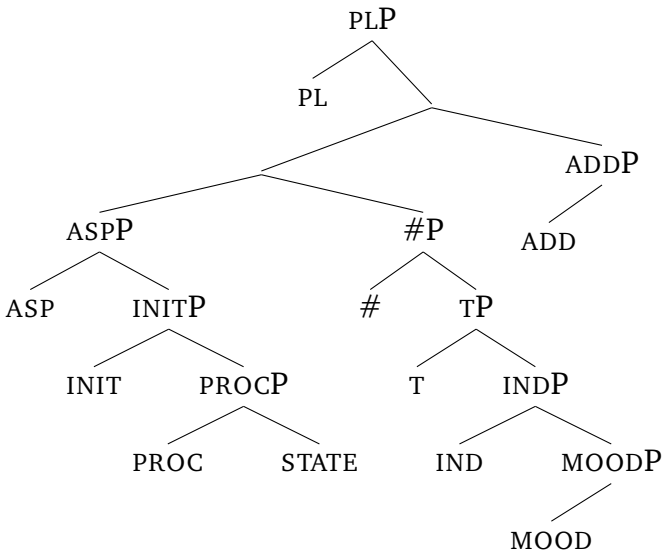


(169) DERIVATION OF BATI, 3PL PRS, INTERMEDIATE STEP



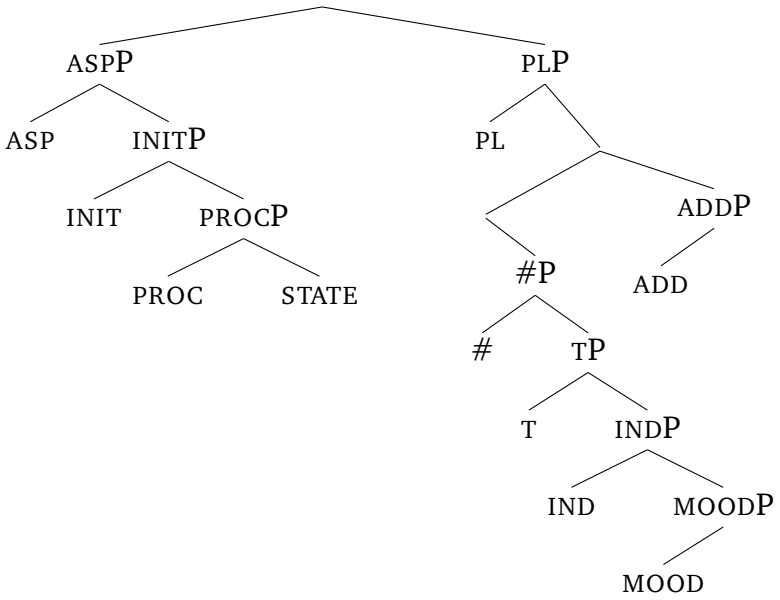
After that, the feature PL is merged:

(170) DERIVATION OF BATI, 3PL PRS, INTERMEDIATE STEP



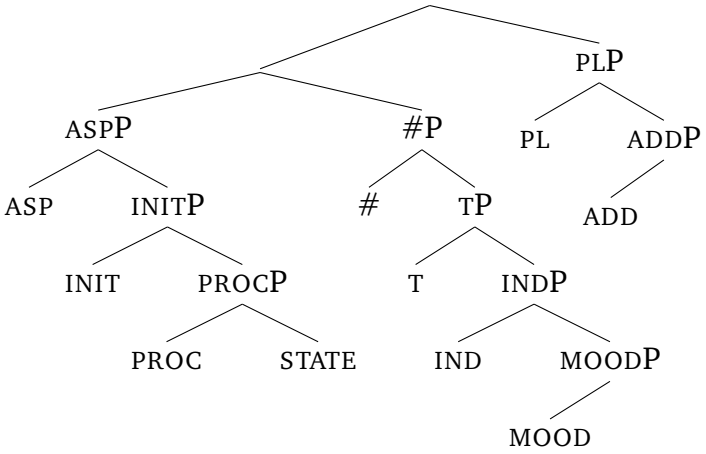
Syntax proceeds moving ASPP.

(171) DERIVATION OF BATI, 3PL PRS, INTERMEDIATE STEP



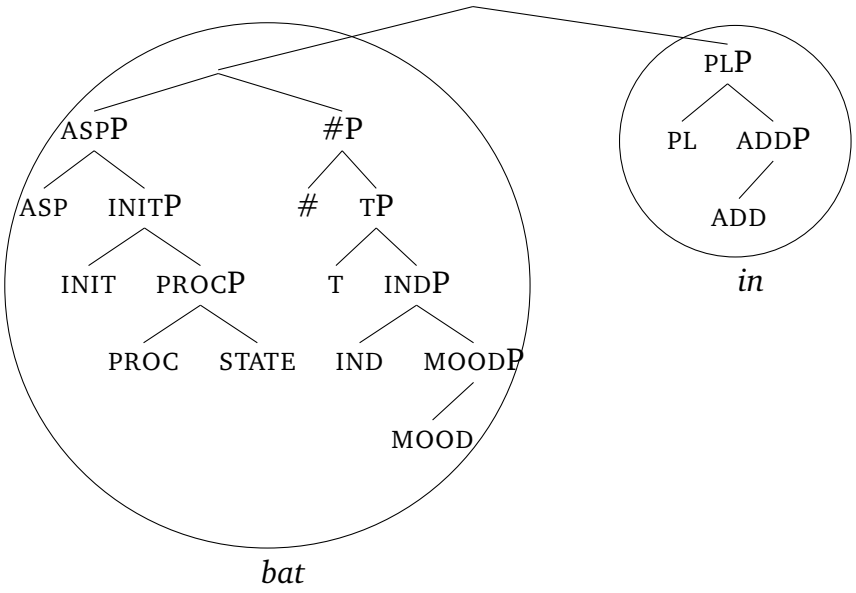
Since that fails, the entire specifier is moved, yielding (172).

(172) DERIVATION OF BATI, 3PL PRS, INTERMEDIATE STEP



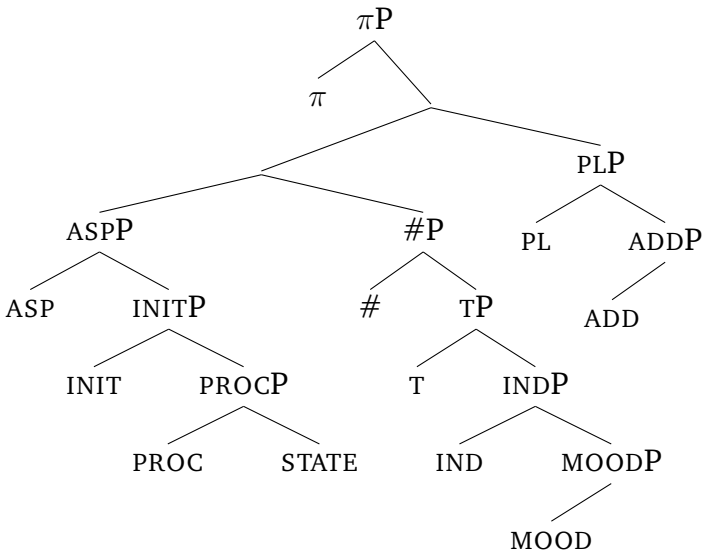
This leads to a successful lexicalization of the structure with the root */bat/* and the suffix *-in*$_3$.

(173) DERIVATION OF BATI, 3PL PRS, INTERMEDIATE STEP



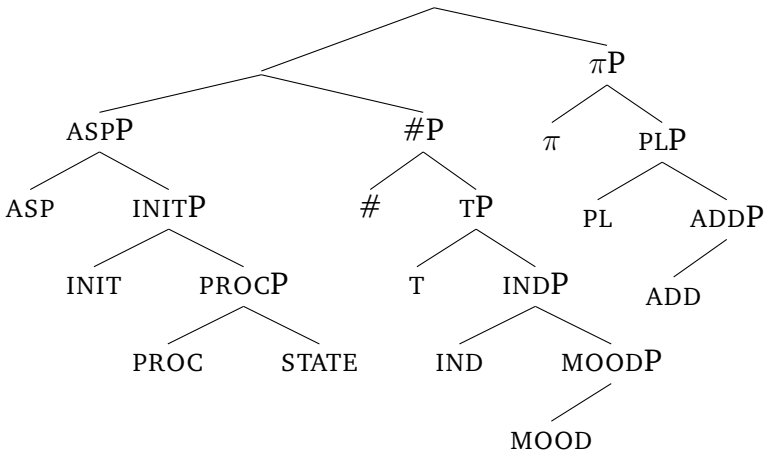
Going on with the derivation, syntax merges the π feature.

(174) DERIVATION OF BATI, 3PL PRS, INTERMEDIATE STEP



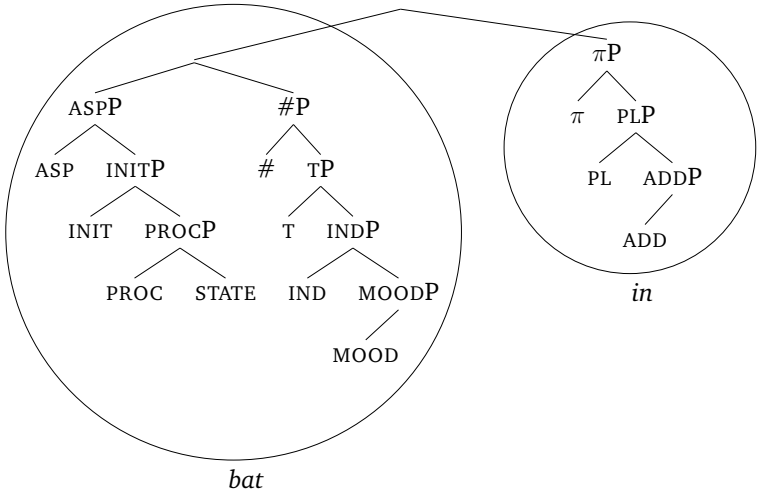
Since there is no matching item in the lexicon for such structure, movement gets triggered. Following the spellout algorithm, the first rescue movement is the sub-extraction of ASPP from the Spec. However, that does not help to get a successful derivation. The next option is thus triggered: syntax evacuates the entire Spec. This yields the following configuration:

(175) DERIVATION OF BATI, 3PL PRS, INTERMEDIATE STEP



As in the previous cycle, the root */bat/* matches the left part, while the suffix *-in*$_3$ is a perfect match for the πP node, i.e.:

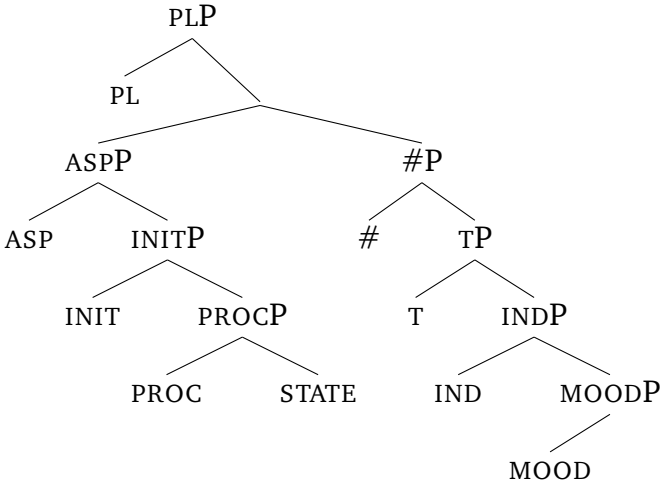
(176) DERIVATION OF BATI, 3PL PRS, FINAL FORM



We thus derived the 3PL PRS of the *e*-verbs.

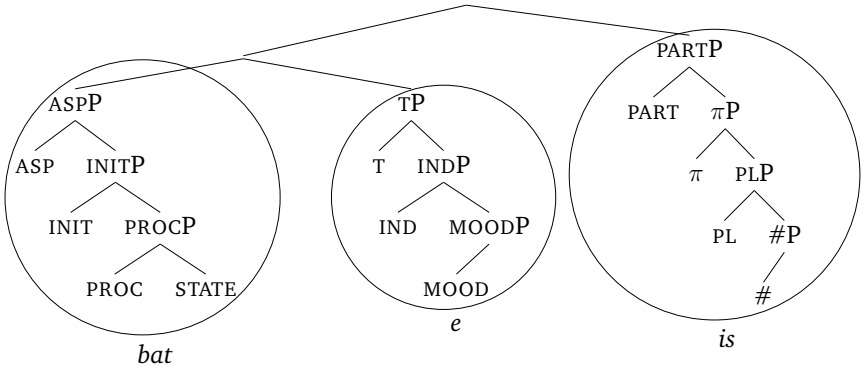
What happens when syntax builds a 2PL PRS? Above #, syntax will merge the feature PL (177). Crucially, the ADD meaning is not expressed in a 2PL form.

(177) DERIVATION OF BATI, 2PL PRS, INTERMEDIATE STEP



The derivation will thus continue as we have seen in § 2.2.2, examples (76)-(91), and the final form will look like (178).

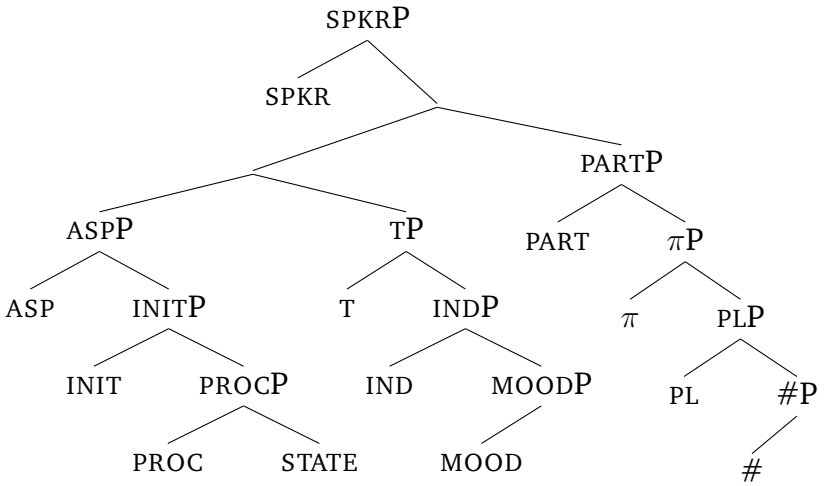
(178) DERIVATION OF BATI, 2PL PRS, FINAL FORM



This time we correctly derived the 2PL form *bat-e-is*. The crucial difference between the first option and this one is that the 3PL is not in a subset relation with the other plural forms. That additional feature is all we need to correctly derive the 2PL form.

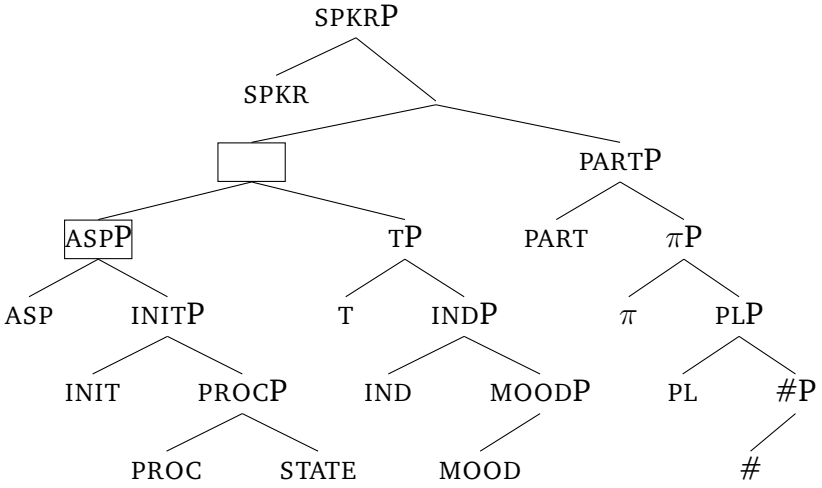
To build a 1PL, syntax will continue the derivation by merging the feature SPKR on top of (178), as shown in (179).

(179) DERIVATION OF BATI, 1PL PRS, INTERMEDIATE STEP



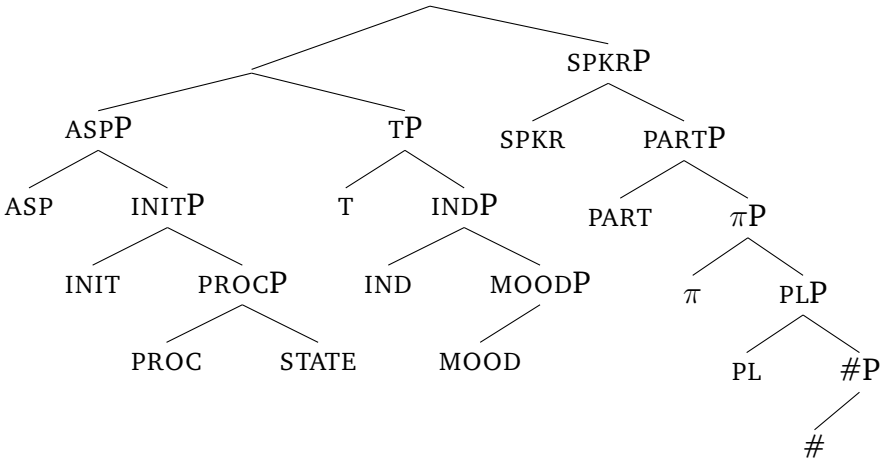
When syntax checks the lexicon for a matching item, it cannot find any. So, syntax tries to move the lowest labelled node crossing only the unlabelled ones, i.e. ASPP. That fails, so a second attempt is made by moving the dominating unlabelled node. These two movements are highlighted by the squares in (180).

(180) DERIVATION OF BATI, 1PL PRS, INTERMEDIATE STEP



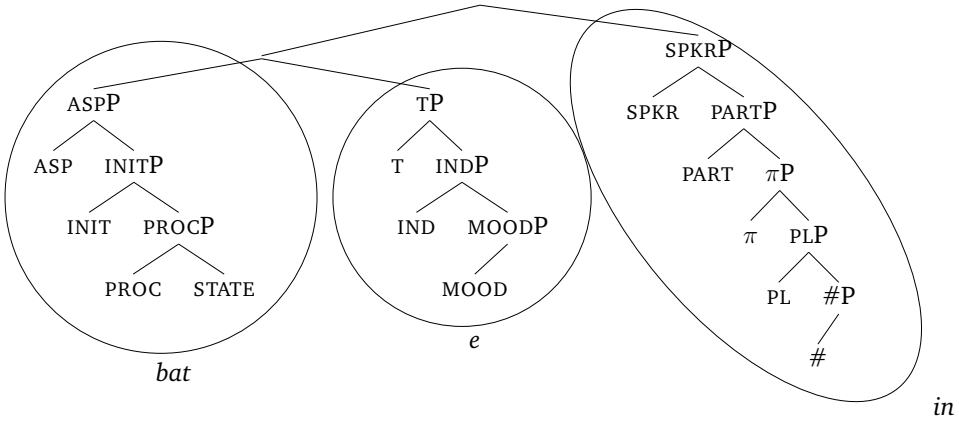
The second movement results in the tree below.

(181) DERIVATION OF BATI, 1PL PRS, INTERMEDIATE STEP



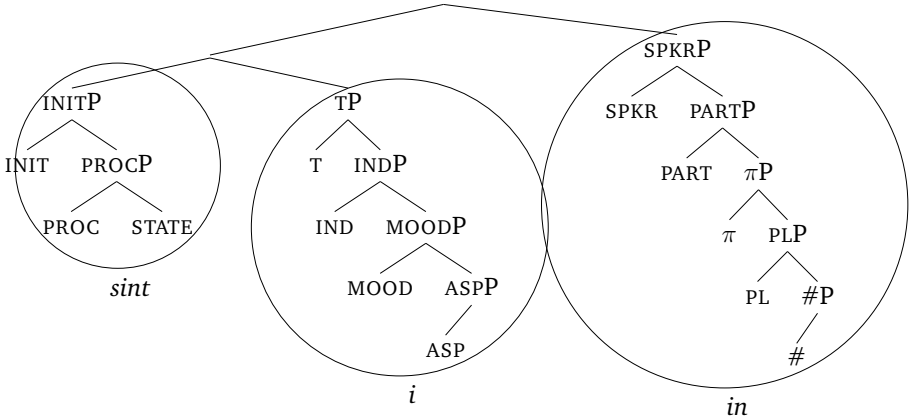
As before, the lexical entry of */bat/* matches the tree up to ASPP, while the TV *-e* - up to TP. The suffix *-in*$_1$ is now a perfect match for SPKRP.

(182) DERIVATION OF BATI, 1PL PRS, FINAL FORM

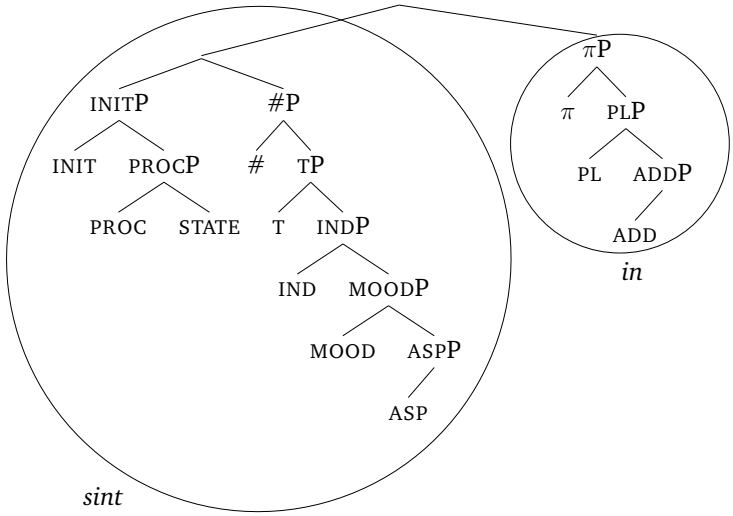


Below the reader can find the final forms of the 1PL and 3PL PRS with the *i*-verbs. The logical steps are exactly the same to derive the 1PL and 3PL PRS forms with *e*-verbs.

(183) DERIVATION OF SINTÎ, 1PL PRS, FINAL FORM



(184) DERIVATION OF SINTÎ, 3PL PRS, FINAL FORM



The present forms of *e*-verbs and *i*-verbs are now fully derived:

(185) LEXICALIZATION TABLE OF BATI, PRS

STATE	PROC	INIT	ASP	MOOD	IND	T	#	ADD	PL	π	PART	SPKR
bat												
bat											s	
bat												
bat				e			in_1					
bat				e			is					
bat								in_3				

(186) LEXICALIZATION TABLE OF SINTÎ, PRS

STATE	PROC	INIT	ASP	MOOD	IND	T	#	ADD	PL	π	PART	SPKR
sint												
sint											s	
sint												
sint			i				in_1					
sint			i				is					
sint								in_3				

One issue that still needs to be addressed is that the analysis predicts the

presence of the TV in the 1PL PRS forms, i.e.:

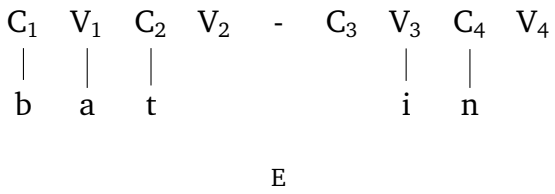
(187) UNDERLYING FORMS OF BAT AND SINT, 1PL PRS
- a. *bat-e-in* ('we hit')
- b. *sint-i-in* ('we hear')

But we do not see them on the surface:

(188) SURFACE FORMS OF BAT AND SINT, 1PL PRS
- a. *bat-in* ('we hit')
- b. *sint-in* ('we hear')

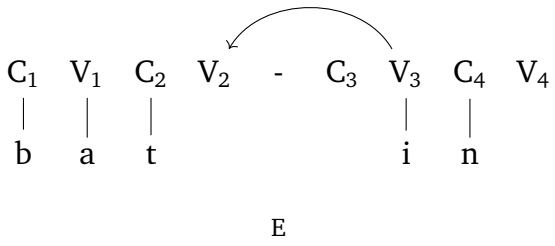
I propose a phonological solution: the TV is a floating vowel, namely it is associated to no prosodic node, as shown in the UR. The representation employed are those of strict CV (Lowenstamm 1996, Scheer 2004).

(189) UR OF BATIN, 1PL



As a floating element, /e/ gets pronounced only when associated to a prosodic node. The potential landing sites are V_2 and V_4. The nucleus V_4 may remain phonetically unexpressed since it is domain-final. See Scheer (2004) for a detailed discussion on final empty nuclei. The nucleus V_2 can also remain phonetically unexpressed since it is properly governed by the following nucleus, as indicated by the arrow from V_3 to V_2.

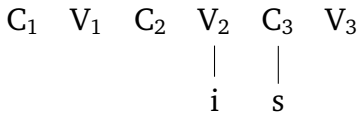
(190) UR OF BATIN, 1PL



As a consequence, the vowel /e/ keeps floating and it does not get to be pronounced. This explains why the TV does not surface in the 1PL PRS, despite being there underlyingly. On the other hand, the thematic vowel *-e* surfaces in

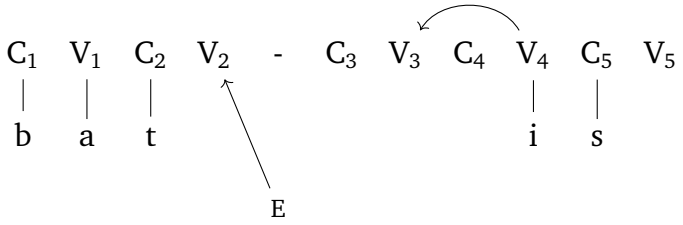
the 2PL form: *bateis* ('you hit'). One possible analysis is that the underlying representation of the suffix *-is* contains an extra CV:

(191) UR OF -IS



When the suffix *-is* concatenates with the root and the thematic vowel, we get the following representation:

(192) UR OF BATEIS



As before, the final nucleus can remain phonetically unexpressed. The same is true for the empty nucleus V_3, which is properly governed by the filled nucleus V_4. Crucially, the empty V_2 cannot remain phonetically unexpressed based on the Empty Category Principle, which says that:

(193) EMPTY CATEGORY PRINCIPLE, Scheer (2004:67)
A Nucleus may remain phonetically unexpressed iff it is:
a. properly governed or
b. enclosed within a domain of Infrasegmental Government or
c. domain-final.

The nucleus V_2 does not fulfill any of the requirements to remain empty. So, the V_2 position is filled in by the floating thematic vowel, which gets to be pronounced. The same logic applies to the TV *-i* of the *i*-verbs. The TV is present underlyingly in the 1PL PRS, but it is not pronounced since it is floating, i.e. not associated to any prosodic node.

With that in place, the phonological behaviour of the thematic vowels *-e* and *-i* is not surprising anymore.

Notice that such analysis derives one of the generalizations presented in Chapter 1, i.e.:

(194) GENERALIZATION II
The 2PL and 1PL are always syncretic.

The same morpheme follows the root in the 1/2PL forms. This will always trigger the same root allomorph in those two forms.

2.5 Here comes the Past

2.5.1 The plural forms

In this section, we will go through the analysis of the past forms for both verb classes. The relevant paradigms are repeated below.

(195) E-VERBS

		PRS	PST
SG	1	bat	bat-e-v-i
	2	bat-s	bat-e-v-a-s
	3	bat	bat-e-v-a
PL	1	bat-in	bat-e-v-in
	2	bat-e-is	bat-e-v-is
	3	bat-in	bat-e-v-in

(196) I-VERBS

		PRS	PST
SG	1	sint	sint-i-v-i
	2	sint-s	sint-i-v-a-s
	3	sint	sint-i-v-a
PL	1	sint-in	sint-i-v-in
	2	sint-i-is	sint-i-v-is
	3	sint-in	sint-i-v-in

Let us start by zooming in on the 3PL forms. In both verb classes, the TV and the PST marker are found between the root and the suffix *-in*$_3$. In the PRS, on the other hand, the root is followed only by the suffix *-in*$_3$.

(197) E-VERBS, 3PL PST AND PRS

a. *bat-**e-v**-in*$_3$

b. *bat -in*$_3$

(198) I-VERBS, 3PL PST AND PRS

a. *sint-**i-v**-in*$_3$

b. *sint -in*$_3$

These forms are represented in the lexicalization tables below.

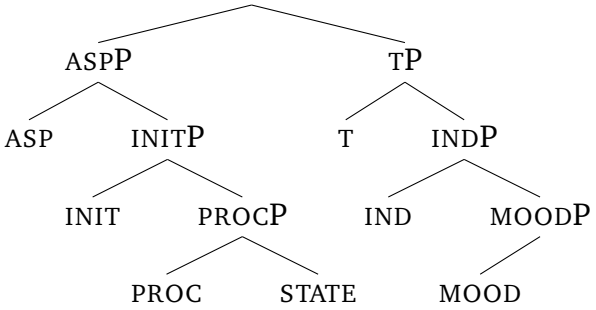
(199) LEXICALIZATION TABLES OF BAT AND SINT, 3PL PRS AND PST

	STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π
PST	bat				e			v		in$_3$		
PRS	bat							■		in$_3$		
PST	sint			i				v		in$_3$		
PRS	sint							■		in$_3$		

The lexicalization tables in (199) raise the following puzzle: how come that the root can lexicalize the entire structure up to # in the PRS, but, crucially, it cannot lexicalize the structure up to T in the PST? In the latter case, indeed, the TVs *-e* and *-i* pop up. We have already met such paradox about the presence/absence of the TVs when we looked at the contrast between the 3SG and 2PL PRS forms in § 2.2.1. As before, the solution lies in the fact that the TP node is not a sub-constituent of the lexical entries of */bat/* and */sint/*.

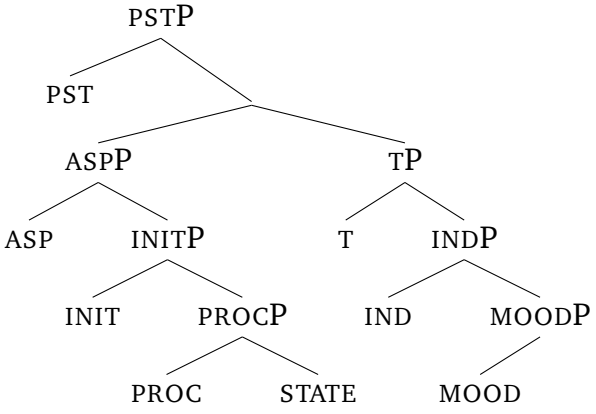
Let us start by looking at (200), taking for granted all the steps that took us there. For a step-by-step derivation the reader can refer back to § 2.2.2, Examples (53)-(68).

(200) DERIVATION OF BATI, 3PL PST, INTERMEDIATE STEP



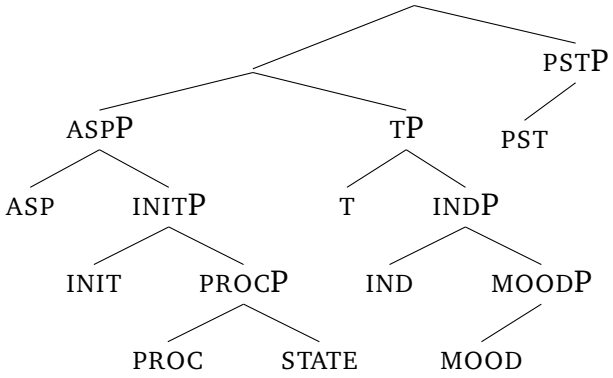
At this point, syntax merges the PST feature (201).

(201) DERIVATION OF BATI, 3PL PST, INTERMEDIATE STEP



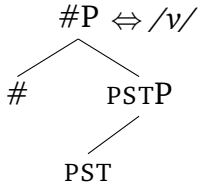
Since there is no match in the lexicon, movement gets triggered. Following the spellout algorithm, ASPP is moved first. Since that fails, syntax tries to move the entire complement:

(202) DERIVATION OF BATI, 3PL PST, INTERMEDIATE STEP



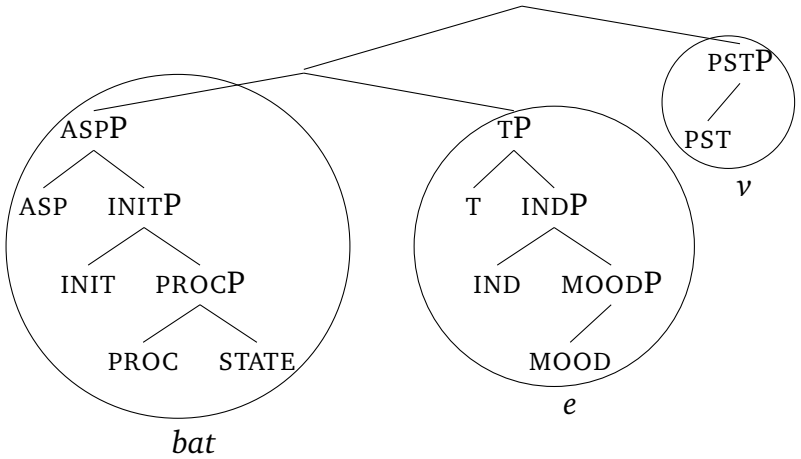
When syntax checks the lexicon, it finds the lexical entry of the root */bat/*. This item matches the ASPP node only. The TP is spelled out by the TV *-e*. The suffix *-v* lexicalizes the PSTP, containing that constituent in its lexical entry, which is shown below.

(203) LEXICAL ENTRY OF -V



The tree is thus lexicalized as follows:

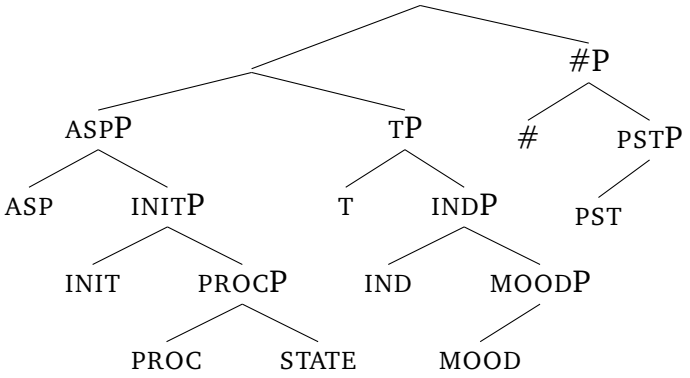
(204) DERIVATION OF BATI, 3PL PST, INTERMEDIATE STEP



When # is merged, there is no matching item in our lexicon. So, movement gets triggered. First, syntax sub-extracts ASPP. When that fails, it move the entire

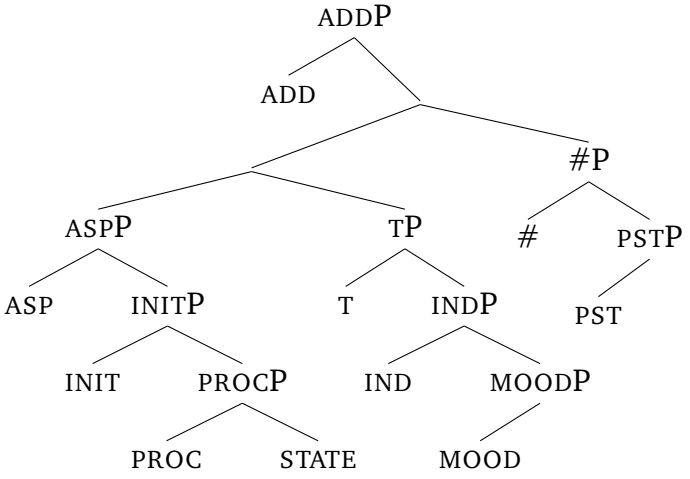
specifier. The configuration below is a candidate for a successful lexicalization. The suffix *-v* is a perfect match for the constituent [#[PST]]. Its lexical entry and the right branch of the syntactic tree are indeed identical.

(205) DERIVATION OF BATI, 3PL PST, INTERMEDIATE STEP



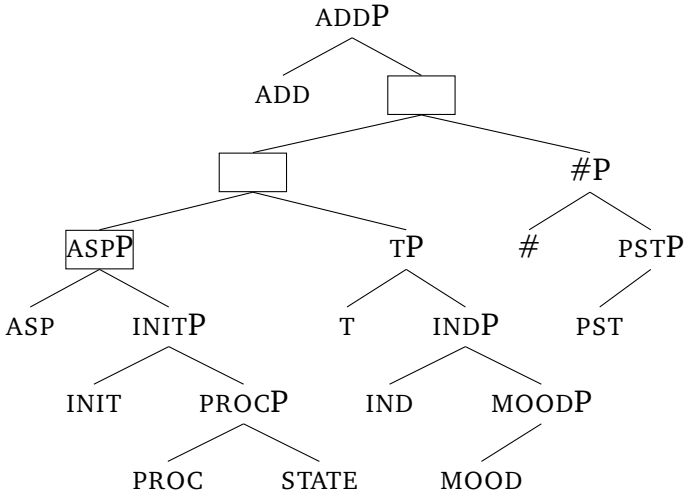
Syntax continues by merging the next feature: ADD.

(206) DERIVATION OF BATI, 3PL PST, INTERMEDIATE STEP



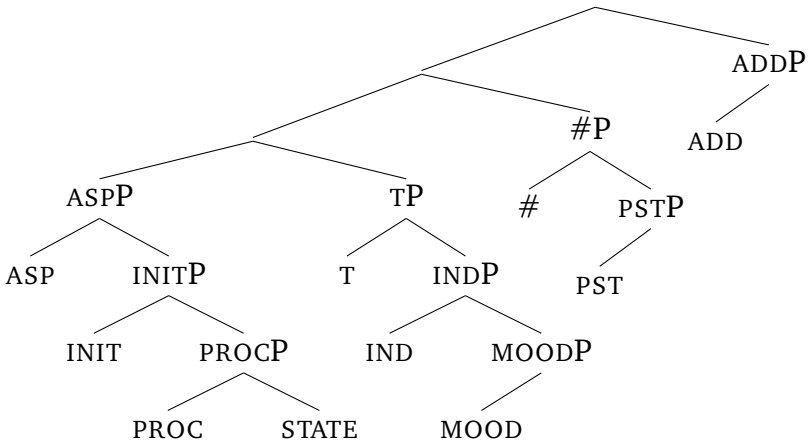
Again, there is nothing that can lexicalize what syntax built. As indicated by the squares, the highlighted nodes get moved in the attempt to get to a successful lexicalization.

(207) DERIVATION OF BATI, 3PL PST, INTERMEDIATE STEP



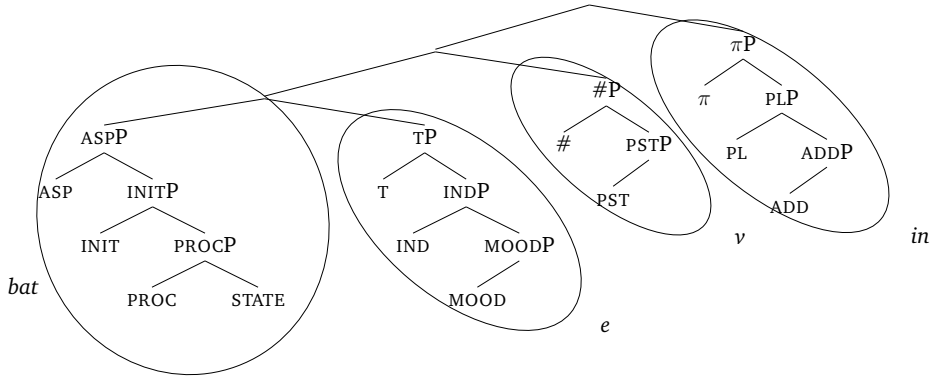
The last possible movement leads to:

(208) DERIVATION OF BATI, 3PL PST, INTERMEDIATE STEP



As before, the suffix *-in$_3$* lexicalizes the ADDP. The derivation will proceed like that up to πP. The final form is shown in (209).

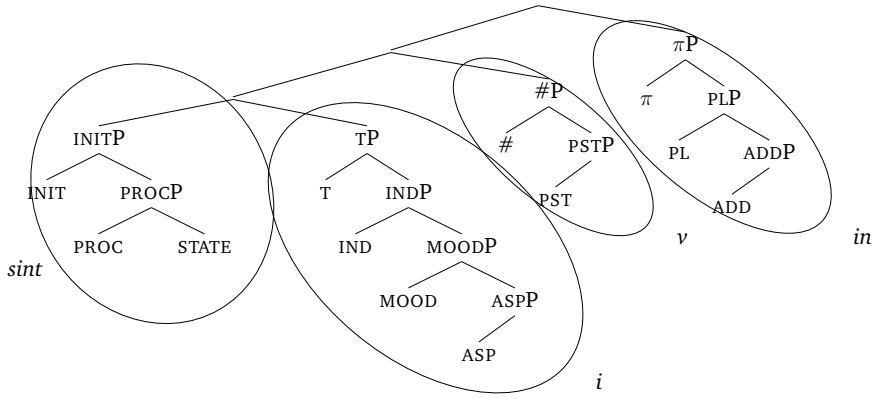
(209) DERIVATION OF BATI, 3PL PST, FINAL FORM



We thus derived the 3PL PST, which exhibits the TV between the root and the past marker *-v*. That follows from the fact that the root matches only partially the syntactic tree. The PST feature comes in between T and #, preventing the root to grow up to #.

The same logic applies for the derivation of the 3PL PST form of the *i*-verbs.

(210) DERIVATION OF SINTÎ, 3PL PST, FINAL FORM



Moving to the 1/2PL forms, the only difference between the PRS and the PST forms is the presence of the PST marker *-v*.

(211) E-VERBS, 1PL PRS AND PST
- a. *bat-e -in*$_1$
- b. *bat-e-v-in*$_1$

(212) I-VERBS, 1PL PRS AND PST
- a. *sint-i -in*$_1$
- b. *sint-i-v-in*$_1$

(213) E-VERBS, 2PL PRS AND PST
- a. *bat-e -is*
- b. *bat-e-v-is*

(214) I-VERBS, 2PL PRS AND PST
- a. *sint-i -is*
- b. *sint-i-v-is*

The derivations of those forms are represented in the lexicalization tables below.

(215) LEXICALIZATION TABLE OF BATI, 1/2PL PST

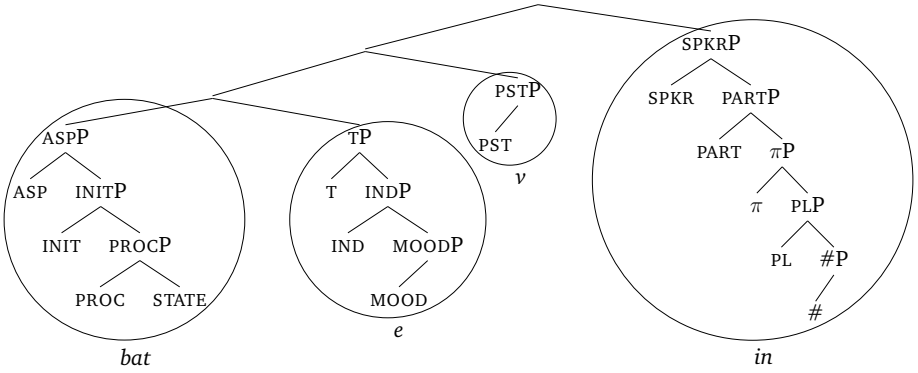
STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	PL	π	PART	SPKR
bat				e			v	in_1				
bat				e			v	is				

(216) LEXICALIZATION TABLE OF SINTÎ, 1/2PL PST

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	PL	π	PART	SPKR
sint			i				v	in_1				
sint			i				v	is				

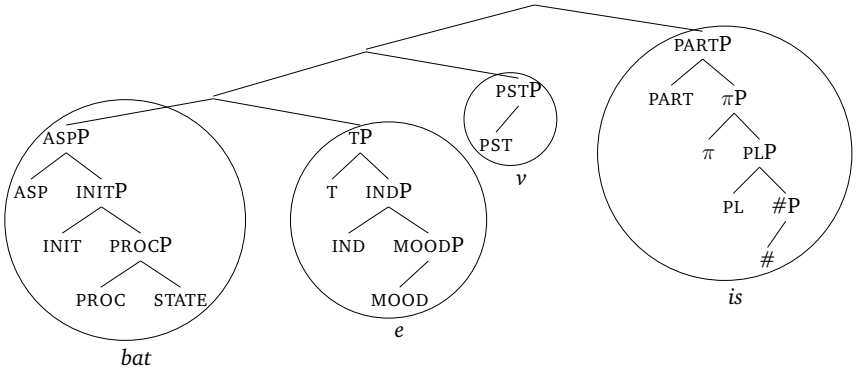
When syntax builds a 1PL PST with an *e*-verb, the tree in (217) is the final result of the derivation. The root can lexicalize the ASPP, whereas the TV's job is to lexicalize the TP node. Moving up, the suffix *-v* is responsible for the PSTP node. The lexical entry of the suffix *-in_1*, on the other hand, is a perfect match for the SPKRP node.

