The ups and downs of Pruning: Reply to Paparounas (2024)

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Abstract

In this response, we critically engage with Paparounas's (2024) head-adjacency analysis of Greek verbal morphology. While challenging Merchant's (2015) spanning analysis, Paparounas (2024) does not provide a better alternative, as it faces serious shortcomings upon closer scrutiny. Consequently, the novel analytical claims concerning Greek verbal morphology, alongside broader theoretical implications, lose their foundational support. Our critique focuses on Embick's (2010) Pruning mechanism. In particular, we show that the Greek data fail to substantiate Paparounas's claims regarding (a) the purportedly destructive nature of Pruning, rendering a Pruned node incapable of conditioning another morphological rule, or (b) the timing of its application. Furthermore, Pruning, as is applied in Paparounas (2024), suffers from look-ahead (Moskal and Smith 2016), which makes the entire analysis incompatible with a head-adjacency-based approach. Ultimately, however, we argue that strict head-adjacency-based analyses, such as that of Paparounas, which rely exclusively on late insertion rules to account for allomorphy and suppletion, are fundamentally flawed, irrespective of destructivity and look-ahead.

1 Introduction

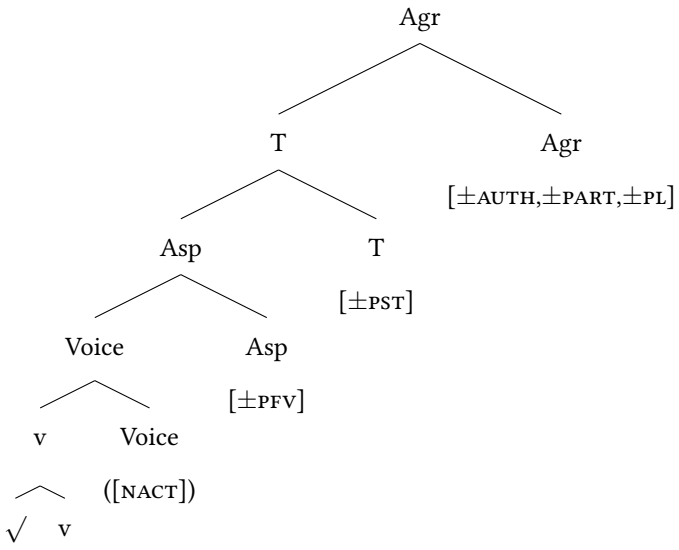
Paparounas (2024) investigates various verb classes of Greek, analyzing their morphological forms across different Aspect, Voice, or Tense values. Similarly, in Merchant (2015), comparable evidence from Greek verbal morphology was used to support a spanning(-adjacency) analysis. Paparounas evaluates Merchant's arguments and brings forth new evidence, contending that it is in line with a head-adjacency-based approach, as in Embick (2010). While we concur that Paparounas (2024) challenges Merchant's spanning analysis, it encounters significant shortcomings. Our examination begins with a detailed exploration of a specific case study (Section 4), providing details about Paparounas's proposed analysis. However, upon closer examination, a serious look-ahead issue is detected, rendering an adjacency-based analysis untenable (Section 5). Section 6 examines an additional case study employed by Paparounas to advance new claims centered around Embick's (2010) Pruning mechanism. In reaction to this case study, we provide evidence from Greek data that refutes Paparounas's claims regarding Pruning, specifically its pur-

ported destructive character and the timing of its application (Section 7). It is important to note, however, that while destructivity and look-ahead raise important concerns, they do not constitute the primary issues with Paparounas's strict head-adjacency-based analysis. As demonstrated in Section 9, such an analysis exhibits fundamental shortcomings even when destructivity and look-ahead are disregarded. Section 10 concludes. We begin with an overview of the Greek verbal morphology (Section 2).

2 Background on Greek verbal morphology

Greek verbal forms are inflected for Voice, Aspect, Tense, and Subject Agreement (Joseph and Smirniotopoulos 1993; Philippaki-Warburton and Spyropoulos 1998; Philippaki-Warburton 1998; Galani 2005; Christopoulos and Petrosino 2018; Merchant 2015; Holton et al. 2012; Spyropoulos et al. 2015; Revithiadou et al. 2019; Christopoulos 2022 i.a.). These morphosyntactic features are widely assumed to be directly mapped to Voice, Aspect, Tense, and Agreement heads in a one-to-one manner shown in the tree structure below.

(1)



The precise decomposition of morphemes and their corresponding associations with the heads in the tree above remains a subject of ongoing inquiry when examining Greek morphology. Nevertheless, in the scope of this discussion, we will take Paparounas's (2024) analysis as a starting point while acknowledging its shortcomings as we progress. Paparounas's analysis relies on theoretical assumptions concerning the essential morphological decompositions of the Greek verb, which are illustrated in Table 1 below, sourced from his paper.[1]

[1] Manner dissimilation accounts for the change of /θ/ to [t] following fricatives. Consequently, /γraf-θ-ik-a/ is realized as [γraf-t-ik-a]. Throughout this paper, we will consistently use the form of the underlying phonological representation.