(217) DERIVATION OF BATI, 1PL PST, FINAL FORM



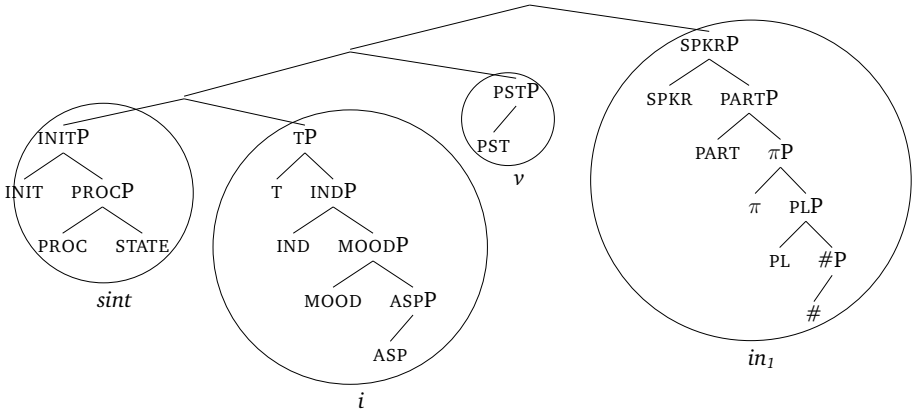
The 2PL is a subset of the tree above, stopping at PART.

(218) DERIVATION OF BATI, 2PL PST, FINAL FORM

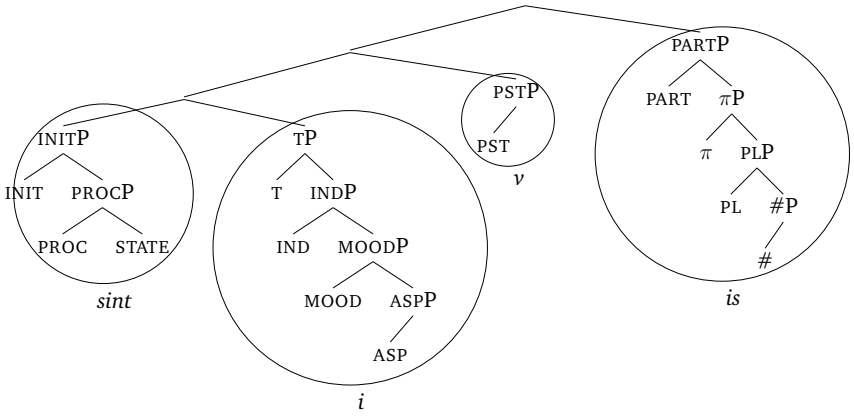


For completeness, below the reader can find the 1/2PL forms of the *i*-verbs in the form of syntactic trees.

(219) DERIVATION OF SINTÎ, 1PL PST, FINAL FORM



(220) DERIVATION OF SINTÎ, 2PL PST, FINAL FORM



Notice that the PST marker *-v* prevents the root from growing all the way to #. This requires the help of the thematic vowels to spellout TP. The same happens in the PRS forms: the agreement suffixes *-in*$_1$ and *-is* prevent the root from growing up to #. Leaving the same amount of features to be lexicalized between the root and their foot. This means that: (i) the same TV of the PST forms will spell out those features; (ii) the same root allomorph will be found in the PST forms and in the 1/2PL PRS. That turns out to be correct given the following generalization on TF verbs:

(221) GENERALIZATION III
When the PST forms combines with the same TV found in the 2PL PRS, those forms are syncretic with the 1/2PL PRS.

2.5.2 The singular forms

As we have just seen, in the PL PST forms, the *e*-verbs and *i*-verbs show the same set of suffixes of the PRS after *-v-*.

(222) PL FORMS OF BATI

	PRS	PST
1PL	bat-**in**	bat-e-v-**in**
2PL	bat-e-**is**	bat-e-v-**is**
3PL	bat-**in**	bat-e-v-**in**

(223) PL FORMS OF SINTÎ

	PRS	PST
1PL	sint-**in**	sint-i-v-**in**
2PL	sint-i-**is**	sint-i-v-**is**
3PL	sint-**in**	sint-i-v-**in**

When it comes to the SG PST forms, on the other hand, we see different suffixes compared to the PRS forms. The "new" suffixes are *-i* and *-a*. The 1SG is marked by the suffix *-i*, while the 2SG shows the suffix *-a* between *-v* and *-s*. The 3SG shows only the suffix *-a*.

(224) SG FORMS OF BATI

		PRS	PST
SG	1	bat	bat-e-v-**i**
	2	bat-s	bat-e-v-**a**-s
	3	bat	bat-e-v-**a**

(225) SG FORMS OF SINTÎ

		PRS	PST
SG	1	sint	sint-i-v-**i**
	2	sint-s	sint-i-v-**a**-s
	3	sint	sint-i-v-**a**

These suffixes are specialized for the singular forms. To express that, their feet has been placed at #. The features below # will be lexicalized as in the plural past forms. We can thus fill in the lexicalization tables as follows:

(226) LEXICALIZATION TABLE OF BATI, SG PST

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	π	PART	SPKR
bat				e			v				
bat				e			v				
bat				e			v				

(227) LEXICALIZATION TABLE OF SINTÎ, SG PST

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	π	PART	SPKR
sint			i				v				
sint			i				v				
sint			i				v				

Now we just need to fill in the lexicalization table with the agreement suffixes. The 1/3SG forms show only one suffix: *-i* and *-a*, respectively. Those suffixes will then lexicalize the agreement features all by themselves. On the other hand, the 2SG displays two suffixes: the same *-a* of the 3SG and the suffix *-s*. The latter is responsible only for lexicalizing the PART feature, leaving the constituent [π [#]] for the suffix *-a*. The updated lexicalization tables are thus the following:

(228) LEXICALIZATION TABLE OF BATI, SG PST

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	π	PART	SPKR
bat				e			v	i			
bat				e			v	a		s	
bat				e			v	a			

(229) LEXICALIZATION TABLE OF SINTÎ, SG PST

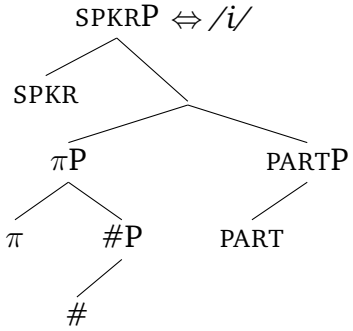
STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	π	PART	SPKR
sint			i				v	i			
sint			i				v	a		s	
sint			i				v	a			

A last puzzle arises: how come syntax needs two suffixes to lexicalize the [PART [π [#]]] constituent? The suffix *-i* alone contains those features. It could thus

lexicalize the entire constituent requiring less movement, compared to the bi-morphemic option.

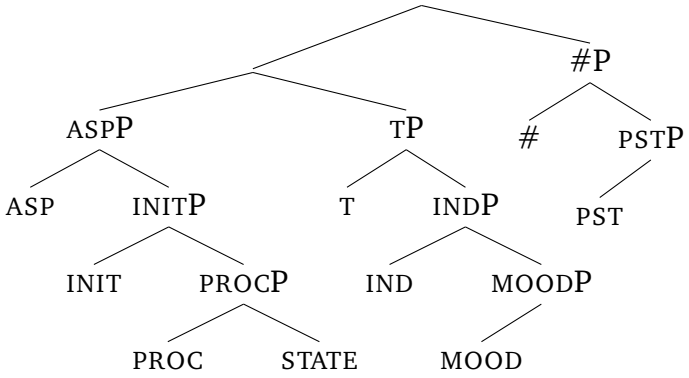
Similarly for the roots, the solution lies in the feature geometry of the lexical entry of *-i*. So far, we introduced a new type of lexical entry, i.e. the CLB with a binary foot. Those items encode movement of a constituent to various height of the functional sequence resulting in a branching lexical item. As explored in Starke (2022), a second type of lexemes can be present in the lexicon with the new lexicalization procedure: CLB tree with a unary foot. Let us suppose that we have an entry like this:

(230) LEXICAL ENTRY OF -I



Such lexical entry is the result of sub-extraction. The feature geometry of the lexical entry of *-i* prevents the suffix to be able to pop up in the 2SG PST form.[15] Let us sketch the solution step by step, starting with the derivation of the 3SG PST form of *bati* ('to hit'). We can resume the previous PST derivation up to #.

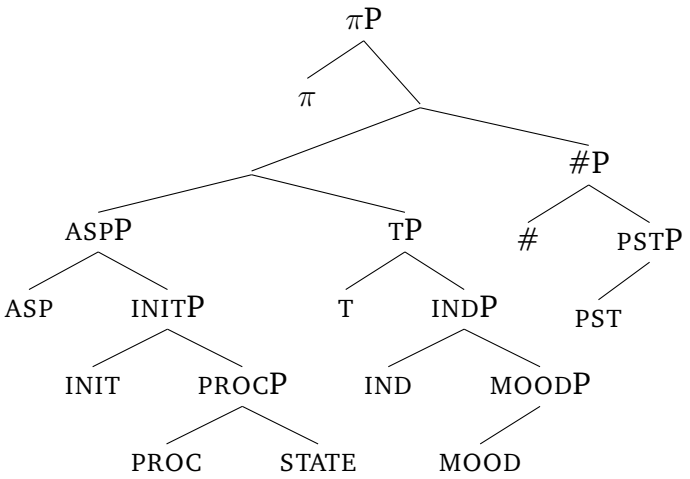
(231) DERIVATION OF BATI, 3SG PST, INTERMEDIATE STEP



When syntax is building a SG form, it merges the feature π directly above #:

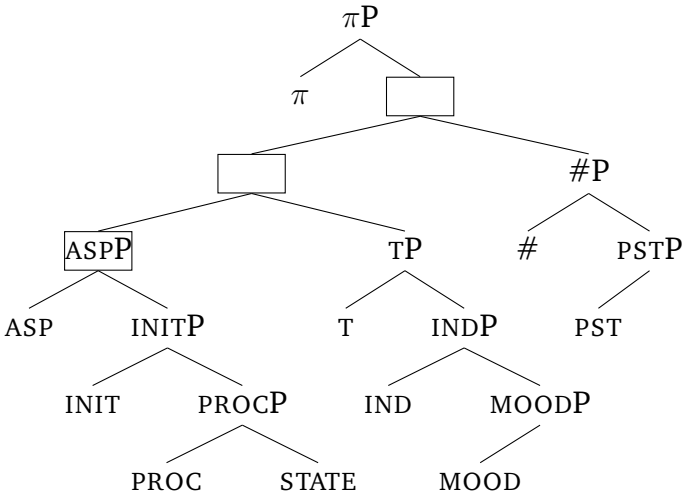
[15]The suffix *-i* is not found in the SG PRS of the *e-* and *i*-verbs as those derivations will never get to a configuration compatible with its entry.

(232) DERIVATION OF BATI, 3SG PST, INTERMEDIATE STEP



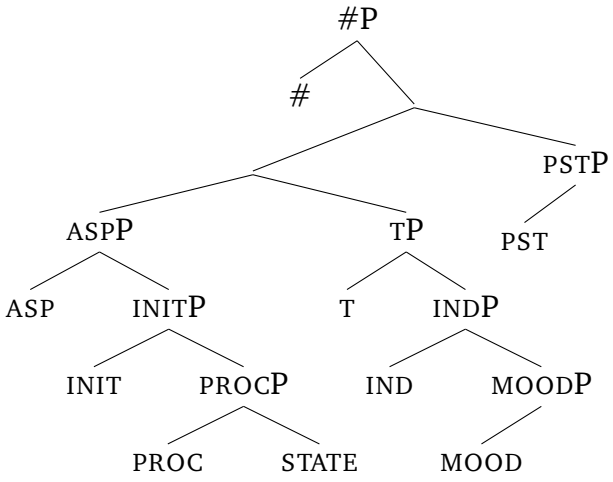
When syntax checks the lexicon, it cannot find any item that could lexicalize the structure in (232). Movement gets triggered: first, syntax tries to sub-extract ASPP. When that fails, it continues by moving the dominating unlabelled node. That fails too. Syntax then tries to move the entire Spec, but that is unsuccessful.

(233) DERIVATION OF BATI, 3SG PST, INTERMEDIATE STEP



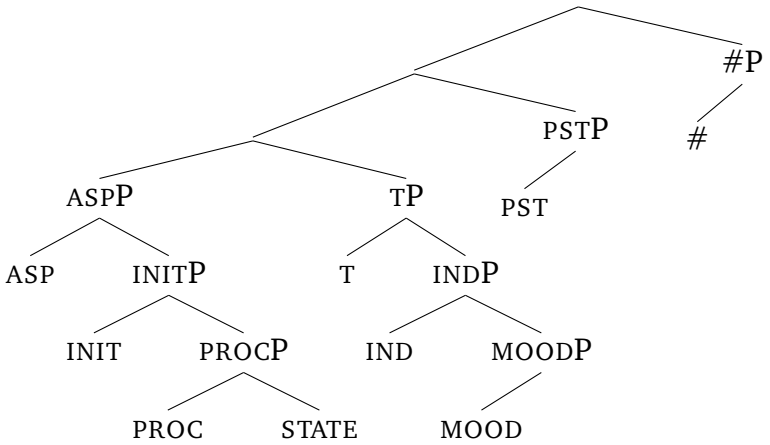
Since no movement helped the derivation, backtracking is the only remaining rescue operation. We thus undo the merging of π and go back to the previous cycle, i.e. when we merge #.

(234) DERIVATION OF BATI, 3SG PST, BACKTRACKING



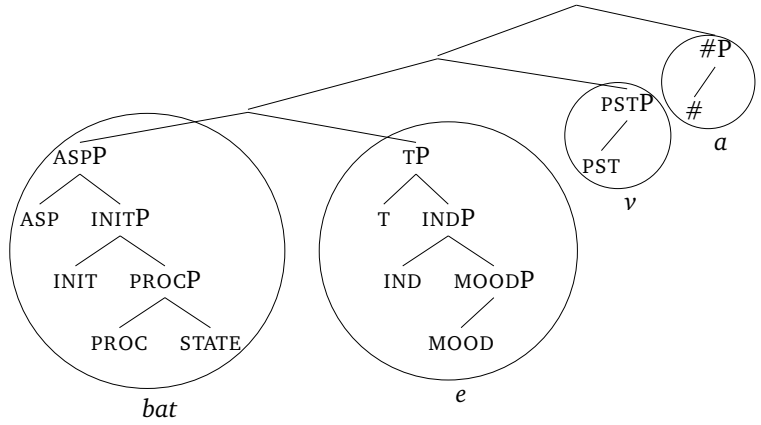
Moving the entire complement was the only option that we did not try before. We thus try that, yielding the structure in (235).

(235) DERIVATION OF BATI, 3SG PST, INTERMEDIATE STEP



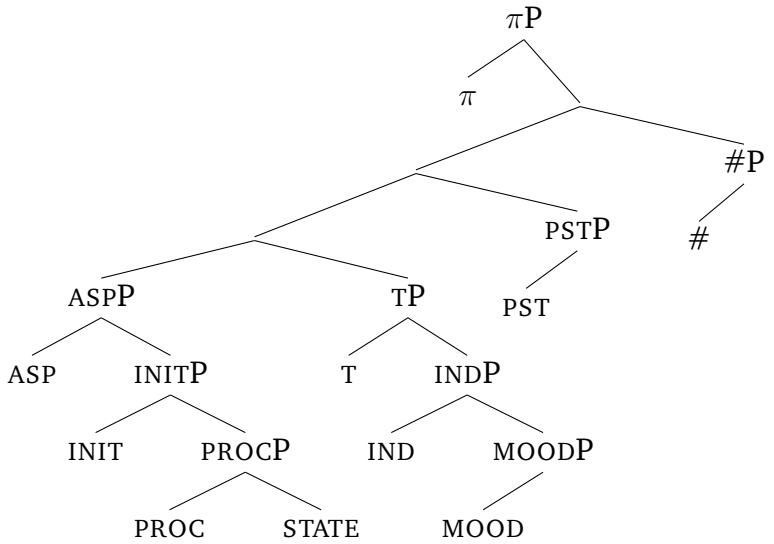
Syntax now checks the lexicon. There several entries can lexicalize #P: *-i*, *-a*, and *-in*$_1$ and *-is* contain that constituent. Given the Elsewhere Principle, syntax selects *-a* as the best fit since its entry has the least amount of superfluous features. The structure is thus lexicalized as follows:

(236) DERIVATION OF BATI, 3SG PST, INTERMEDIATE STEP



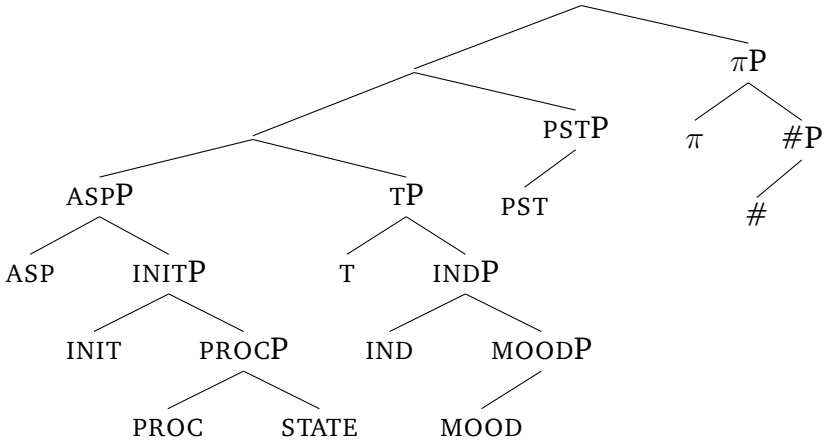
Syntax continues by merging π:

(237) DERIVATION OF BATI, 3SG PST, INTERMEDIATE STEP



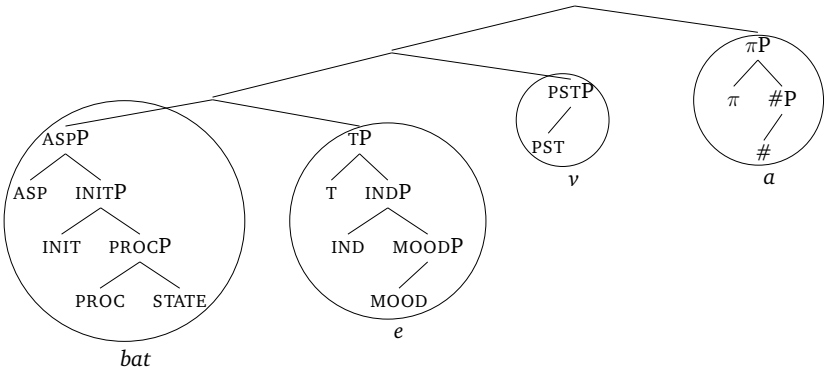
Again, the syntactic tree cannot be lexicalized by any lexical item. Movement gets triggered. After trying each possible movement as stated in the spellout algorithm, the Spec movement results in the structure below:

(238) DERIVATION OF BATI, 3SG PST, INTERMEDIATE STEP



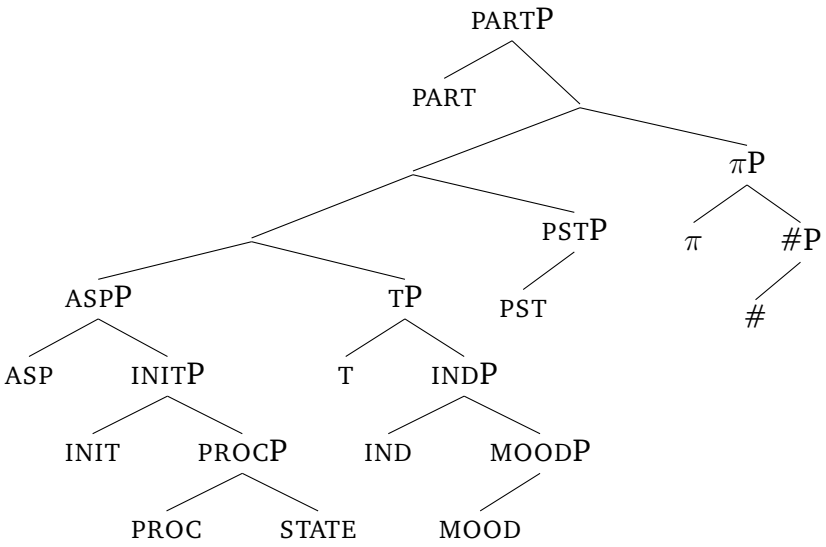
The root */bat/* lexicalizes ASPP, the TV *-e* - TP, the suffix *-v* - PSTP. With respect to the πP node, *-a* and *-i* compete for its lexicalization. Again, *-a* wins since it is a perfect match for the πP node.

(239) DERIVATION OF BATI, 3SG PST, FINAL FORM



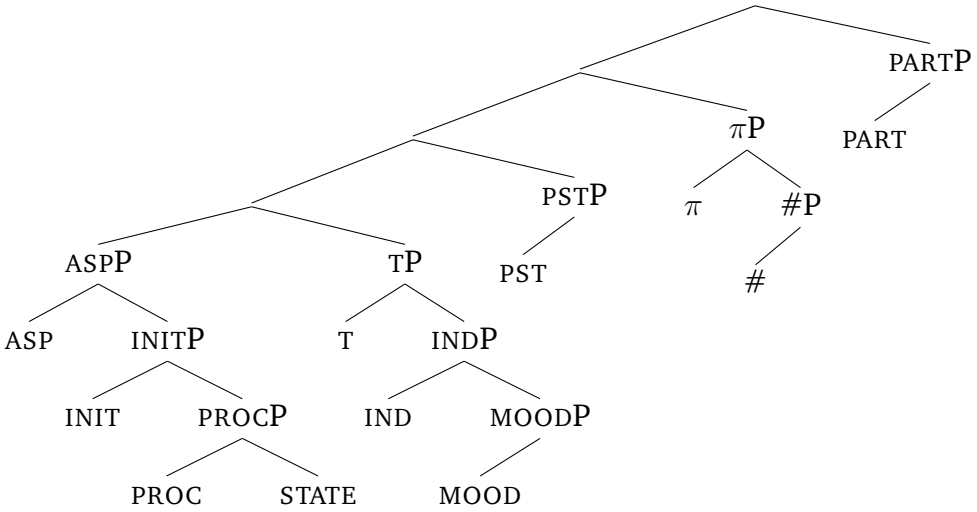
If syntax wants to build a 2SG, it will continue merging the PART feature.

(240) DERIVATION OF BATI, 2SG PST, INTERMEDIATE STEP



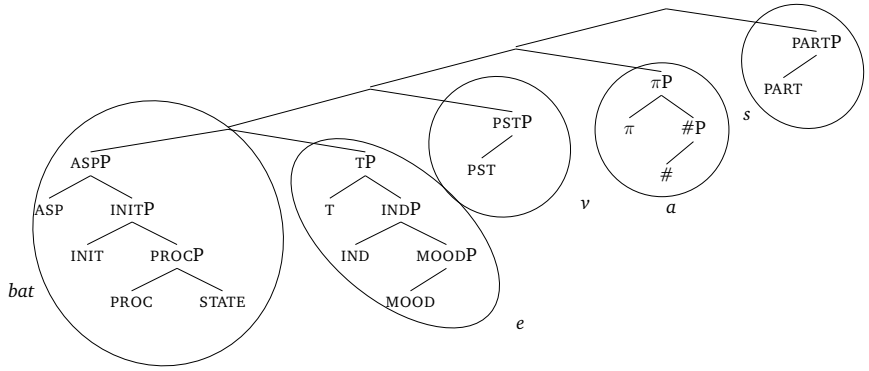
Spellout-driven movement occurs. Syntax will apply the sub-extraction option first. That fails, so it moves the immediately dominating node recursively. Only moving the entire complement leads to a successful lexicalization.

(241) DERIVATION OF BATI, 2SG PST, INTERMEDIATE STEP



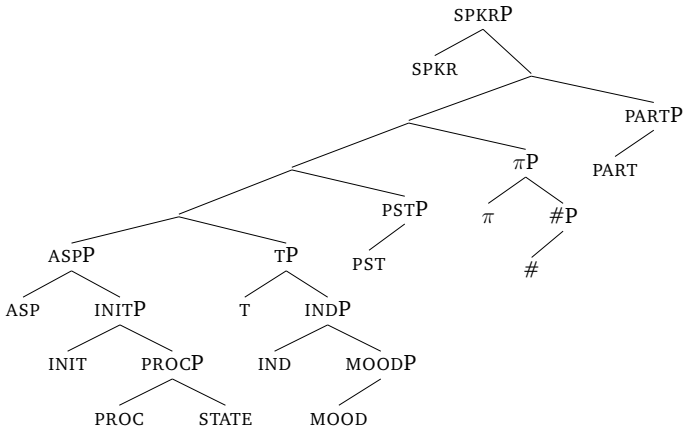
The 2SG PST can be easily derived: the suffix *-s* matches the PARTP. The rest of the structure gets lexicalized as in the 3SG PST.

(242) DERIVATION OF BATI, 2SG PST, FINAL FORM



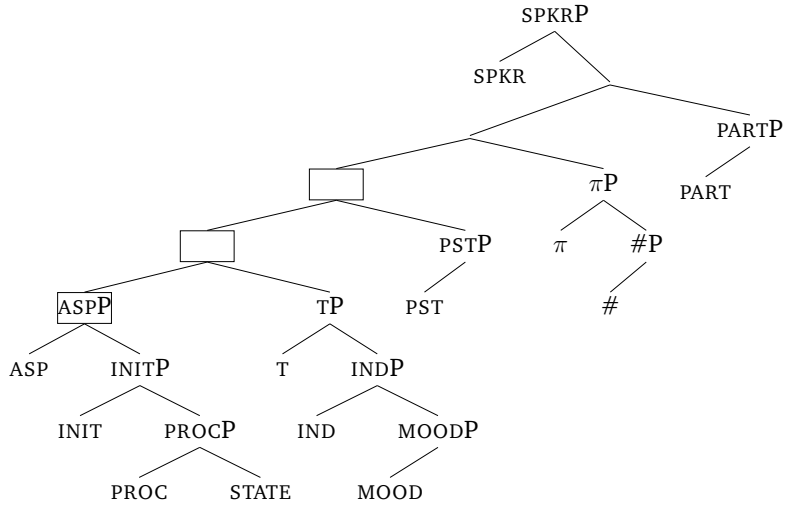
What happens when syntax builds a 1SG instead? It continues the derivation merging the feature SPKR.

(243) DERIVATION OF BATI, 1SG PST, INTERMEDIATE STEP



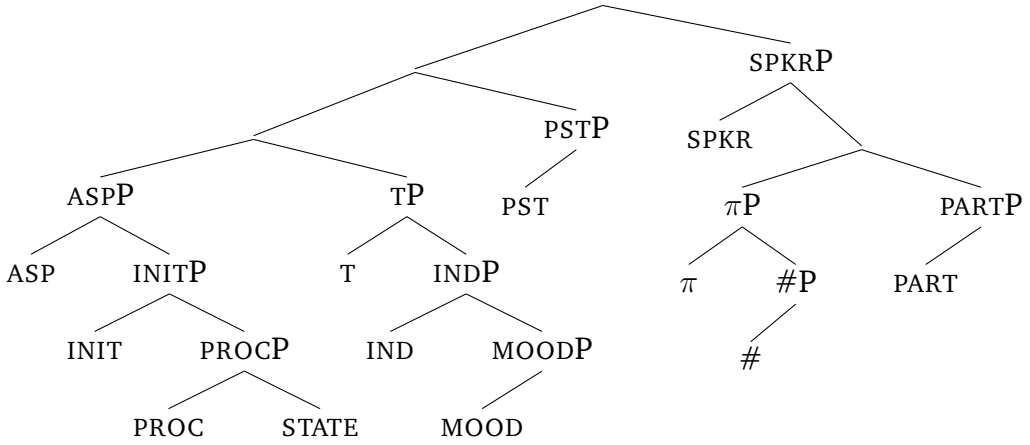
Following the spellout algorithm, syntax tries first to sub-extract the ASPP node. When that fails, it goes upwards and moves the dominating unlabelled node (see (244)).

(244) DERIVATION OF BATI, 1SG PST, INTERMEDIATE STEP



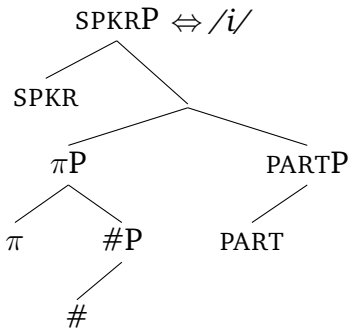
When that fails too, it continues by moving the upper unlabelled node, yielding (245).

(245) DERIVATION OF BATI, 1SG PST, INTERMEDIATE STEP



After sub-extraction, what is left on the right can now be lexicalized by the suffix *-i*, whose lexical entry has the following shape:

(246) LEXICAL ENTRY OF -I



The same logic applies for the derivations of the SG PST forms of the *i*-verbs. The overall lexicalization tables for both verb classes are shown below:[16]

(247) LEXICALIZATION TABLE OF BATI

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
bat													
bat												s	
bat													
bat				e				in_1					
bat				e				is					
bat									in_3				
bat				e			v	i					
bat				e			v	a				s	
bat				e			v	a					
bat				e			v	in_1					
bat				e			v	is					
bat				e			v		in_3				

[16]As assumed for the 1/2PL PRS forms, the thematic vowels *-e* and *-i* are floating elements in the PST forms as well. Both thematic vowels get to be pronounced in all the PST forms since they are linked to the available V position. The same logic applies to all the three thematic vowels in the PST forms of all verb classes. It has to be pointed out that in the derivation of the 2PL PST form, the deletion of an extra VC sequence will occur to rescue an ill-formed derivation, following Gussmann & Kaye (1993).

(248) LEXICALIZATION TABLE OF SINTÎ

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
sint													
sint												s	
sint													
sint			i					in_1					
sint			i					is					
sint									in_3				
sint			i				v	i					
sint			i				v	a				s	
sint			i				v	a					
sint			i				v	in_1					
sint			i				v	is					
sint			i				v		in_3				

The combination of the spellout algorithm and the lexical entries with CLBs allow to correctly derive the PRS and PST forms. Up to now, we have derive only two verb patterns attested in TF, i.e. the *e*- and *i*-verbs. In the next chapters, we will see that the other verb patterns can be derived with the same technology in the same principled way.

Chapter 3

Inflectional patterns

We now have all the ingredients to derive the remaining verb classes in Tualis Friulian within a Nanosyntactic analysis. In this chapter we will look at the remaining inflectional patterns:

(i) the long *e*-verbs in § 3.1;

(ii) the *if*-verbs in § 3.2;

(iii) the *a*-verbs in § 3.3.

These three verb classes show different suffixes from the previously analysed *e*- and *i*-verbs in Chapter 2. However, we can account for those classes without any additional mechanism to morpho-syntax, i.e., beyond the usual nanosyntactic operations.

3.1 Long e-verbs

As illustrated by *valê* ('to value'), the verb class of long *e*-verbs differs from the *e*-verbs only in the SG PRS forms.

		PRS	PST
SG	1	val-ː	val-e-v-i
	2	val-ː-s	val-e-v-a-s
	3	val-ː	val-e-v-a
PL	1	val-in	val-e-v-in
	2	val-e-is	val-e-v-is
	3	val-in	val-e-v-in

valê, 'to value'

		PRS	PST
SG	1	bat	bat-e-v-i
	2	bat-s	bat-e-v-a-s
	3	bat	bat-e-v-a
PL	1	bat-in	bat-e-v-in
	2	bat-e-is	bat-e-v-is
	3	bat-in	bat-e-v-in

bati, 'to hit'

The singular present forms of *valê* ('to value') show an additional morpheme: the length. The two verb classes, however, show no difference in the PL PRS and PST forms. The derivations of those forms work exactly the same.[1]

(1) LEXICALIZATION TABLE OF VALÊ, PL PRS AND PST

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
val				e				in_1					
val				e				is					
val									in_3				
val				e			v	i					
val				e			v	a				s	
val				e			v	a					
val				e			v	in_1					
val				e			v	is					
val				e			v		in_3				

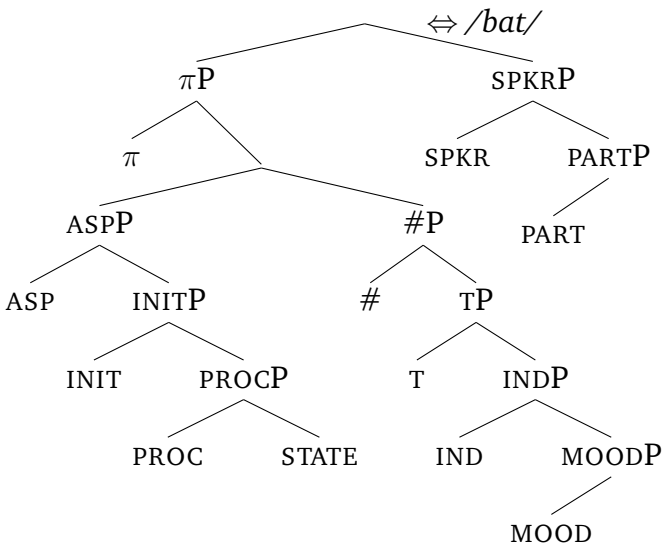
(2) LEXICALIZATION TABLE OF BATI, PL PRS AND PST

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
bat				e				in_1					
bat				e				is					
bat									in_3				
bat				e			v	i					
bat				e			v	a				s	
bat				e			v	a					
bat				e			v	in_1					
bat				e			v	is					
bat				e			v		in_3				

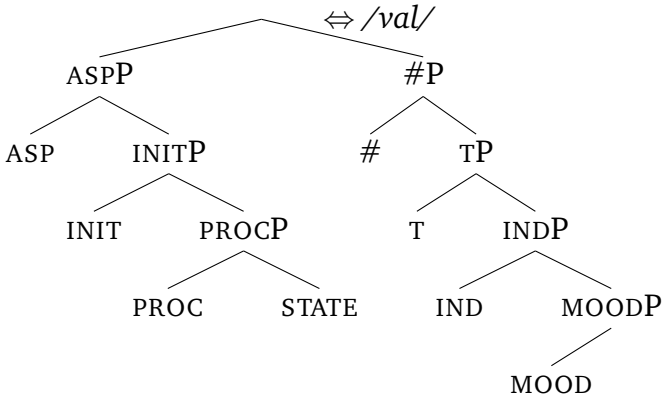
Given the parallel behavior in these forms, the question is: how come that these two patterns differ in the SG PRS forms? This difference can be captured in terms of root size. Specifically, I argue that *valê*-like verbs are smaller than *bati*-like verbs. In the latter case, the lexical entry of the root can reach up to SPKR (see (3)). On the other hand, */val/* can only reach up to #, leaving the remaining features to be lexicalized by an additional morpheme (see (4)).

[1]For detailed steps of the derivations, the reader can see § 2.4 and § 2.5.

(3) LEXICAL ENTRY OF BAT



(4) LEXICAL ENTRY OF VAL



As we can see, both roots contain an ASPP on the left branch, which is why they pattern the same in most forms (cf. lexicalization tables in (1)-(2)). However, they are going to differ in the SG PRS forms, where the *e*- root */bat/* can realize person features, but the long *e*-root */val/* cannot. The two roots can thus fill in the cells in the lexicalization tables as shown below.

(5) LEXICALIZATION TABLE OF BATI, SG PRS

SPI	ASP	MOOD	IND	T	#	π	PART	SPKR
bat								
bat							s	
bat								

(6) LEXICALIZATION TABLE OF VALÊ, SG PRS

SPI	ASP	MOOD	IND	T	#	π	PART	SPKR
val								
val							s	
val								

As the rectangles in Table (6) indicate, the simplest way to analyse the length morpheme is to have it lexicalize the remaining syntactic layers: [SPKR[PART[π]]]. However, this would lead to a wrong prediction in the past tense forms: the suffix *-v* can reach up to #, leaving the same amount of features to be lexicalized: [SPKR[PART[π]]]. The length morpheme would thus be responsible for lexicalizing person features in the PST as well.

(7) LEXICALIZATION TABLE OF VALÊ, 3SG PRS AND PST

SPI	ASP	MOOD	IND	T	PST	#	π
val							
val		e			v		

That is a wrong result: the length morpheme is not attested in the past forms. There we find the suffixes *-a* and *-i*, as we have seen in Chapter 2, § 2.5.2.

(8) LEXICALIZATION TABLE OF VALÊ, SG PST

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	π	PART	SPKR
val				e			v	i			
val				e			v	a		s	
val				e			v	a			

To prevent such misprediction, it is necessary to make the length have a lower foot than π. Where exactly would the foot be placed? We will now discuss various possible options for the foot of the length morpheme. Among those options, some are abandoned since they lead to wrong predictions.

If it has its foot in #, it will be identical to the suffix *-a*. In addition to that, the presence of the TV will be wrongly predicted in the SG PRS forms., e.g.:

(9) HYPOTHETICAL LEXICALIZATION TABLE OF VALÊ, 3SG PRS AND PST

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	π
val				e				ː	
val				e			v	a	

This option is thus rejected.

The next possibility would be placing the foot of the length morpheme at either T or IND. If so, the length morpheme would compete with the suffix *-a* to lexicalize person features., e.g.:

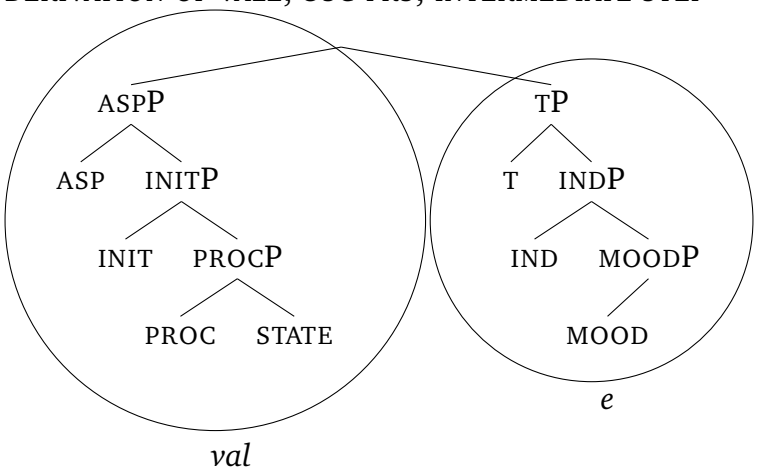
(10) HYPOTHETICAL LEXICALIZATION TABLE OF VALÊ, 3SG PRS AND PST

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	π
val				e		ː			
val				e			v	a	

Under this hypothetical scenario, *-a* would require less backtracking than the length morpheme. It would thus win the competition and the length morpheme would never enter the derivation. As before, a wrong form will be derived for the 3SG PRS form, i.e., **val-e-a*.

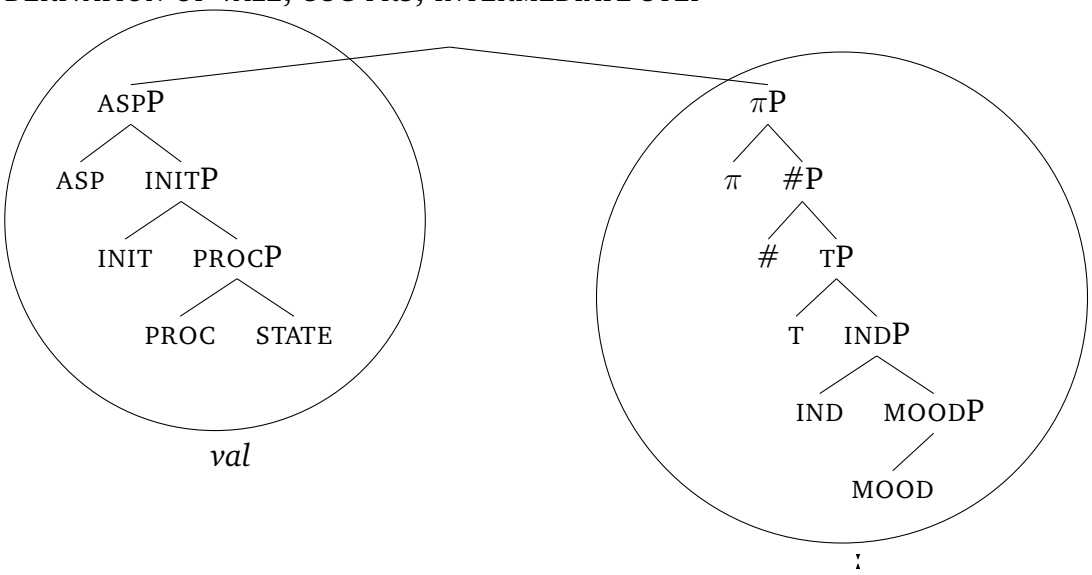
The correct form emerges when the foot of -ː is placed lower, i.e. at MOOD. The length morpheme competes with the TV *-e*, which also has its foot in MOOD. The TV will be a perfect match up to T, lexicalizing the following constituent: [T [IND [MOOD]]].

(11) DERIVATION OF VALÊ, 3SG PRS, INTERMEDIATE STEP



When the π feature is merged, the length morpheme will lexicalize [π [# [T [IND [MOOD]]]]].

(12) DERIVATION OF VALÊ, 3SG PRS, INTERMEDIATE STEP



In this way, the length morpheme correctly combines with the long *e*-roots only in the SG PRS forms. The shape of its lexical entry derives why (i) we do not see other root types combining with the length morpheme; (ii) we do not find the length morpheme in other tenses and moods.[2]

In addition to that, we also need to capture the fact that the length morpheme can lexicalize all the features up to SPKR in the 1SG, but it cannot grow all the way to PART in the 2SG.

(13) LEXICALIZATION TABLE OF VALÊ, SG PRS

STATE	PROC	INIT	ASP	MOOD	IND	T	#	π	PART	SPKR
val				:						
val				:					s	
val				:						

The SG forms create an ABA pattern. However, this is not a problem for the current theory. ABA patterns are attested also in the SG PRS forms of both *e*- and *i*-verbs, as shown in Chapter 2, § 2.3.

[2]As discussed in Chapter 1, there are a few verbs that show root vowel lengthening, but combine with an *-i* thematic vowel. I treat the root vowel lengthening in that class as root suppletion, and leave a potential unified morphological analysis for future research.

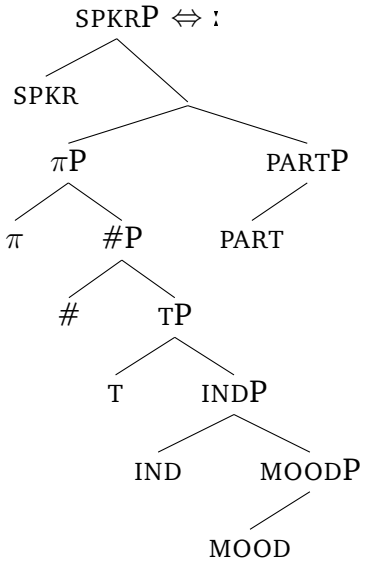
(14) ATTESTED ABA PATTERNS

		long *e*-verbs	*e*-verbs	*i*-verbs
SG	1	val-ː	bat	sint
	2	val-ː-s	bat-s	sint-s
	3	val-ː	bat	sint

We captured that pattern for the *i*- and *e*-roots due to the shape of their lexical entries: trees with a CLB. The feature arrangement, however, is such that the lexically stored trees do not contain a sub-constituent able to match the entire structure built by syntax to express a 2SG. There is however a difference among these ABA patterns: the *e*- and *i*-roots do not show any suffix in the 1/3SG forms. On the other hand, the long *e*-roots are always followed by the length morpheme in the SG PRS forms. In the 2SG an additional suffix is needed: *-s*.

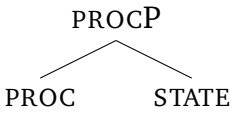
The lexical entry of the length morpheme adopts the same strategy (see (15)). As we shall see, the derivation proceeds in a way that this morpheme is also unable to lexicalize all ϕ features in the 2SG PRS due to its constituency.

(15) LEXICAL ENTRY OF ː

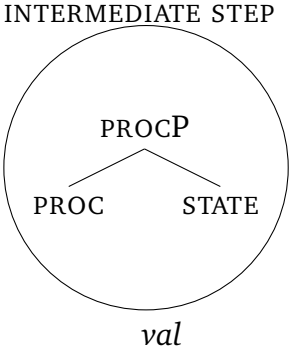


Let us now run the derivations of the SG PRS forms of the long *e*-verbs. When syntax builds a 3SG PRS form with a verb like *valê*, it first merges STATE and PROC. Then, it checks the lexicon, and the entry of */val/* can lexicalize that phrase.

(16) DERIVATION OF VALÊ, 3SG PRS, INTERMEDIATE STEP

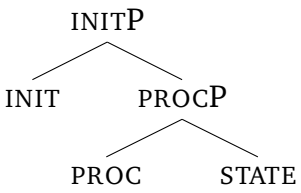


(17) DERIVATION OF VALÊ, 3SG PRS, INTERMEDIATE STEP

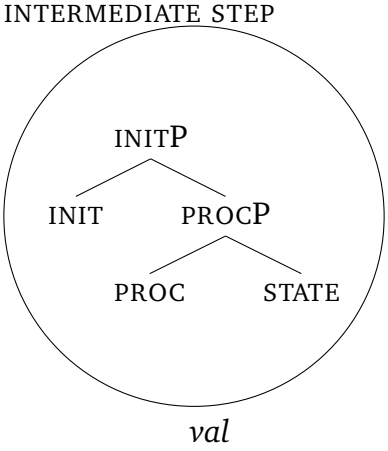


Syntax continues by merging the next feature, i.e. INIT, and the root is again able to lexicalize what syntax has built.

(18) DERIVATION OF VALÊ, 3SG PRS, INTERMEDIATE STEP

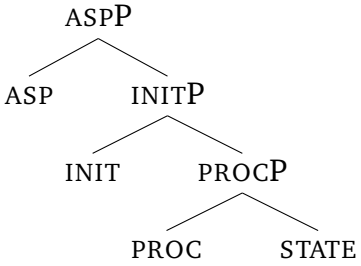


(19) DERIVATION OF VALÊ, 3SG PRS, INTERMEDIATE STEP



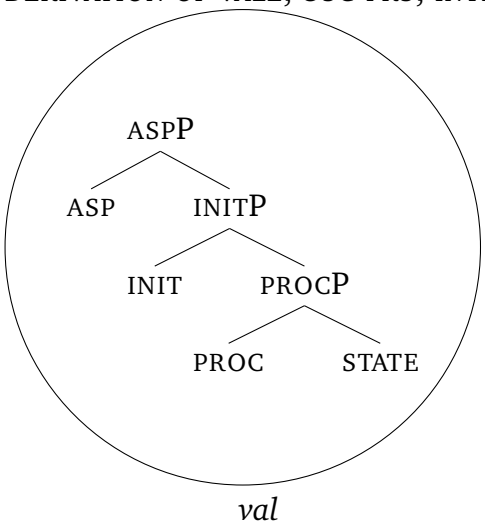
After that, ASP gets merged.

(20) DERIVATION OF VALÊ, 3SG PRS, INTERMEDIATE STEP



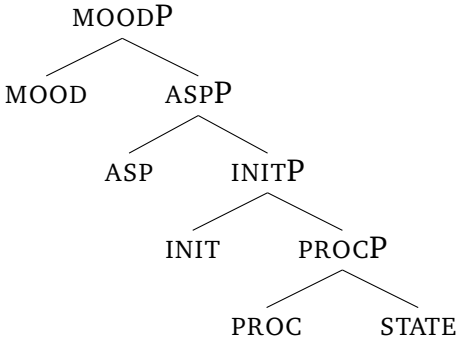
The lexical entry of the root */val/* matches again what syntax has built.

(21) DERIVATION OF VALÊ, 3SG PRS, INTERMEDIATE STEP



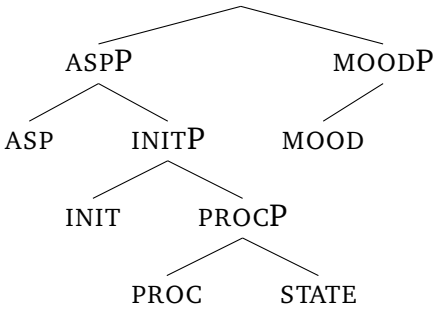
The derivation goes on with the merge of MOOD.

(22) DERIVATION OF VALÊ, 3SG PRS, INTERMEDIATE STEP



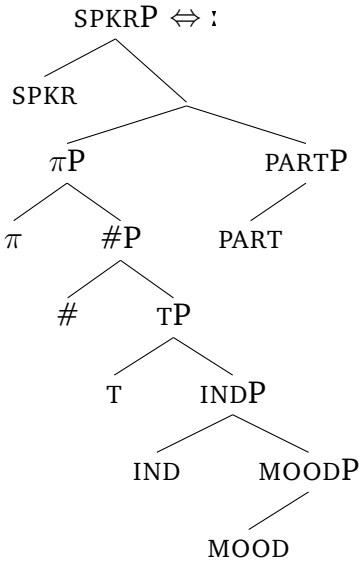
However, there is no matching lexical item for what syntax has built. So, movement gets triggered. Following the spellout algorithm, the ASPP node is moved first.

(23) DERIVATION OF VALÊ, 3SG PRS, INTERMEDIATE STEP

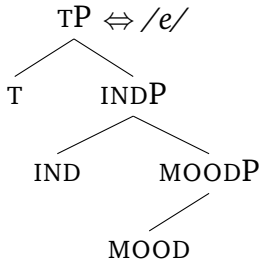


Syntax checks the lexicon and finds two lexical items that match the MOODP: the length morpheme and the thematic vowel *-e*.

(24) LEXICAL ENTRY OF ː

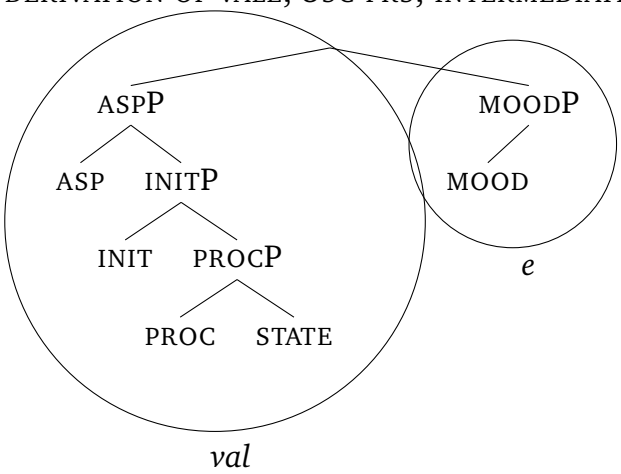


(25) LEXICAL ENTRY OF -E



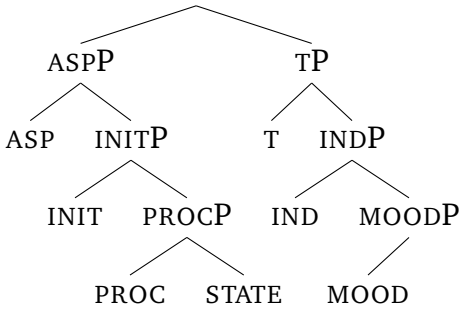
Given the Elsewhere Condition (see Chapter 2, Example (125)), the lexical entry of *-e* is a better match for lexicalizing MOODP since it has the least amount of superfluous features.
The following successful lexicalization applies: the root */val/* can lexicalize the left branch, whereas the thematic vowel *-e* matches the MOODP node.

(26) DERIVATION OF VALÊ, 3SG PRS, INTERMEDIATE STEP



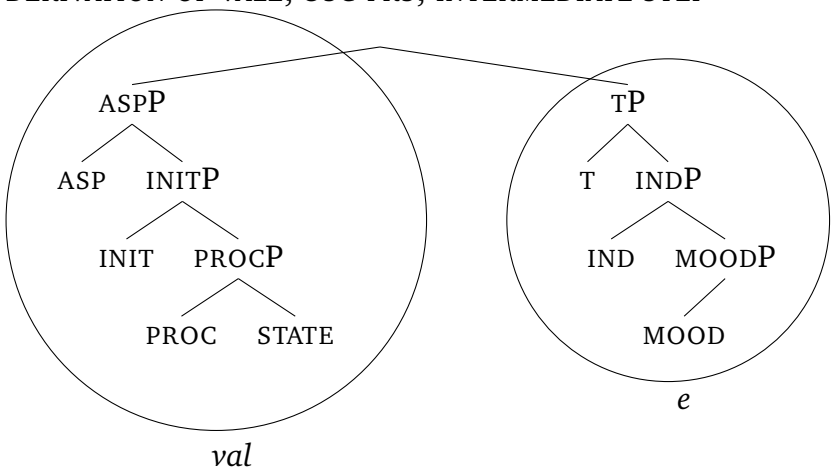
The derivation will continue exactly as for the SG PRS forms of *bati* up to T (see § 2.2.2, Examples (63)-(68)).

(27) DERIVATION OF VALÊ, 3SG PRS, INTERMEDIATE STEP



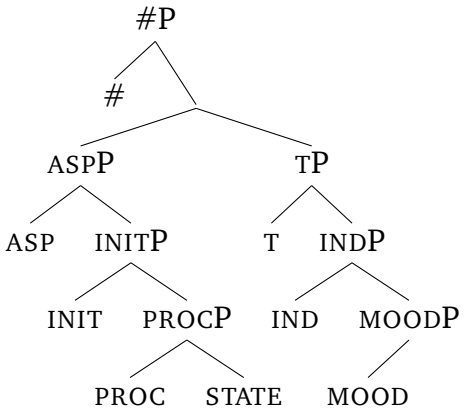
The root */val/* is a match for ASPP, while the thematic vowel *-e* is a perfect match for the TP.

(28) DERIVATION OF VALÊ, 3SG PRS, INTERMEDIATE STEP



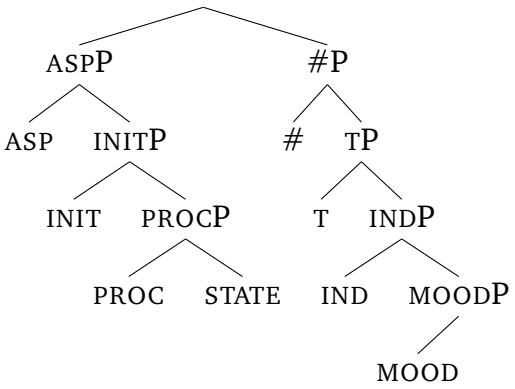
When syntax is building a 3SG PRS form, it will continue by merging #.

(29) DERIVATION OF VALÊ, 3SG PRS, INTERMEDIATE STEP



There is no matching item in the lexicon. Movement is thus needed to successfully lexicalize the structure in (29). Following the spellout algorithm, syntax tries to move the closest non-remnant labelled constituent, i.e. ASPP:

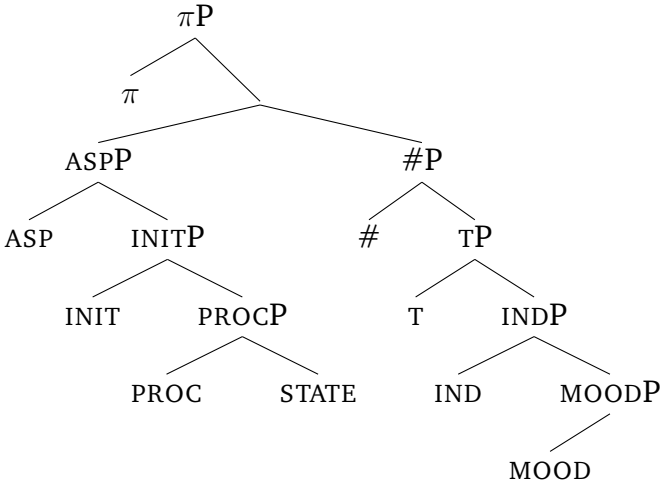
(30) DERIVATION OF VALÊ, 3SG PRS, INTERMEDIATE STEP



The root */val/* is a perfect match for the entire structure at this stage of the derivation.

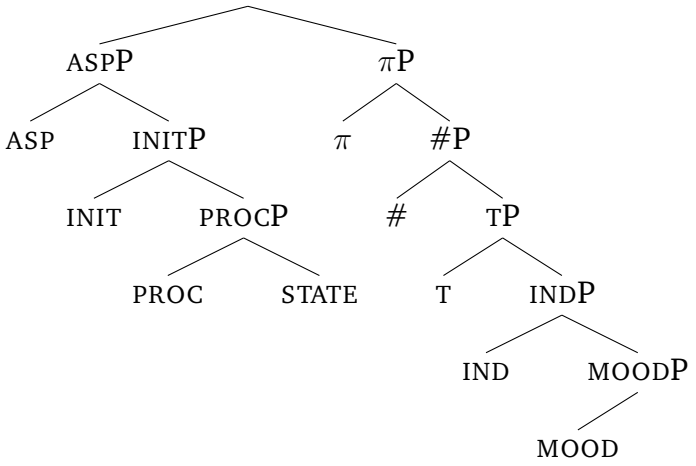
Syntax continues merging π.

(31) LEXICALIZATION OF VAL, 3SG PRS, INTERMEDIATE STEP



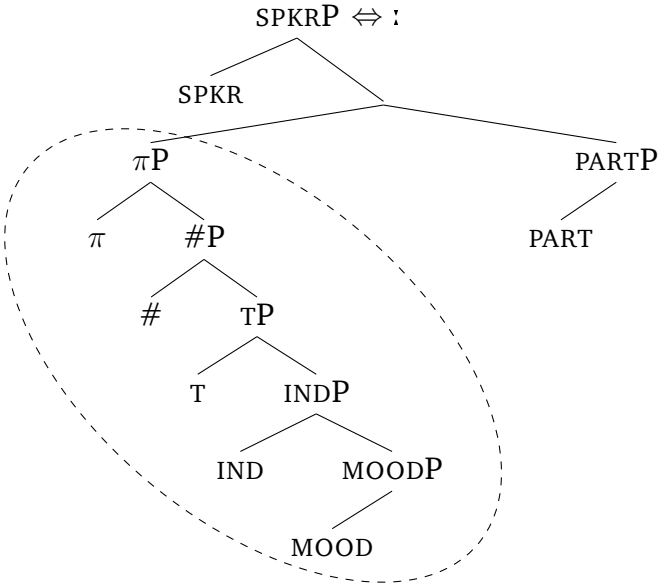
This is the place in the derivation where the long *e*-verbs and the short *e*-verbs start diverging. The short *e*-roots would match the entire structure in (31) (cf. Chapter 2, § 2.2.2, Example (73)). On the other hand, when syntax is building a 3SG with long *e*-verbs, it checks the lexicon for spelling out (31), but it does not find any matching item for the syntactic structure. So, movement gets triggered. First, syntax tries to move ASPP.

(32) DERIVATION OF VALÊ, 3SG PRS, INTERMEDIATE STEP



After moving ASPP, syntax checks the lexicon again, and finds a matching item for πP: the lexical entry of the length morpheme contains that constituent, as highlighted in (33).

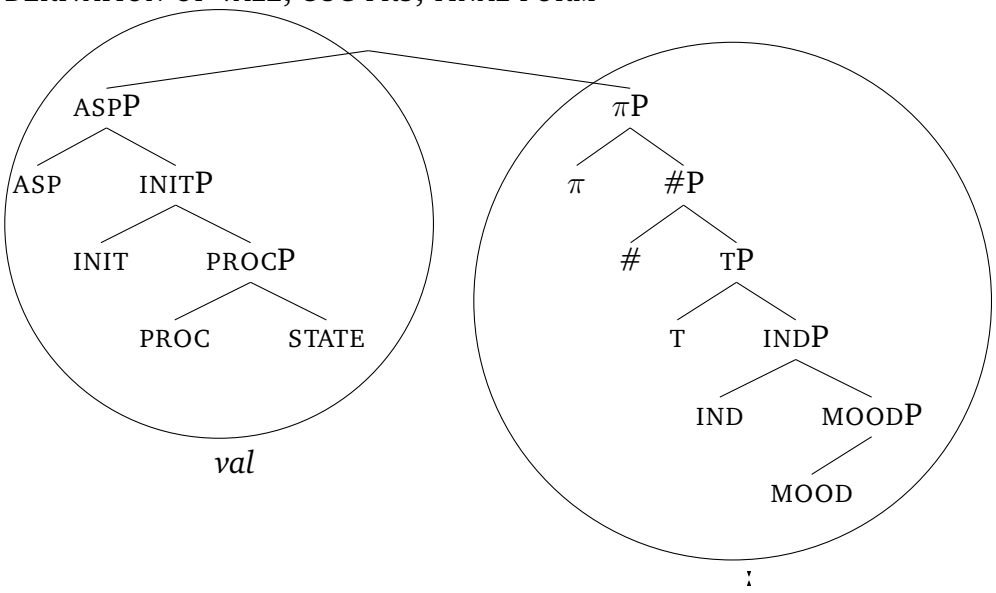
(33) LEXICAL ENTRY OF -ː



So, what is left behind can be lexicalized by the length morpheme.[3]

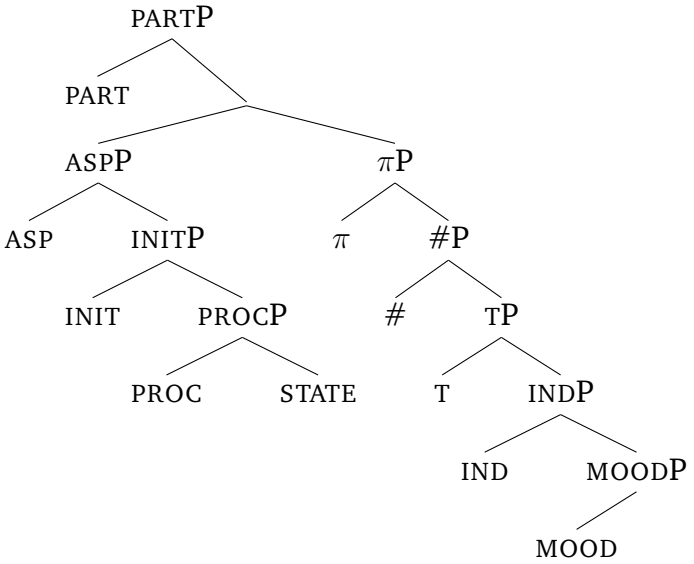
[3]Notice that the suffix -ː will enter the derivation when the feature π is merged right above #. For instance, that does not happen in the PL forms: the feature PL is merged after #. In addition to that, the length morpheme is not attested in the PST forms either. There the TV *-e* will be the best fit for TP, winning the competition over the length.

(34) DERIVATION OF VALÊ, 3SG PRS, FINAL FORM



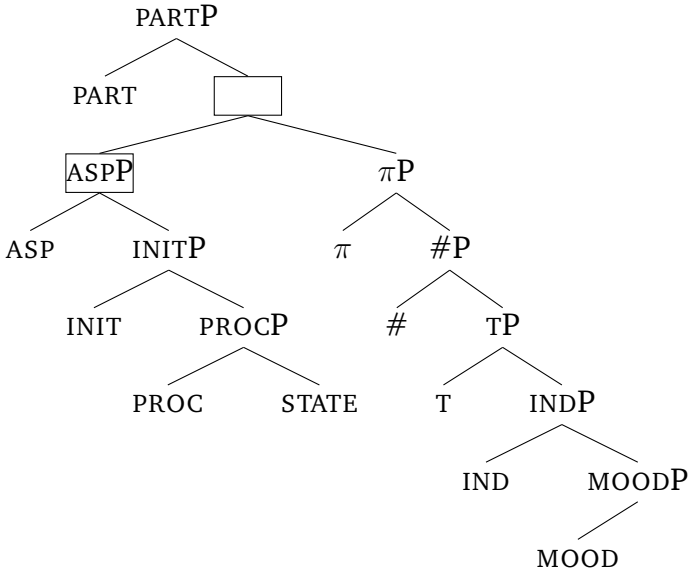
If syntax continues building a 2SG form, it will merge the feature PART on top of (34), i.e.:

(35) DERIVATION OF VALÊ, 2SG PRS, INTERMEDIATE STEP



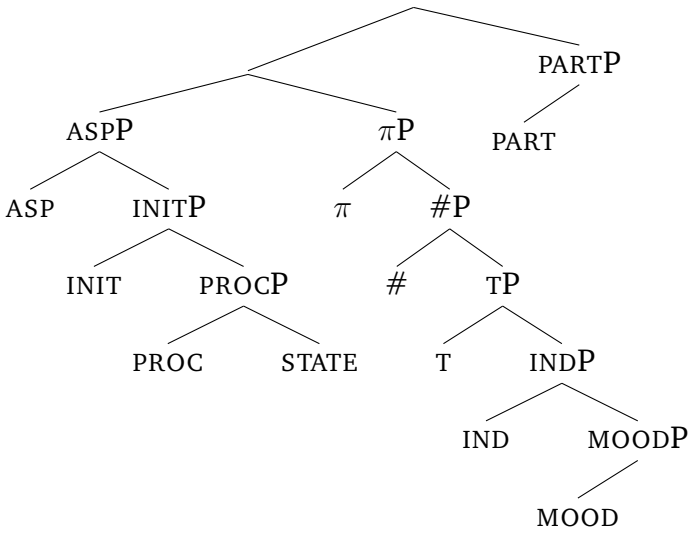
There is no lexical tree that matches the syntactic tree above. So, movement gets triggered. As usual, syntax tries to move ASPP first.

(36) DERIVATION OF VALÊ, 2SG PRS, INTERMEDIATE STEP



When that fails, it moves the entire complement, yielding (37).

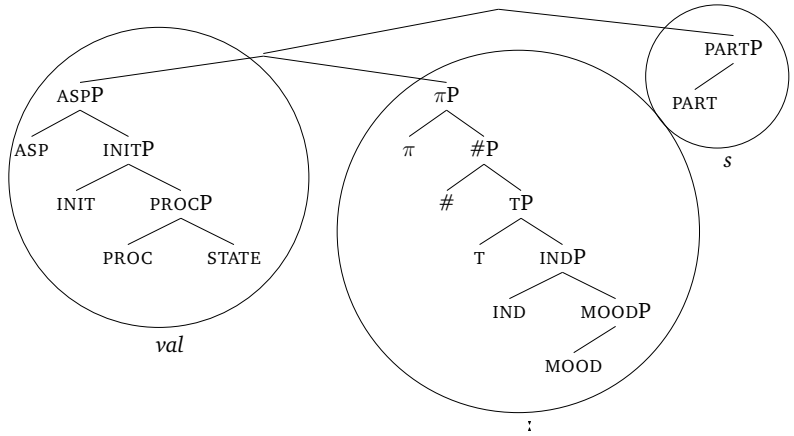
(37) DERIVATION OF VALÊ, 2SG PRS, INTERMEDIATE STEP



After complement movement, syntax checks the lexicon for matching items. As before, the root */val/* and the length morpheme matches the left branch, whereas the suffix *-s* is a perfect match for PARTP. Notice that the length morpheme cannot lexicalize all the features from MOOD to PART as those features do not form a constituent, contrary to its lexical entry (cf. (15)). It has also to be pointed out that the lexical entry of the length morpheme does contain the PARTP, but the

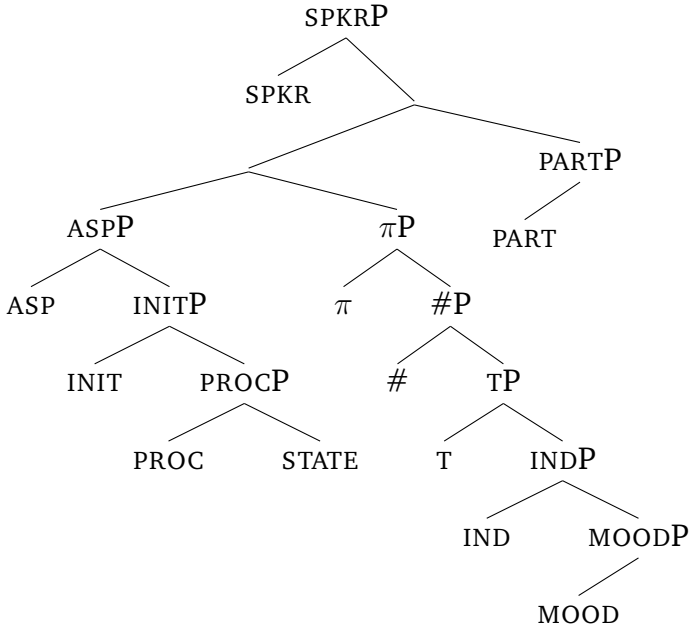
lexeme of the suffix *-s* is a perfect match. The latter wins the competition for spelling out PARTP.

(38) DERIVATION OF VALÊ, 2SG PRS, FINAL FORM



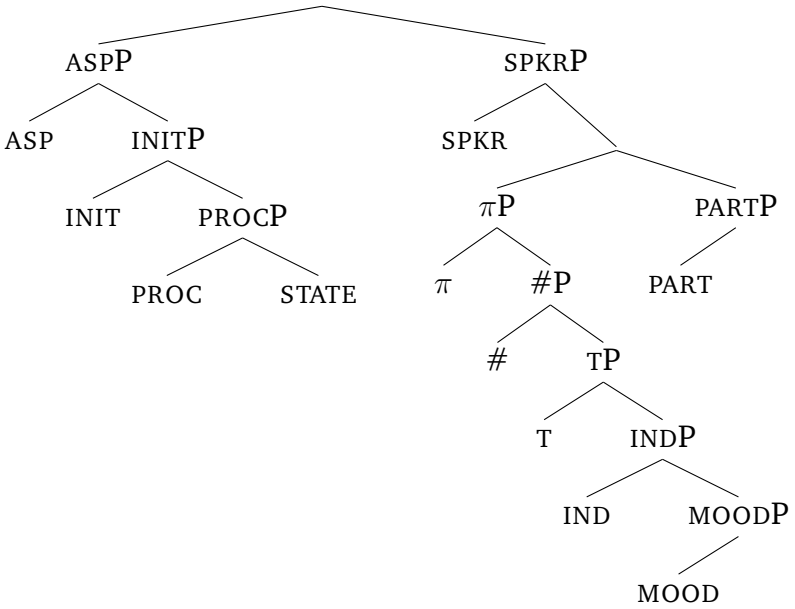
We are now left with the 1SG PRS to be derived: *vâl*. Syntax will now merge the feature SPKR:

(39) DERIVATION OF VALÊ, 1SG PRS, INTERMEDIATE STEP



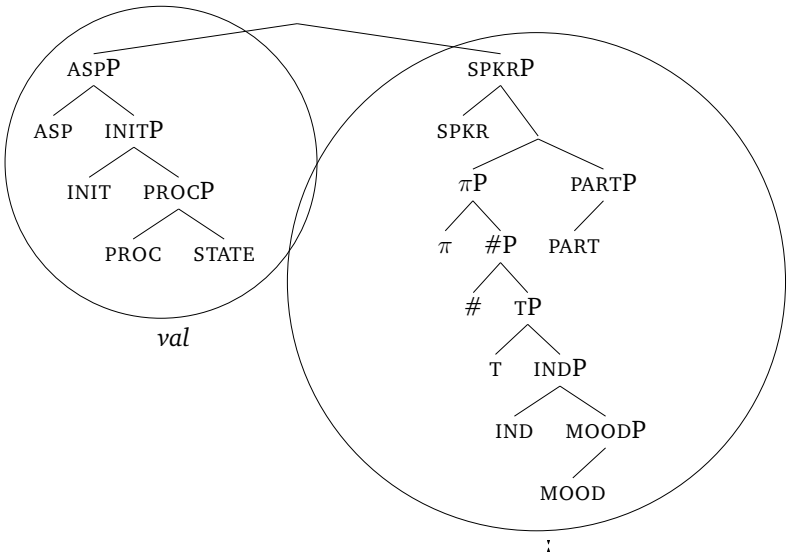
Since there is no lexical item that is able to spell out what syntax has built in (39), movement gets triggered. First, ASPP is sub-extracted, yielding (40).

(40) DERIVATION OF VALÊ, 1SG PRS, INTERMEDIATE STEP



The root */val/* can lexicalize ASPP, whereas the lexical entry of the length morpheme perfectly matches the right branch of the tree.

(41) DERIVATION OF VALÊ, 1SG PRS, FINAL FORM



The lexical entry of the length morpheme shows the effect of sub-extraction, which happens when SPKR gets merged. Such feature arrangement is the key solution to derive the ABA pattern in the SG PRS: the lexical entry of the length mor-

pheme is able to lexicalize the PART feature only when: (i) the SPKR is merged on top; (ii) sub-extraction of ASPP takes place.

To sum up, here is the updated lexicalization table of the PRS and PST forms of the long *e*-verbs.

(42) LEXICALIZATION TABLE OF VALÊ, PRS AND PST FORMS

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
val				:									
val				:								s	
val				:									
val				e				in_1					
val				e				is					
val									in_3				
val				e			v	i					
val				e			v	a				s	
val				e			v	a					
val				e			v	in_1					
val				e			v	is					
val				e			v		in_3				

3.2 Iʃ-verbs

Verbs such as *finî* ('to finish') combine with the TV *-i*, as *sintî* ('to hear'), but they show the suffix *-iʃ* in the SG and 3PL PRS.

		PRS	PST
SG	1	fin- iʃ	fin-i-v-i
	2	fin- iʃ -s	fin-i-v-a-s
	3	fin- iʃ	fin-i-v-a
PL	1	fin-in	fin-i-v-in
	2	fin-i-is	fin-i-v-is
	3	fin- iʃ -in	fin-i-v-in

finî, 'to finish'

		PRS	PST
SG	1	sint	sint-i-v-i
	2	sint-s	sint-i-v-a-s
	3	sint	sint-i-v-a
PL	1	sint-in	sint-i-v-in
	2	sint-i-is	sint-i-v-is
	3	sint-in	sint-i-v-in

sintî, 'to hear'

We will now focus on the SG and 3PL PRS forms since the other forms behave exactly the same as *sintî* ('to hear'). As we can see from the lexicalization tables

(43)-(44), the derivations of those forms work the same as the 1/2PL PRS and PST forms of *i*-verbs (see also Chapter 2).

(43) LEXICALIZATION TABLE OF FINÎ, 1/2PL PRS AND PST

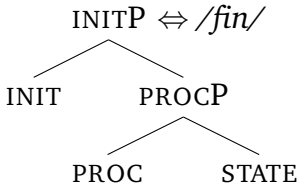
STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
fin			i					in_1					
fin			i					is					
fin			i				v	i					
fin			i				v	a				s	
fin			i				v	a					
fin			i				v	in_1					
fin			i				v	is					
fin			i				v		in_3				

(44) LEXICALIZATION TABLE OF SINTÎ, 1/2PL PRS AND PST

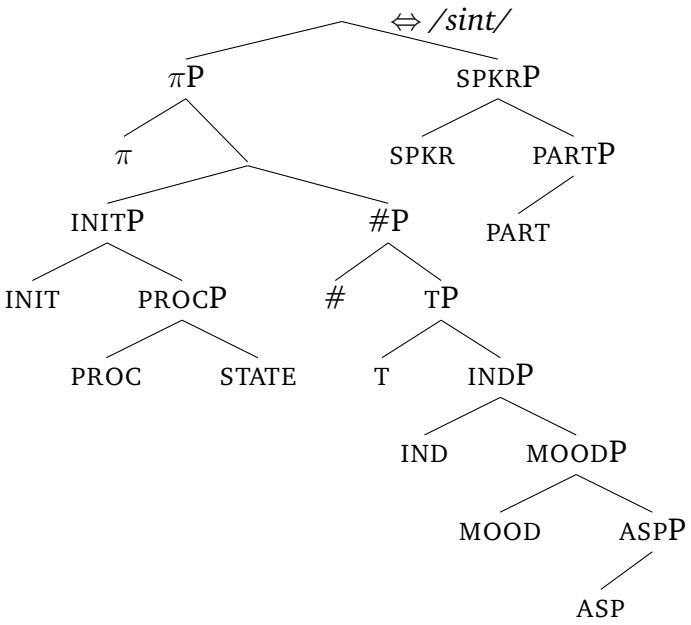
STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
sint			i					in_1					
sint			i					is					
sint			i				v	i					
sint			i				v	a				s	
sint			i				v	a					
sint			i				v	in_1					
sint			i				v	is					
sint			i				v		in_3				

The two patterns diverge in the SG and 3PL PRS forms: *finî*-like verbs need an additional morpheme, i.e. *-iʃ*, whereas *sintî*-like verbs do not. This difference can be captured in terms of root size. *Finî*-like verbs are of a smaller size compared to *sinî*-like verbs. For this reason, they need an additional morpheme to lexicalize the remaining features.

(45) LEXICAL ENTRY OF FIN



(46) LEXICAL ENTRY OF SINT



The two verbs pattern the same as long as they spell out INITP (see Tables (43)-(44)). When the root */sint/* spells out more than INITP, the two verb classes diverge and the suffix *-iʃ* lexicalizes the remaining features in the SG and 3PL PRS forms of *finî*-like verbs.[4]

(47) LEXICALIZATION TABLE OF FINÎ, SG AND 3PL PRS

STATE	PROC	INIT	ASP	MOOD	IND	T	#	ADD	PL	π	PART	SPKR
fin			iʃ									
fin			iʃ								s	
fin			iʃ									
fin			iʃ					in_3				

While looking at the SG forms, we can see that the same ABA pattern of the long *e*-verbs is attested: the suffix *-iʃ* reaches up to SPKR, but it does not lexicalize the PARTP in the 2SG.

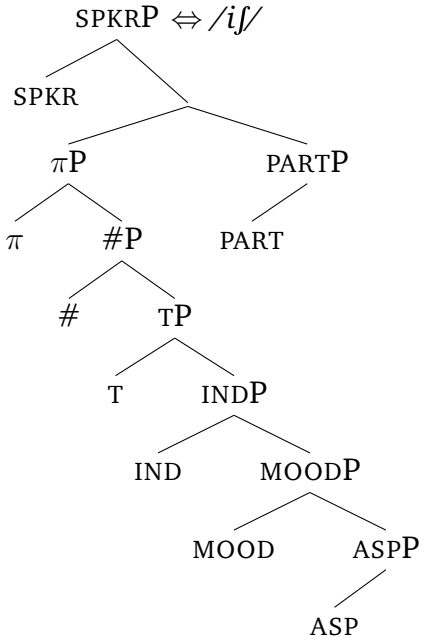
[4]Traditionally, the suffix *-iʃ-* is considered to have evolved from the Latin suffix -sc- (see, e.g., Da Tos 2013). It has, however, lost the semantic contribution attributed to the Latin suffix, i.e. inchoative meaning. Despite that, it is treated as a separate morpheme given its productivity in the language, and in the current analysis it contributes deriving the meaning of SG+3PL PRS forms in TF. A similar analysis can be found in Goryczka (2023) for the suffix *-isk* in Italian verbs.

(48)

		iʃ-verbs	long *e*-verbs
SG	1	fin-iʃ	val-ː
	2	fin-iʃ-s	val-ː-s
	3	fin-iʃ	val-ː

On analogy to the long *e*-verbs, the solution lies in the shape of the lexical entry of the suffix *-iʃ*.

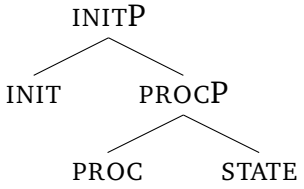
(49) LEXICAL ENTRY OF -Iʃ



The entry with a CLB in (49) allows us to derive the ABA pattern in the SG forms: it lexicalizes the PART feature only when the SPKR gets merged.

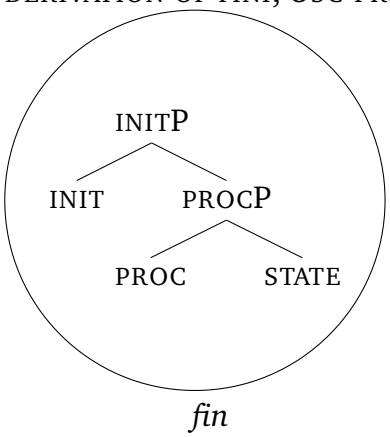
Let us see that in detail by running the derivations of the SG and 3PL PRS forms. We can take for granted the steps that took us to (50).

(50) DERIVATION OF FINÎ, 3SG PRS, INTERMEDIATE STEP



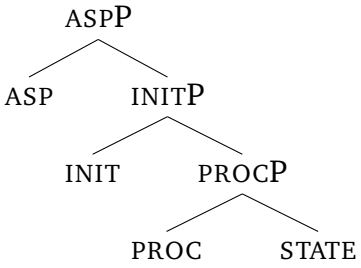
The lexical entry of */fin/* matches the entire structure:

(51) DERIVATION OF FINÎ, 3SG PRS, INTERMEDIATE STEP



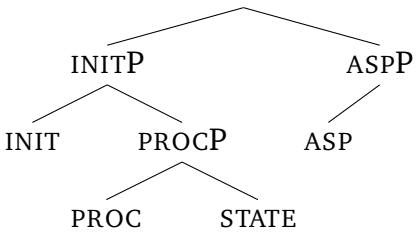
The feature ASP gets merged on top:

(52) DERIVATION OF FINÎ, 3SG PRS, INTERMEDIATE STEP



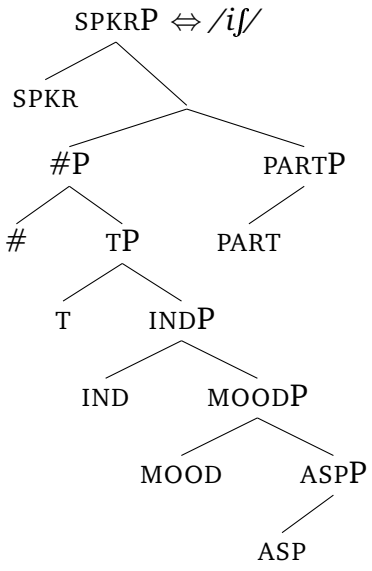
The root */fin/* is not able to spellout the entire structure anymore, so movement gets triggered.

(53) DERIVATION OF FINÎ, 3SG PRS, INTERMEDIATE STEP

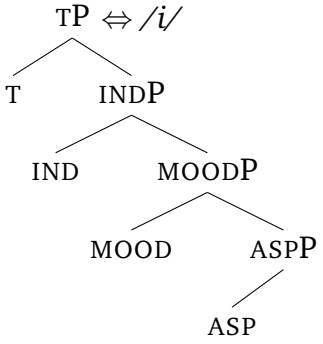


Syntax checks the lexicon and finds two lexical items that match the ASPP: the suffix *-iʃ* and the thematic vowel *-i*.

(54) LEXICAL ENTRY OF -I∫

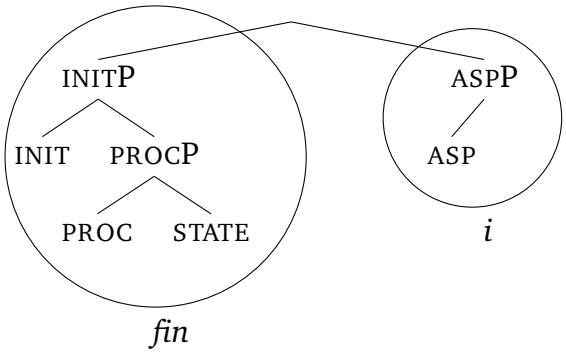


(55) LEXICAL ENTRY OF -I



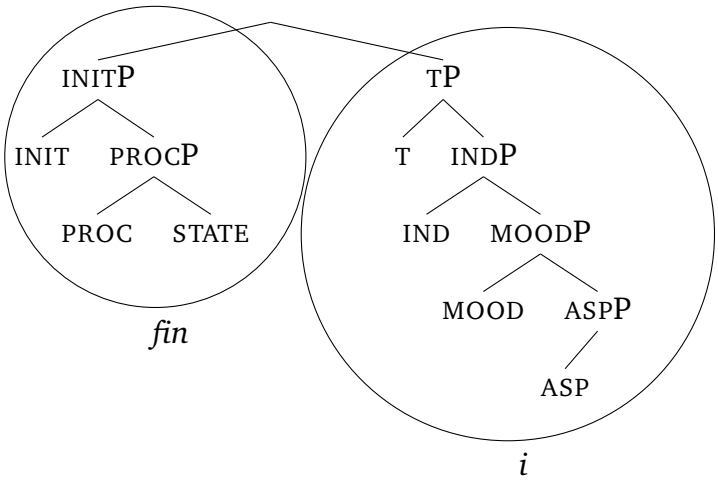
Given the Elsewhere Condition (see Chapter 2, Example (125)), the lexical entry of *-i* is a better match for lexicalizing ASPP since it has the least amount of superfluous features. The tree in (53) is thus lexicalized as follows:

(56) DERIVATION OF FINÎ, 3SG PRS, INTERMEDIATE STEP



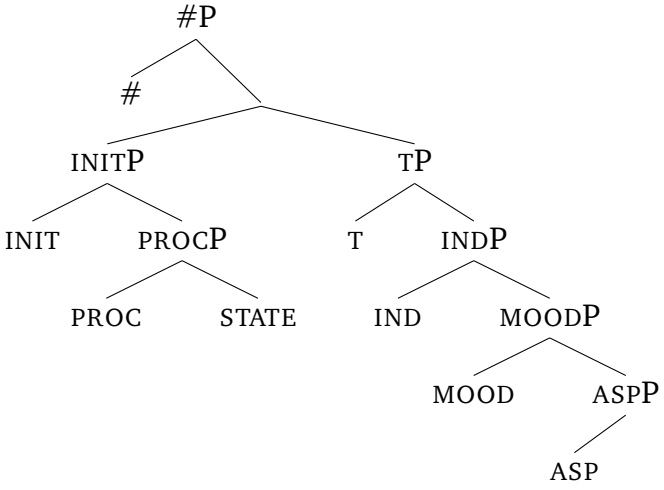
The derivation will then continue as for *sintî* up to T (see § 2.2.3, Example (99)).