ACT.IPFV.NONPST	**ACT.PFV.NONPST**
ɣraf -o	ɣraf -s -o
√write AGR	√write ASP AGR
NACT.IPFV.NONPST	**NACT.PFV.NONPST**
ɣraf -ome	ɣraf -θ -o
√write AGR	√write ASP AGR
ACT.IPFV.PST	**ACT.PFV.PST**
e- ɣraf -a	e- ɣraf -s -a
TNS √write AGR	TNS √write ASP AGR
NONACT.IPFV.PST	**NONACT.PFV.PST**
ɣraf -omun	ɣraf -θ -ik a
√write AGR	√write ASP T AGR

Table 1: First-singular forms of *ɣraf-o* 'write'

The table above illustrates that AGR suffixes are sensitive to the Voice specification of the verb, as observed in the contrast between the agreement suffixes *-o* and *-ome* in the active and non-active voice, respectively. Non-active morphology is assumed in Paparounas (2024) to emerge due to an interaction between the AGR head and a Voice head with a NONACT feature. This feature is post-syntactically assigned to a Voice head lacking a specifier, and is assumed to be used in Voice in other cases where Greek verbs employ non-active morphology, such as in anticausatives, dispositional middles, and reciprocals (Embick 1998, 2004; Alexiadou et al. 2015, Paparounas 2023).[2] Turning to Aspect, different accounts have been proposed in previous literature in regard to its exponence (Joseph and Smirniotopoulos 1993; Spyropoulos and Revithiadou 2009; Merchant 2015; Manzini et al. 2016; Christopoulos and Petrosino 2018, Revithiadou et al. 2019; Spyropoulos et al. 2023). The VIs that Paparounas assumes for Aspect and non-active Voice are shown below:

(2) *VIs for Voice and Asp*

(a) $[\text{NONACT}]_{\text{Voice}} \leftrightarrow \varnothing$

(b) $[\text{-PFV}]_{\text{Asp}} \leftrightarrow \varnothing$

(c) $[\text{+PFV}]_{\text{Asp}} \leftrightarrow /\theta/ \ / \ \text{NONACT}_{\text{Voice}}$ ___

(d) $[\text{+PFV}]_{\text{Asp}} \leftrightarrow /s/$

As demonstrated, $\text{Voice}_{[\text{NONACT}]}$ is assumed to be silent. Conversely, the default realization of $\text{Aspect}_{[\text{+PFV}]}$ is *-s* (2d), while in the context of non-active Voice, it takes on the form *-θ*, (2c). Furthermore, $\text{Aspect}_{[\text{-PFV}]}$ is posited to be null in

[2] See though Angelopoulos et al. (2020).

Greek, (2b). Regarding Aspect$_{[\text{-PFV}]}$, it is noteworthy that Paparounas consistently incorporates it in his analysis, as its presence is crucial for the realization of various elements such as verbalizers and stems, as we will also discuss. Thus, its function is similar to that of Voice$_{[\text{NONACT}]}$, which is also assumed to be null but necessary for the exponence of other heads, like AGR, as was demonstrated in Table 1. Consequently, since both Asp$_{[\text{-PFV}]}$ and Voice$_{[\text{NONACT}]}$ play a role in the realization of other heads, it follows under Paparounas's reasoning that both Asp$_{[\text{-PFV}]}$ and Voice$_{[\text{NONACT}]}$ should be uniformly realized syntactically, ruling out the possibility, briefly considered by Paparounas as an alternative, that imperfective aspect is merely the absence of Asp. In what follows, we explore how the VIs in (2) are used to address allomorphy in Greek, including the role of null nodes and of Pruning. We proceed with the critical challenges that undermine Paparounas's account directly thereafter.

3 Background on Paparounas (2024)

Paparounas (2024) proposes an analysis of Greek morphology on the grounds that it is local and avoids issues of Merchant's (2015) spanning analysis—issues that have also been noted in previous literature (Revithiadou et al. 2019; Christopoulos and Petrosino 2018). To achieve locality, Paparounas's analysis is grounded in Embick's (2010) adjacency-based theory of insertion and Pruning mechanism. In particular, according to Embick's (2010) adjacency-based theory, a hierarchically organized structure, $\sqrt{} > \text{X}_{[+\text{A}]} > \text{Y}_{[+\text{B}]} > \text{Z}_{[+\text{C}]}$, is linearized as shown in (3a). This representation serves as the basis for insertion and expresses a series of pairwise concatenative relationships: the Root is concatenated with X, X with Y, and so on. However, it is subject to constraint (3b), which only allows the Root to be conditioned by X, X to be conditioned by the Root or Y, and so on, thereby preserving adjacency relationships.

(3) a. $\sqrt{}^\frown\text{X}_{[+\text{A}]}$, $\text{X}_{[+\text{A}]}{}^\frown\text{Y}_{[+\text{B}]}$, $\text{Y}_{[+\text{B}]}{}^\frown\text{Z}_{[+\text{C}]}$

b. *Node Adjacency Hypothesis:* Allomorphy is only possible with elements that are concatenated.