(57) DERIVATION OF FINÎ, 3SG PRS, INTERMEDIATE STEP



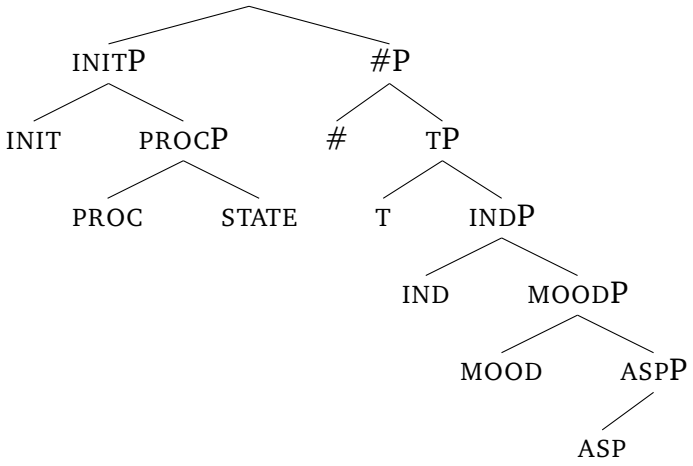
Syntax will continue merging the # feature.

(58) DERIVATION OF FINÎ, 3SG PRS, INTERMEDIATE STEP



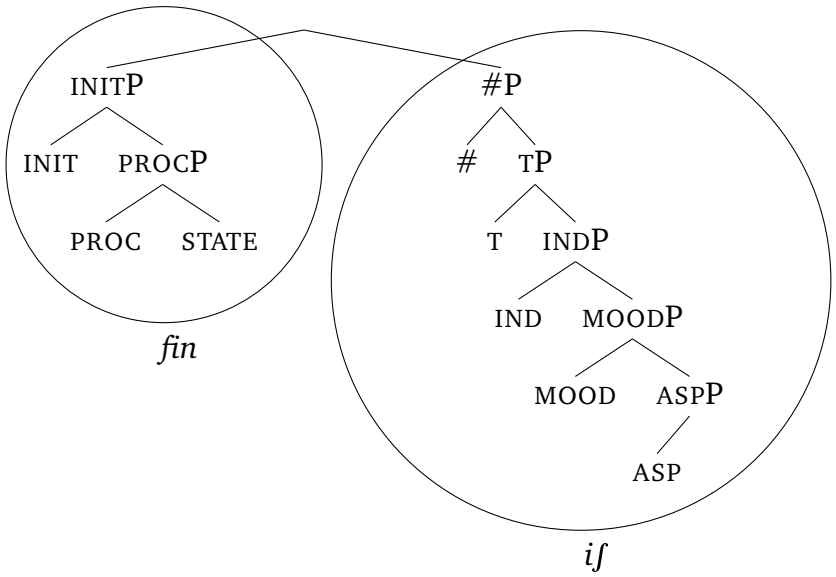
Movement gets triggered since there is no matching item for what syntax has built in (58). INITP gets moved across #P.

(59) DERIVATION OF FINÎ, 3SG PRS, INTERMEDIATE STEP



The INITP can be lexicalized by the root */fin/*, while the lexical entry of *-iʃ* is a match for the #P.[5] Here the derivations of *iʃ-* and *i*-verbs diverge. The *i*-roots would be able to lexicalize the entire structure in (59).

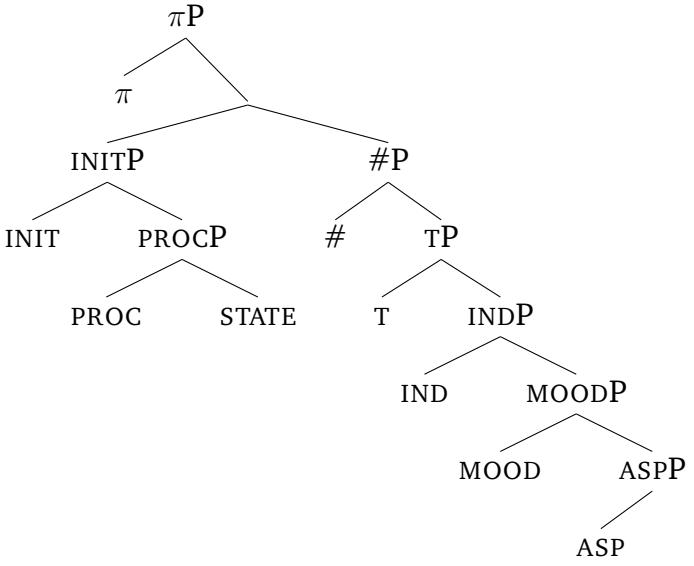
(60) DERIVATION OF FINÎ, 3SG PRS, INTERMEDIATE STEP



When syntax is building a 3SG, it goes on by merging π:

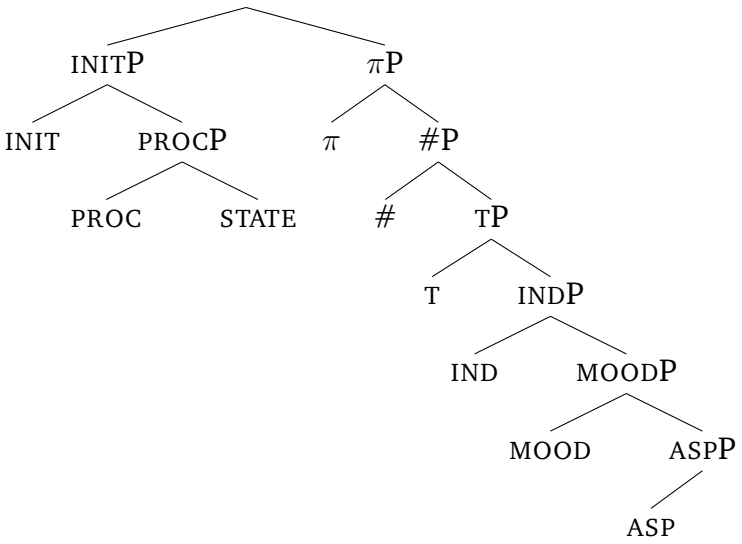
[5]Notice that the suffix *-iʃ* will enter the derivation when the feature # is merged right above T. For instance, that does not happen in the PST forms: the feature PST is merged after T. In that case, the TV *-i* will be the best fit for TP and win the competition over *-iʃ*.

(61) DERIVATION OF FINÎ, 3SG PRS, INTERMEDIATE STEP



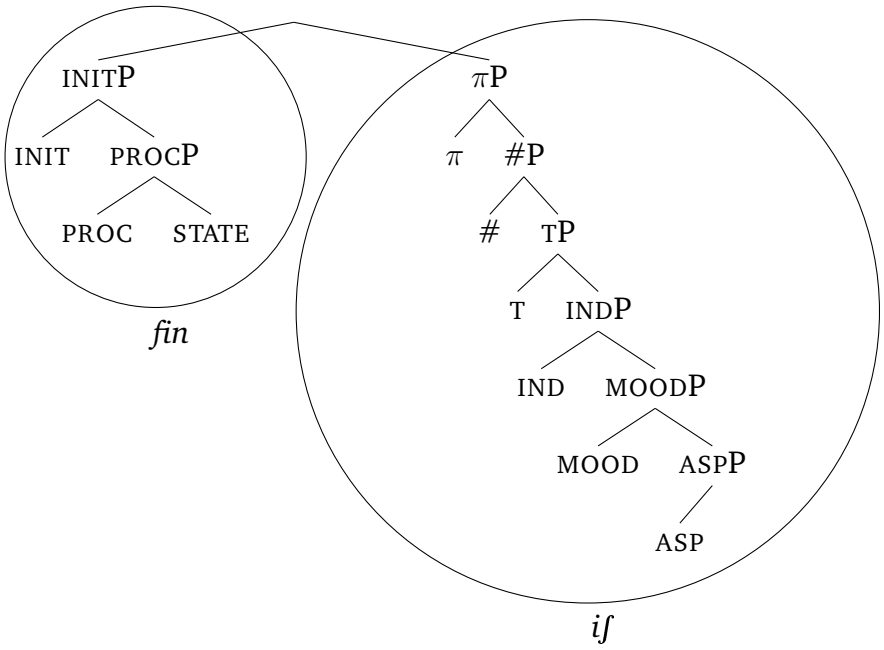
Again, there is no match in the lexicon for the tree in (61). Movement of INITP occurs.

(62) DERIVATION OF FINÎ, 3SG PRS, INTERMEDIATE STEP



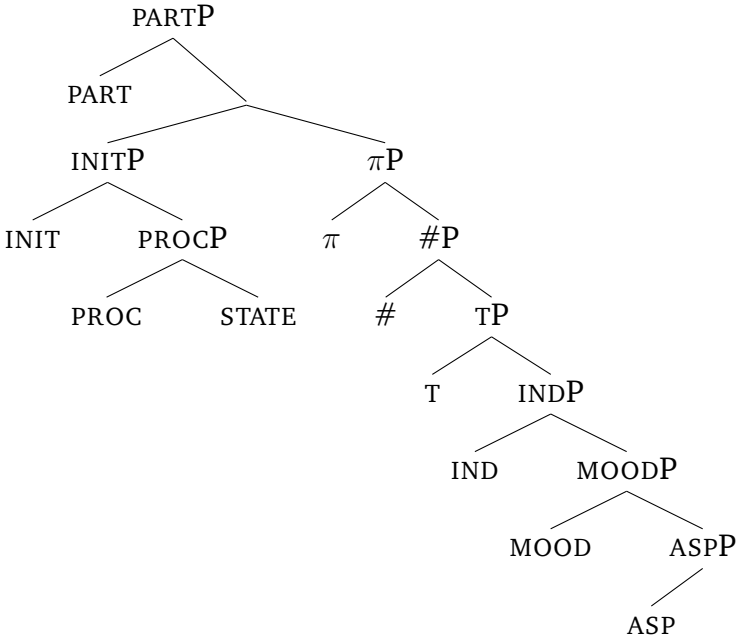
The left branch is spelled out as */fin/*. The right branch, on the other hand, is lexicalized by the suffix *-iʃ*.

(63) DERIVATION OF FINÎ, 3SG PRS, FINAL FORM



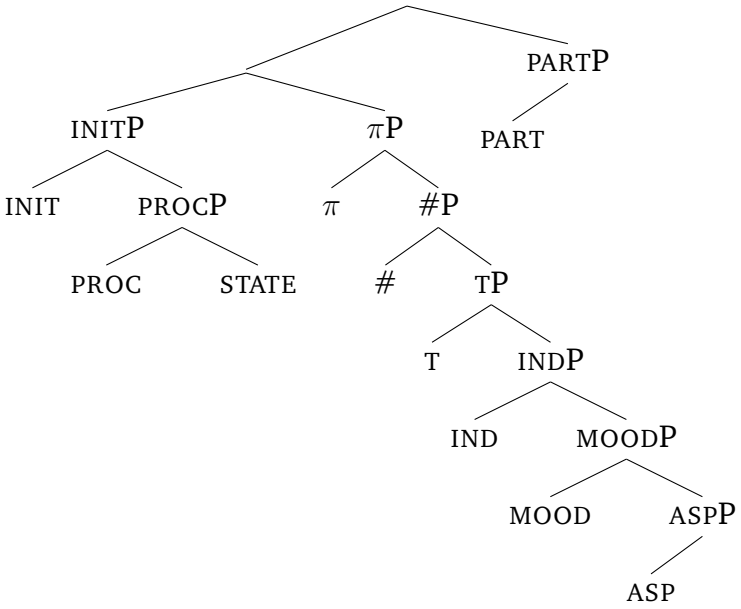
If syntax wants to build a 2SG PRS, it will simply merge PART on top of (63), as we can see below.

(64) DERIVATION OF FINÎ, 2SG PRS, INTERMEDIATE STEP



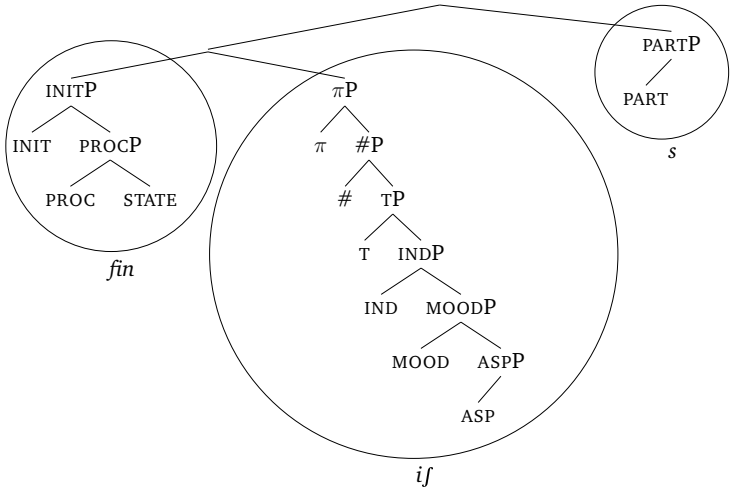
There is no lexical item that matches what syntax has just built. So, movement gets triggered. First, syntax tries to move the Spec. When that fails, it moves the entire complement, yielding the tree in (65).

(65) DERIVATION OF FINÎ, 2SG PRS, INTERMEDIATE STEP



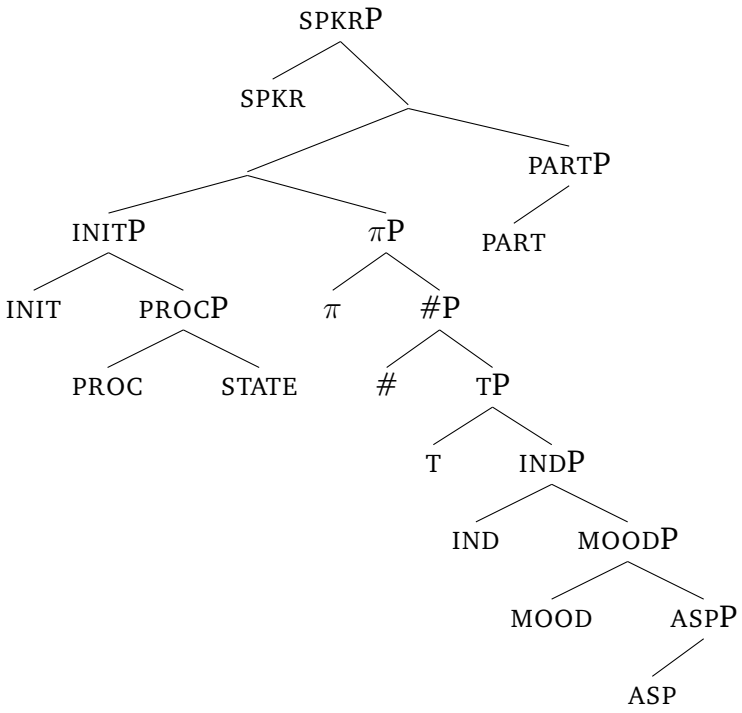
The PARTP can now be lexicalized by the suffix *-s*, whose lexical entry is a perfect match.

(66) DERIVATION OF FINÎ, 2SG PRS, FINAL FORM



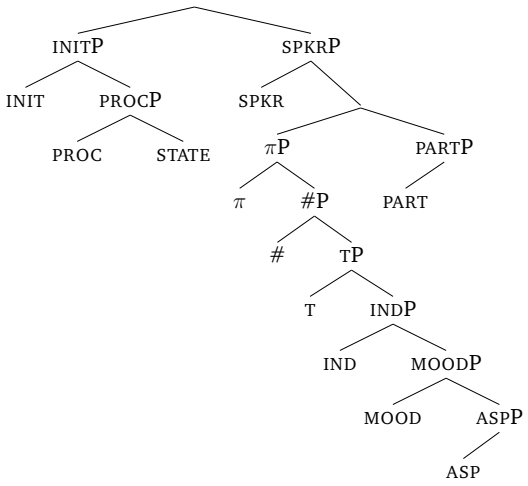
Above (66), the feature SPKR is merged in order to build a 1SG PRS.

(67) DERIVATION OF FINÎ, 1SG PRS, INTERMEDIATE STEP



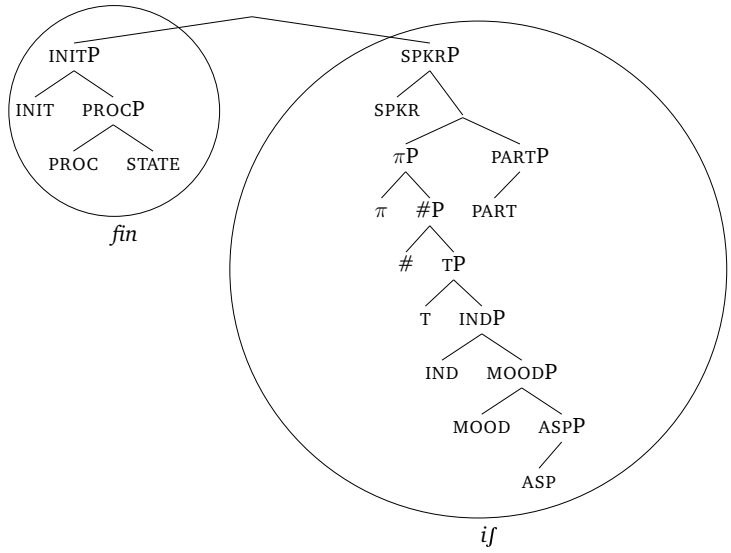
In the lexicon, however, there is no match for what syntax has built. Movement of INITP occurs.

(68) DERIVATION OF FINÎ, 1SG PRS, INTERMEDIATE STEP



What is left behind perfectly matches the lexical entry of *-iʃ*.

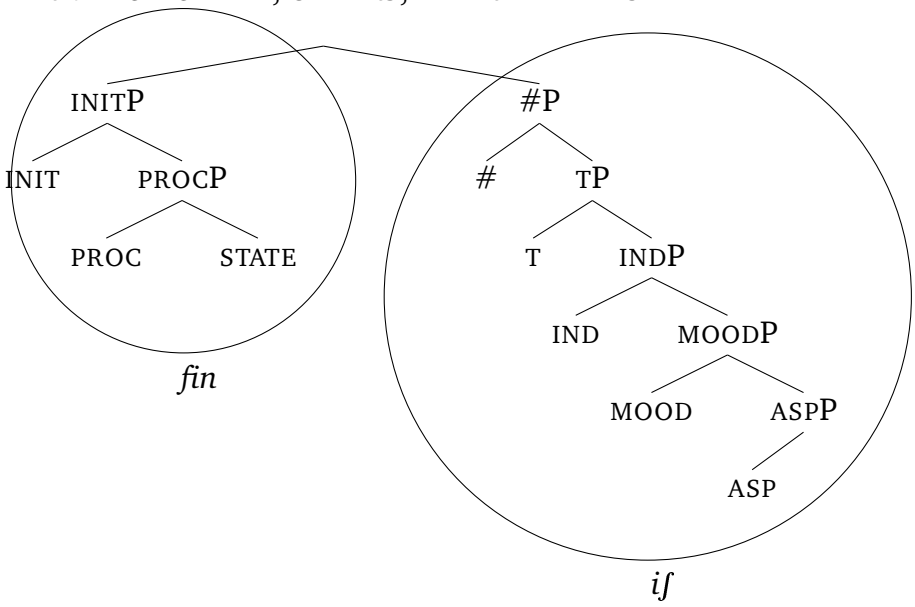
(69) DERIVATION OF FINÎ, 1SG PRS, FINAL FORM



We thus correctly derived the SG PRS forms of the *iʃ*-verbs.

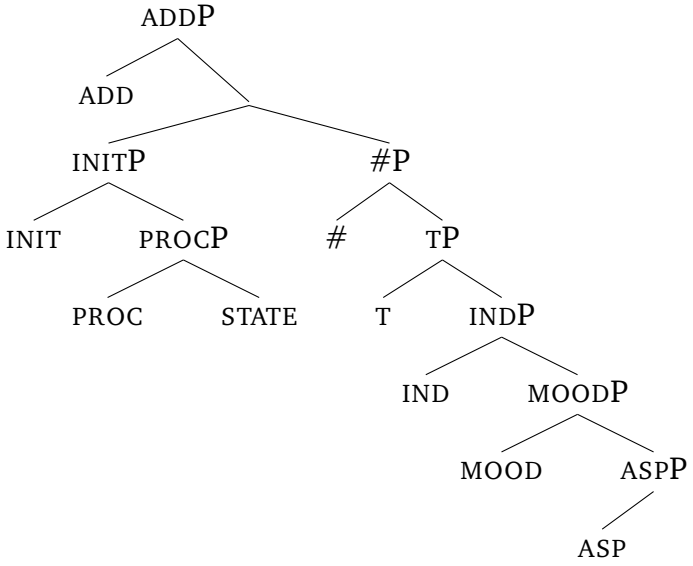
To complete the overall picture of this verb class, let us look at the 3PL PRS, i.e. *finiʃin* ('they finish'). We can resume the syntactic derivation from this stage:

(70) DERIVATION OF FINÎ, 3PL PRS, INTERMEDIATE STEP



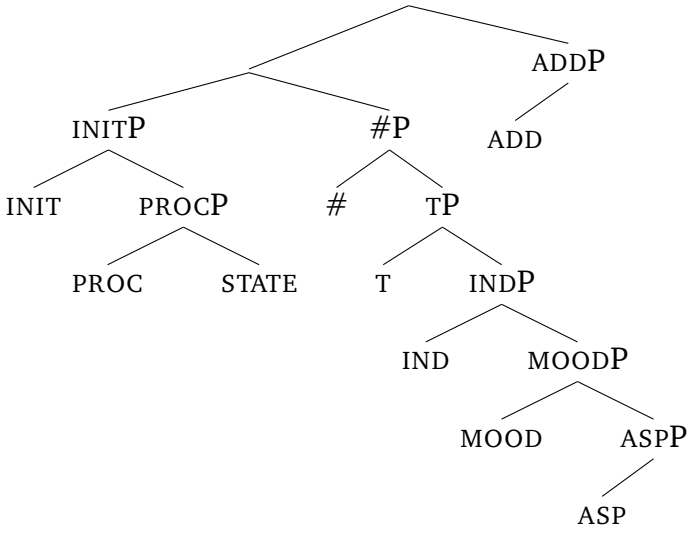
Syntax merges the next feature to build a 3PL, i.e. the ADD feature.

(71) DERIVATION OF FINÎ, 3PL PRS, INTERMEDIATE STEP



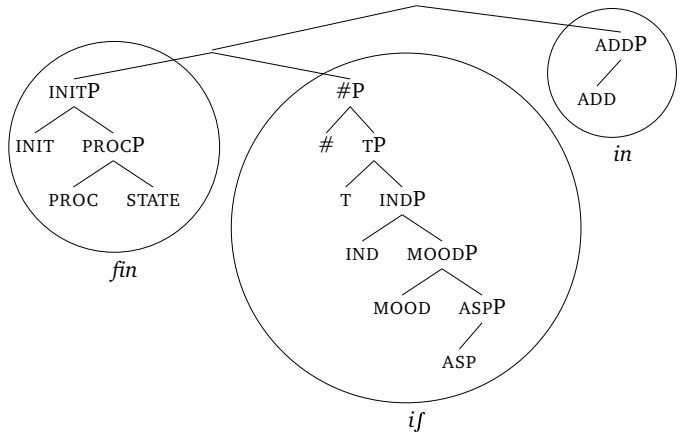
The syntactic tree in (71) has no matching lexical tree in the lexicon. To rescue the derivation, movement of INITP occurs. When that fails, the entire complement is moved.

(72) DERIVATION OF FINÎ, 3PL PRS, INTERMEDIATE STEP



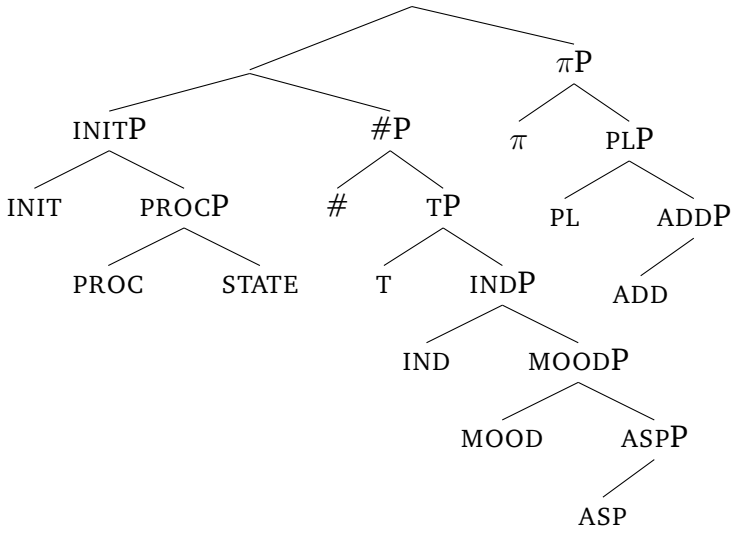
After complement movement, the ADDP can be spelled out by the suffix *-in*$_3$, whose lexical entry has its foot in ADD: [π[PL[ADD]]]. The INITP is spelled out as */fin/*, and the #P as *-iʃ*:

(73) DERIVATION OF FINÎ, 3PL PRS, INTERMEDIATE STEP



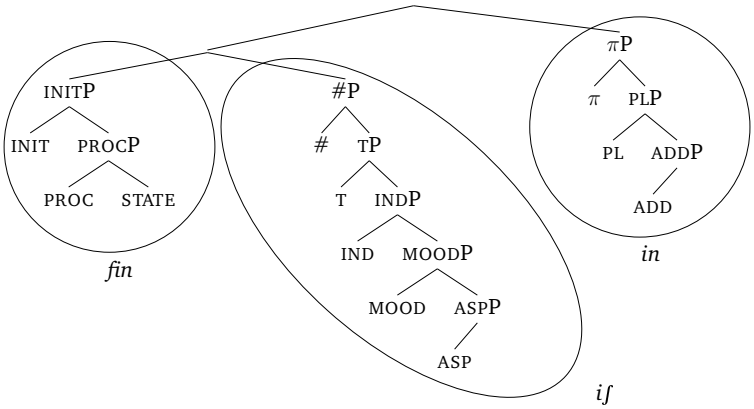
The derivation will continue like that up to the last feature needed to express a 3PL.

(74) DERIVATION OF FINÎ, 3PL PRS, INTERMEDIATE STEP



The syntactic structure is lexicalized as follows:

(75) DERIVATION OF FINÎ, 3PL PRS, FINAL FORM



We thus correctly derived the entire paradigm of the *iʃ*-verbs. The complete lexicalization table is shown below.

(76) LEXICALIZATION TABLE OF FINÎ

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
fin			iʃ										
fin			iʃ									s	
fin			iʃ										
fin			i					in_1					
fin			i					is					
fin			iʃ						in_3				
fin			i				v	i					
fin			i				v	a				s	
fin			i				v	a					
fin			i				v	in_1					
fin			i				v	is					
fin			i				v		in_3				

3.3 A-verbs

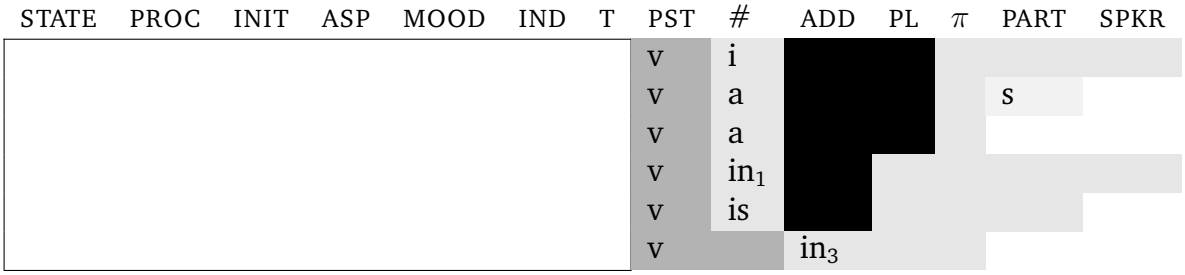
As shown in Chapter 1, the *a*-verbs display the paradigm below:

		PRS	PST
SG	1	klam-i	klam-a-v-i
	2	klam-a-s	klam-a-v-a-s
	3	klam-a	klam-a-v-a
PL	1	klam-in	klam-a-v-in
	2	klam-a-is	klam-a-v-is
	3	klam-in	klam-a-v-in

klamâ, 'to call'

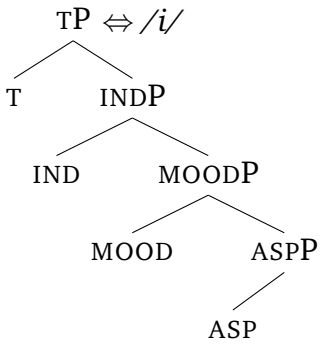
Let us zoom in on the PST: in all the forms the root combines with the TV *-a*. On the other hand, the other verb patterns take an *-e* or *-i* thematic vowel. The right combination of root and thematic vowel can be achieved via a different root size and shape, compared to the roots that take either an *-e* or *-i* thematic vowel. The starting point of my analysis is that the suffixes above the thematic vowel are the same across all the verb patterns in TF. We thus already know how to partially fill in the lexicalization table for the PST forms of the *a*-verbs.

(77) LEXICALIZATION TABLE OF KLAMÂ, PST FORMS



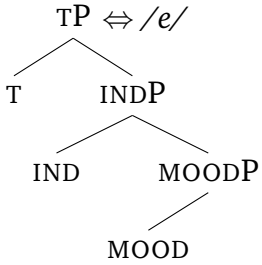
The root and the TV *-a* must divide the labor of lexicalization up to T. There are several possible ways to do that. The verbal root must lexicalize at least the thematic layers such as [INIT [PROC STATE]], leaving the remaining features to the TV. However, it cannot be that the TV *-a* has its foot in ASP since that would make it identical to the thematic vowel *-i*:

(78) LEXICAL ENTRY OF -I.TV



It also cannot be that *-a* starts at MOOD, as this would make it identical to the TV *-e*.

(79) LEXICAL ENTRY OF -E.TV



There are two options left: the TV *-a* can have its foot either at IND or T.[6] The latter option has been adopted.[7] We can thus fill in the lexicalization table as follows:

(80) LEXICALIZATION TABLE OF KLAMÂ, PST FORMS

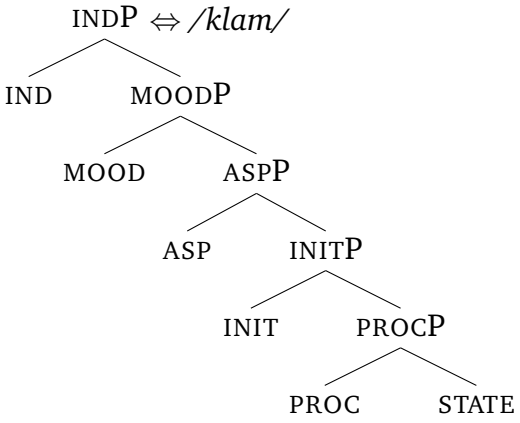
STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
klam						a	v	i					
klam						a	v	a				s	
klam						a	v	a					
klam						a	v	in_1					
klam						a	v	is					
klam						a	v		in_3				

[6]We are left with these two options due to prior choices with respect to the ordering of the thematic vowels. As pointed out in Chapter 2, footnote (8), there are 6 possible orders for the three thematic vowels and the latter has been chosen: $i > e > a$.

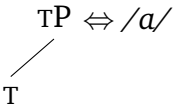
[7]The TV *-a* is attested also in non-indicative moods. For this reason, I opted for placing its foot in T, instead of IND. The latter option would have wrongly made the TV specialized for the IND mood only. However, the analysis of non-indicative moods is left for future research.

The lexical entries of the *a*-roots and the TV *-a* have the shapes below. The lexical entry of */klam/* will be updated when looking at the present forms.

(81) LEXICAL ENTRY OF KLAM

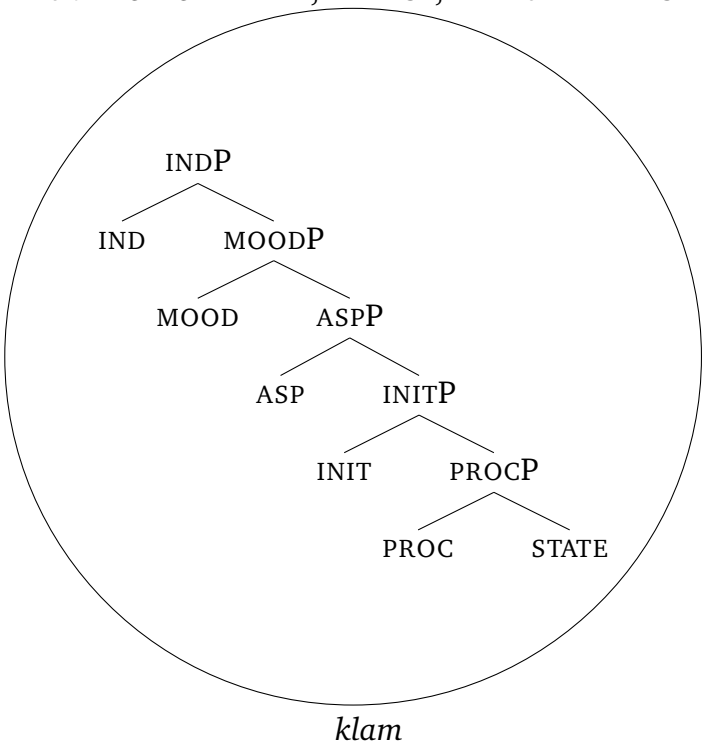


(82) LEXICAL ENTRY OF -A.TV



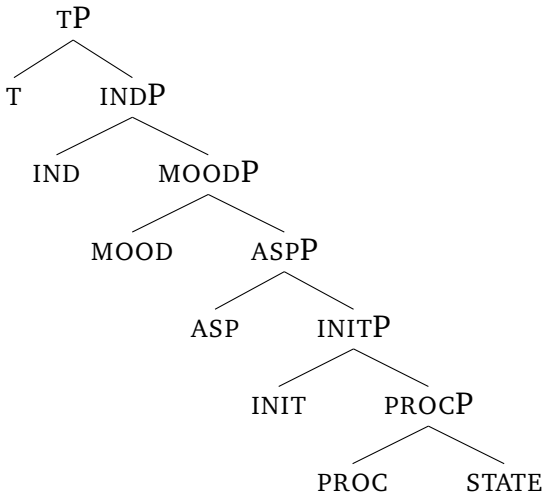
We now have all the ingredients to look at the past derivations for the *a*-verbs. The lexical entry of */klam/* matches the syntactic tree up to IND.

(83) DERIVATION OF KLAMÂ, 2PL PST, INTERMEDIATE STEP



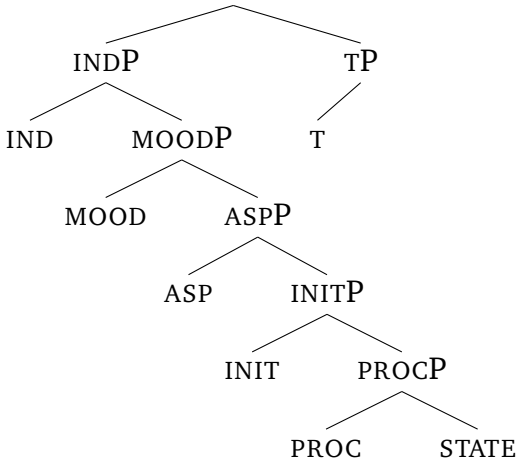
Syntax continues by merging T.

(84) DERIVATION OF KLAMÂ, 2PL PST, INTERMEDIATE STEP



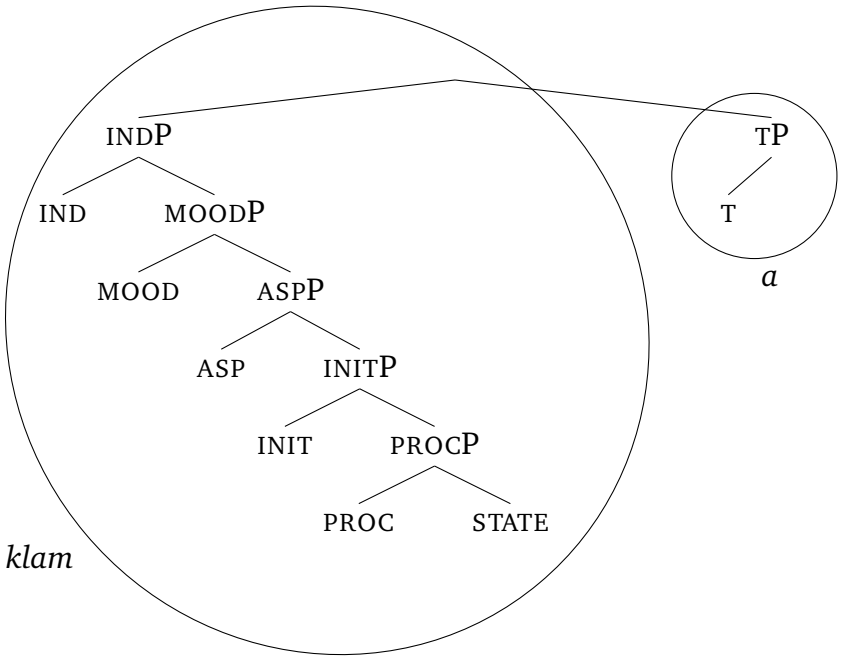
There is no matching item in the lexicon, so movement occurs.

(85) DERIVATION OF KLAMÂ, 2PL PST, INTERMEDIATE STEP



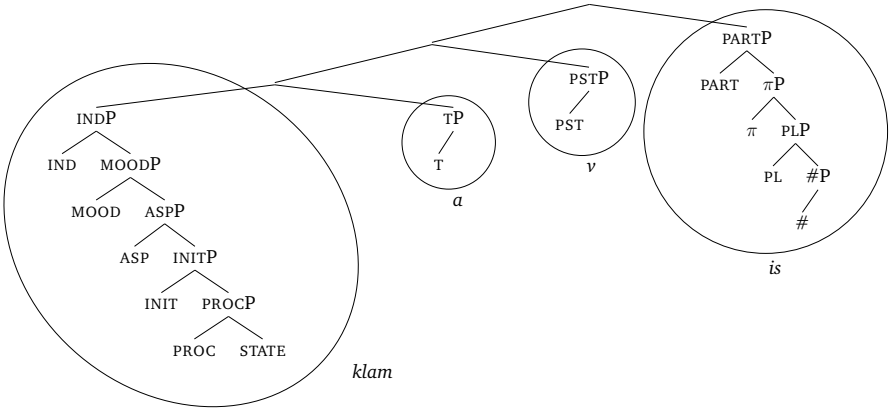
After that, the tree can be lexicalized: the INDP is spelled out as */klam/*, while TP as */a/*.

(86) DERIVATION OF KLAMÂ, 2PL PST, INTERMEDIATE STEP



The derivation will now continue exactly as for the other verb classes. For the detailed steps of the derivation, see Chapter 2, § 2.5. For instance, the final form of a 2PL PST form with *a*-verbs would have the shape in (87).

(87) DERIVATION OF KLAMÂ, 2PL PST, FINAL FORM



Let us now see what happens in the PRS forms of the *a*-verbs.

		PRS
SG	1	klam-i
	2	klam-a-s
	3	klam-a
PL	1	klam-in
	2	klam-a-is
	3	klam-in

klamâ, 'to call'

We will start by looking at the PL forms. More specifically, let us zoom in on the 2/3PL forms:

(88) KLAMÂ, 2/3PL PRS
  a. *klam-a-is* ('you call')
  b. *klam -in* ('they call')

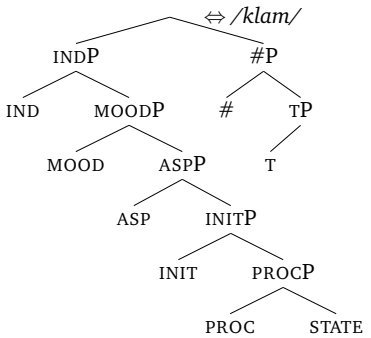
Apart from the different agreement suffixes, i.e. *-is* and *-in*$_3$, the evident contrast between these two forms is that the root combines with the TV in the 2PL, whereas it does not in the 3PL.

(89) LEXICALIZATION TABLE OF KLAMÂ, 2/3PL PRS

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
klam						a		is					
klam									in$_3$				

The root */klam/* is capable to grow up to #, as shown in the second row of (89), but it stops growing at IND in the 2PL PRS form. We thus need to revise the lexical entry of */klam/*. The updated lexeme is shown in (90).

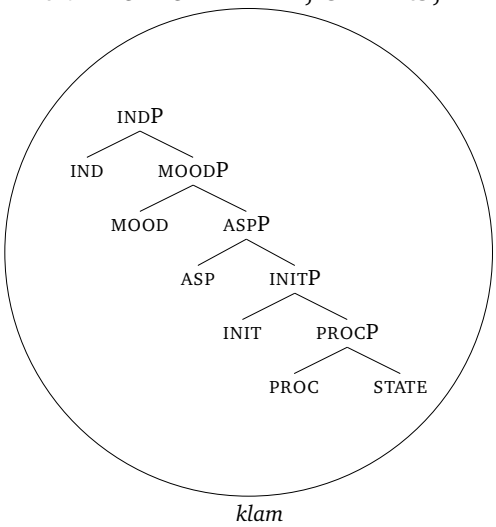
(90) LEXICAL ENTRY OF KLAM



The updated lexical entry has a CLB. The T and # features are placed on the right branch. As we have seen for other root types, this means that TP is not a sub-constituent of the lexeme */klam/*. This generates the contrast between the 2 and 3PL forms.

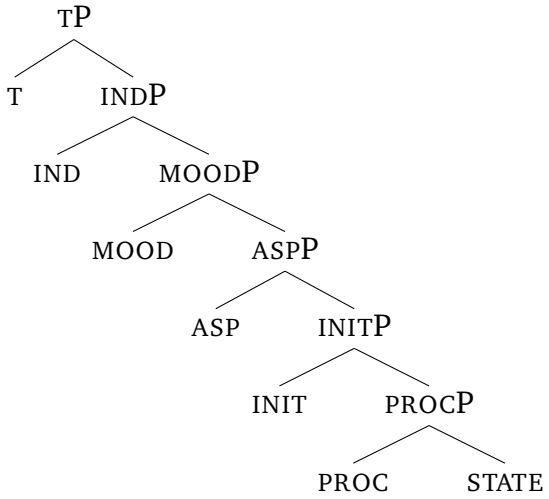
Let us see how the derivations work in detail, starting with the 3PL form. As in the PST forms, the lexical entry of */klam/* matches the syntactic tree up to IND:

(91) DERIVATION OF KLAMÂ, 3PL PRS, INTERMEDIATE STEP



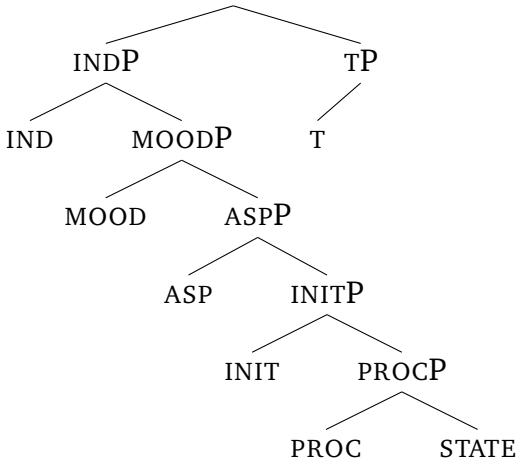
Syntax continues merging T.

(92) DERIVATION OF KLAMÂ, 3PL PRS, INTERMEDIATE STEP



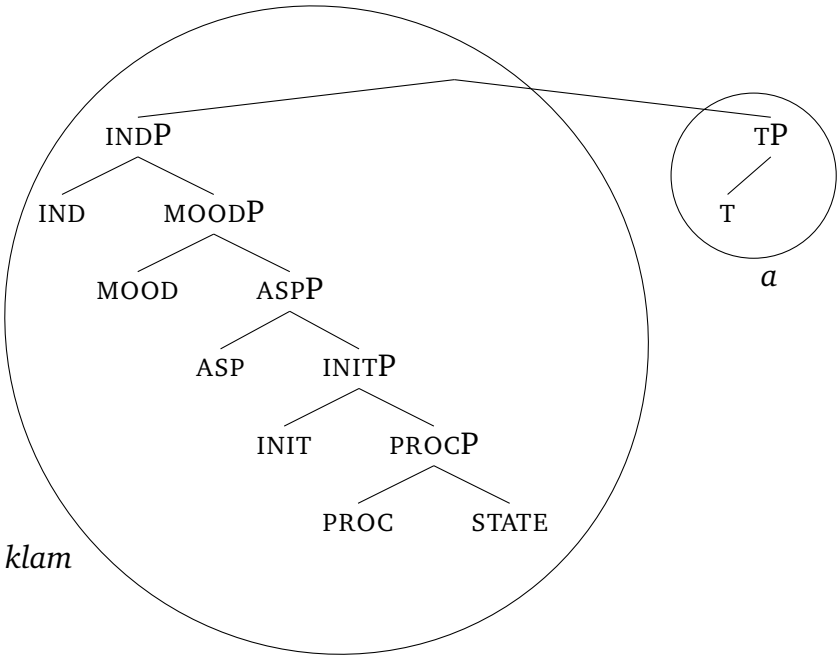
There is however no matching item for the tree in (92). So, movement is triggered, yielding (93).

(93) DERIVATION OF KLAMÂ, 3PL PRS, INTERMEDIATE STEP



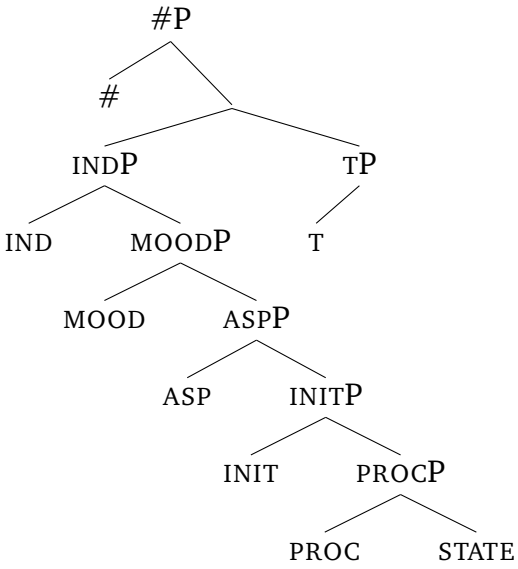
The TP can now be spelled out as */a/*.

(94) DERIVATION OF KLAMÂ, 3PL PRS, INTERMEDIATE STEP



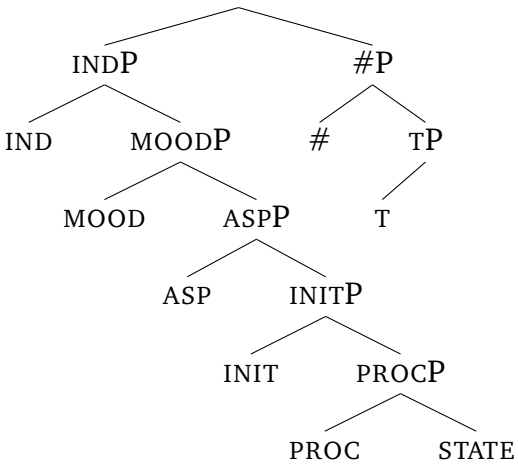
The derivation continues by merging #.

(95) DERIVATION OF KLAMÂ, 3PL PRS, INTERMEDIATE STEP



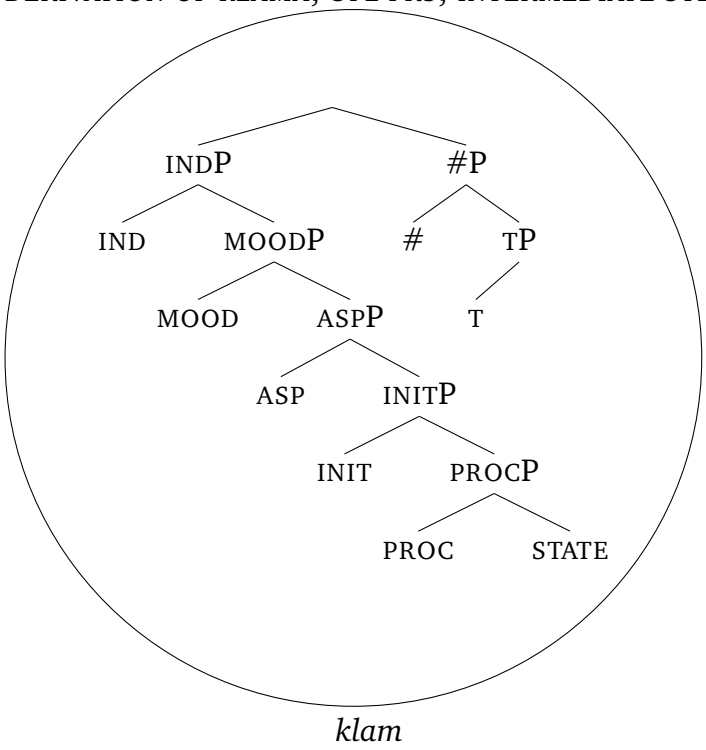
Again, there is no lexical item that is able to match the entire syntactic structure. So, movement of INDP occurs, as shown below.

(96) DERIVATION OF KLAMÂ, 3PL PRS, INTERMEDIATE STEP



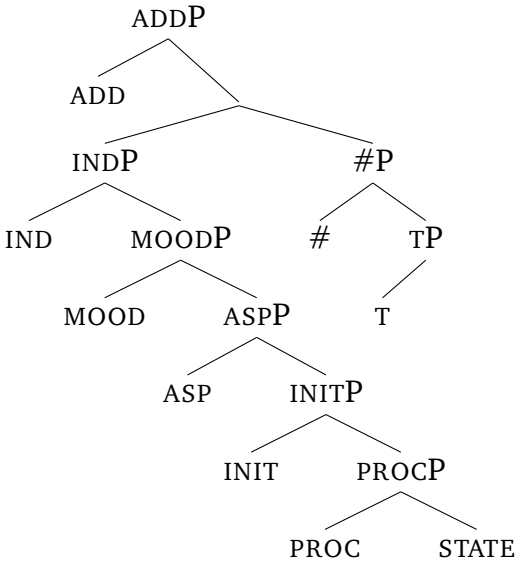
After that, the lexical entry of */klam/* is a perfect match for the entire structure.

(97) DERIVATION OF KLAMÂ, 3PL PRS, INTERMEDIATE STEP



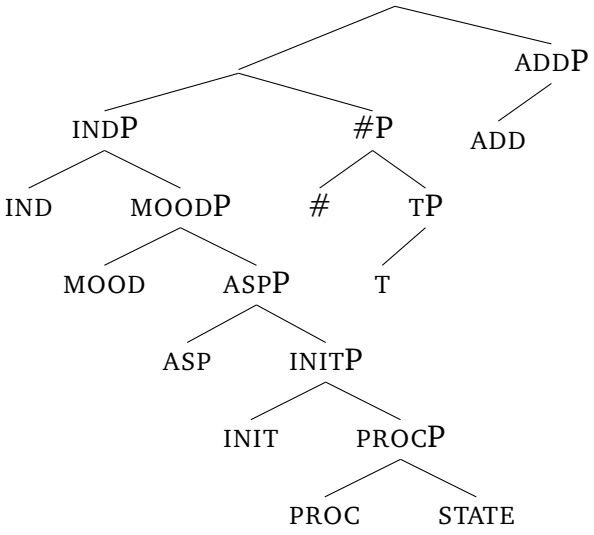
The feature ADD is then merged on top of (97).

(98) DERIVATION OF KLAMÂ, 3PL PRS, INTERMEDIATE STEP



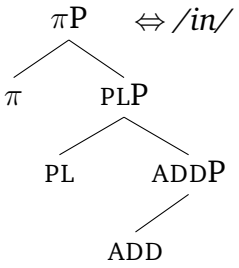
Again, the tree above cannot be lexicalized. So, movement is triggered. First, syntax tries to move INDP. When that fails, it moves the entire complement.

(99) DERIVATION OF KLAMÂ, 3PL PRS, INTERMEDIATE STEP



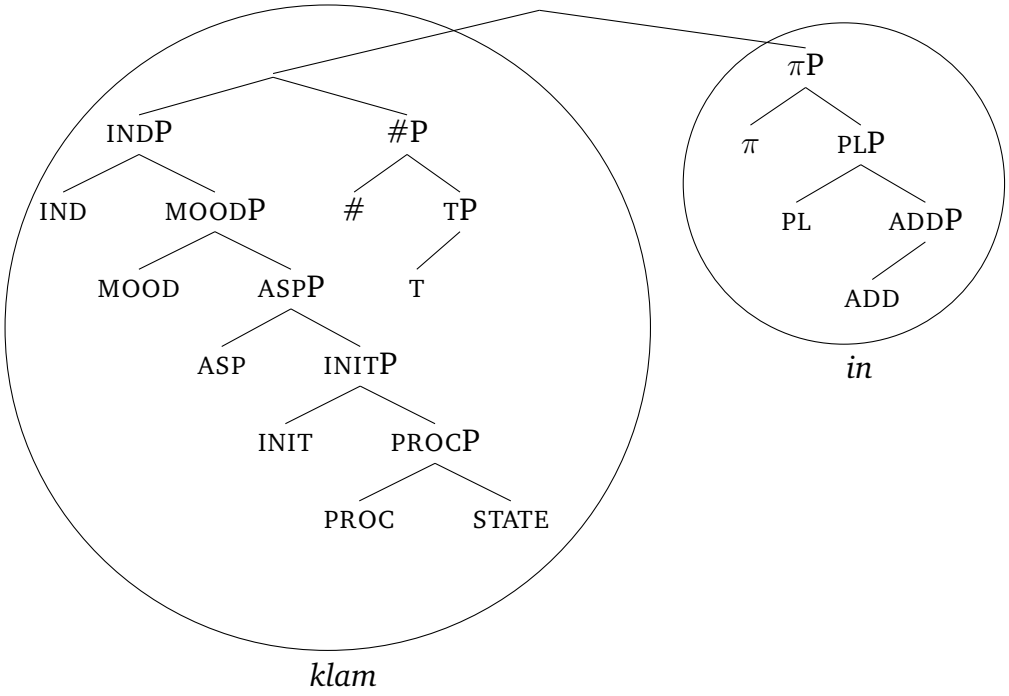
As before, the left branch is spelled out as */klam/*, while the ADDP can be now spelled out as *-in*$_3$, whose lexical entry is repeated below:

(100) LEXICAL ENTRY OF -IN$_3$



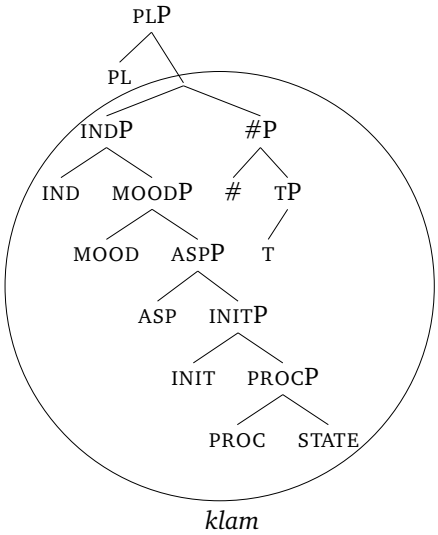
The derivation will continue like that up to π, leading to the final form of the 3PL PRS:

(101) DERIVATION OF KLAMÂ, 3PL PRS, FINAL FORM



If syntax wants to build a 2PL PRS, it will merge the feature PL on the top of the constituent that can be spelled out by the root */klam/*, as shown in (102).

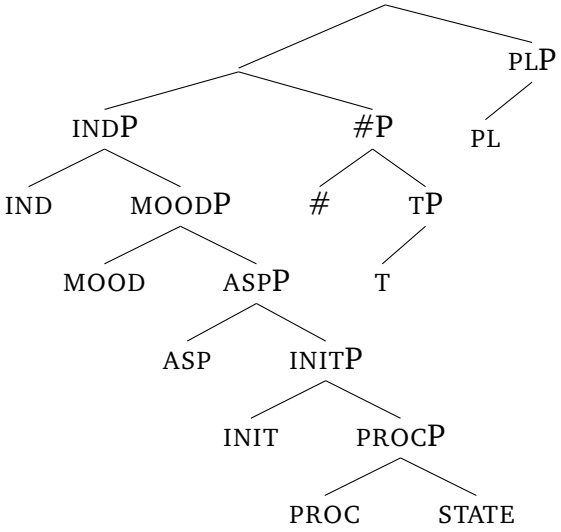
(102) DERIVATION OF KLAMÂ, 2PL PRS, INTERMEDIATE STEP



None of the lexical items matches the syntactic tree. To rescue the derivation, syntax tries to move the specifier first. Since that fails, it tries the next available

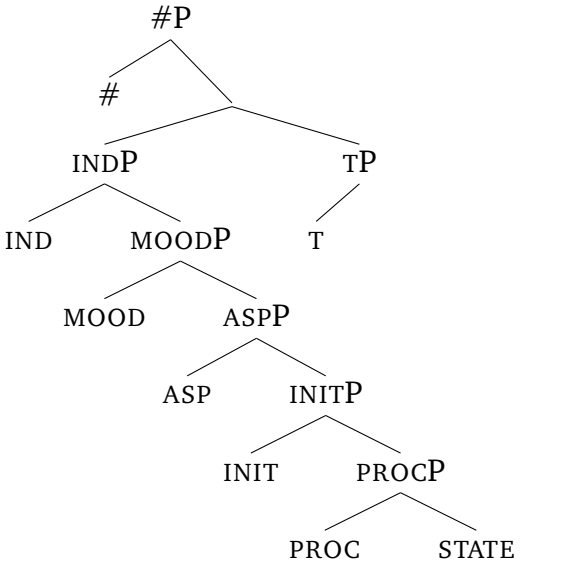
option, i.e. moving the entire complement:

(103) DERIVATION OF KLAMÂ, 2PL PRS, INTERMEDIATE STEP



In our lexicon, however, there is no item that can lexicalize PLP. At this point of the derivation, there is only one option left: backtracking. We thus go to the previous cycle and try the next available option for that cycle. This means we undo the merging of PL and go back at when the # feature was merged.

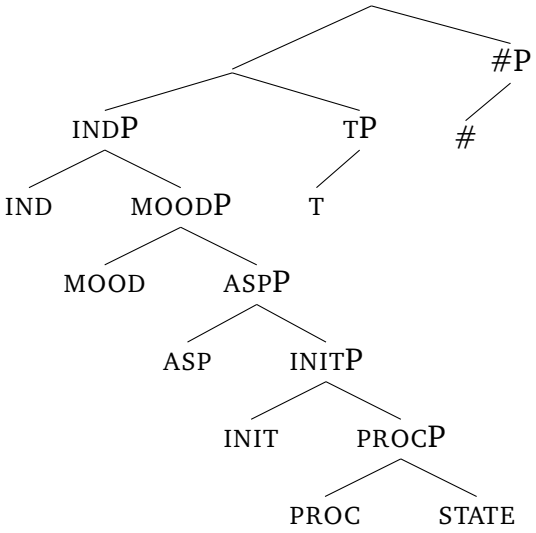
(104) DERIVATION OF KLAMÂ, 2PL PRS, BACKTRACKING



At that stage, the root */klam/* lexicalizes INDP, while the TV *-a* is a perfect match for TP. We then moved INDP to successfully lexicalize what syntax has built. Since

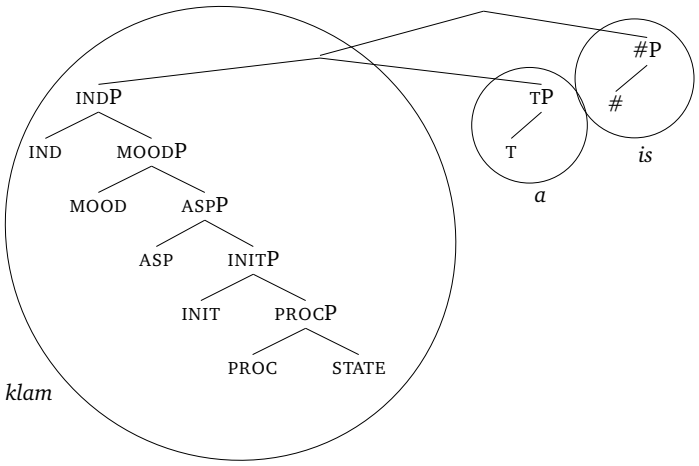
this movement will lead to a failure when we try to derive the 2PL PRS, this time we move the entire complement.

(105) DERIVATION OF KLAMÂ, 2PL PRS, INTERMEDIATE STEP



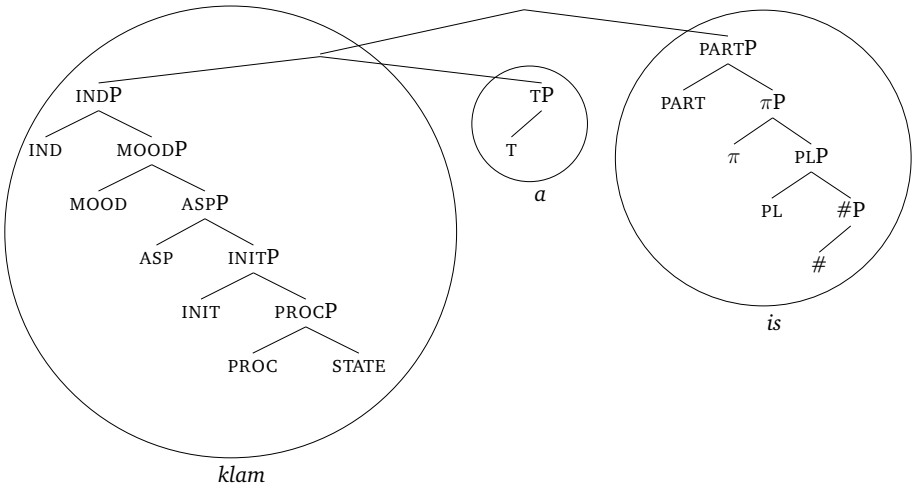
After complement movement the syntactic tree gets lexicalized as follows: the root can now match only the INDP, while the TV matches the TP. The #P can be lexicalized by the suffix *-is*.

(106) DERIVATION OF KLAMÂ, 2PL PRS, INTERMEDIATE STEP



The derivation will continue as for other verb classes up to PART. For detailed steps, the reader can see Chapter 2, § 2.2.2. The final 2PL PRS form with *a*-verbs will be the following:

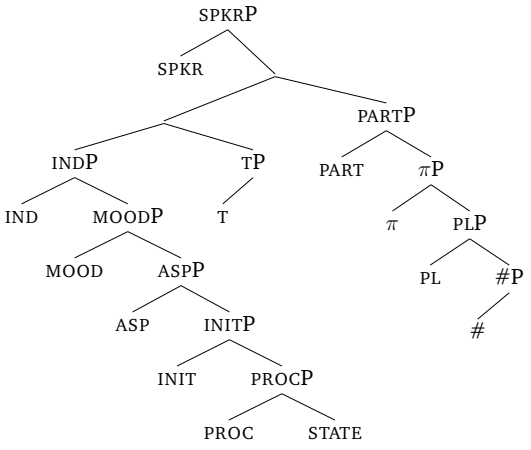
(107) DERIVATION OF KLAMÂ, 2PL PRS, FINAL FORM



We thus correctly derived the 2/3PL PRS forms and the presence/absence of the thematic vowel *-a*. Again, this is allowed by the shape of the lexical entry of the *a*-root. The root can lexicalize the T feature when # is on the same branch. However, when this constituency is absent, the root is not able to lexicalize T. So, as it happens in the 2PL, the TV *-a* is needed.

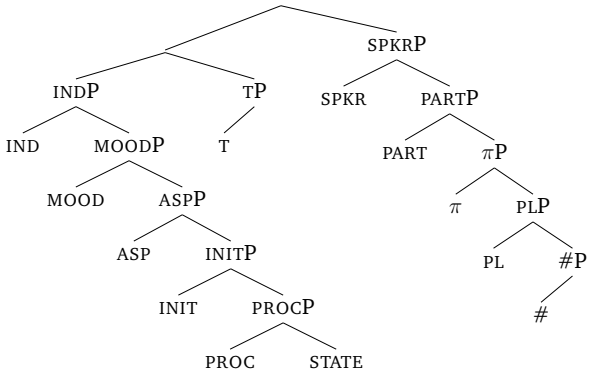
The same happens when syntax is building a 1PL PRS form: *klam-in* ('we call'). The feature SPKR is merged after PART, as shown in (108).

(108) DERIVATION OF KLAMÂ, 1PL PRS, INTERMEDIATE STEP



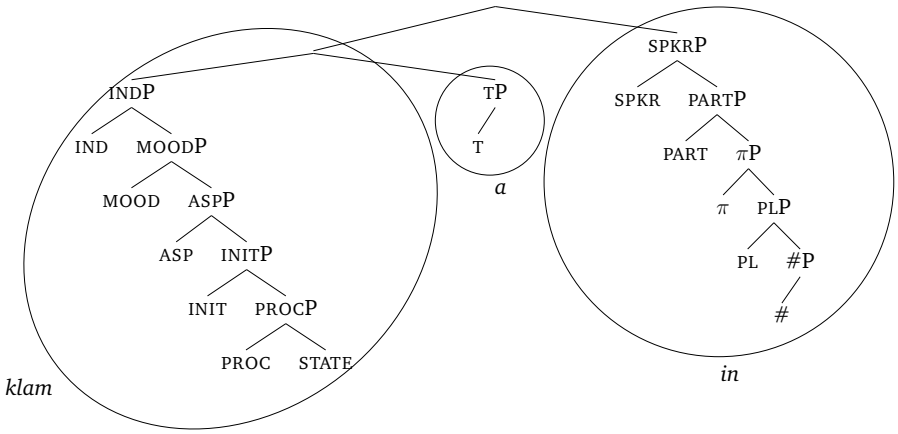
After merging SPKR, movement gets triggered as there is no match in the lexicon. Syntax moves INDP first. That fails, so the next option is attempted, yielding the structure in (109).

(109) DERIVATION OF KLAMÂ, 1PL PRS, INTERMEDIATE STEP



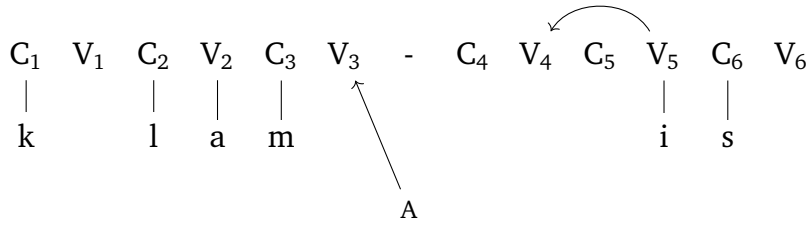
The derivation is now successful and SPKRP is spelled out as *-in*$_1$. The lexical entry of *-in*$_1$ is indeed a perfect match.

(110) DERIVATION OF KLAMÂ, 1SG PRS, FINAL FORM



As it happens to other verb classes (see, e.g., § 2.4), one issue needs to be addressed. The analysis predicts the presence of the TV *-a* in the 1PL form, but we do not see it on the surface: *klam-in* ('we call'). The same proposal holds as for the other verb classes: the thematic vowel is a floating element. This means that it gets to be pronounced only when it is associated to a prosodic node. That happens, for instance, in the 2PL PRS form:

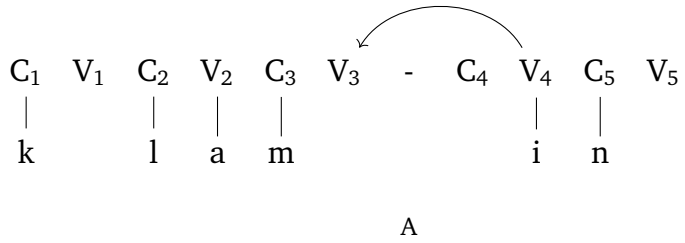
(111) UR OF KLAMAIS



Crucially, the empty V_3 cannot remain phonetically unexpressed based on the Empty Category Principle (Scheer, 2004) (see Chapter 2, (193)). So, that empty position is filled in by the floating thematic vowel, which gets to be pronounced.[8]

On the other hand, in the 1PL the TV keeps floating as all the V positions are properly governed.

(112) UR OF KLAMIN



The TV is not pronounced and the correct surface form is derived phonologically: *klamin* ('we call').

The SG PRS forms are the only missing pieces to get a complete picture of the *a*-verbs.

		PRS
SG	1	klam-i
	2	klam-a-s
	3	klam-a

klamâ, 'to call'

[8]It has to be pointed out that there are vowel-final roots in the *a*-class, e.g., *creâ* ('to create'). Those verbs show both the root vowel and the thematic vowel *-a* in the 2PL PRS form, e.g. *cre-a-is*. To derive the correct form, it is necessary to assume that the vowel-final roots have an extra CV in their underlying representation. That extra CV will provide a landing site for the thematic vowel *-a*, otherwise the 2PL PRS would be wrongly pronounced as **creis*. Another option could be that the empty CV is a separate morpheme. I will not explore that option here as it plays no role in the analysis.

On the surface, the set of suffixes of the SG PRS seems identical to the agreement suffixes found in the SG PST forms.

		PRS	PST
SG	1	klam-**i**	klam-a-v-**i**
	2	klam-**a-s**	klam-a-v-**a-s**
	3	klam-**a**	klam-a-v-**a**

klamâ, 'to call'

The question is now the following: are these suffixes also underlyingly the same? More specifically, are the suffixes *-i* and *-a* in the PRS of the *a*-verbs the same of the PST forms?

Let us start with the clearest case, i.e. the 1SG PRS form. There I propose that the suffix *-i* is the same. We can thus fill in the lexicalization table as follows:

(113) LEXICALIZATION TABLE OF KLAMÂ, 1SG PRS AND PST

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	π	PART	SPKR
klam								i			
klam						a	v	i			

Given the shape of its lexical entry, the root */klam/* can lexicalize all the features up to T only when it also lexicalizes # (see, e.g., 101). The lexeme of the 1SG suffix *-i*, however, has its foot exactly at #. So, who lexicalizes T in the PRS? The lexicon provides a matching item: the TV *-a*.

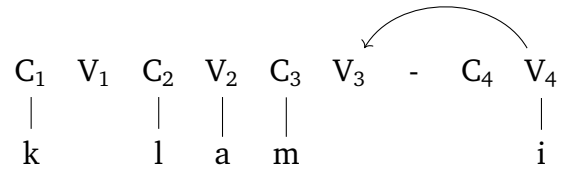
(114) LEXICALIZATION TABLE OF KLAMÂ, 1SG PRS AND PST

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	π	PART	SPKR
klam						a		i			
klam						a	v	i			

So, the *a*-roots combine with the TV both in the 1SG PRS and PST. They also share the same agreement suffix, i.e. *-i*.

On the surface, however, there is no TV in the 1SG PRS. That is not surprising as the /a/ is a floating element and it does not get to be pronounced in the 1SG. We can explain this the same way as in the 1PL. Specifically, recall that the TV *-a* is a floating vowel and it only surfaces when there is an ungoverned position in the skeleton. Since in the 1SG (just like in the 1PL), there is no such position, then the TV is not pronounced.

(115) UR OF KLAMI



A

The empty V_3 position is properly governed by V_4, so it can stay empty. The floating /a/ does not get pronounced. The surface form is thus: *klami* ('I call').

The same question holds for the suffix *-a* in the 2/3SG forms. Is it the same /a/ we see in the PST? In this case, the answer is less straightforward. There are two logical options: (i) the /a/ in the PRS is not the same as the one in the PST, (ii) the /a/ in the 2/3SG PRS is the same of the one in the PST.

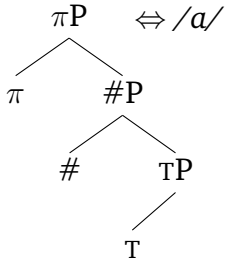
Under the first option, the lexicalization table will look like this:

(116) LEXICALIZATION TABLE OF KLAMÂ, 2/3SG PRS AND PST

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	π	PART
klam						a				
klam						a				s
klam						a	v	a		
klam						a	v	a		s

In the PRS, it is the TV responsible for lexicalizing the features # and π. On the other hand, in the PST, an homophonous suffix is responsible for the constituent [π [#]]. Given that, we must revise our lexical entry of the TV *-a*, which has to grow up to π, instead of stopping at T, as shown in (35). The updated lexical entry is thus the following:

(117) LEXICAL ENTRY OF -A.TV, OPTION 1



The other logical option is that the same /a/ is found both in the PRS and PST. As we have seen in Table 116, the agreement suffix *-a* can lexicalize the

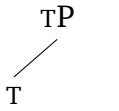
constituent [π [#]]. The root */klam/* would then be responsible for all the features up to IND, leaving T to be lexicalized.

(118) LEXICALIZATION TABLE OF KLAMÂ, 2/3SG PRS AND PST

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	π	PART
klam								a		
klam								a		s
klam						a	v	a		
klam						a	v	a		s

As it happened for the 1SG, the question now is: who can lexicalize T? Under this option, there is a perfect match in the lexicon: the TV *-a*, whose lexical entry is shown below:

(119) LEXICAL ENTRY OF -A.TV, OPTION 2



The lexicalization table can be filled in as in shown in (120).

(120) LEXICALIZATION TABLE OF KLAMÂ, 2/3SG PRS AND PST

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	π	PART
klam						a		a		
klam						a		a		s
klam						a	v	a		
klam						a	v	a		s

We thus get both the TV *-a* and the agreement suffix *-a* in the PRS forms. However, only the agreement suffix surfaces, while the TV does not. That is due to the fact that the TV is a floating element and keeps floating in the 2/3SG PRS, as it happens in the 1SG and 1PL PRS forms.

Both options lead to a successful derivation. The second option is more attractive in that it captures the morphological generalization: the SG PRS forms of the *a*-verbs show the same set of agreement suffixes as the PST forms across classes.

	PRS		PST	
1	klam	i	klam-a-v	i
2	klam	a-s	klam-a-v	a-s
3	klam	a	klam-a-v	a

klamâ, ‘to call’

Given that, I adopt the second option, i.e.:

(121) LEXICALIZATION TABLE OF KLAMÂ, 2/3SG PRS

STATE	PROC	INIT	ASP	MOOD	IND	T	#	π	PART
klam						a	a		
klam						a	a		s

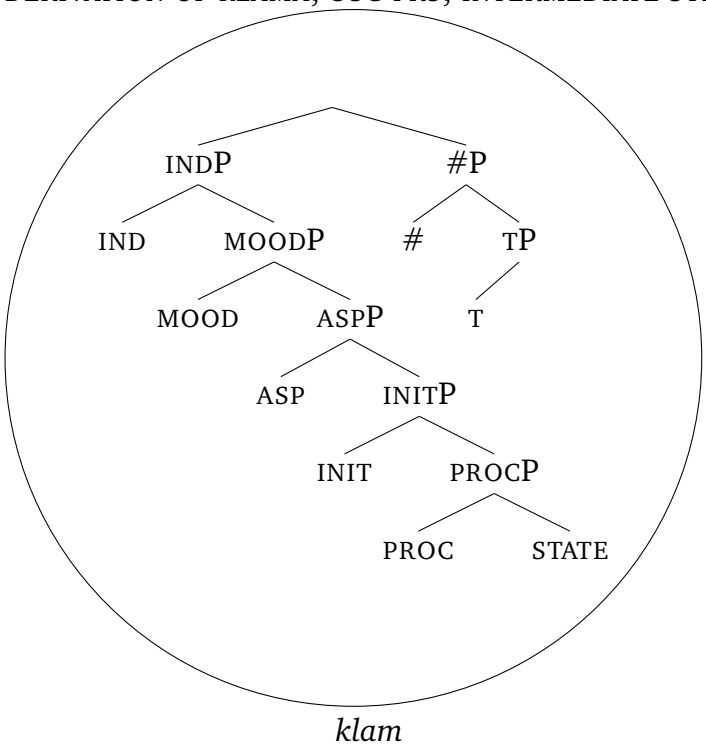
Under this option, the presence of the suffix *-v* is the only difference between the PRS and PST forms.

(122) LEXICALIZATION TABLE OF KLAMÂ, 2/3SG PRS AND PST

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	π	PART
klam						a		a		
klam						a		a		s
klam						a	v	a		
klam						a	v	a		s

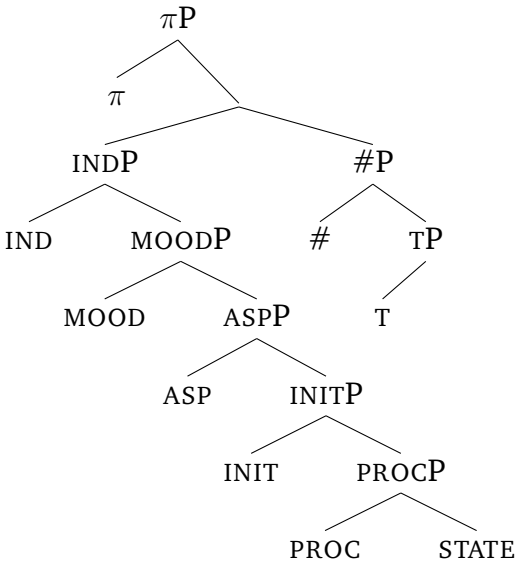
Let us run the derivations of the SG forms, starting from the stage shown in (123).

(123) DERIVATION OF KLAMÂ, 3SG PRS, INTERMEDIATE STEP



Syntax will now merge the feature π on top of (123), as shown in the tree below.

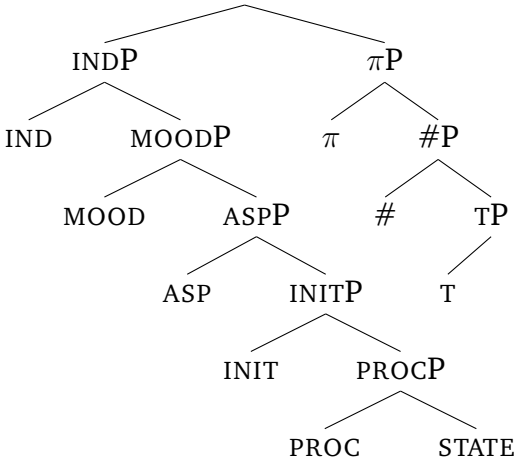
(124) DERIVATION OF KLAMÂ, 3SG PRS, INTERMEDIATE STEP



The root, however, does not match the tree entirely anymore, and no other lex-

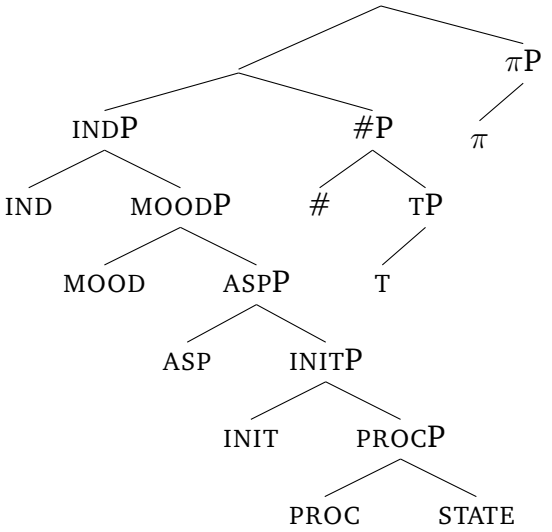
eme matches what syntax has built. So, movement gets triggered. Following the spellout algorithm, the first step is to move INDP.

(125) DERIVATION OF KLAMÂ, 3SG PRS, INTERMEDIATE STEP



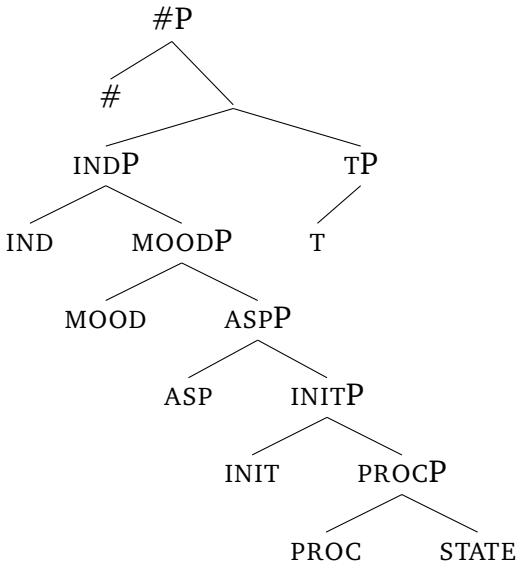
The root can lexicalize INDP, but there is still no matching item for πP. So, the next option is tried: move the entire complement.

(126) DERIVATION OF KLAMÂ, 3SG PRS, INTERMEDIATE STEP



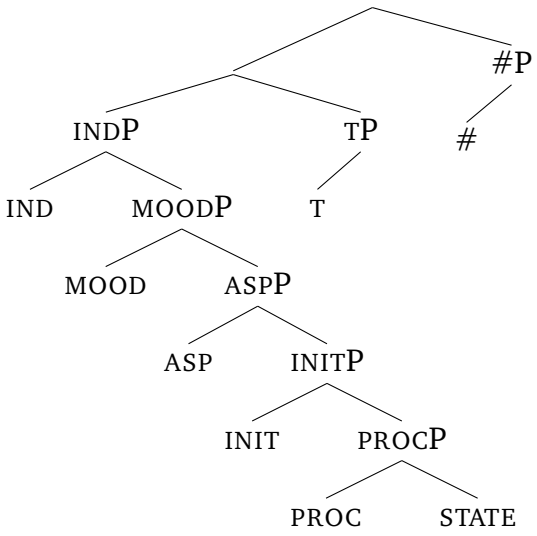
With this configuration, there is still no matching item for πP again. There is only one option left: backtracking. We thus undo merging π and go to the previous cycle, i.e. when # has been merged.

(127) DERIVATION OF KLAMÂ, 3SG PRS, BACKTRACKING



Before only INDP has been moved, but that led to an unsuccessful derivation. We thus try the next available option for this cycle and move the entire complement, yielding (128).

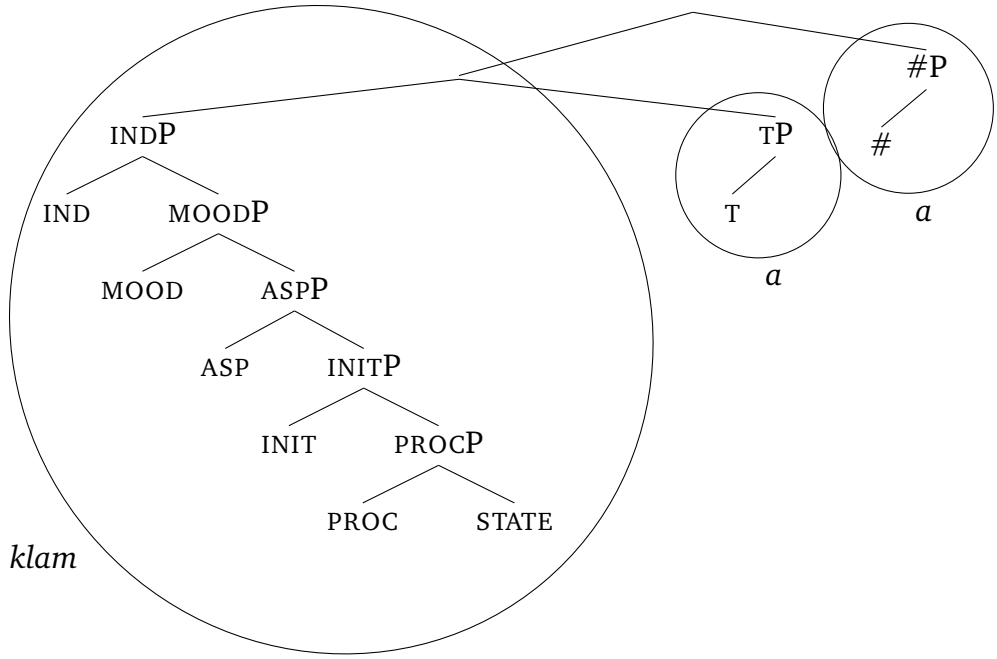
(128) DERIVATION OF KLAMÂ, 3SG PRS, INTERMEDIATE STEP



At this point, syntax checks the lexicon: the lexical entry of */klam/* contains the INDP and it is thus able to spell it out. The TV *-a* is perfect match for TP. When it comes to the #P, syntax finds several candidates. The suffixes *-a*, *-i*, *-in*$_1$ and *-is* start all at #. Among those, the best candidate turns out to be *-a* with the least

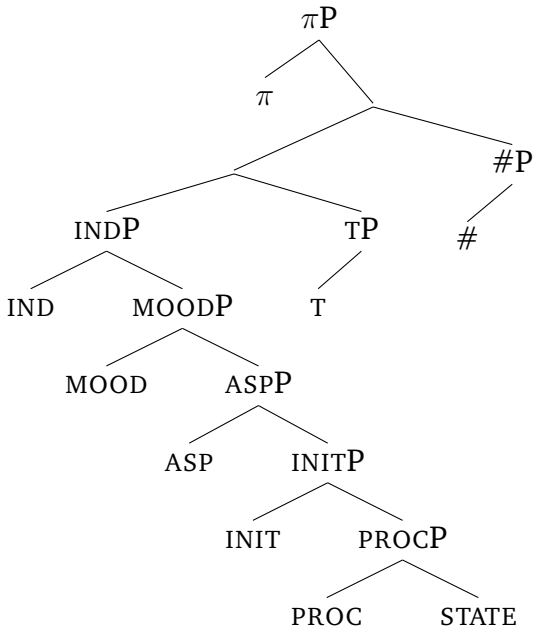
number of superfluous features.

(129) DERIVATION OF KLAMÂ, 3SG PRS, INTERMEDIATE STEP



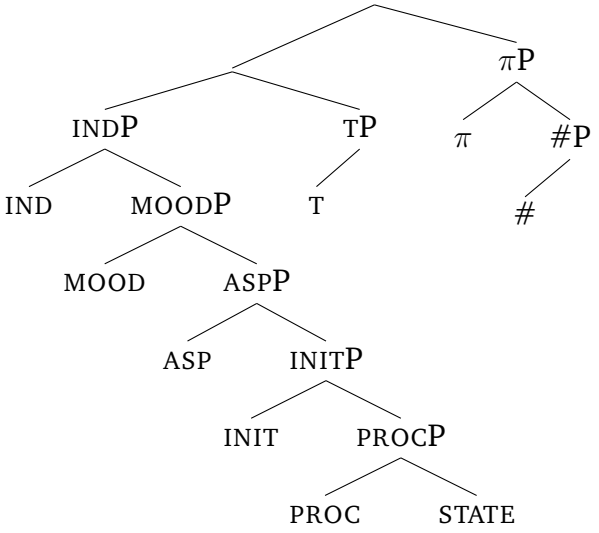
Building a 3SG PRS requires one more feature: π.