Embick (2010)

The next ingredient involved in Paparounas's analysis is Embick's (2010) Pruning mechanism, which is responsible for the elimination of null nodes from the linear representation. This process enables apparent long-distance allomorphy across null heads to become possible. To illustrate this, let us consider the structure in (4a) borrowed from Paparounas (2024), assuming that insertion has occurred up to Y: the Root has been realized as π, X is realized as α, and Y is null. As Y is null, it can undergo Pruning, as defined in (4a), leading to its removal from the linear representation. As a result, X and Z become adjacent. With that in mind, a more general question that arises is under what conditions Pruning applies, or put differently, which of the null nodes undergo Pruning. To address this

question, Paparounas proposes that Pruning is '[...] a last resort operation, triggered just in case there exists a VI which demands access to a non-local node.'

(4) a. $\sqrt{}_{/\pi/}{}^\frown X_{[+A]/\alpha/}, X_{[+A]/\alpha/}{}^\frown Y_{[+B]/\varnothing/}, Y_{[+B]/\varnothing/}{}^\frown Z_{[+C]}$

b. $X[\alpha]{}^\frown Y\varnothing, Y\varnothing{}^\frown Z \rightarrow X[\alpha]{}^\frown Z$

In what follows, we explore how the VIs in (2) are used by Paparounas to address Root suppletion in Greek (Case study 1), including the role of null nodes and of Pruning. We proceed with the critical look-ahead challenge that undermines Paparounas's account directly thereafter.

4 Case study 1: Root suppletion

The first case that we review here involves Root suppletion in Greek. In a prior study by Merchant (2015), Root suppletion was thoroughly investigated, leading to the proposal that it makes reference to a non-local context, where the intervening nodes are not null. As a result, Merchant argues that Root suppletion in Greek challenges head-adjacency-based theories, supporting the less restrictive theory of spanning. However, Paparounas revisits the topic of Root suppletion and contends that a spanning analysis is only supported by a specific morphological analysis of the Greek data. According to Paparounas, this analysis has its shortcomings, and he proposes an alternative view, wherein a head-adjacency analysis can be pursued. As a result, Root allomorphy, as observed in the Greek verbs, does not necessarily support the notion of spanning. To illustrate the cases of Root suppletion in question consider the three verbs in the table below:

ACT		NONACT	
IMPFV	PFV	PFV	
tro-	fa(ɣ)-	faɣo-	eat'
vlep-	ð-	iðo-	'see'
le(ɣ)-	p-	le(ɣ)-/ipo-	'say'

Table 2: Greek suppletive verb stems

Merchant's spanning analysis rested on the assumption that the default Root form is the one attested in the imperfective, while the Root form attested in the perfective arises from contextually conditioned insertion rules. However, as convincingly argued by Paparounas, the spanning analysis falls short if the perfective form is the default. Indeed, this appears to be the case, considering the pervasive use of the perfective form, *faɣ-*, elsewhere, e.g. in participles, event nominals. Given this observation, Paparounas contends that the correct distribution of these verb forms can

be captured by the rules illustrated in (5).

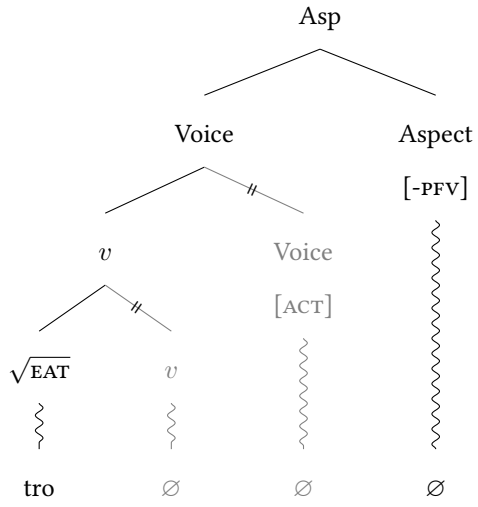
(5) (a) $\sqrt{\text{EAT}} \leftrightarrow$ /tro/ / ___ [-PFV]

(b) ($\sqrt{\text{EAT}} \leftrightarrow$ /faɣo/ / ___ [NONACT]$_{\text{Voice}}$ [+PFV]$_{\text{Asp}}$)

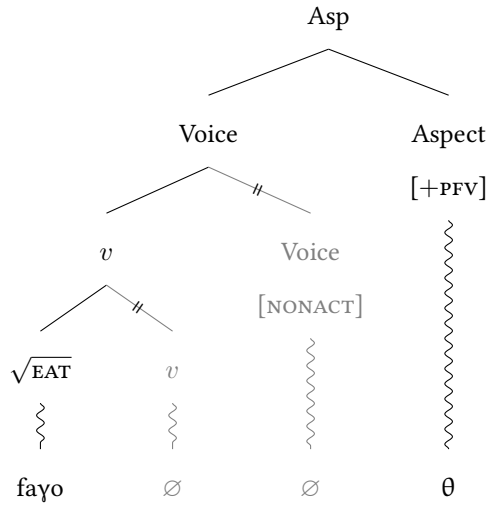
(c) $\sqrt{\text{EAT}} \leftrightarrow$ /faɣ/