(130) DERIVATION OF KLAMÂ, 3SG PRS, INTERMEDIATE STEP



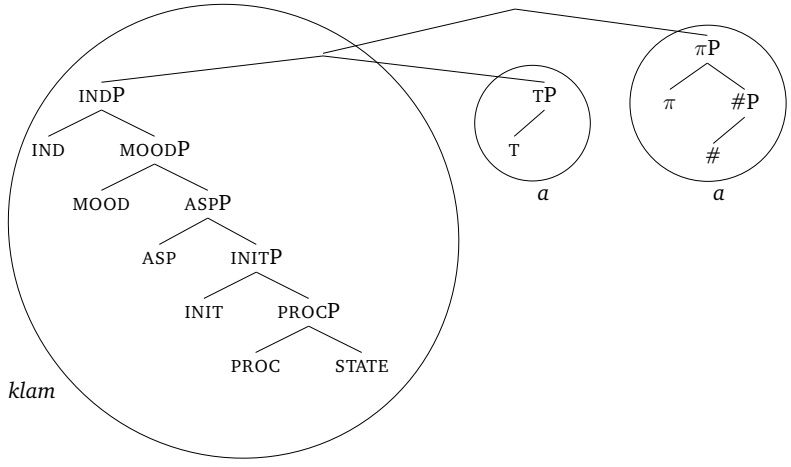
Since no lexical item is able to spell out (130), movement occurs. As before, INDP only is moved, but that fails. So, the next option leads to the structure below.

(131) DERIVATION OF KLAMÂ, 3SG PRS, INTERMEDIATE STEP



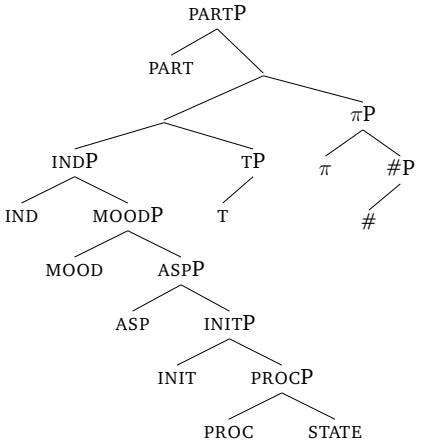
The syntactic tree can be successfully spelled out as follows:

(132) DERIVATION OF KLAMÂ, 3SG PRS, FINAL FORM



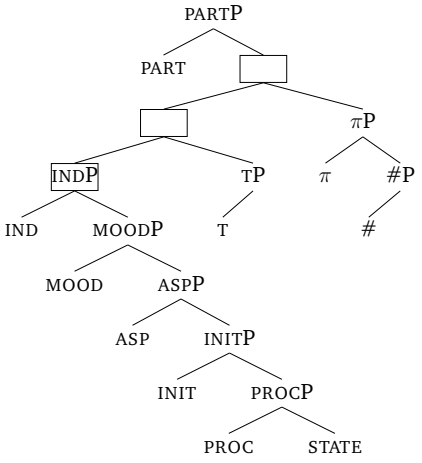
If syntax wants to build a 2SG, it will continue merging PART.

(133) DERIVATION OF KLAMÂ, 2SG PRS, INTERMEDIATE STEP



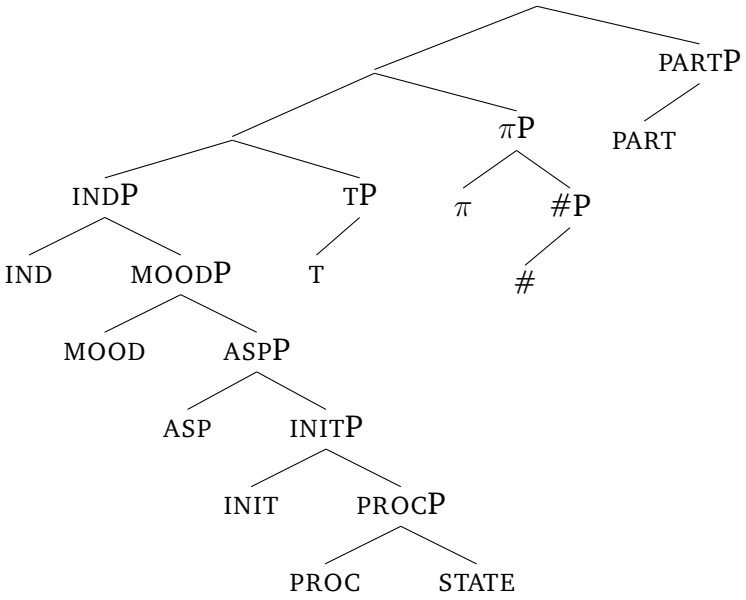
The tree in (133) cannot be spelled out by any lexical entry. Again, movement occurs. Moving INDP fails. So, syntax tries to move the dominating remnant constituent, as shown by the rectangle in (134). However, that also does not lead to a successful lexicalization.

(134) DERIVATION OF KLAMÂ, 2SG PRS, INTERMEDIATE STEP



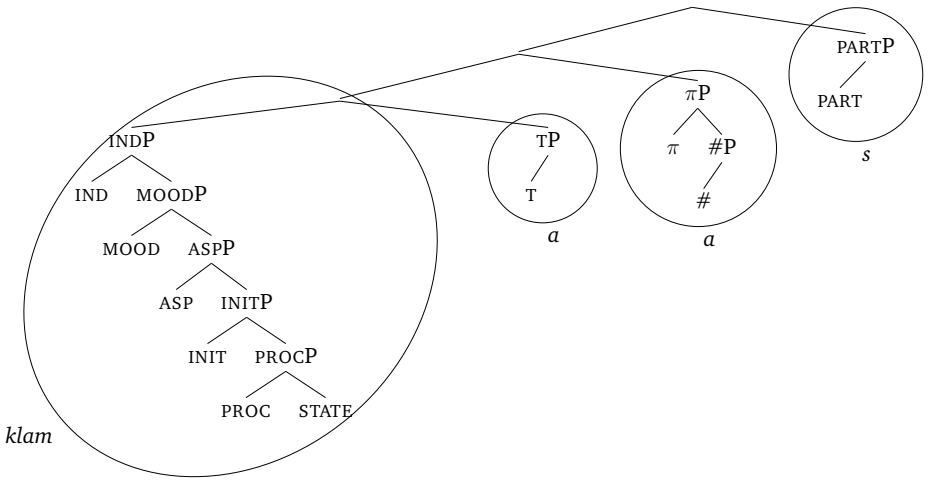
The last possible movement yields the tree in (135).

(135) DERIVATION OF KLAMÂ, 2SG PRS, INTERMEDIATE STEP



The syntactic tree can now be lexicalized as follows:

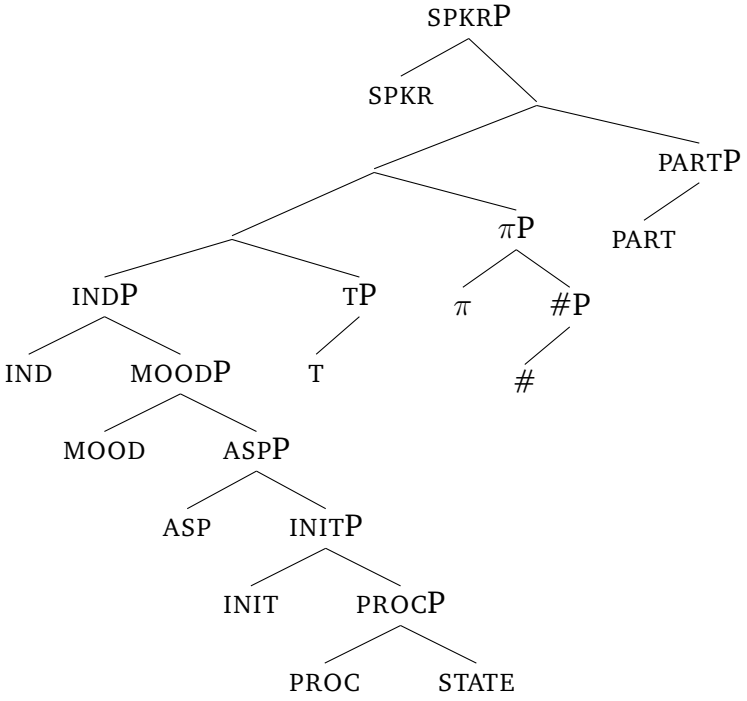
(136) DERIVATION OF KLAMÂ, 2SG PRS, FINAL FORM



We thus correctly derived the 2SG PRS of *a*-verbs, too.

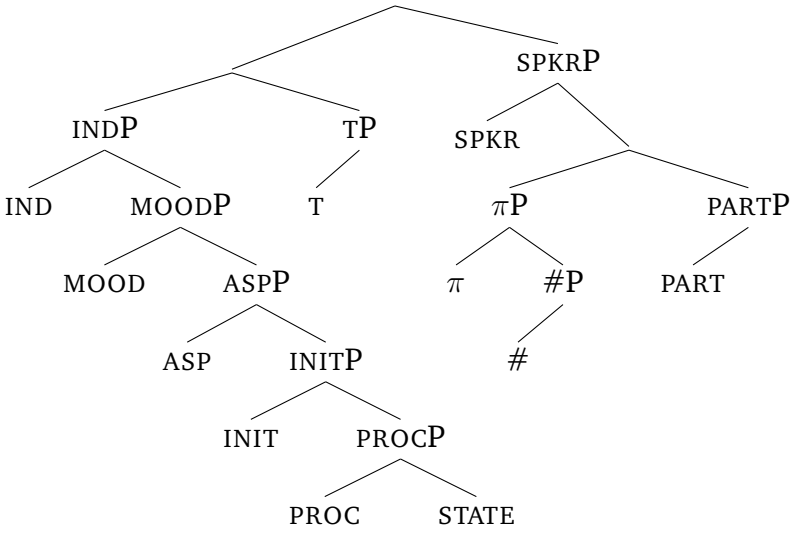
Creating a 1SG requires merging the feature SPKR.

(137) DERIVATION OF KLAMÂ, 1SG PRS, INTERMEDIATE STEP



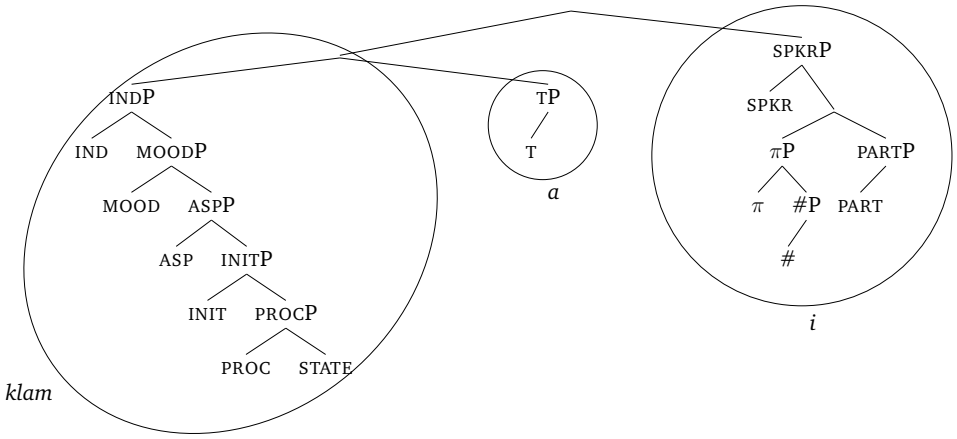
There is no matching item for the syntactic structure in (137), so syntax will try to sub-extract INDP first. That fails, so the next possible movement will be attempted, i.e. moving the dominating unlabelled node. The result of that second movement is shown below.

(138) DERIVATION OF KLAMÂ, 1SG PRS, INTERMEDIATE STEP



What is left behind by sub-extraction can be lexicalized by the suffix *-i*, which perfectly matches the SPKRP.

(139) DERIVATION OF KLAMÂ, 1SG PRS, FINAL FORM



The complete lexicalization table of *a*-verbs is thus the following:

(140) LEXICALIZATION TABLE OF KLAMÂ, PRS AND PST

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
klam						a		i					
klam						a		a				s	
klam						a		a					
klam						a		in_1					
klam						a		is					
klam									in_3				
klam						a	v	i					
klam						a	v	a				s	
klam						a	v	a					
klam						a	v	in_1					
klam						a	v	is					
klam						a	v		in_3				

This concludes the analysis of the inflectional verb patterns. The main point was to show that we can capture the combination of the correct root with the correct suffix, without language-specific features. Adding verb classes into the picture (i.e. the long *e*-verbs, the *iʃ*-verbs and the *a*-verbs) did not require any additional mechanism to morpho-syntax, beyond the usual syntactic operations presented in Chapter 2.

With the same technology, we will now take into account the so-called irregular verbs in TF.

Chapter 4

Irregular verbs

A number of Tualis Friulian verbs are "irregular" since they exhibit different patterns compared to the inflectional classes that have been analysed in Chapter 2 and Chapter 3. They fall into two types: those that show only unexpected roots, and a tiny class that shows both unexpected roots and missing suffixes.

The distribution of the different root allomorphs within a paradigm follows the natural classes predicted in the analysis. Let us take the root */bat/*, for instance. The lexicalization table is shown below.

(1) LEXICALIZATION TABLE OF BATI

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
bat													
bat												s	
bat													
bat				e				in_1					
bat				e				is					
bat									in_3				
bat				e			v	i					
bat				e			v	a				s	
bat				e			v	a					
bat				e			v	in_1					
bat				e			v	is					
bat				e			v		in_3				

As shown in (1), the root */bat/* can lexicalize all the features up to SPKR, but it can also shrink to:

(i) π in the 2/3SG PRS;

(ii) # in the 3PL PRS;

(iii) ASP in the 1/2PL PRS and PST forms.

This creates four different environments:

(i) 1SG PRS;

(ii) 2/3SG PRS;

(iii) 3PL PRS;

(iv) 1/2PL PRS and PST forms.

In this case, the verb *bati* ('to hit') shows only one root that is syncretic in all the environments, but we could also expect one root type for each of the four different environments. Moreover, since the environments are in subset-superset relations, we also expect that the neighboring sizes of roots will be syncretic.

This prediction about natural classes is borne out when we look at the so-called "irregular verbs". Among those verbs, the number of root types increases monotonically. One verb class shows one root allomorph for the 1SG and 2/3SG PRS forms, whereas a different root allomorph is found in the 3PL and 1/2PL PRS+PST forms, e.g.:

(2) LEXICALIZATION TABLE OF THE INVERTED L-PATTERN WITH E_{TV}

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
mowv													
mowv												s	
mowv													
mov				e				in_1					
mov				e				is					
mov									in_3				
mov				e			v	i					
mov				e			v	a				s	
mov				e			v	a					
mov				e			v	in_1					
mov				e			v	is					
mov				e			v		in_3				

In this pattern, two root types are attested for the four environments.

Then, the paradigm of the verb *murî* ('to die') shows an additional root type for one of the predicted natural classes, i.e. the 3PL PRS.

(3) LEXICALIZATION TABLE OF MURÎ, 'TO DIE'

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
mowr													
mowr												s	
mowr													
mur			i					in_1					
mur			i					is					
mor									in_3				
mur			i				v	i					
mur			i				v	a				s	
mur			i				v	a					
mur			i				v	in_1					
mur			i				v	is					
mur			i				v		in_3				

The lexicalization table in (3) thus shows three root allomorphs for the four environments.

Crazy verbs like *lâ* ('to go') show a different root shape for each environment:[1]

(4) LEXICALIZATION TABLE OF LÂ

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
voj													
va												s	
va													
l						a		in_1					
l						a		is					
van													
l						a	v	i					
l						a	v	a				s	
l						a	v	a					
l						a	v	in_1					
l						a	v	is					
l						a	v		in_3				

[1]It has to be pointed out that when the expected suffixes are missing, more environments are possible. That is that case of the PST forms of the verb *essi* ('to be'). The root allomorph is not followed by the expected TV and the past suffix -V, e.g. *er-i*. The root can thus lexicalize a different amount of features, compared to the 1/2PL PRS forms. This difference makes possible to have two different root allomorphs in the 1/2PL PRS+PST environment.

So, the analysis of TF verbs proposed in Chapter 2 and 3 predicts four natural classes of roots, which are observed by the actual morphology.

In the following sections, I present each pattern in detail.

4.1 When the length goes missing: the inverted L-pattern

In this section, I discuss the inverted L-pattern, as illustrated here with the verb *movi* ('to move'). On the surface, verbs such as *movi* show the thematic vowel *-e* in the 2PL PRS and PST forms.

		PRS	PST
SG	1	mowv	mov-**e**-v-i
	2	mowv-s	mov-**e**-v-a-s
	3	mowv	mov-**e**-v-a
PL	1	mov-in	mov-**e**-v-in
	2	mov-**e**-is	mov-**e**-v-is
	3	mov-in	mov-**e**-v-in

movi, 'to move'

We have been looking at other two verb classes that take an *-e* thematic vowel: the *e*-verbs (5) and the long *e*-verbs (6).

(5) E-VERBS

		PRS	PST
SG	1	bat	bat-**e**-v-i
	2	bat-s	bat-**e**-v-a-s
	3	bat	bat-**e**-v-a
PL	1	bat-in	bat-**e**-v-in
	2	bat-**e**-is	bat-**e**-v-is
	3	bat-in	bat-**e**-v-in

bati, 'to hit'

(6) LONG E-VERBS

		PRS	PST
SG	1	val-ː	val-**e**-v-i
	2	val-ː-s	val-**e**-v-a-s
	3	val-ː	val-**e**-v-a
PL	1	val-in	val-**e**-v-in
	2	val-**e**-is	val-**e**-v-is
	3	val-in	val-**e**-v-in

valê, 'to value'

Verbs like *movi*, however, show two root allomorphs: one is found in the SG PRS forms, the other is found elsewhere. The distribution of these two allomorphs creates an inverted L-pattern in the paradigm.

(7) INVERTED L-PATTERN

		PRS	PST
SG	1	mowv	mov-e-v-i
	2	mowv-s	mov-e-v-a-s
	3	mowv	mov-e-v-a
PL	1	mov-in	mov-e-v-in
	2	mov-e-is	mov-e-v-is
	3	mov-in	mov-e-v-in

movi, 'to move'

The same shape could be identified in the long *e*-verbs, which show an additional morpheme in the SG PRS forms, i.e. the length morpheme, as we can see in the representative paradigm of the verb *valê* ('to value').

(8) LONG E-VERBS

		PRS	PST
SG	1	val-ː	val-e-v-i
	2	val-ː-s	val-e-v-a-s
	3	val-ː	val-e-v-a
PL	1	val-in	val-e-v-in
	2	val-e-is	val-e-v-is
	3	val-in	val-e-v-in

valê, 'to value'

If we compare the long *e*-verbs and the inverted L-verbs, we can notice that *movi*-like verbs differ in two ways from the *valê*-like verbs.

		PRS	PST
SG	1	mowv	mov-e-v-i
	2	mowv-s	mov-e-v-a-s
	3	mowv	mov-e-v-a
PL	1	mov-in	mov-e-v-in
	2	mov-e-is	mov-e-v-is
	3	mov-in	mov-e-v-in

movi, 'to move'

		PRS	PST
SG	1	val-ː	val-e-v-i
	2	val-ː-s	val-e-v-a-s
	3	val-ː	val-e-v-a
PL	1	val-in	val-e-v-in
	2	val-e-is	val-e-v-is
	3	val-in	val-e-v-in

valê, 'to value'

First, their SG PRS forms have a suppletive root, i.e. */mowv/*, and second, those forms lack root vowel lengthening. Why does root suppletion erase the length morpheme?

The idea is that these suppletive roots are portmanteau: they cover both the slot of the root and the slot of the suffix -ː.

(9) LEXICALIZATION TABLE OF MOVI, SG PRS

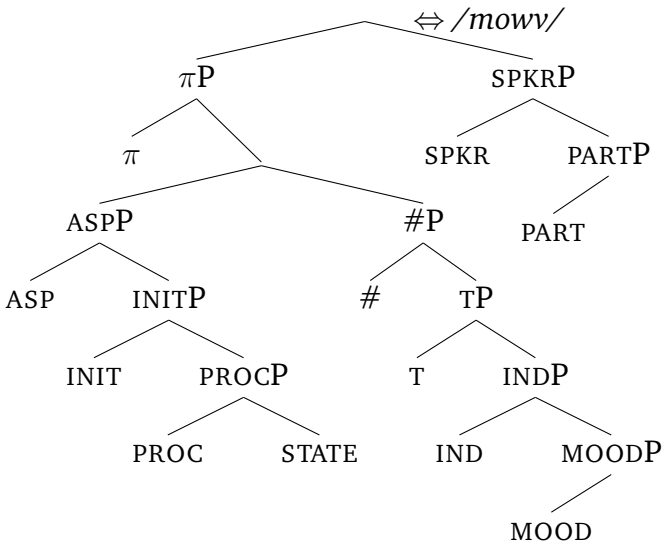
STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
mowv													
mowv												s	
mowv													

(10) LEXICALIZATION TABLE OF VALÊ, SG PRS

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
val				ː									
val				ː								s	
val				ː									

Concretely, the lexical entry of */mowv/* is:

(11) LEXICAL ENTRY OF MOWV



The derivation of the SG PRS forms works exactly the same as the one of the *e*-verbs. For the detailed steps, the reader can see Chapter 2, § 2.2 and § 2.3.

In the PL PRS and PST forms, *movi*-like verbs show a different root allomorph, e.g., */mov/*. Otherwise, they behave exactly as the long *e*-verbs, e.g., *valê*.

(12) LEXICALIZATION TABLE OF MOVI, PL PRS AND PST

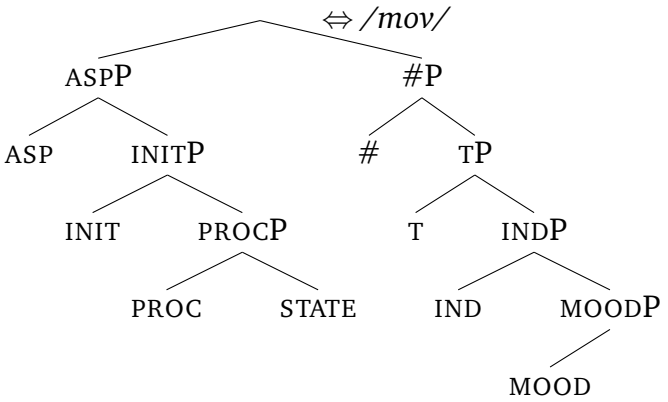
STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
mov				e				in_1					
mov				e				is					
mov									in_3				
mov				e			v	i					
mov				e			v	a				s	
mov				e			v	a					
mov				e			v	in_1					
mov				e			v	is					
mov				e			v		in_3				

(13) LEXICALIZATION TABLE OF VALÊ, PL PRS AND PST

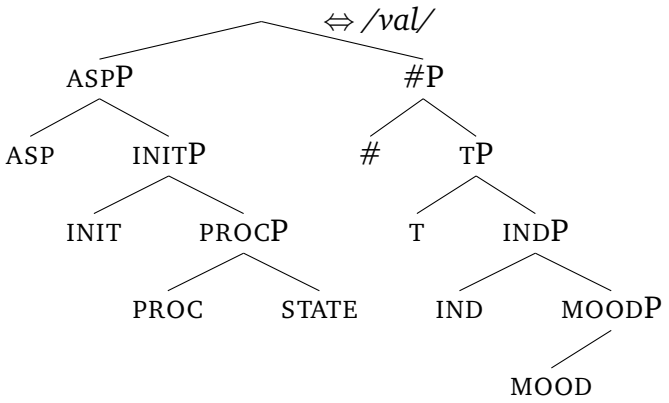
STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
val				e				in_1					
val				e				is					
val									in_3				
val				e			v	i					
val				e			v	a				s	
val				e			v	a					
val				e			v	in_1					
val				e			v	is					
val				e			v		in_3				

The lexical entry of */mov/* will thus have the same shape of the lexical entry as */val/*. Below the two lexemes are shown in comparison.

(14) LEXICAL ENTRY OF MOV

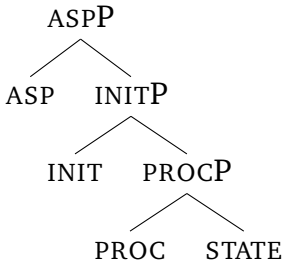


(15) LEXICAL ENTRY OF VAL



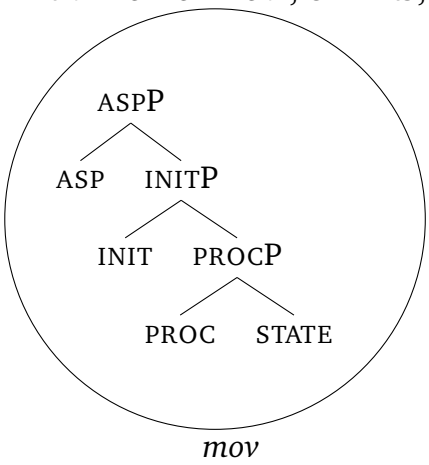
Now the question is: how do we get the correct distribution of root allomorphs? The lexicon contains two items with the same concept, i.e. MOVE. This means that the two lexemes will compete for lexicalization. The competition between */mowv/* and */mov/* is ruled by the Elsewhere Principle (see Chapter 2, Example 125). Let us see that in detail with a concrete case: the derivation of a 3PL PRS form. Let us take it from here:

(16) DERIVATION OF MOVI, 3PL PRS, INTERMEDIATE STEP



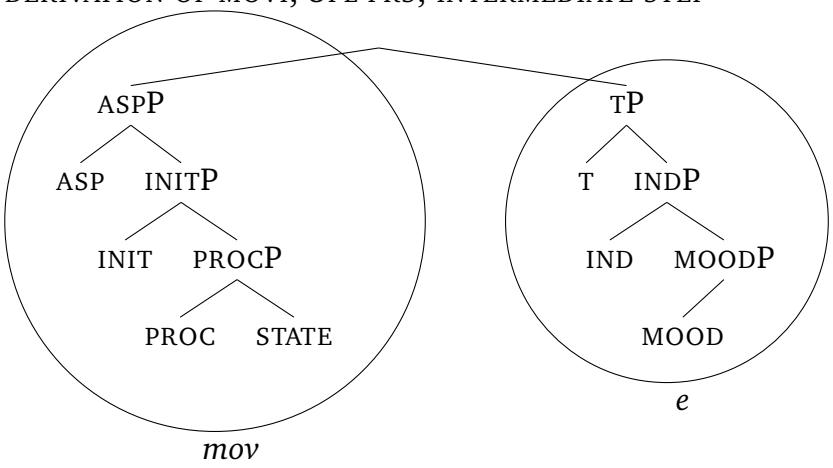
Both the lexical entry of */mowv/* and the one of */mov/* contain the constituent that need to be lexicalized in (16). The lexeme */mov/*, however, has fewer superfluous features compared to */mowv/*. Given the Elsewhere Principle, the item with the least amount of unused features wins the competition. So, */mov/* is the best fit for the syntactic structure in (16), which gets lexicalized as follows:

(17) DERIVATION OF MOVI, 3PL PRS, INTERMEDIATE STEP



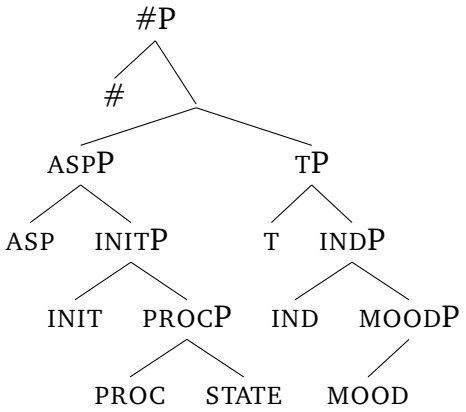
When syntax continues building a 3PL PRS, it will reach a stage where ASPP is spelled out as *mov*, while TP - as the TV *-e*.

(18) DERIVATION OF MOVI, 3PL PRS, INTERMEDIATE STEP



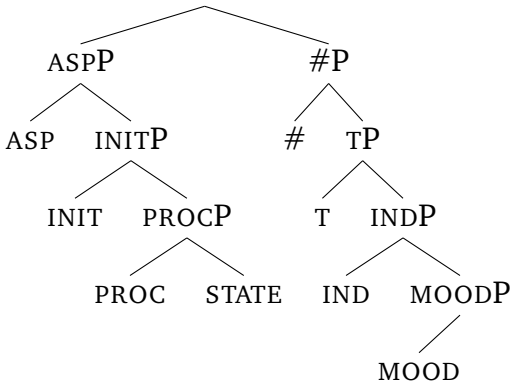
After that, syntax merges #.

(19) DERIVATION OF MOVI, 3PL PRS, INTERMEDIATE STEP



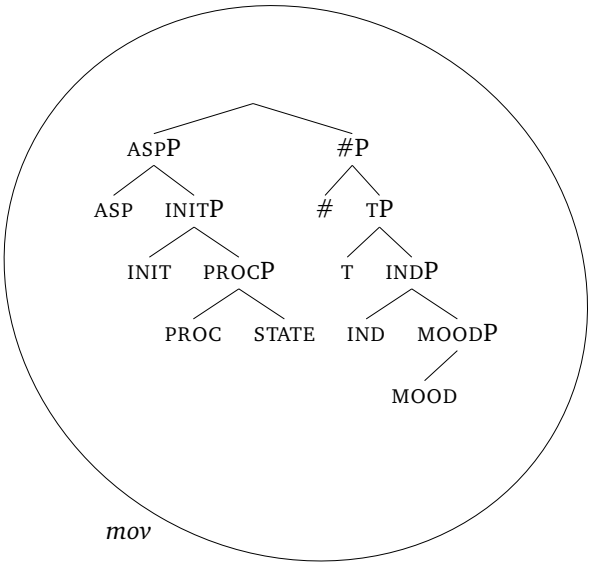
Movement gets triggered since there is no matching item in the lexicon for the structure in (19). As usual, the fist attempt is to move the closest non-remnant labelled constituent: ASPP.

(20) DERIVATION OF MOVI, 3PL PRS, INTERMEDIATE STEP



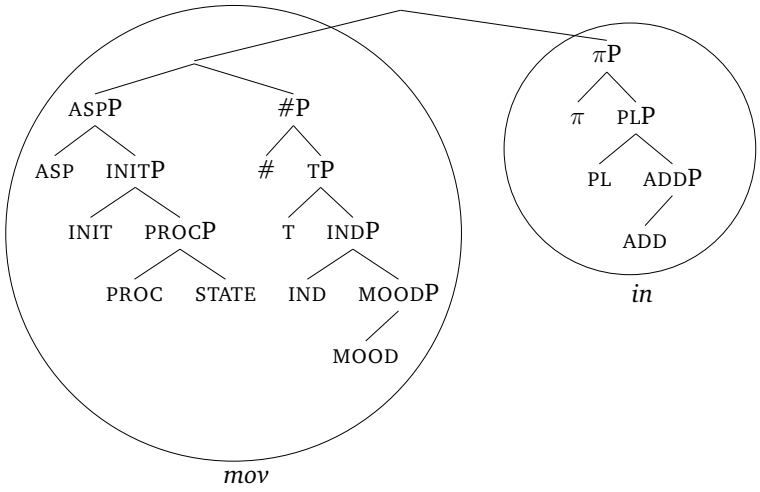
The lexical entry of */mov/* is a perfect match for the tree above.

(21) DERIVATION OF MOVI, 3PL PRS, INTERMEDIATE STEP



After that, syntax will continue merging the feature ADD, as it is building a 3PL form. As we have seen for other verb classes, the final form will look like this:[2]

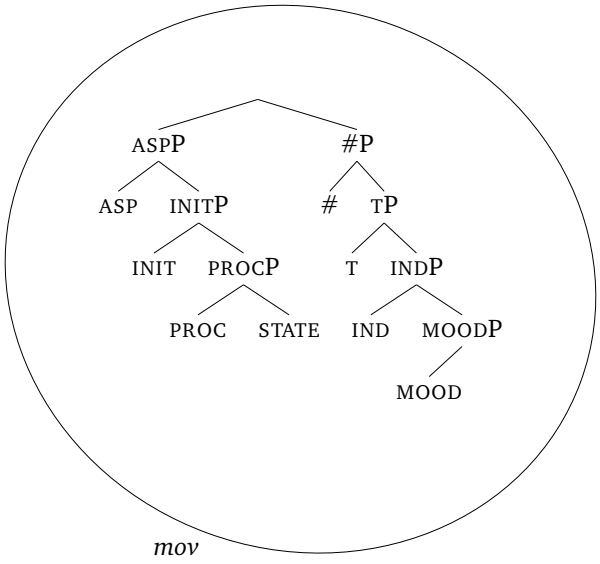
(22) DERIVATION OF MOVI, 3PL PRS, FINAL FORM



We thus correctly derived the 3PL PRS form *movin* ('they move'). The same allomorph is found in the 1/2PL PRS and PST forms since it will be the best fit there as well. How do we get the allomorph */mowv/* in the SG PRS forms then? Let us resume the derivation from this stage:

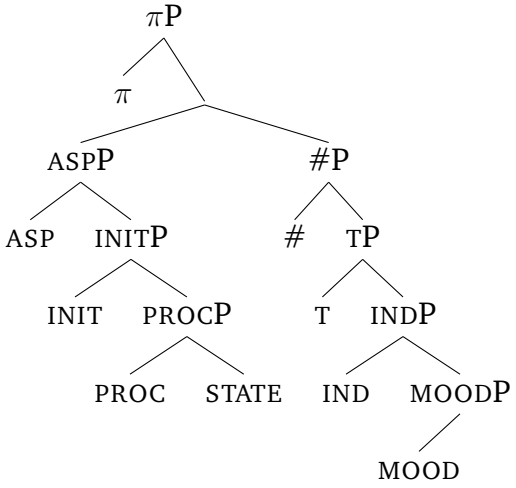
[2]For a detailed syntactic computation, see Chapter 3, § 3.1.

(23) DERIVATION OF MOVI, 3SG PRS, INTERMEDIATE STEP



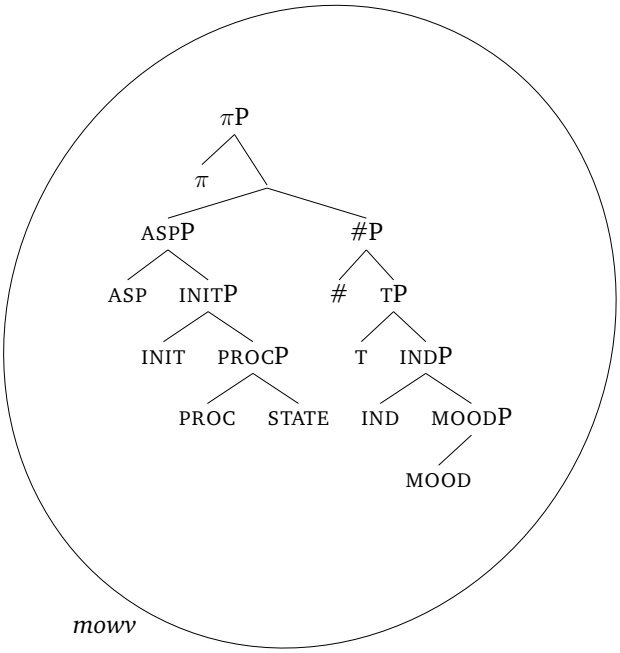
When syntax is building a 3SG PRS, it will merge π on top of (23).

(24) DERIVATION OF MOVI, 3SG PRS, INTERMEDIATE STEP



When syntax checks the lexicon, it finds the entry of */mowv/*, which matches the entire tree.

(25) DERIVATION OF MOVI, 3SG PRS, FINAL FORM



The allomorph */mowv/* is thus correctly derived in the 3SG PRS form. For the lexicalization of the remaining forms, here is the complete lexicalization table of *movi*.

(26) LEXICALIZATION TABLE OF MOVI, PRS AND PST FORMS

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
mowv													
mowv												s	
mowv													
mov				e				in_1					
mov				e				is					
mov									in_3				
mov				e			v	i					
mov				e			v	a				s	
mov				e			v	a					
mov				e			v	in_1					
mov				e			v	is					
mov				e			v		in_3				

Verbs with root suppletion therefore also fall out from our system, with no added complication beyond the obvious fact that they have a second root, i.e. a second verbal lexical entry for the same concept. The lexeme */mowv/* can grow up to SPKR in the SG PRS forms, without needing any additional suffix, e.g. the length morpheme.

4.2 One more inverted L-pattern

On analogy to *movi*-like verbs, the inverted L-zone is found also in the paradigm of *ceri*-like verbs (see, e.g., 27).

(27) INVERTED L-PATTERN WITH TV -I

		PRS	PST
SG	1	tʃejr	tʃer-**i**-v-i
	2	tʃejr-s	tʃer-**i**-v-a-s
	3	tʃejr	tʃer-**i**-v-a
PL	1	tʃer-in	tʃer-**i**-v-in
	2	tʃer-**i**-is	tʃer-**i**-v-is
	3	tʃer-in	tʃer-**i**-v-in

tʃeri, 'to search'

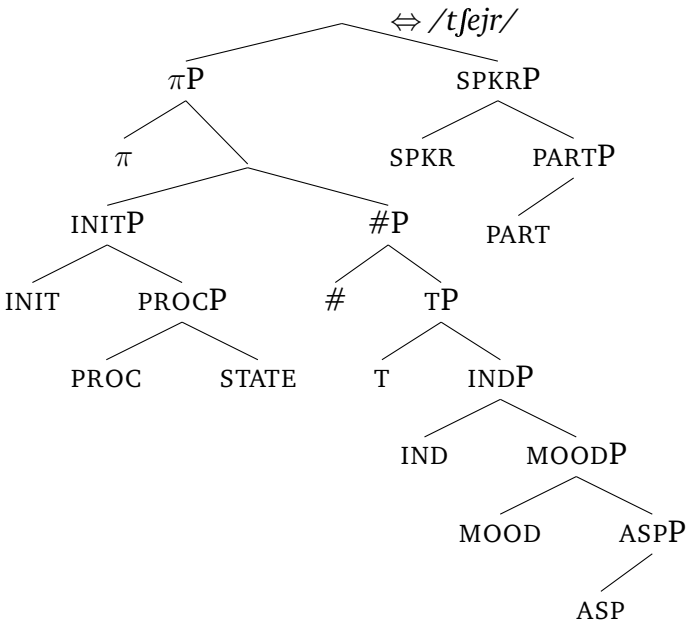
(28) INVERTED L-PATTERN WITH TV -E

		PRS	PST
SG	1	mowv	mov-**e**-v-i
	2	mowv-s	mov-**e**-v-a-s
	3	mowv	mov-**e**-v-a
PL	1	mov-in	mov-**e**-v-in
	2	mov-**e**-is	mov-**e**-v-is
	3	mov-in	mov-**e**-v-in

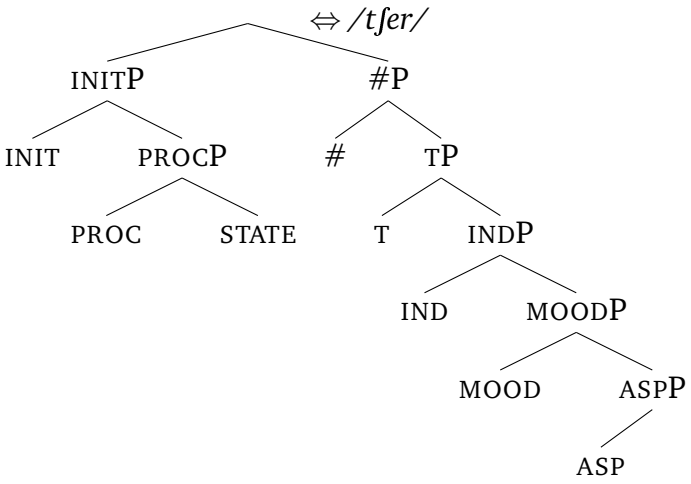
movi, 'to move'

The two paradigms, however, differ in the 2PL PRS and PST forms: *ceri*-like verbs combine with an *-i* TV, whereas *movi*-like verbs show an *-e* TV. How do we get the same distribution of root allomorphs but different thematic vowels? The root allomorphs */tʃejr/* and */tʃer/* can lexicalize the same amount of features of */mowv/* and */mov/*, respectively. The difference is how these features are arranged. Similarly to the "regular" *i*-verbs, the lexical entries of root allomorphs */tʃejr/* and */tʃer/* reach up to INIT on their left branches. Contrary to that, */mowv/* and */mov/* reach up to ASP, as shown in (11) and (14).

(29) LEXICAL ENTRY OF CEIR



(30) LEXICAL ENTRY OF CER



The difference in the thematic vowel is thus derived by a different shape of the lexemes. That is the same solution that applies to any "regular" verb pattern, as we have seen in Chapter 2, § 2.2.2. It only happens that the lexicon has two entries that share the same concept SEARCH. The competition of these two entries work as in *movi*-like verbs, creating the following distribution of root allomorphs:

(31) LEXICALIZATION TABLE OF CERI

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
tʃejr													
tʃejr												s	
tʃejr													
tʃer			i					in_1					
tʃer			i					is					
tʃer									in_3				
tʃer			i				v	i					
tʃer			i				v	a				s	
tʃer			i				v	a					
tʃer			i				v	in_1					
tʃer			i				v	is					
tʃer			i				v		in_3				

4.3 When the -iʃ goes missing

Another irregular class is represented by verbs like *vegni* ('to come'). These verbs take an *-i* thematic vowel in the 2PL PRS and PST forms.

		PRS	PST
SG	1	venj	vinj-**i**-v-i
	2	venj-s	vinj-**i**-v-a-s
	3	venj	vinj-**i**-v-a
PL	1	vinj-in	vinj-**i**-v-in
	2	vinj-**i**-is	vinj-**i**-v-is
	3	venj-in	vinj-**i**-v-in

vegni, 'to come'

The *i*-verbs and the *iʃ*-verbs combine with the same TV.

(32) I-VERBS

		PRS	PST
SG	1	sint	sint-**i**-v-i
	2	sint-s	sint-**i**-v-a-s
	3	sint	sint-**i**-v-a
PL	1	sint-in	sint-**i**-v-in
	2	sint-**i**-is	sint-**i**-v-is
	3	sint-in	sint-**i**-v-in

sintî, 'to hear'

(33) Iʃ-VERBS

		PRS	PST
SG	1	fin-iʃ	fin-**i**-v-i
	2	fin-iʃ-s	fin-**i**-v-a-s
	3	fin-iʃ	fin-**i**-v-a
PL	1	fin-i-in	fin-**i**-v-in
	2	fin-**i**-is	fin-**i**-v-is
	3	fin-iʃ-in	fin-**i**-v-in

finî, 'to finish'

Verbs like *vegni*, however, also show root suppletion. Their root allomorphs have the same distribution of the suffix *-iʃ*, which is found in the paradigm of verbs like *finî* ('to finish').

		PRS	PST
SG	1	venj	vinj-i-v-i
	2	venj-s	vinj-i-v-a-s
	3	venj	vinj-i-v-a
PL	1	vinj-in	vinj-i-v-in
	2	vinj-i-is	vinj-i-v-is
	3	venj-in	vinj-i-v-in

vegni, 'to come'

		PRS	PST
SG	1	fin- iʃ	fin-i-v-i
	2	fin- iʃ -s	fin-i-v-a-s
	3	fin- iʃ	fin-i-v-a
PL	1	fin-in	fin-i-v-in
	2	fin-i-is	fin-i-v-is
	3	fin- iʃ -in	fin-i-v-in

finî, 'to finish'

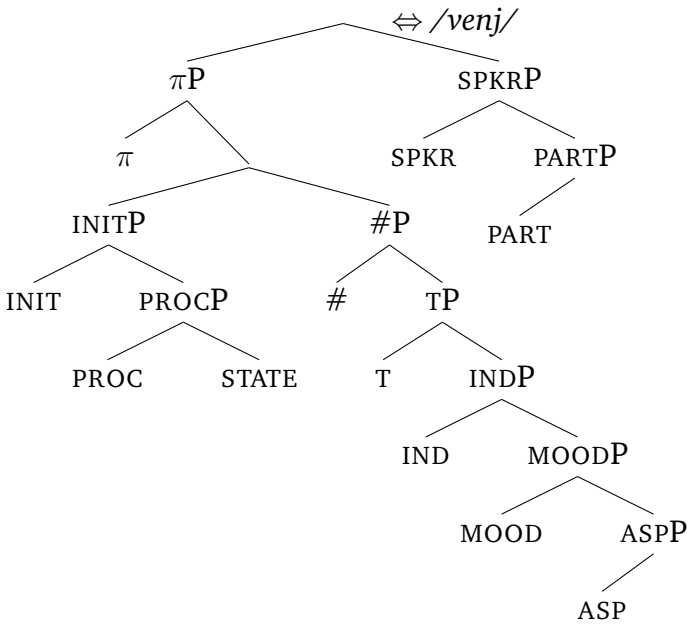
Vegni-like verbs differ from the inflectional class of *iʃ*-verbs in two places. First their SG and 3PLPRS forms have a suppletive root, e.g., */venj/*, and second, those forms lack the suffix *-iʃ*. As it happened for the *movi*-like verbs, those two properties go hand in hand. The suppletive root is a portmanteau as it fills in the slot of the root and the suffix *-iʃ*:

(34) LEXICALIZATION TABLE OF VEGNI AND FINÎ, 1SG PRS

STATE	PROC	INIT	ASP	MOOD	IND	T	#	π	PART	SPKR
venj										
fin			iʃ							

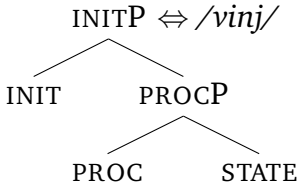
The root */venj/* can reach up to SPKR on its own, having a lexical entry of the shape:

(35) LEXICAL ENTRY OF VENJ



On the other hand, the root allomorph */vinj/* is specialized for the 1/2PL and PST forms with a lexical entry of the shape represented in (36).