Assuming these VIs, a head-adjacency-based theory can be maintained as can be shown in the following trees, repeated from Paparounas:

(6)



(7)

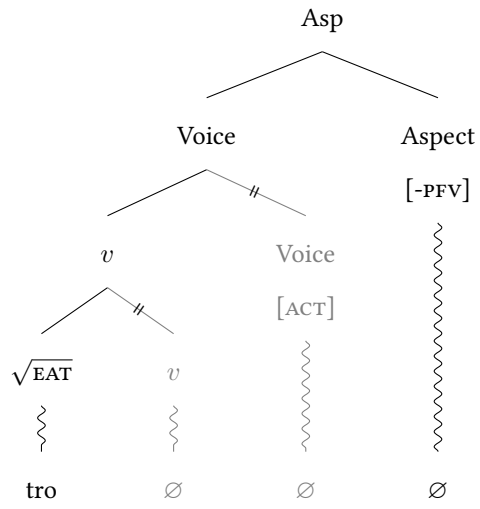


Drawing from Bobaljik (2000), Paparounas adopts an insertion mechanism that operates from the Root outward. In (6), the most specific VI that can be inserted in the Root is *tro*, (5a). This item requires, however, access to a non-local context, namely, Aspect$_{[-\text{PFV}]}$. Since *v* and Voice are silent, they are eligible for Pruning. Consequently, the VI in (5a) can be locally licensed, as required, by Aspect, after Pruning of *v* and Voice. In (7), the more specific VI that can be inserted in the Root is illustrated in (5b). It requires access to two non-local nodes, namely, Voice$_{[\text{NONACT}]}$ and Aspect$_{+[\text{PFV}]}$. Paparounas presumes that Pruning can operate in a timely fashion. Hence, the VI in (5b) is initially conditioned by Voice$_{[\text{NONACT}]}$, made possible after Pruning of *v*. Subsequently, this item requires access to Aspect, feasible after Voice$_{[\text{NONACT}]}$ undergoes Pruning. From these observations, Paparounas concludes that an adjacency-based theory aptly addresses various classes of morphological phenomena in the Greek verb, even those initially favoring a spanning approach, provided the correct VIs are assumed. While this analysis might initially seem promising, the subsequent section demonstrates that it encounters a critical look-ahead problem, undermining the goal of strict locality (*contra* Paparounas 2024).

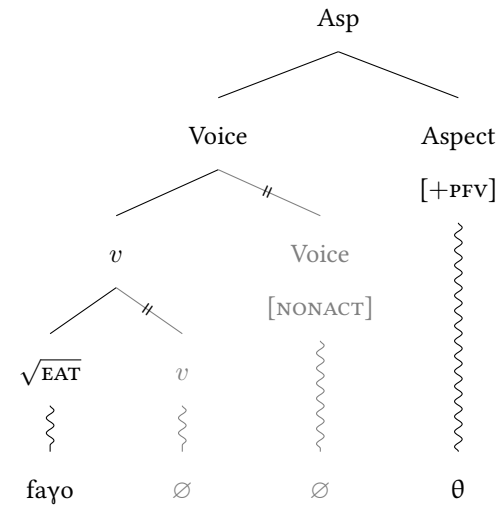
5 Look-ahead in Root suppletion

To illustrate the look-ahead issue, let us consider his trees below, repeated from (6) and (7):

(8)



(9)



Under Paparounas's analysis, *tro* is initially inserted in the root. The VI that is inserted is licensed by a non-local node, specifically, imperfective Aspect. Paparounas assumes that Pruning of *v* is always available in this case. However, this implies that Pruning of *v* in (8) could be applied because the insertion mechanism recognizes that *v* is phonologically zero. Yet, this should not be possible because at the stage of Root insertion, the exponent of *v* has not been inserted yet. Thus, for Pruning of *v* to apply, the insertion mechanism must have access to information that only becomes available in the subsequent stage of insertion, namely, whether *v* is phonologically zero or not. As Moskal and Smith (2016) initially observed, such a scenario presents a look-ahead issue, as it appears that the availability of context conditioning the exponence of the root depends on whether a node, namely, *v*, whose phonological content will be computed later, will have an overt exponent or not. Such a scenario should not be possible within a head-adjacency-based theory, where phonological insertion occurs gradually, and the insertion mechanism can only access information available in adjacent nodes at the time of insertion, rather than information that arises later in the process. Notably, one might argue that the look-ahead issue that was just sketched is not a significant one in the present case, as *v* and Voice are invariably null in Greek. Nevertheless, this is not true; first, Greek has overt verbalizers (Spyropoulos et al. 2015, Panagiotidis et al. 2017 i.a.). Furthermore, Paparounas (2024) posits overt verbalizers, as exemplified in the table below:

ACT		NONACT		
IMPFV	PFV	IMPFV	PFV	
ser-n-o	sir-o	ser-n-me	sir-θ-o	'drag'
stel-n-o	stil-o	stel-n-ome	stal-θ-o	'send'
sper-n-o	spir-o	sper-n-ome	spar-θ-o	'plant'

Table 3: Greek suppletive verb stems

The verbs in this table have in common with the verbs of Table 2 that they display stem suppletion in NONACT.PFV. However, the verbs in Table 3 demonstrate an additional feature—they include an item *-n* (see also section 7.2). Paparounas proposes that *-n* is a verbalizer conditioned by Aspect$_{[-\text{PFV}]}$ (see Revithiadou et al. 2019, Spyropoulos et al. 2023 for an analysis of *-n* as Aspect$_{[-\text{PFV}]}$). Consequently, since Greek allows for overt verbalizers, Pruning of *v* cannot be unrestricted. Consequently, overt verbalizers present a significant look-ahead problem, contradicting the strict locality advocated by Paparounas (2024). Conversely, Paparounas (2024) avoids a similar problem with Voice, as it is uniformly null in his analysis. However, this outcome hinges on a non-standard analysis of the exponent *-θ*, which he analyzes as Aspect conditioned by Voice (see 2c and 9). This diverges from the prevailing view in the literature that *-θ* corresponds to Voice$_{[\text{NONACT}]}$ conditioned by Aspect$_{[+\text{PFV}]}$ (Rivero 1990; Merchant 2015; Spyropoulos and Revithiadou 2009; Manzini et al. 2016). In fact, treating *-θ* as Aspect aids Paparounas (2024) in analyzing the morphology of specific verb classes as a result of intervention. Based on these verb classes, Paparounas (2024) posits two properties of Pruning: it is destructive and applies in a timely manner. The following sections first examine these verb classes and then present a few case studies demonstrating that Greek data challenge Paparounas's conclusions about Pruning. A subsequent case study further challenges both of these claims about Pruning, the treatment of *-θ* as Aspect and as a result, the overall analysis.

6 Case study 2: Voice-conditioned allomorphy

Examining a specific category of verbs exemplified by the verb *ɣraf-o* meaning 'write,' Paparounas presents a striking observation in the following table repeated from Table 1. In the left column, which illustrates the imperfective aspect of the verb, we find a clear pattern in the suffixes that surface rightmost: such suffixes are distinguished between gray and black, and alternate depending on whether the verb is in the active or non-active Voice. The perfective verbal forms are presented in the right column; the striking observation is that in contrast to the imperfective forms, the perfective ones are uniformly formed with the same agreement suffixes, irrespective of whether they are in the active or non-active voice (see also Joseph and Smirniotopoulos 1993; Roussou 2009). Based on this observation,

Paparounas points out that the distribution of these suffixes reveals a new generalization. Agr is realized with non-active endings, shown in black, when all heads between Agr and Voice, e.g. T or Aspect, are null. In contrast, Agr is realized with endings unspecified for Voice, shown in grey, when T and/or Aspect are overt.

ACT.IPFV.NONPST ɣraf - o √write AGR	**ACT.PFV.NONPST** ɣraf -s - o √write ASP AGR
NACT.IPFV.NONPST ɣraf - ome √write AGR	**NACT.PFV.NONPST** ɣraf -θ - o √write ASP AGR
ACT.IPFV.PST e- ɣraf - a TNS √write AGR	**ACT.PFV.PST** e- ɣrap -s - a TNS √write ASP AGR
NONACT.IPFV.PST ɣraf - omun √write AGR	**NONACT.PFV.PST** ɣraf -θ -ik - a √write ASP T AGR

Table 4: First-singular forms of *ɣraf-o* 'write'

Paparounas argues that this generalization can be explained through intervention, in line with a head-adjacency-based analysis. This view is based on the VIs repeated in (10) from (2). These VIs correspond to the agreement suffixes used in the imperfective and perfective forms, and are distinctly categorized: the ending, *-o*, serves as the default realization of Agr, independent of Voice, while the non-active ones, *-ome, -omun*, demonstrate sensitivity to Voice or T.

(10) *VIs for Agr*

(a) [+AUTH,+PART,-PL] ↔ /omun/ / $[\text{NONACT}]_{\text{Voice}}$ $[+\text{PST}]_{\text{T}}$___