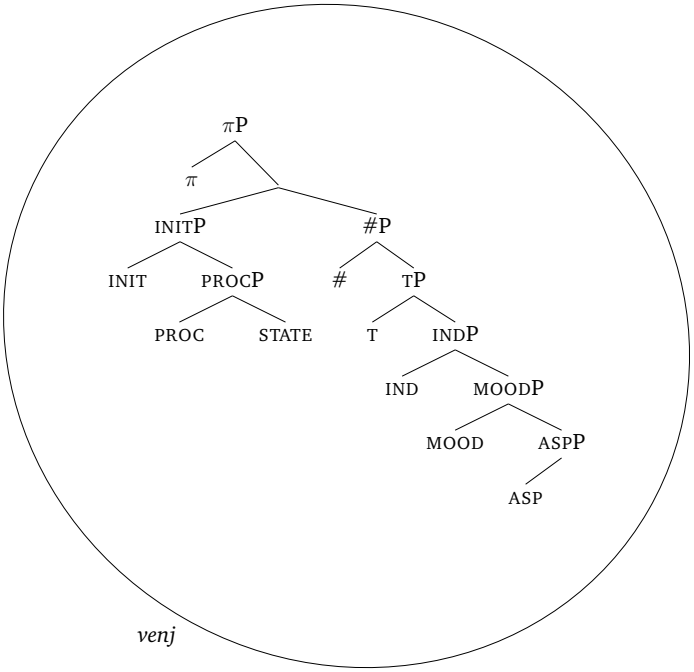
(36) LEXICAL ENTRY OF VINJ



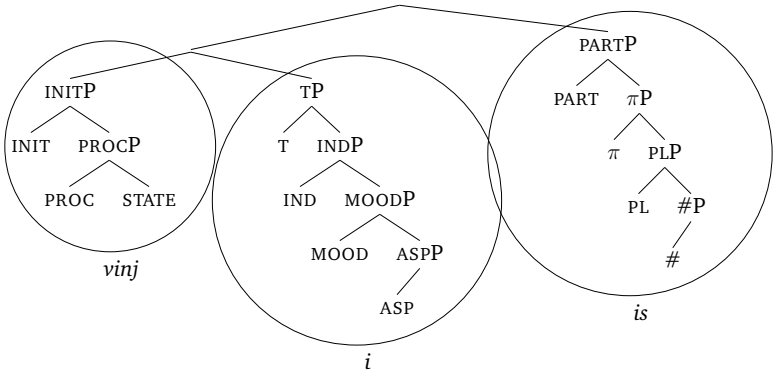
As before for *movi*-like verbs, the two lexical entries compete for lexicalizing what syntax has built. Given the Elsewhere Principle, the most specialized item wins. For instance, when syntax builds the 3PL PRS form, the root allomorph */venj/* will match the tree up to # (see, e.g., (37)). On the other hand, when syntax is building the 1/2PL PRS and the PST forms, the root allomorph */vinj/* will win the competition (see, e.g., (38)).[3]

[3]This verb pattern shows two different allomorphs in the 1PL and 3PL PRS forms. This is one of the reasons why I propose that the two INs suffixes are simply homophonous. They indeed express different features, starting at different points in the FSEQ. This allows us to correctly derive the two different root allomorphs in those forms: */vinj/* and */venj/*.

(37) DERIVATION OF VEGNI, 3SG PRS, FINAL FORM



(38) DERIVATION OF VEGNI, 2PL PRS, FINAL FORM



The derivations of the other forms proceed as indicated in the lexicalization table.

(39) LEXICALIZATION TABLE OF VEGNI

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
venj													
venj												s	
venj													
vinj			i					in_1					
vinj			i					is					
venj									in_3				
vinj			i				v	i					
vinj			i				v	a				s	
vinj			i				v	a					
vinj			i				v	in_1					
vinj			i				v	is					
vinj			i				v		in_3				

Again, we have correctly derived a so-called "irregular" verb pattern, still using only the regular nanosyntactic tools.

4.4 Good things come in threes: murî

This paradigm is almost identical to the one of *vegni*-like verbs. The only difference is that *murî* shows an additional root allomorph, i.e. */mor/* in the 3PL PRS.

		PRS	PST
SG	1	mowr	mur-i-v-i
	2	mowr-s	mur-i-v-a-s
	3	mowr	mur-i-v-a
PL	1	mur-in	mur-i-v-in
	2	mur-i-is	mur-i-v-is
	3	**mor-in**	mur-i-v-in

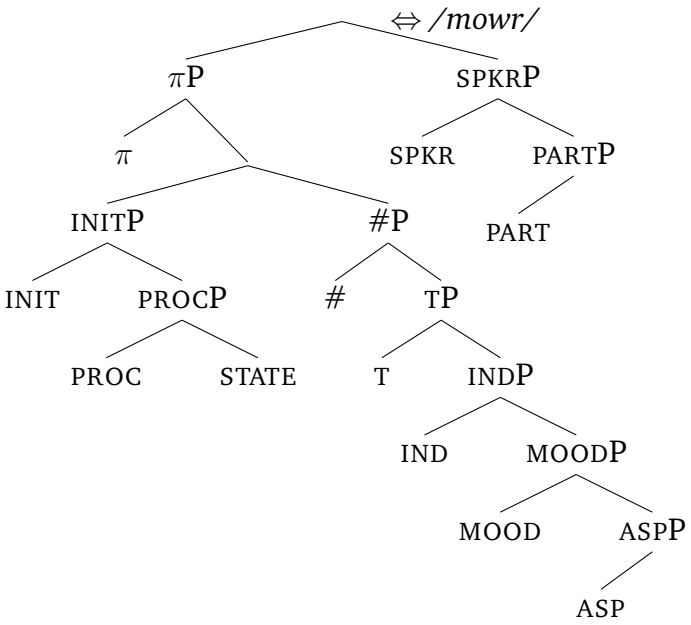
murî, 'to die'

		PRS	PST
SG	1	venj	vinj-i-v-i
	2	venj-s	vinj-i-v-a-s
	3	venj	vinj-i-v-a
PL	1	vinj-in	vinj-i-v-in
	2	vinj-i-is	vinj-i-v-is
	3	venj-in	vinj-i-v-in

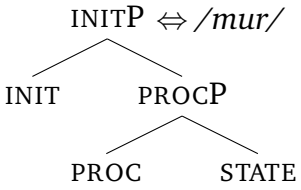
vegni, 'to come'

This means that the lexical entries of */mowr/* and */mur/* will have the same shape of the ones of */venj/* and */vinj/*, i.e.:

(40) LEXICAL ENTRY OF MOWR



(41) LEXICAL ENTRY OF MUR



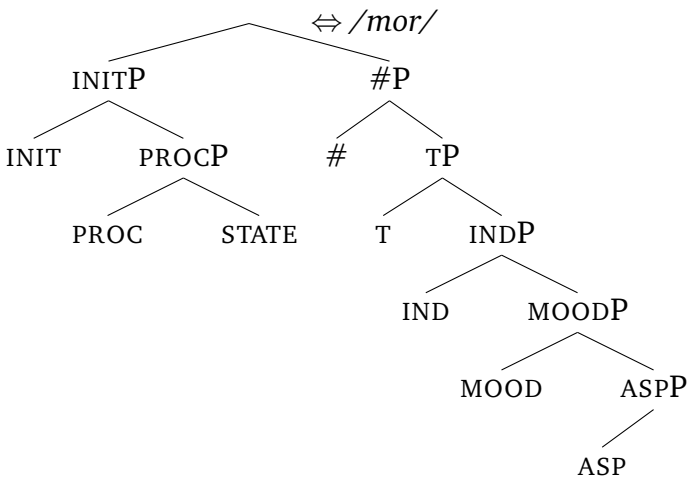
The third allomorph */mor/* pops up only in the 3PL PRS form, followed by the suffix *-in*$_3$, which lexicalizes the tree starting from ADD, as shown below.

(42) LEXICALIZATION TABLE OF MURÎ, 3PL PRS

STATE	PROC	INIT	ASP	MOOD	IND	T	#	ADD	PL	π

The root allomorph */mor/* is thus responsible for the remaining features below ADD, with a lexical entry of the shape:

(43) LEXICAL ENTRY OF MOR



Here is an overall picture of the lexicalization of the PRS and PST forms for the verb *murî* ('to die').

(44) LEXICALIZATION TABLE OF MURÎ

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
mowr													
mowr												s	
mowr													
mur			i					in_1					
mur			i					is					
mor									in_3				
mur			i				v	i					
mur			i				v	a				s	
mur			i				v	a					
mur			i				v	in_1					
mur			i				v	is					
mur			i				v		in_3				

We thus derived a so-called "irregular" verb, and again, we did not need to add any new mechanism to our theory for that. It simply so happens that TF has three lexical entries for the same concept in its lexicon. Those entries however follow the regular format of lexical entries and the regular rules apply to them.

4.5 The crazy verbs

In Tualis Friulian, a couple of isolated verbs are highly irregular. The goal is to see to what extent the current analysis succeeds in decomposing their present and past forms, without compromising the analysis of the other verb patterns. Let us start with the largest class of the crazy verbs, i.e. the *lâ*-like verb class, whose pattern corresponds to three verbs.

4.5.1 Lâ-like verbs

The paradigm of *lâ*-like verbs is shown below:

		PRS	PST
SG	1	voj	l-a-v-i
	2	va-s	l-a-v-a-s
	3	va	l-a-v-a
PL	1	l-in	l-a-v-in
	2	l-a-is	l-a-v-is
	3	van	l-a-v-in

lâ, 'to go'

Let us start by looking at the least crazy part of this verb pattern. The root allomorph */l/* combines with an *-a* thematic vowel in the 2PL PRS and in the PST forms. There, the suffixes are identical to the ones found in the *a*-verbs.

		PRS	PST
SG	1	voj	l-**a**-v-i
	2	va-s	l-**a**-v-a-s
	3	va	l-**a**-v-a
PL	1	l-in	l-**a**-v-in
	2	l-**a**-is	l-**a**-v-is
	3	van	l-**a**-v-in

lâ, 'to go'

		PRS	PST
SG	1	klam-a-i	klam-**a**-v-i
	2	klam-a-a-s	klam-**a**-v-a-s
	3	klam-a-a	klam-**a**-v-a
PL	1	klam-a-in	klam-**a**-v-in
	2	klam-**a**-is	klam-**a**-v-is
	3	klam-in	klam-**a**-v-in

klamâ, 'to call'

The analysis of those forms is thus the same as the one for the *a*-verbs. The lexicalization tables are shown below in comparison.

(45) LEXICALIZATION TABLE OF LÂ, 1/2PL PRS AND PST

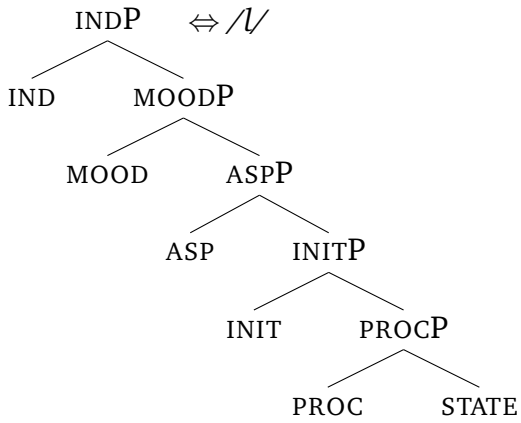
STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
l						a		in_1					
l						a		is					
l						a	v	i					
l						a	v	a				s	
l						a	v	a					
l						a	v	in_1					
l						a	v	is					
l						a	v		in_3				

(46) LEXICALIZATION TABLE OF KLAMÂ, 1/2PL PRS AND PST

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
klam						a		in_1					
klam						a		is					
klam						a	v	i					
klam						a	v	a				s	
klam						a	v	a					
klam						a	v	in_1					
klam						a	v	is					
klam						a	v		in_3				

The lexical entry of the root allomorph */l/* will thus be able to match a syntactic tree up to IND.

(47) LEXICAL ENTRY OF L



On the other hand, *lâ*-like verbs differ from the *a*-verbs in the SG and 3PL PRS. Let us look at each form in detail.

In the 2/3SG PRS, the verb *lâ* ('to go') differs in two ways from the class of the *a*-verbs, which is represented by the verb *klamâ* ('to call').

		PRS	PST
SG	1	voj	l-a-v-i
	2	va-s	l-a-v-a-s
	3	va	l-a-v-a
PL	1	l-in	l-a-v-in
	2	l-a-is	l-a-v-is
	3	van	l-a-v-in

lâ, 'to go'

		PRS	PST
SG	1	klam-a-i	klam-a-v-i
	2	klam-a-a-s	klam-a-v-a-s
	3	klam-a-a	klam-a-v-a
PL	1	klam-in	klam-a-v-in
	2	klam-a-is	klam-a-v-is
	3	klam-in	klam-a-v-in

klamâ, 'to call'

First, the 2/3SG PRS forms of *lâ* have a suppletive root, i.e. */va/*, and second, those forms lack the thematic vowel *-a* and the homophonous agreement suffix.[4] This means that the suppletive root "eats" the slot of those two suffixes in the lexicalization, and it can grow all the way to π.

(48) LEXICALIZATION TABLE OF LÂ, 2/3SG PRS

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART
va												s
va												

[4]As discussed in Chapter 1, § 1.4.1, the /a/ of */va/* can only be the root vowel. This root allomorph is not followed by any additional suffix. It cannot be that */va/* is suffixed by the floating thematic vowel *-a* since the TV triggers a different root allomorph, i.e. */l/*.

(49) LEXICALIZATION TABLE OF KLAMÂ, 2/3SG PRS

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART
klam						a		a				s
klam						a		a				

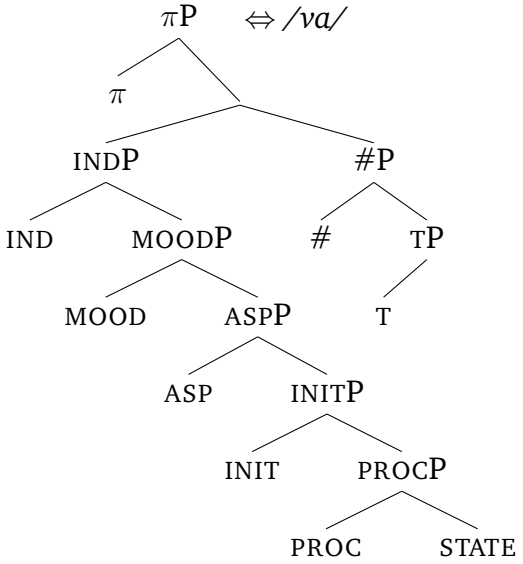
Putting together the 2/3SG and the 1/2PL PRS and PST forms bring up a puzzle we have already solved for other verb classes, i.e. how come the root allomorph *va* can grow all the way to π in the SG, but it cannot grow up to T in the 1/2PL PRS and PST?

(50) LEXICALIZATION TABLE OF LÂ, 2SG AND 2PL

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART
va												s
l						a		is				

On analogy to other verb classes, the solution lies in the shape of the lexical entry: */va/* does not contain the sub-constituent TP, with a lexical entry of the shape shown below.[5]

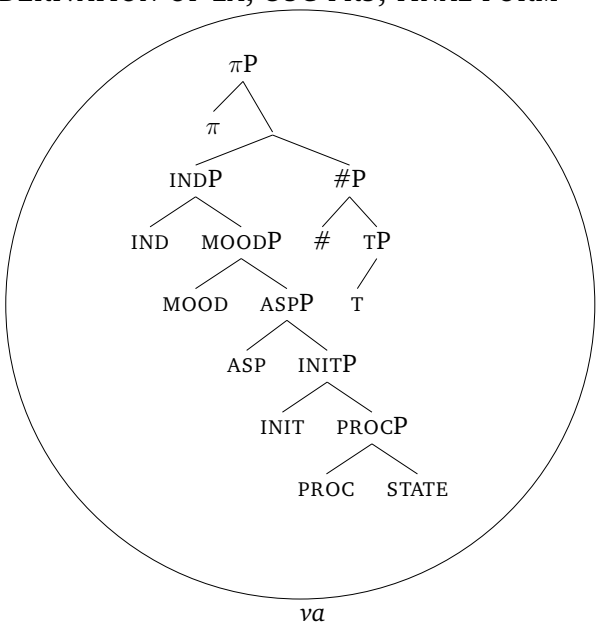
(51) LEXICAL ENTRY OF VA



[5]The root */va/* can match all the features up #. That is, however, irrelevant since the 1/2PL suffixes have their feet at # and take TP as a complement.

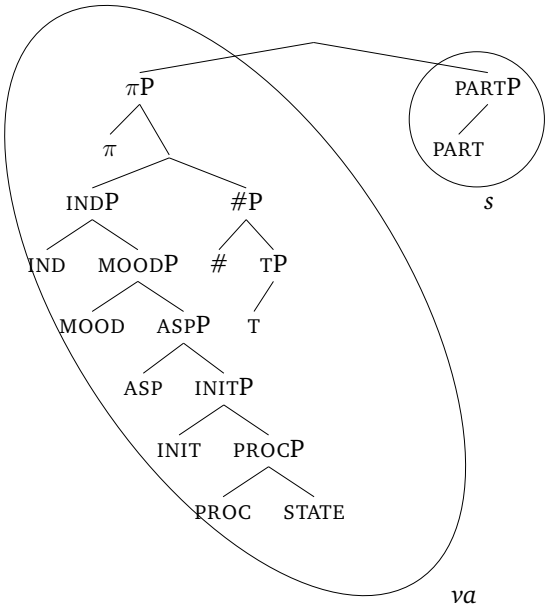
The allomorph */va/* will then match the entire syntactic tree when syntax is building a 3SG PRS, as shown in (52).

(52) DERIVATION OF LÂ, 3SG PRS, FINAL FORM



When syntax is building a 2SG PRS, the root allomorph */va/* will need the help of the suffix *-s*. The final form looks like this:

(53) DERIVATION OF LÂ, 2SG PRS, FINAL FORM



So far, all the forms have been segmented as the already analysed verb patterns. However, this is not the case for the 1SG and 3PL PRS forms, as they will be analysed as unsegmentable.

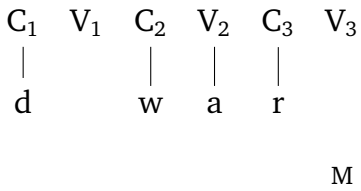
		PRS	PST
SG	1	voj	l-a-v-i
	2	va-s	l-a-v-a-s
	3	va	l-a-v-a
PL	1	l-a-in	l-a-v-in
	2	l-a-is	l-a-v-is
	3	van	l-a-v-in

lâ, 'to go'

Let us start with the 3PL: *van* ('they go'). At first, one might try to decompose it into the root allomorph */va/* and the suffix *-n*, i.e. *va-n*. If so, the question arises whether the *-n* could be a realization of the 3PL suffix *-in*$_3$. Such an analysis seems initially feasible. That is because the 3PL suffix *-in*$_3$ has ADD as a foot, and it is therefore predicted that it combines with a form that spells out #P. That is the case of */va/*. Under this option, the absence of the initial vowel */i/* of the 3PL suffix *-in*$_3$ in *van* should be treated phonologically. I explored the

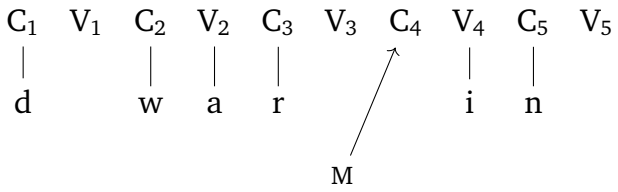
possibility that the initial vowel */i/* would be represented as a floating element. However, this would predict the wrong 3PL PRS form for other verbs, e.g. *durmî*. In those cases, the root-final consonant is a floating element, which gets to be pronounced when there is an available C position.

(54) UR OF DWARM



The floating */m/* gets to be pronounced in the 3PL, i.e. *duarmin* ('they sleep').

(55) 3PL PRS OF DURMÎ



The landing site is offered by the vowel-initial suffix *-in$_3$*. This requires the */i/* to come with its own CV in the skeleton. This means that the */i/* cannot be a floating element. Otherwise, we would predict forms like **duarin*, instead of *duarmin*. As for now, there is no clear phonological solution for the *n*∼*in$_3$* This does not enable the analysis of *van* as the realization of *va-in$_3$*.

The other logical option is that the root allomorph */va/* is followed by the suffix *-n*: *va-n*. However, putting together such segmentation and the current set-up would generate all sorts of wrong predictions. Concretely, if we segment the /n/ out, the suffix will play a role in the derivation. How much would it help the root allomorph *va* in deriving the 3PL PRS? When syntax is building the 3PL PRS, the root can reach up to # at the most given the shape of its lexical entry (see (51)).

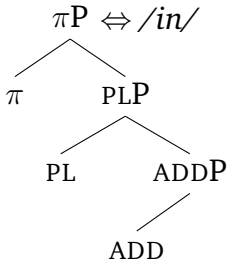
(56) LEXICALIZATION TABLE OF LÂ, 3PL PRS

STATE	PROC	INIT	ASP	MOOD	IND	T	#	ADD	PL	π
va										

The features left to be lexicalized by *-n* would be [π [PL [ADD]]]. This, however,

would make the lexical entry of *-n* identical to the one of *-in$_3$*.[6]

(57) LEXICAL ENTRY OF -IN$_3$



Logically, *-n* would have its foot either higher or lower than *-in$_3$*. It cannot be that *-n* starts higher as the root cannot lexicalize ADD on its own. It has indeed a gap exactly there, as shown in (58).

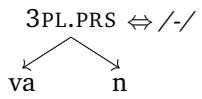
(58) LEXICALIZATION TABLE OF LÂ, 3SG AND 3PL PRS

STATE	PROC	INIT	ASP	MOOD	IND	T	#	ADD	PL	π
va										
va									n	

So, neither the root nor the suffix *-n* can be responsible for ADD. Under this hypothetical scenario, the suffix *-in$_3$* is the only one that can lexicalize that feature. The wrong 3PL PRS form will be derived: **va-in*.[7]

[6]It is possible to incorporate this into the system introducing the concept of private lexical entries, as first developed by Starke and adopted in (De Clercq & Vanden Wyngaerd, 2019) for the negative adjectival prefixes in French. Under this option, *-n* is an unproductive suffix that exists in the lexicon in combination with particular roots, e.g., */va/*. For *van*, there exists a lexical entry for the combination of the verbal root and the suffix.

(1)



The entry in (1) contains two pointers: one points to the lexical entry of *va*, the other - to the lexical entry of *-n*. The latter contains the same features of the productive suffix *-in$_3$*. These two suffixes will, however, not compete for insertion when syntax is building a 3PL PRS. The unproductive lexical suffix *-n* is indeed not accessible to all the roots, but it will be activated only with certain roots. Those roots will be listed in the lexicon as (1). I did not adopt this solution in order to use a simpler technology, without introducing a new theoretical device, i.e. pointers.

[7]I explored the option of segmenting the suffix *-in$_3$* into two separate morphemes: *-i* and *-n*. However, this would not improve the situation. On the contrary, it will not derive the correct 3PL PRS of the crazy verbs, and, additionally, it would generate further mispredictions across verb classes.

What happens if *-n* has its foot lower then? Again, we would get a misprediction. Under this option, *-n* would start at least at #. This would make its foot identical to the one of *-is* and *-in$_1$*.

(59) LEXICALIZATION TABLE OF LÂ, PL PRS

STATE	PROC	INIT	ASP	MOOD	IND	T	#	ADD	PL	π	PART	SPKR
l						a	in$_1$					
l						a	is					
							n					

If so, the features below *-n* are the same as the ones below *-is* and *-in$_1$*. They would thus be spelled out as in the 1/2PL. This would wrongly derive the 3PL **lan*, instead of *van*. Therefore, it is not possible to correctly derive the 3PL PRS of *lâ*-like verbs if it is segmented.

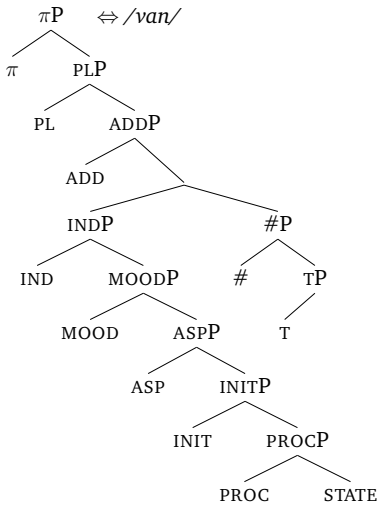
The only option left is that the 3PL is analysed as an unsegmentable form: the portmanteau */van/* covers the slots of the root and of the missing suffix *-in$_3$*.

(60) LEXICALIZATION TABLE OF LÂ, PL PRS

STATE	PROC	INIT	ASP	MOOD	IND	T	#	ADD	PL	π	PART	SPKR
l						a	in$_1$					
l						a	is					
van												

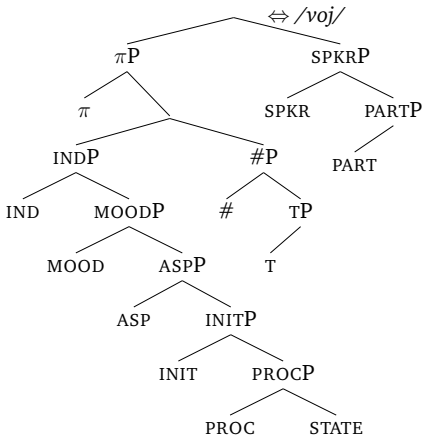
The portmanteau */van/* can lexicalize all the features needed to express a 3PL PRS with a lexical entry of the type:

(61) LEXICAL ENTRY OF VAN



The same issue holds for the 1SG PRS: *voj* ('I go'). The form cannot be decomposed, so it is analysed as a portmanteau that pops up only when syntax is building a 1SG PRS form. To achieve such result, its lexical entry has the shape below:

(62) LEXICAL ENTRY OF VOJ



I explored the possibility to segment */voj/* as follows: the root allomorph */vo/* and the 1SG agreement suffix *-i*.[8] However, the lexical entry of the suffix *-i* has the same foot of the 1/2PL suffixes, i.e. *-in*$_1$ and *-is*. This would predict that the same root allomorph is found in the 1SG PRS. This would wrongly predict the form **lai*.[9]

[8]Under that hypothesis, the /i/ turns into /j/ when preceded by another vowel.

[9]Another option is that the lexicon contains an entry like:

(63) LEXICALIZATION TABLE OF LÂ, 1SG AND 1/2PL PRS

STATE	PROC	INIT	ASP	MOOD	IND	T	#	ADD	PL	π	PART	SPKR
l						a	i					
l						a	in_1					
l						a	is					

Throughout the paradigm of *lâ*-like verbs, we thus find two forms that cannot be decomposed: *voj* and *van* in the 1SG and 3PL PRS forms, respectively. The other forms do not show anything surprising compared to other verb classes in TF. The competition among root allomorphs follows the same mechanism of other suppletive verb patterns.

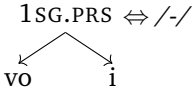
(64) LEXICALIZATION TABLE OF LÂ

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
voj													
va												s	
va													
l						a		in_1					
l						a		is					
van													
l						a	v	i					
l						a	v	a				s	
l						a	v	a					
l						a	v	in_1					
l						a	v	is					
l						a	v		in_3				

4.5.2 Savê-like verbs

The paradigm of *savê*-like verbs shows the thematic vowel *-e* in the 2PL PRS and PST forms. In those forms, *savê*-like verbs behave exactly as the *e*-verbs, which

(1)



The lexical entry of */vo/* will have the same feature content of */l/*, but it will win the competition for insertion only when syntax is building a 1SG PRS form. The same option opens up for the other 1SG PRS forms that will not be decomposed in the following sections.

are represented by the verb *bati* ('to hit').

		PRS	PST
SG	1	saj	sav-**e**-v-i
	2	sa-s	sav-**e**-v-a-s
	3	sa	sav-**e**-v-a
PL	1	sav-in	sav-**e**-v-in
	2	sav-**e**-is	sav-**e**-v-is
	3	san	sav-**e**-v-in

savê, 'to know'

		PRS	PST
SG	1	bat	bat-**e**-v-i
	2	bat-s	bat-**e**-v-a-s
	3	bat	bat-**e**-v-a
PL	1	bat-in	bat-**e**-v-in
	2	bat-**e**-is	bat-**e**-v-is
	3	bat-in	bat-**e**-v-in

bati, 'to hit'

In the SG and 3PL PRS forms, the verb pattern shows the same behaviour of *lâ*-like verbs with respect to the distribution of root allomorphs.

		PRS	PST
SG	1	saj	sav-e-v-i
	2	sa-s	sav-e-v-a-s
	3	sa	sav-e-v-a
PL	1	sav-in	sav-e-v-in
	2	sav-e-is	sav-e-v-is
	3	san	sav-e-v-in

savê, 'to know'

		PRS	PST
SG	1	voj	l-a-v-i
	2	va-s	l-a-v-a-s
	3	va	l-a-v-a
PL	1	l-in	l-a-v-in
	2	l-a-is	l-a-v-is
	3	van	l-a-v-in

lâ, 'to go'

The derivation of those forms will thus work in the same way as the *e*-verbs in the 1/2PL PRS and PST forms. The reader can compare the lexicalization tables presented below.[10]

(65) LEXICALIZATION TABLE OF SAVÊ, 1/2PL PRS AND PST

[10]Following Ramchand (2008), stative verbs do not contain PROCP. So, verbs like *savê* ('to know'), *volê* ('to want') in § 4.5.3 and *essi* ('to be') in § 4.5.4 show only the STATE and INIT features at the bottom of the structure.

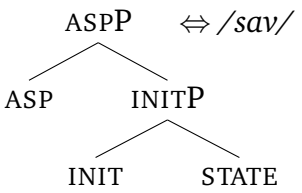
STATE	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
sav			e				in_1					
sav			e				is					
sav			e			v	i					
sav			e			v	a				s	
sav			e			v	a					
sav			e			v	in_1					
sav			e			v	is					
sav			e			v		in_3				

(66) LEXICALIZATION TABLE OF BATI, 1/2PL PRS AND PST

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
bat				e				in_1					
bat				e				is					
bat				e			v	i					
bat				e			v	a				s	
bat				e			v	a					
bat				e			v	in_1					
bat				e			v	is					
bat				e			v		in_3				

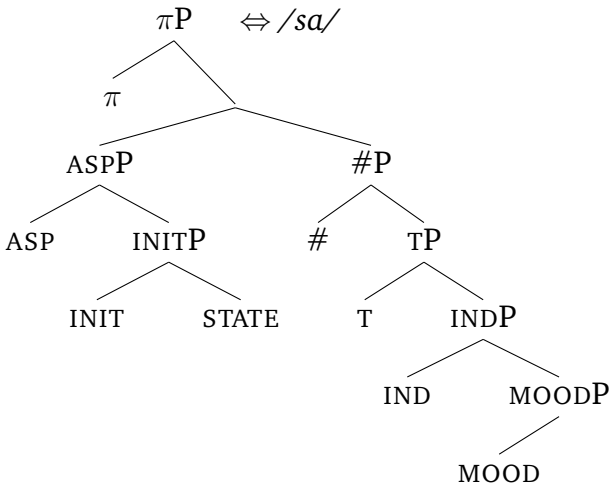
The lexical entry of the root allomorph */sav/* matches the syntactic structure up to ASP:

(67) LEXICAL ENTRY OF SAV



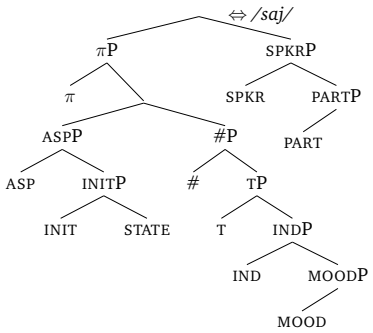
On the other hand, in the SG and 3PL PRS, *savê*-like verbs are analysed as *lâ*-like verbs. We have previously seen that for the *lâ*-like verbs, the lexicon contains four lexemes with the same concept: */voj/*, */va/*, */van/* and */l/*. The same is true for *savê*-like verbs. The lexicon contains four different lexical items with the concept KNOW. One root allomorph is specialized for the 1/2PL and PST forms, i.e. */sav/*. The root allomorph */sa/* is found in the 2/3SG PRS only. Its lexical entry shows a CLB, i.e.:

(68) LEXICAL ENTRY OF SA

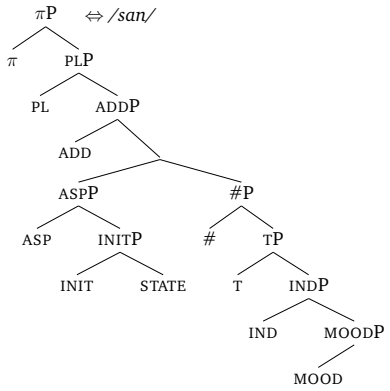


The 1SG and 3PL PRS forms cannot be decomposed. As before, they are analysed as portmanteaus: */saj/* and */san/*, respectively. Their lexical entries are shown below.

(69) LEXICAL ENTRY OF SAJ



(70) LEXICAL ENTRY OF SAN



To sum up, here is the overall lexicalization table of *savê*-like verbs.

(71) LEXICALIZATION TABLE OF SAVÊ

STATE	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
saj												
sa											s	
sa												
sav			e				in_1					
sav			e				is					
san												
sav			e			v	i					
sav			e			v	a				s	
sav			e			v	a					
sav			e			v	in_1					
sav			e			v	is					
sav			e			v		in_3				

4.5.3 Volê

The paradigm of *volê* shows four root allomorphs. As with *movi*-like verbs, the distribution of the root allomorph */vol/* creates an inverted L-pattern in the paradigm of *volê*. In addition to that, both verb patterns show the thematic vowel *-e*.

		PRS	PST
SG	1	voj	vol-**e**-v-i
	2	vows	vol-**e**-v-a-s
	3	vowl	vol-**e**-v-a
PL	1	vol-in	vol-**e**-v-in
	2	vol-**e**-is	vol-**e**-v-is
	3	vol-in	vol-**e**-v-in

volê, 'want'(surface)

		PRS	PST
SG	1	mowv	mov-**e**-v-i
	2	mowv-s	mov-**e**-v-a-s
	3	mowv	mov-**e**-v-a
PL	1	mov-in	mov-**e**-v-in
	2	mov-**e**-is	mov-e-v-is
	3	mov-in	mov-**e**-v-in

movi, 'to move'

The analysis of the inverted L-zone will thus be the same as the one for the *movi*-like verbs.

(72) LEXICALIZATION TABLE OF VOLÊ, PL PRS AND PST

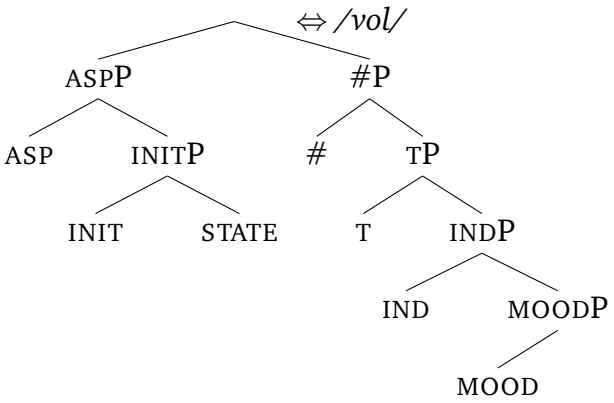
STATE	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
vol			e				in_1					
vol			e				is					
vol							in_3					
vol			e			v	i					
vol			e			v	a				s	
vol			e			v	a					
vol			e			v	in_1					
vol			e			v	is					
vol			e			v	in_3					

(73) LEXICALIZATION TABLE OF MOVI, PL PRS AND PST

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
mov				e				in_1					
mov				e				is					
mov									in_3				
mov				e			v	i					
mov				e			v	a				s	
mov				e			v	a					
mov				e			v	in_1					
mov				e			v	is					
mov				e			v		in_3				

As shown in (72), the lexical entry of */vol/* can reach up to # in the 3PL PRS, but it stops at ASP elsewhere. That behaviour is a consequence of the shape of its lexical entry:

(74) LEXICAL ENTRY OF VOL



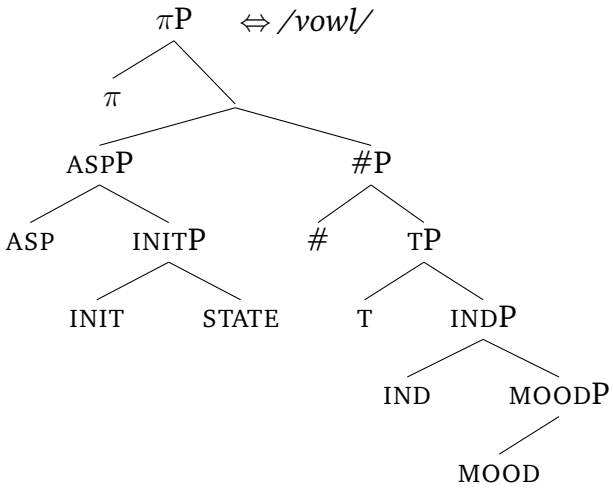
Contrary to *movi*-like verbs, *volê* shows a different root allomorph for each SG form.

		PRS	PST
SG	1	voj	vol-e-v-i
	2	vows	vol-e-v-a-s
	3	vowl	vol-e-v-a
PL	1	vol-in	vol-e-v-in
	2	vol-e-is	vol-e-v-is
	3	vol-in	vol-e-v-in

volê, 'want'(surface)

The root allomorph */vowl/* is specialized for the 3SG PRS. It does not need the help of any suffix to lexicalize the features needed to express a 3SG PRS.

(75) LEXICAL ENTRY OF VOWL



For this verb, I propose that the 2SG PRS cannot be decomposed, i.e. */vows/* ('you want'), despite the fact that it shows what looks like the 2SG agreement suffix *-s*. This decision has been taken to avoid a misprediction. Let us go through it step by step. Given the set-up for the analysis of TF verb classes, the 2SG agreement suffix *-s* lexicalizes only the PART feature. If we try to decompose the 2SG PRS of *volê*, we would get the root allomorph */vow/* followed by the suffix *-s*. These two morphemes would fill in the lexicalization table as follows:

(76) LEXICALIZATION TABLE OF VOLÊ, 2SG PRS

STATE	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART
vow											s

The root allomorph would be able to grow all the way to π, but those slots are the same ones filled in by the allomorph */vowl/* in the 3SG PRS.

(77) LEXICALIZATION TABLE OF VOLÊ, 2/3SG PRS

STATE	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART
vow											s
vowl											

It is not possible that two different allomorphs lexicalize the same amount of features arranged with the same geometry.[11] With the current set-up, it is thus not

[11] Just like */van/*, there are two more possibilities. One option would be that the alternation

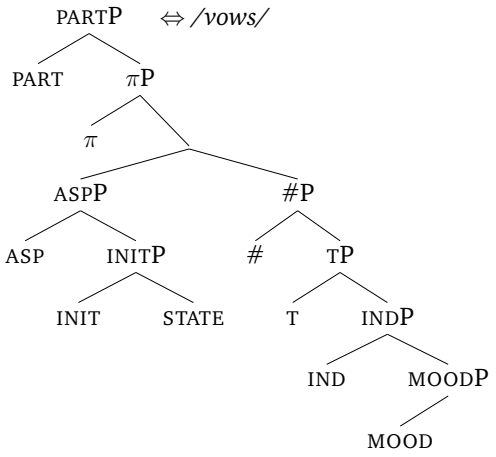
possible to derive root suppletion between the 2 and 3SG PRS. As a consequence, */vows/* is not decomposed. The lexicalization table in (78) shows the solution I adopted.

(78) LEXICALIZATION TABLE OF VOLÊ, 2/3SG PRS

STATE	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART
vows											
vowl											

The lexical entry of */vows/* will be the following:

(79) LEXICAL ENTRY OF VOWS



As in the previous crazy verb patterns, I suggest that also the 1SG PRS cannot be decomposed. The form */voj/* is found only in the 1SG PRS with a lexical entry of the type:

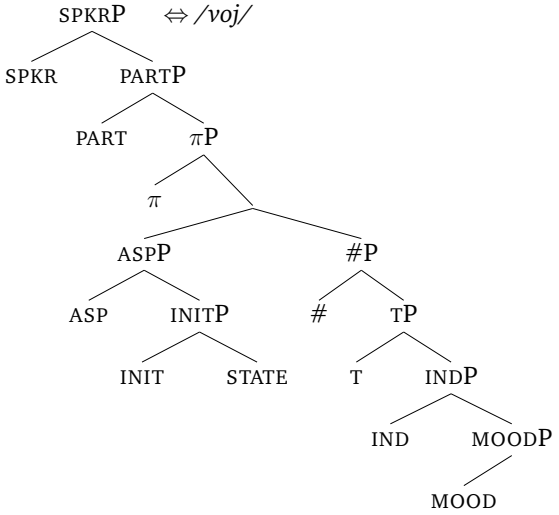
---

between */vow/* and */vowl/* is simply phonological. As discussed in Chapter 1, § 1.4.3, so far I could not solve that alternation phonologically. The other option is to introduce the concept of private lexical entries. The root allomorph */vow/* will be treated as an unproductive root, which is invisible during the standard syntactic derivation. It gets visible only when syntax is building a 2SG PRS form since the lexicon contains the following entry:

(1)

Under this option, the feature content of */vow/* and */vowl/* can be identical.

(80) LEXICAL ENTRY OF VOJ



Below the reader can find the overall lexicalization table of *volê*.