(b) [+AUTH,+PART,-PL] ↔ /ome/ / $[\text{NONACT}]_{\text{Voice}}$

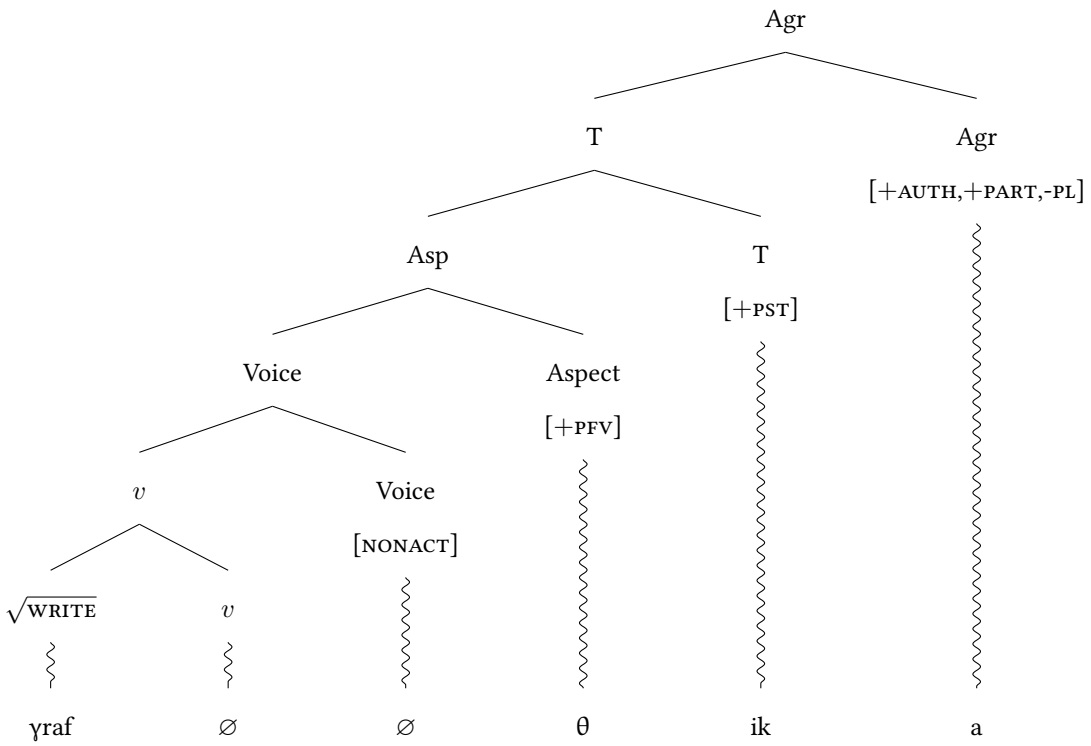
(c) [+AUTH,+PART,-PL] ↔ /a/ / $[+\text{PST}]_{\text{T}}$___

(d) [+AUTH,+PART,-PL] ↔ /o/

To see how these VIs can account for the generalization illustrated in Table 4, let us first consider the non-active perfective past form *ɣraf-θ-ik-a* from this table. Insertion operates from the Root outward. With this in mind, let us examine the configuration in (11) at the stage where all nodes have undergone insertion except Agr. Several potential VIs shown in (10) are available for insertion. Of them, (10a) and (10b) require access to Voice. However, they are unable to access this node because both Aspect and T are overtly realized, thus precluding them from undergoing

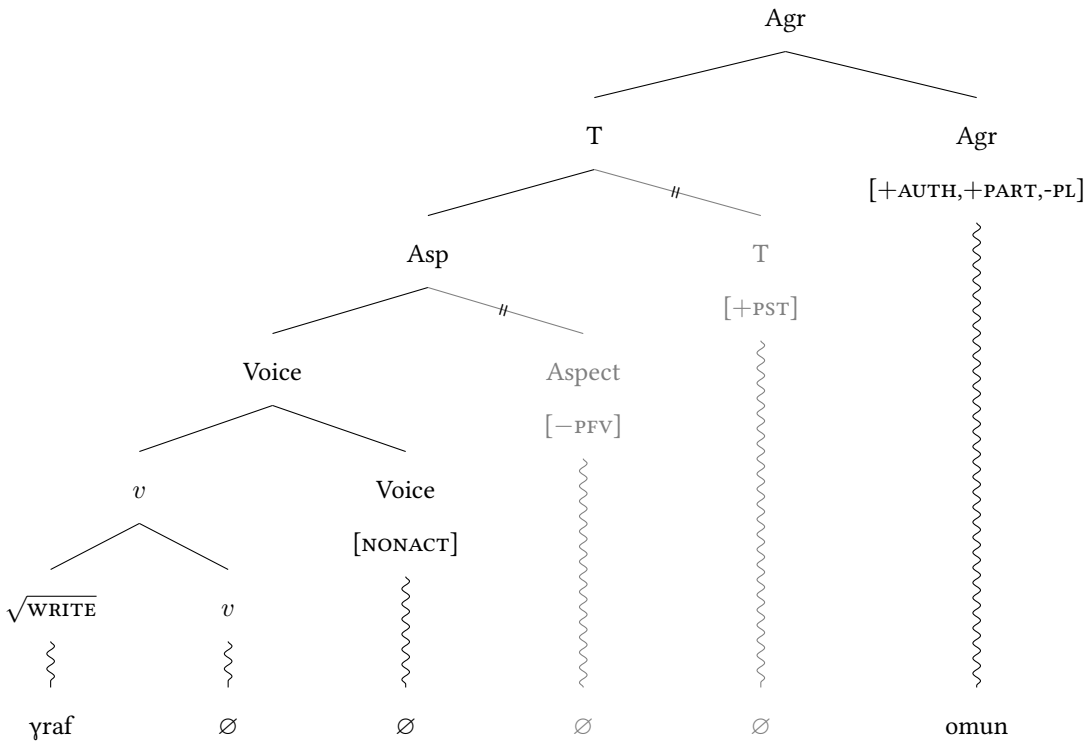
Pruning. Consequently, the contextual conditions for (10a) and (10b) cannot be satisfied, resulting in the application of a more general VI, *-a*, in (10c), which only requires access to [+PST].

(11)



By contrast, in the non-active imperfective form *γraf-omun*, shown in (12) below, the two intervening heads between Agr and Voice are null. Paparounas posits that these null heads, Aspect and T, can undergo successful Pruning, illustrated with a delink symbol in the tree below, after Agr gets conditioned by T. This process leads to Voice and Agr becoming adjacent. As a result, the insertion of the most specific VI in (10a) becomes possible.

(12)



Paparounas's analysis encounters challenges at first sight when dealing with the so-called athetic verbs. This class of verbs is illustrated in Table 5, and, as shown, differs from the class of *ɣrafo* of Table 4 in that the aspectual *-θ* of the non-active perfective is missing. In particular, the non-active perfective form is realized as *ka-o* instead of **ka-θ-o*. This discrepancy poses an unexpected complication for Paparounas's analysis for the following reason: According to the proposed analysis, since $\text{Aspect}_{[+\text{PFV}]}$ is not expressed through *-θ*, it should be null and undergo Pruning. Given this, Agr should have access to $\text{Voice}_{[\text{NONACT}]}$, and so the VI in (10c) should be used, predicting the existence of **ka-ome*, where Agr is realized with the non-active ending *-ome*. Nonetheless, this prediction contradicts what is attested, as we observe the form *ka-o* instead in the third column of the table below.

ACT		NONACT	
IMPFV	PFV	PFV	
ke-o	kaf-s-o	ka-o	'burn'
pniɣ-o	pniɣ-s-o	pniɣ-o	'choke/drown'
klev-o	klef-s-o	klap-o	'steal'
kov-o	kov-s-o	kop-o	'cut'
stref-o	stref-s-o	straf-o	'turn'

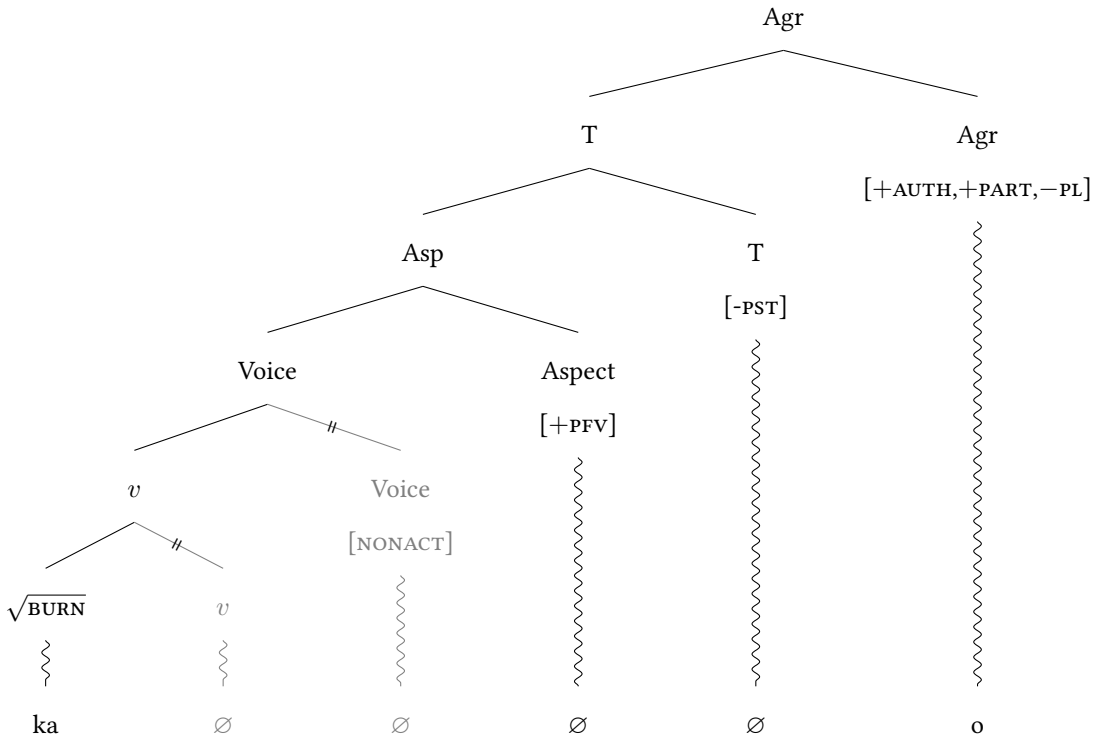
Table 5: Stems of the Modern Greek athetic verbs, in the 1SG

To address this challenge, Paparounas adopts from Merchant (2015) the assumption that the athetic verbs lack $-\theta$ because they take the more specific exponent of Asp, shown below, which has access to specific roots:

(13) $[+\text{PFV}]_{\text{Asp}} \leftrightarrow \varnothing$ / $\{\sqrt{\text{BURN}}$ ...$\}$ ___

To illustrate how this VI is used, consider the structure in (14). Here, *v* and Voice are silent, so the functional node that will be computed for insertion first is Asp. The most specific VI matching Asp that can be applied is (13). However, this VI requires access to a non-local context, namely the root, leading to the triggering of Pruning for *v* and Voice. As a result of Pruning, *v* and Voice will be removed from the linear representation, and so Asp will become adjacent to Root, allowing it to be conditioned by it, as required by (13). Pruning is taken to be a destructive operation, as it involves the removal of nodes from the linearized representation. Consequently, when the insertion mechanism computes Agr, the VI in (10b), which would allow *-ome*, cannot be inserted as Voice$_{[\text{NONACT}]}$ has been pruned, predicting the ungrammaticality of **ka-ome*. Instead, the elsewhere form in (10d) is used, giving rise to *ka-o*.