(81) LEXICALIZATION TABLE OF VOLÊ

STATE	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
voj												
vows												
vowl												
vol			e				in_1					
vol			e				is					
vol								in_3				
vol			e			v	i					
vol			e			v	a				s	
vol			e			v	a					
vol			e			v	in_1					
vol			e			v	is					
vol			e			v		in_3				

4.5.4 Essi

The paradigm of the verb *essi* ('to be') shows unexpected forms both in the PRS and PAST. Only the 1/2PL PRS forms behave as expected:

		PRS	PST
SG	1	soj	er-i
	2	se:s	er-a-s
	3	e	er-a
PL	1	s-in	er-in
	2	s-e-is	er-is
	3	son	er-in

essi, 'to be'

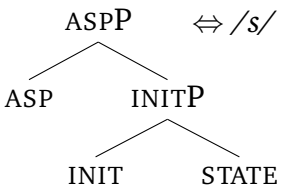
The root allomorph */s/* combines with the TV *-e* in the 2PL. As in the other verb patterns, the same root allomorph */s/* is found in the 1PL PRS. The analysis of these two forms is the same as that of the verbal roots that combine with an *-e* thematic vowel, i.e.:

(82) LEXICALIZATION TABLE OF ESSI, 1/2PL PRS

STATE	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
s			e				in_1					
s			e				is					

The lexical entry of */s/* is thus the following:

(83) LEXICAL ENTRY OF S



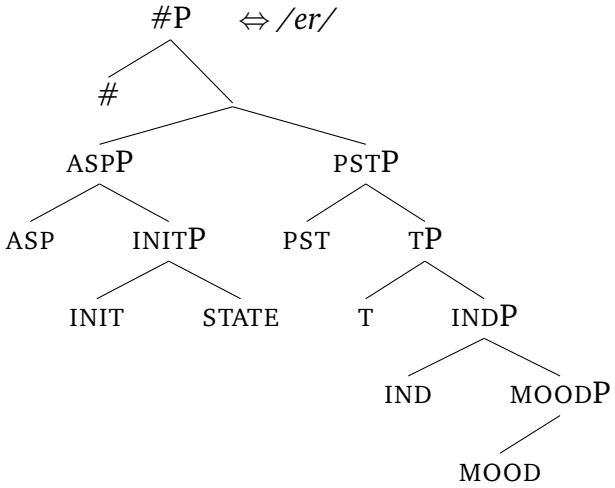
Contrary to all other verb patterns, the PST is not syncretic with the 1/2PL PRS forms. A different root allomorph is found in the PST, i.e. */er/*. In addition to that, those forms lack the thematic vowel and the PST marker *-v*. These two properties go hand in hand. The suppletive root */er/* is analysed as portmanteau: it covers the slot of the root, the TV, and the suffix *-v*.

(84) LEXICALIZATION TABLE OF ESSI, PST

STATE	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
er							i					
er							a				s	
er							a					
er							in_1					
er							is					
er								in_3				

We can update our lexicon with the following entry:

(85) LEXICAL ENTRY OF ER



Notice that the PST root allomorph is not a superset of the PRS. That is why */er/* does not pop up in any of the PRS forms.

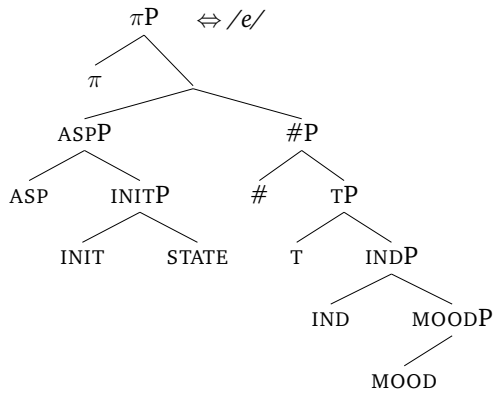
The SG and 3PL PRS forms show a different allomorph for each form.

		PRS	PST
SG	1	soj	er-i
	2	se:s	er-a-s
	3	e	er-a
PL	1	s-in	er-in
	2	s-e-is	er-is
	3	son	er-in

essi, 'to be'

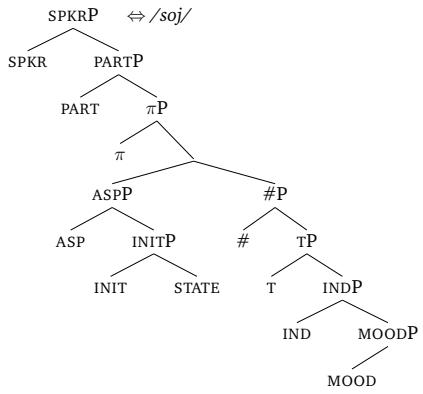
The behaviour of SG PRS is the same as *volê*. One root allomorph is specialized for the 3SG PRS, i.e. */e/*. It does not need any additional suffix to lexicalize all the features needed to express a 3SG PRS. Its lexical entry will thus have the shape of (86).

(86) LEXICAL ENTRY OF E

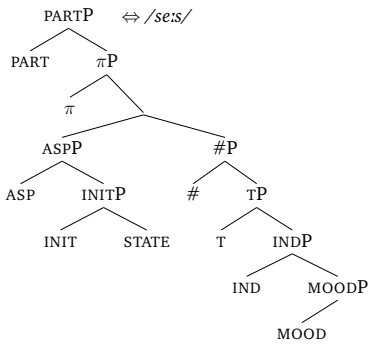


Similarly to the paradigm of *volê*, the 1/2SG PRS forms are not segmented, but treated as portmanteaus.[12] Their lexical entries are shown below:

(87) LEXICAL ENTRY OF SOJ



(88) LEXICAL ENTRY OF SÊS

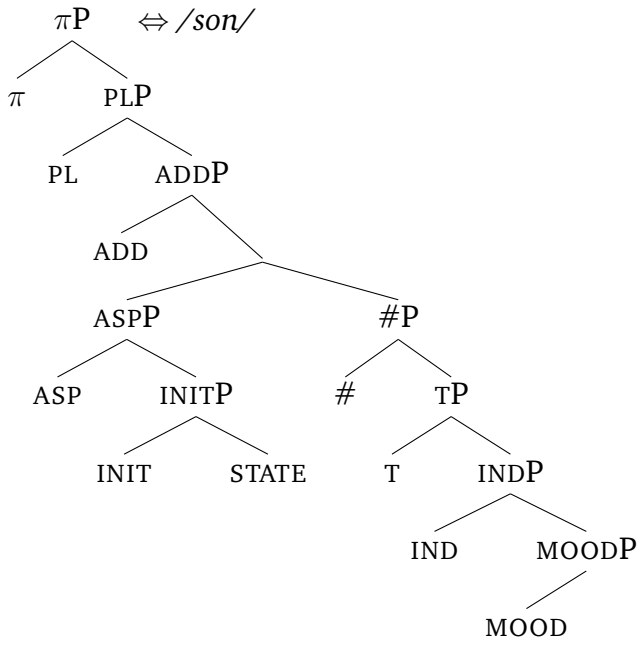


Together with the SG, the 3PL PRS form is not decomposed. It is indeed analysed as a portmanteau that covers both the slot of the root and the slot of the expected suffix *-in*$_3$.[13] The lexical entry of */son/* is shown in (89).

[12]Segmenting the 1/2SG PRS forms would derive the wrong forms, just like among the other so-called crazy patterns. As already explored before, it is possible to segment those forms if we introduce into the picture private lexical items.

[13]The 3PL form */son/* could be segmented as */so/* and *-n* under the assumption that the suffix *-n* is a private lexical entry.

(89) LEXICAL ENTRY OF SON



Putting together all the forms of *essi*, we get the following lexicalization table:

(90) LEXICALIZATION TABLE OF ESSI

STATE	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
soj						■		■	■			
se:s						■		■	■			
e						■		■	■			
s			e			■	in_1	■				
s			e			■	is	■				
son						■						
er							i	■	■			
er							a	■	■		s	
er							a	■	■			
er							in_1	■				
er							is	■				
er								in_3				

With the verb *essi* in shape, we have derived all the irregular verbs from the universal syntactic operations of Nanosyntax, without postulating context-sensitive rules or morphology-specific operations.

Conclusions

I proposed an account for the Tualis Friulian verbs in the synthetic forms of the indicative present and past tense. More specifically, I analyse the distribution of root and suffix allomorphy within the attested 13 verb classes.

The analysis is formulated within the framework of Nanosyntax. The main ingredients of the theory are:

(91) Bottom-up phrasal lexicalization, governed by the Superset Principle and the Elsewhere Condition.

(92) Spellout algorithm (Starke 2022, cited from Caha 2023b):

  (a) Merge F and spell out

  (b) If fail, move the closest non-remnant labelled constituent

  (c) If fail, move the immediately dominating constituent and spell out (Recursive)

  (d) If fail, go back to the previous cycle and try the next option for that cycle (backtracking)

The consistent application of the sub-extracting algorithm in combination with three types of lexical entries (i.e. simple lexical entries, CLB trees with a binary foot, CLB trees with a unary foot) allows to derive:

(i) correct root-suffix pairing;

(ii) root suppletion;

(iii) syncretism, including ABA patterns.

The analysis also correctly predicts four natural classes of roots, as shown in Chapter 4 with the so-called "irregular" verbs.

To conclude, a direction for future research is to enlarge the set of data with the non-indicative moods (e.g., present subjunctive, future and conditional). Among these forms, the present subjunctive seems the first to be added into the picture for two main reasons:

(i) to understand and derive the challenging syncretism between the 1/2PL PRS and the 1/2PL SUBJ, as shown in Appendix D;

(ii) to include Tualis Friulian data in a cross-linguistic study of the present indicative and subjunctive, following the analysis presented in Starke & Cortiula (2021a) for Brazilian Portuguese.

Appendix A

Paradigms

In this appendix, the reader can find the final account of the verb classes in Tualis Friulian. The tables represent the underlying forms that emerged after the phonology has been cleaned up and the analysis carried out. The paradigms show the floating thematic vowels also in the forms where they do not surface, e.g., in the 1PL PRS forms.

(1) E-VERBS

		PRS	PST
SG	1	bat	bat-e-v-i
	2	bat-s	bat-e-v-a-s
	3	bat	bat-e-v-a
PL	1	bat-e-in	bat-e-v-in
	2	bat-e-is	bat-e-v-is
	3	bat-in	bat-e-v-in

(2) I-VERBS

		PRS	PST
SG	1	sint	sint-i-v-i
	2	sint-s	sint-i-v-a-s
	3	sint	sint-i-v-a
PL	1	sint-i-in	sint-i-v-in
	2	sint-i-is	sint-i-v-is
	3	sint-in	sint-i-v-in

(3) LONG E-VERBS

		PRS	PST
SG	1	val-ː	val-e-v-i
	2	val-ː-s	val-e-v-a-s
	3	val-ː	val-e-v-a
PL	1	val-e-in	val-e-v-in
	2	val-e-is	val-e-v-is
	3	val-in	val-e-v-in

(4) Iʃ-VERBS

		PRS	PST
SG	1	fin-iʃ	fin-i-v-i
	2	fin-iʃ-s	fin-i-v-a-s
	3	fin-iʃ	fin-i-v-a
PL	1	fin-i-in	fin-i-v-in
	2	fin-i-is	fin-i-v-is
	3	fin-iʃ-in	fin-i-v-in

(5) A-VERBS

		PRS	PST
SG	1	klam-a-i	klam-a-v-i
	2	klam-a-a-s	klam-a-v-a-s
	3	klam-a-a	klam-a-v-a
PL	1	klam-a-in	klam-a-v-in
	2	klam-a-is	klam-a-v-is
	3	klam-in	klam-a-v-in

(6) INVERTED L-PATTERN, E_{TV}

		PRS	PST
SG	1	mowv	mov-e-v-i
	2	mowv-s	mov-e-v-a-s
	3	mowv	mov-e-v-a
PL	1	mov-e-in	mov-e-v-in
	2	mov-e-is	mov-e-v-is
	3	mov-in	mov-e-v-in

(7) INVERTED L-PATTERN, I_{TV}

		PRS	PST
SG	1	tʃejr	tʃer-i-v-i
	2	tʃejr-s	tʃer-i-v-a-s
	3	tʃejr	tʃer-i-v-a
PL	1	tʃer-i-in	tʃer-i-v-in
	2	tʃer-i-is	tʃer-i-v-is
	3	tʃer-in	tʃer-i-v-in

(8) T-PATTERN

		PRS	PST
SG	1	venj	vinj-i-v-i
	2	venj-s	vinj-i-v-a-s
	3	venj	vinj-i-v-a
PL	1	vinj-i-in	vinj-i-v-in
	2	vinj-i-is	vinj-i-v-is
	3	venj-in	vinj-i-v-in

(9) MURÎ

		PRS	PST
SG	1	mowr	mur-i-v-i
	2	mowr-s	mur-i-v-a-s
	3	mowr	mur-i-v-a
PL	1	mur-i-in	mur-i-v-in
	2	mur-i-is	mur-i-v-is
	3	mor-in	mur-i-v-in

(10) LÂ-LIKE VERBS

		PRS	PST
SG	1	voj	l-a-v-i
	2	va-s	l-a-v-a-s
	3	va	l-a-v-a
PL	1	l-a-in	l-a-v-in
	2	l-a-is	l-a-v-is
	3	van	l-a-v-in

(11) SAVÊ-LIKE VERBS

		PRS	PST
SG	1	saj	sav-e-v-i
	2	sa-s	sav-e-v-a-s
	3	sa	sav-e-v-a
PL	1	sav-e-in	sav-e-v-in
	2	sav-e-is	sav-e-v-is
	3	san	sav-e-v-in

(12) VOLÊ

		PRS	PST
SG	1	voj	vol-e-v-i
	2	vows	vol-e-v-a-s
	3	vowl	vol-e-v-a
PL	1	vol-e-in	vol-e-v-in
	2	vol-e-is	vol-e-v-is
	3	vol-in	vol-e-v-in

(13) ESSI

		PRS	PST
SG	1	soj	er-i
	2	seːs	er-a-s
	3	e	er-a
PL	1	s-e-in	er-in
	2	s-e-is	er-is
	3	son	er-in

Appendix B

Lexicalization tables

All the lexicalization tables are collected in this appendix. As throughout the dissertation, the first six rows show how the PRS forms are lexicalized, followed by the PST forms. The forms are organized from 1 to 3 and from SG to PL. The black cells indicate when a meaning is not expressed in the structure.

(1) LEXICALIZATION TABLE OF E-VERBS

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
bat													
bat												s	
bat													
bat				e				in_1					
bat				e				is					
bat									in_3				
bat				e			v	i					
bat				e			v	a				s	
bat				e			v	a					
bat				e			v	in_1					
bat				e			v	is					
bat				e			v		in_3				

(2) LEXICALIZATION TABLE OF I-VERBS

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
sint													
sint												s	
sint													
sint			i					in_1					
sint			i					is					
sint									in_3				
sint			i				v	i					
sint			i				v	a				s	
sint			i				v	a					
sint			i				v	in_1					
sint			i				v	is					
sint			i				v		in_3				

(3) LEXICALIZATION TABLE OF LONG E-VERBS

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
val				ː									
val				ː								s	
val				ː									
val				e				in_1					
val				e				is					
val									in_3				
val				e			v	i					
val				e			v	a				s	
val				e			v	a					
val				e			v	in_1					
val				e			v	is					
val				e			v		in_3				

(4) LEXICALIZATION TABLE OF Iʃ-VERBS

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
fin			iʃ										
fin			iʃ									s	
fin			iʃ										
fin			i					in_1					
fin			i					is					
fin			iʃ						in_3				
fin			i				v	i					
fin			i				v	a				s	
fin			i				v	a					
fin			i				v	in_1					
fin			i				v	is					
fin			i				v		in_3				

(5) LEXICALIZATION TABLE OF A-VERBS

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
klam						a		i					
klam						a		a				s	
klam						a		a					
klam						a		in_1					
klam						a		is					
klam									in_3				
klam						a	v	i					
klam						a	v	a				s	
klam						a	v	a					
klam						a	v	in_1					
klam						a	v	is					
klam						a	v		in_3				

(6) LEXICALIZATION TABLE OF THE INVERTED L-PATTERN WITH E_{TV}

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
mowv													
mowv												s	
mowv													
mov				e				in_1					
mov				e				is					
mov									in_3				
mov				e			v	i					
mov				e			v	a				s	
mov				e			v	a					
mov				e			v	in_1					
mov				e			v	is					
mov				e			v		in_3				

(7) LEXICALIZATION TABLE OF THE INVERTED L-PATTERN WITH I_{TV}

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
tʃejr													
tʃejr												s	
tʃejr													
tʃer			i					in_1					
tʃer			i					is					
tʃer									in_3				
tʃer			i				v	i					
tʃer			i				v	a				s	
tʃer			i				v	a					
tʃer			i				v	in_1					
tʃer			i				v	is					
tʃer			i				v		in_3				

(8) LEXICALIZATION TABLE OF THE T-PATTERN

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
venj													
venj												s	
venj													
vinj			i					in_1					
vinj			i					is					
venj									in_3				
vinj			i				v	i					
vinj			i				v	a				s	
vinj			i				v	a					
vinj			i				v	in_1					
vinj			i				v	is					
vinj			i				v		in_3				

(9) LEXICALIZATION TABLE OF MURÎ, 'TO DIE'

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
mowr													
mowr												s	
mowr													
mur			i					in_1					
mur			i					is					
mor									in_3				
mur			i				v	i					
mur			i				v	a				s	
mur			i				v	a					
mur			i				v	in_1					
mur			i				v	is					
mur			i				v		in_3				

(10) LEXICALIZATION TABLE OF LÂ-LIKE VERBS

STATE	PROC	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
voj													
va												s	
va													
l						a		in_1					
l						a		is					
van													
l						a	v	i					
l						a	v	a				s	
l						a	v	a					
l						a	v	in_1					
l						a	v	is					
l						a	v		in_3				

(11) LEXICALIZATION TABLE OF SAVÊ-LIKE VERBS

STATE	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
saj												
sa											s	
sa												
sav			e				in_1					
sav			e				is					
san												
sav			e			v	i					
sav			e			v	a				s	
sav			e			v	a					
sav			e			v	in_1					
sav			e			v	is					
sav			e			v		in_3				

(12) LEXICALIZATION TABLE OF VOLÊ, 'TO WANT'

STATE	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
voj												
vows												
vowl												
vol			e				in_1					
vol			e				is					
vol								in_3				
vol			e			v	i					
vol			e			v	a				s	
vol			e			v	a					
vol			e			v	in_1					
vol			e			v	is					
vol			e			v		in_3				

(13) LEXICALIZATION TABLE OF ESSI , 'TO BE'

STATE	INIT	ASP	MOOD	IND	T	PST	#	ADD	PL	π	PART	SPKR
soj												
seːs												
e												
s			e				in_1					
s			e				is					
son												
er							i					
er							a				s	
er							a					
er							in_1					
er							is					
er								in_3				

Appendix C

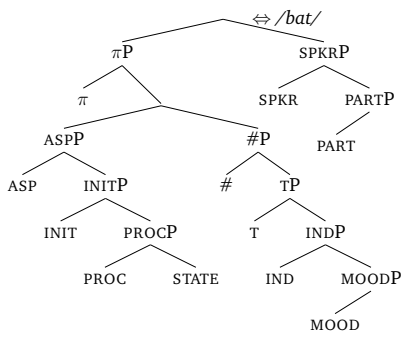
Lexical entries

In this appendix, the reader can find all the lexical entries employed to analyse the PRS and PST forms in Tualis Friulian. The lexemes of the different root types are presented first. For each verb class, one representative root has been chosen. Those entries are followed by the lexemes of the suffixes, which start with the entries of the three thematic vowels. In the lexical entries, I mark three different types of phonological information by different graphical means: (i) normal letters correspond to a melody attached to the skeleton; (ii) capital letters correspond to melody that is not attached to the skeleton (e.g., A, E and I for the floating thematic vowels); (iii) capital C and V correspond to skeletal positions unoccupied by melody.

Roots

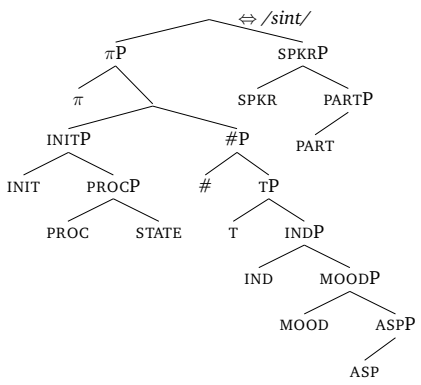
E-verbs

(1) LEXICAL ENTRY OF BAT



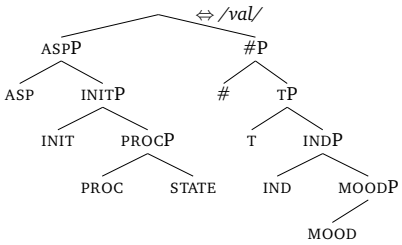
I-verbs

(2) LEXICAL ENTRY OF SINT



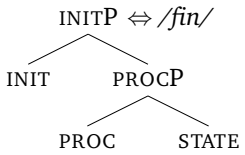
Long e-verbs

(3) LEXICAL ENTRY OF VAL



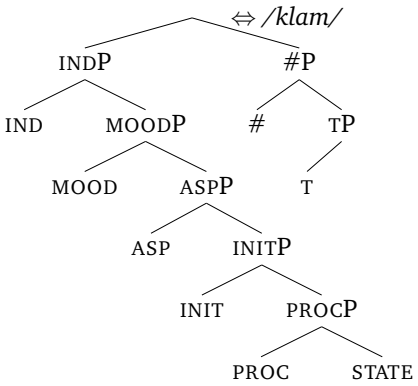
Iʃ-verbs

(4) LEXICAL ENTRY OF FIN



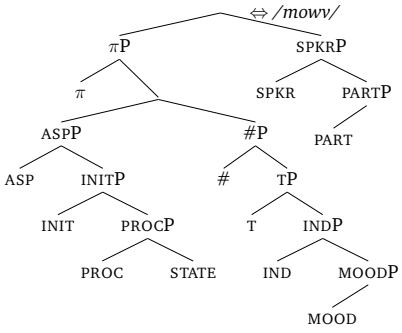
A-verbs

(5) LEXICAL ENTRY OF KLAM

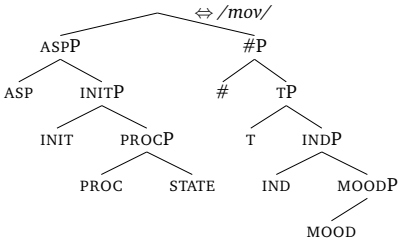


Inverted L-pattern with E_{tv}

(6) LEXICAL ENTRY OF MOWV

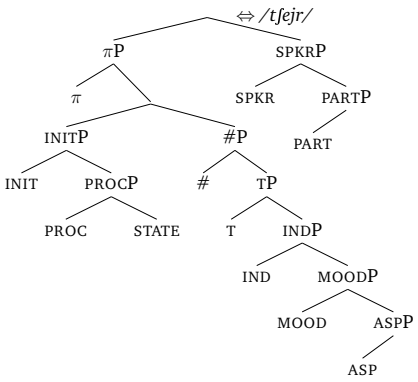


(7) LEXICAL ENTRY OF MOV

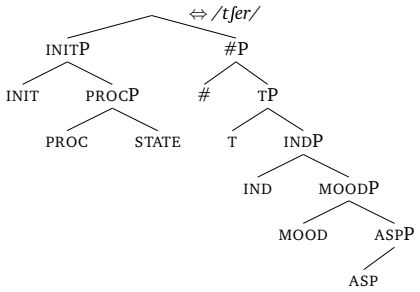


Inverted L-pattern with I_{tv}

(8) LEXICAL ENTRY OF CEIR

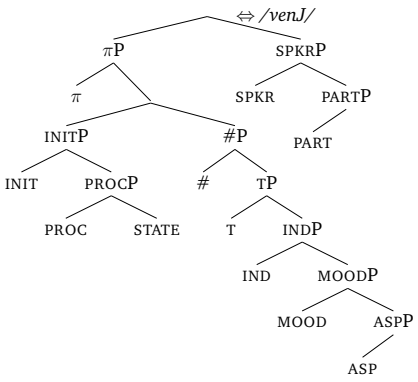


(9) LEXICAL ENTRY OF CER

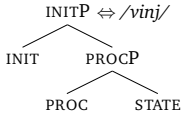


T-pattern

(10) LEXICAL ENTRY OF VENJ

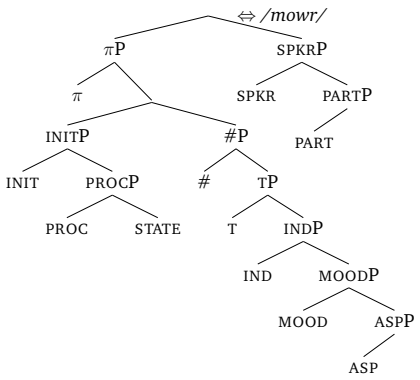


(11) LEXICAL ENTRY OF VINJ

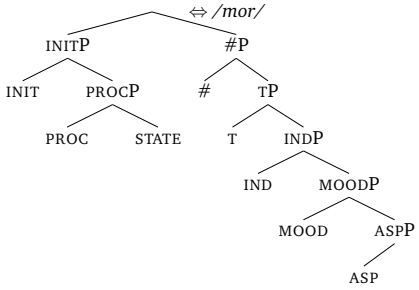


Murî

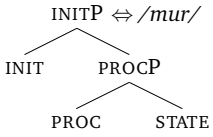
(12) LEXICAL ENTRY OF MOWR



(13) LEXICAL ENTRY OF MOR

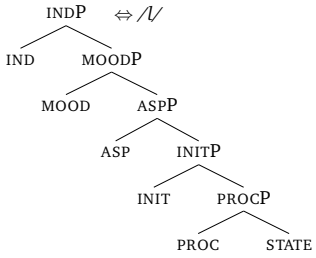


(14) LEXICAL ENTRY OF MUR

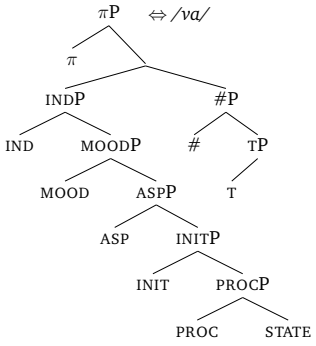


Lâ-like verbs

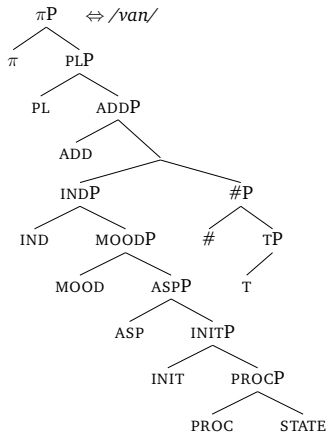
(15) LEXICAL ENTRY OF L



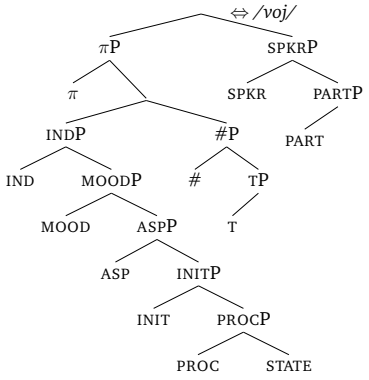
(16) LEXICAL ENTRY OF VA



(17) LEXICAL ENTRY OF VAN

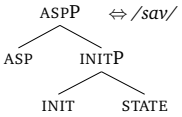


(18) LEXICAL ENTRY OF VOJ

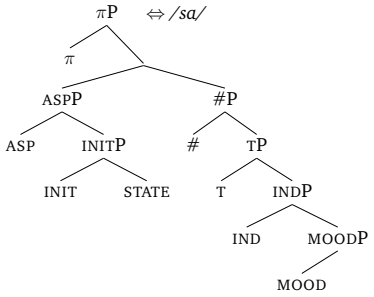


Savê-like verbs

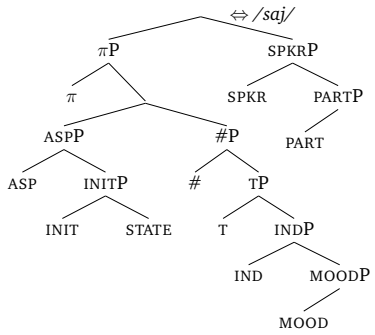
(19) LEXICAL ENTRY OF SAV



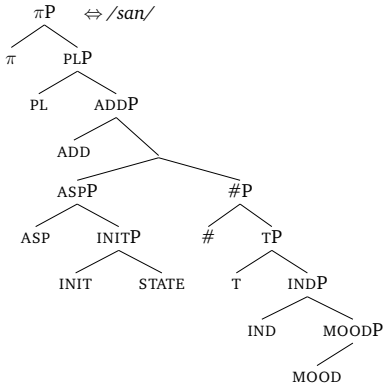
(20) LEXICAL ENTRY OF SA



(21) LEXICAL ENTRY OF SAJ

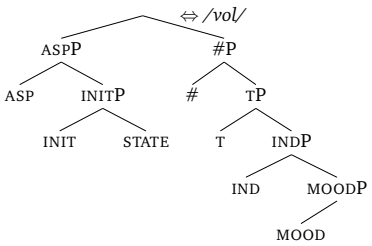


(22) LEXICAL ENTRY OF SAN

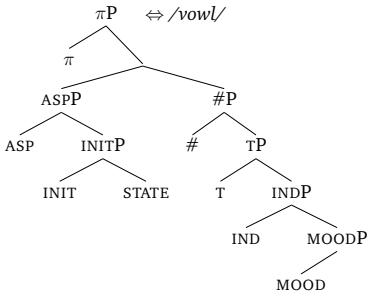


Volê

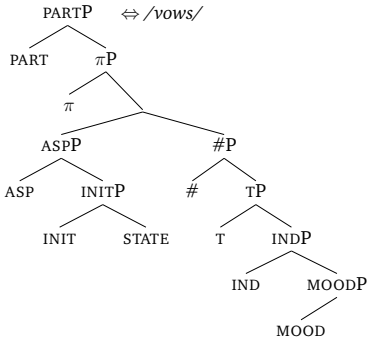
(23) LEXICAL ENTRY OF VOL



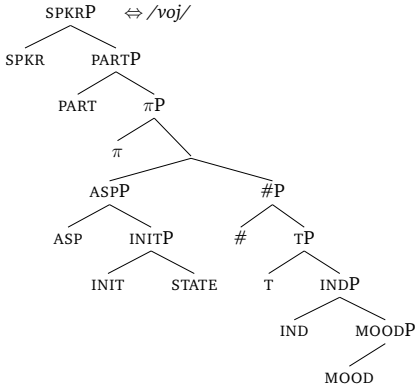
(24) LEXICAL ENTRY OF VOWL



(25) LEXICAL ENTRY OF VOWS

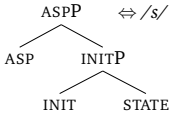


(26) LEXICAL ENTRY OF VOJ

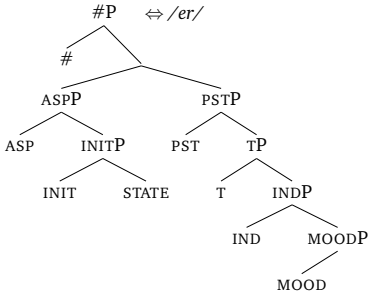


Essi

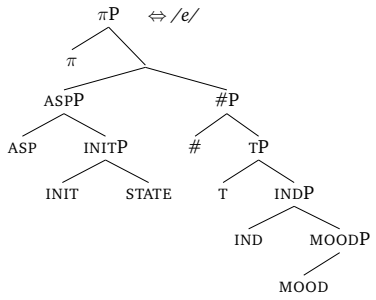
(27) LEXICAL ENTRY OF S



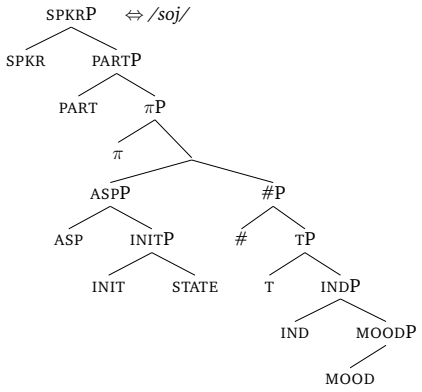
(28) LEXICAL ENTRY OF ER



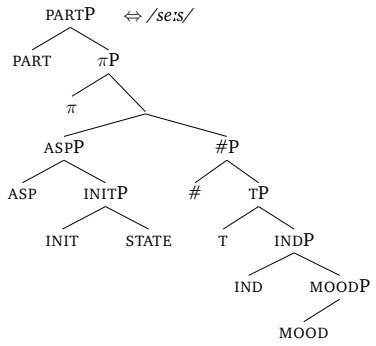
(29) LEXICAL ENTRY OF E



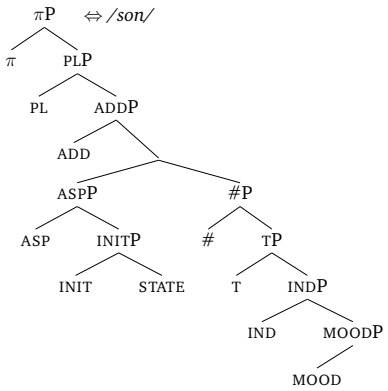
(30) LEXICAL ENTRY OF SOJ



(31) LEXICAL ENTRY OF SÊS

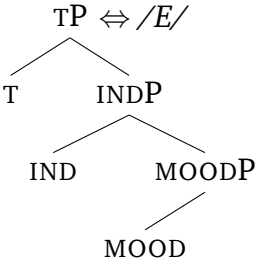


(32) LEXICAL ENTRY OF SON

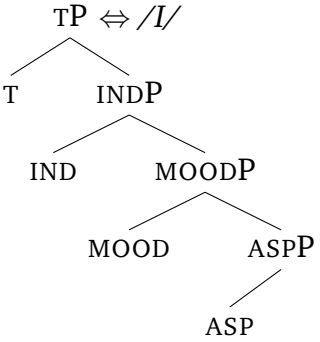


Suffixes

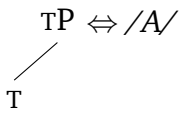
(33) LEXICAL ENTRY OF -E_{TV}



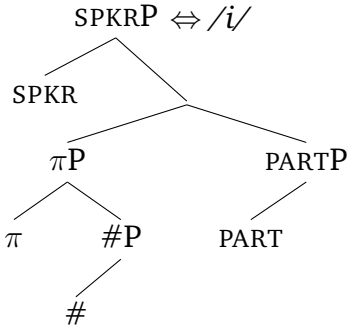
(34) LEXICAL ENTRY OF -I_{TV}



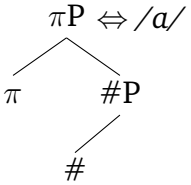
(35) LEXICAL ENTRY OF -A_{TV}



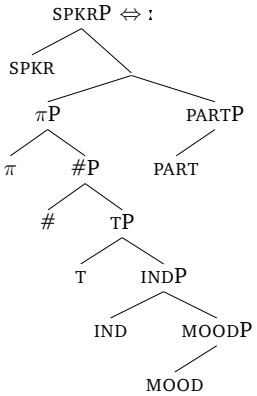
(36) LEXICAL ENTRY OF -I



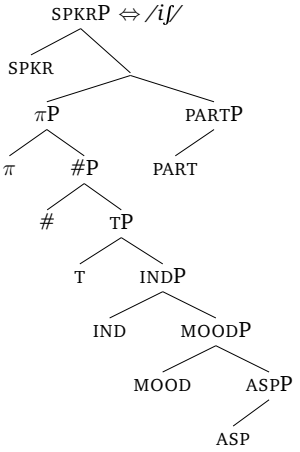
(37) LEXICAL ENTRY OF -A



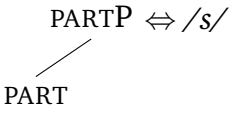
(38) LEXICAL ENTRY OF -ː



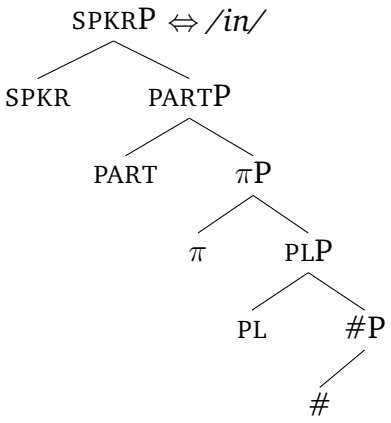
(39) LEXICAL ENTRY OF -Iʃ



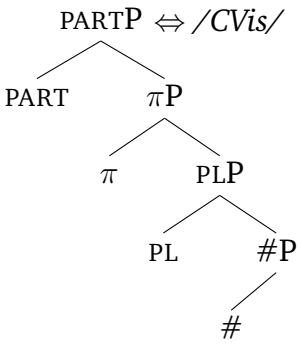
(40) LEXICAL ENTRY OF -S



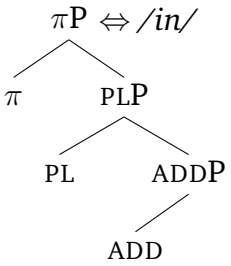
(41) LEXICAL ENTRY OF -IN$_1$



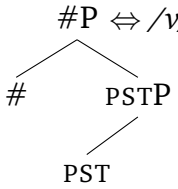
(42) LEXICAL ENTRY OF -IS



(43) LEXICAL ENTRY OF -IN$_3$



(44) LEXICAL ENTRY OF -V



Appendix D

The subjunctive

In this appendix, I present an overall picture of Tualis Friulian verb classes when the present subjunctive is also included into the picture. This step increases the number of verb classes from 13 to 15. The new entries are the paradigms of *dâ* ('to give') (Table 11) and *vê* ('to have') (Table 12). The paradigms below have been cleaned phonologically. However, they do not show the underlying morphemes found in the present indicative forms since it is not known yet if and which underlying morphemes could be found in the subjunctive forms.

(1) E-VERBS

		PRS SUBJ	PRS IND	PST
SG	1	bat-a	bat	bat-e-v-i
	2	bat-a-s	bat-s	bat-e-v-a-s
	3	bat-a	bat	bat-e-v-a
PL	1	bat-in	bat-in	bat-e-v-in
	2	bat-e-is	bat-e-is	bat-e-v-is
	3	bat-ane	bat-in	bat-e-v-in

(2) I-VERBS

		PRS SUBJ	PRS IND	PST
SG	1	sint-a	sint	sint-i-v-i
	2	sint-a-s	sint-s	sint-i-v-a-s
	3	sint-a	sint	sint-i-v-a
PL	1	sint-in	sint-in	sint-i-v-in
	2	sint-i-is	sint-i-is	sint-i-v-is
	3	sint-ane	sint-in	sint-i-v-in

(3) Iʃ-VERBS

		PRS SUBJ	PRS IND	PST
SG	1	fin-iʃ-a	fin-iʃ	fin-i-v-i
	2	fin-iʃ-a-s	fin-iʃ-s	fin-i-v-a-s
	3	fin-iʃ-a	fin-iʃ	fin-i-v-a
PL	1	fin-in	fin-in	fin-i-v-in
	2	fin-i-is	fin-i-is	fin-i-v-is
	3	fin-iʃ-ane	fin-iʃ-in	fin-i-v-in

(4) LONG E-VERBS

		PRS SUBJ	PRS IND	PST
SG	1	val-a	val-ː	val-e-v-i
	2	val-a-s	val-ː-s	val-e-v-a-s
	3	val-a	val-ː	val-e-v-a
PL	1	val-in	val-in	val-e-v-in
	2	val-e-is	val-e-is	val-e-v-is
	3	val-ane	val-in	val-e-v-in

(5) A-VERBS

		PRS SUBJ	PRS IND	PST
SG	1	klam-i	klam-i	klam-a-v-i
	2	klam-i-s	klam-a-s	klam-a-v-a-s
	3	klam-i	klam-a	klam-a-v-a
PL	1	klam-in	klam-in	klam-a-v-in
	2	klam-a-is	klam-a-is	klam-a-v-is
	3	klam-ine	klam-in	klam-a-v-in

(6) INVERTED L-PATTERN WITH E_{TV}

		PRS SUBJ	PRS IND	PST
SG	1	mov-a	mowv	mov-e-v-i
	2	mov-a-s	mowv-s	mov-e-v-a-s
	3	mov-a	mowv	mov-e-v-a
PL	1	mov-in	mov-in	mov-e-v-in
	2	mov-e-is	mov-e-is	mov-e-v-is
	3	mov-ane	mov-in	mov-e-v-in

(7) INVERTED L-PATTERN WITH I_{TV}

		PRS SUBJ	PRS	PST
SG	1	tʃer-a	tʃejr	tʃer-i-v-i
	2	tʃer-a-s	tʃejr-s	tʃer-i-v-a-s
	3	tʃer-a	tʃejr	tʃer-i-v-a
PL	1	tʃer-in	tʃer-in	tʃer-i-v-in
	2	tʃer-i-is	tʃer-i-is	tʃer-i-v-is
	3	tʃer-ane	tʃer-in	tʃer-i-v-in

(8) T-PATTERN

		PRS SUBJ	PRS IND	PST
SG	1	venj-a	venj	vinj-i-v-i
	2	venj-a-s	venj-s	vinj-i-v-a-s
	3	venj-a	venj	vinj-i-v-a
PL	1	vinj-in	vinj-in	vinj-i-v-in
	2	vinj-i-is	vinj-i-is	vinj-i-v-is
	3	venj-ane	venj-in	vinj-i-v-in

(9) MURÎ, ‘TO DIE’

		PRS SUBJ	PRS IND	PST
SG	1	mor-a	mowr	mur-i-v-i
	2	mor-a-s	mowr-s	mur-i-v-a-s
	3	mor-a	mowr	mur-i-v-a
PL	1	mur-in	mur-in	mur-i-v-in
	2	mur-i-is	mur-i-is	mur-i-v-is
	3	mor-ane	mor-in	mur-i-v-in

(10) LÂ-LIKE VERBS

		PRS SUBJ	PRS IND	PST
SG	1	vad-a	voj	l-a-v-i
	2	vad-a-s	va-s	l-a-v-a-s
	3	vad-a	va	l-a-v-a
PL	1	l-in	l-in	l-a-v-in
	2	l-a-is	l-a-is	l-a-v-is
	3	vad-ane	van	l-a-v-in

(11) DÂ-LIKE VERBS

		PRS SUBJ	PRS IND	PST
SG	1	d-e:t-i	doj	d-a-v-i
	2	d-e:t-i-s	da-s	d-a-v-a-s
	3	d-e:t-i	da	d-a-v-a
PL	1	d-e:t-in	d-in	d-a-v-in
	2	d-e:t-is	d-a-is	d-a-v-is
	3	d-e:t-ine	dan	d-a-v-in

(12) VÊ, ‘TO HAVE’

		PRS SUBJ	PRS IND	PST
SG	1	v-eːt-i	aj	v-e-v-i
	2	v-eːt-i-s	a-s	v-e-v-a-s
	3	v-eːt-i	a	v-e-v-a
PL	1	v-eːt-in	v-in	v-e-v-in
	2	v-eːt-is	v-e-is	v-e-v-is
	3	v-eːt-ine	an	v-e-v-in

(13) SAVÊ, ‘TO KNOW’

		PRS SUBJ	PRS IND	PST
SG	1	sep-i	saj	sav-e-v-i
	2	sep-i-s	sa-s	sav-e-v-a-s
	3	sep-i	sa	sav-e-v-a
PL	1	sav-in	sav-in	sav-e-v-in
	2	sav-e-is	sav-e-is	sav-e-v-is
	3	sep-ine	san	sav-e-v-in

(14) VOLÊ, ‘TO WANT’

		PRS SUBJ	PRS IND	PST
SG	1	vol-a	voj	vol-e-v-i
	2	vol-a-s	vows	vol-e-v-a-s
	3	vol-a	vowl	vol-e-v-a
PL	1	vol-in	vol-in	vol-e-v-in
	2	vol-e-is	vol-e-is	vol-e-v-is
	3	vol-ane	vol-in	vol-e-v-in

(15) ESSI, ‘TO BE’

		PRS SUBJ	PRS IND	PST
SG	1	s-eːt-i	soj	er-i
	2	s-eːt-i-s	seːs	er-a-s
	3	s-eːt-i	e	er-a
PL	1	s-eːt-in	s-in	er-in
	2	s-eːt-is	s-e-is	er-is
	3	s-eːt-ine	son	er-in

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