(14)



In summary, even though the agreement endings for both thetic and athetic verbs look the same on the surface, they arise through distinct routes. In thetic verbs, *-ome* is blocked in the non-active perfective because its licenser is made invisible by overt interveners; in athetic paradigms, *-ome* is blocked because its licenser has previously been pruned.

7 The challenges

In this section, we expand upon Paparounas's analysis, exploring different case studies. These case studies have in common that a stem and/or verbalizer is conditioned by Aspect ([±PFV]) Voice or T. Our goal is to evaluate the applicability of Paparounas's analysis to these cases. Specifically, we challenge the analysis of specific exponents, such as the treatment of *-θ* as Aspect. Moreover, we contest empirical generalizations, such as Paparounas's generalization that non-active agreement suffixes are exclusive to bare roots, as well as theoretical claims, such as the idea that Pruning renders a node incapable of licensing another morphological rule.

7.1 Challenge 1: Root suppletion

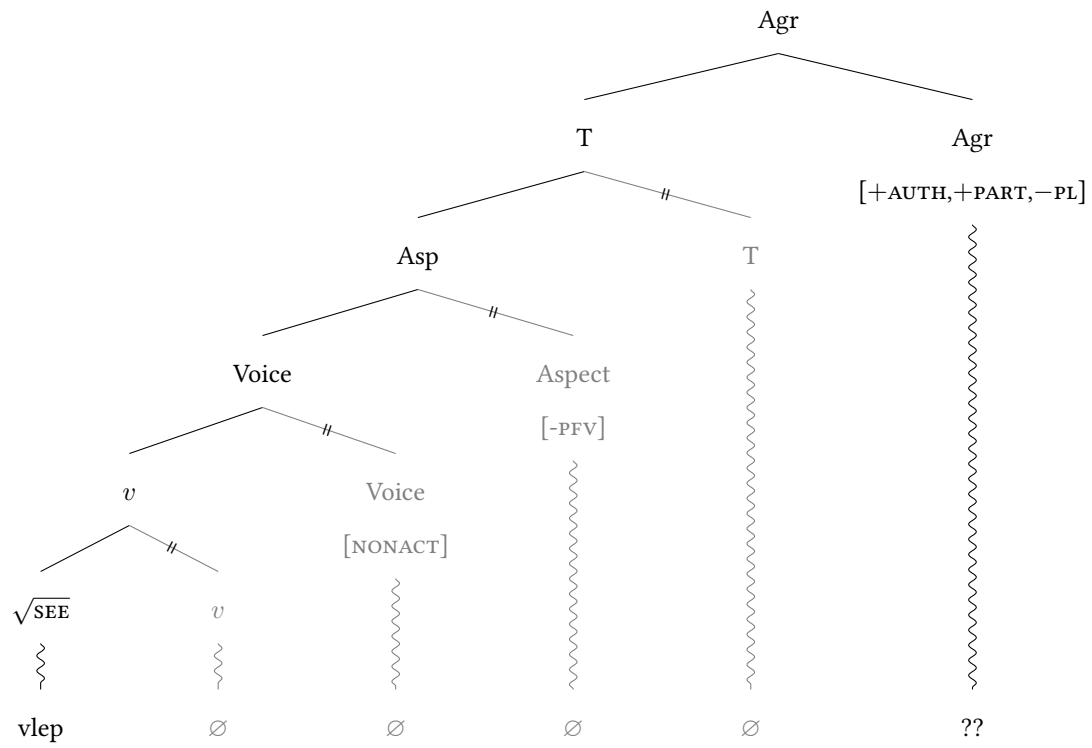
To illustrate the challenges Root suppletion raises in the context of Aspect$_{[-\text{PFV}]}$, consider the table below:

ACT		NONACT		
IMPFV	PFV	IMPFV	PFV	
tro-	fa(ɣ)-	tro-	faɣo-	'eat'
vlep-	δ-	vlep-	iδo-	'see'
le(ɣ)-	p-	le(ɣ)-	le(ɣ)-/ipo-	'say'

Table 6: Greek suppletive verb stems

This table illustrates the same class of verbs as shown in Table 2, which Paparounas considered in regard to Root suppletion. While Paparounas effectively accounts for Root suppletion, the question of how exactly *-ome* and *-o* are inserted in the non-active and active forms of these verbs is not discussed. Indeed, we show that the distribution of *-ome* and *-o* cannot be accounted for by Paparounas's analysis, presenting a significant challenge. Consider the following tree structure for the NONACT.IPFV form *vlepome* 'be seen' from the table:

(15)



We assume, as in Paparounas (2024), that the insertion mechanism proceeds from the Root upwards. Given this, insertion of the Root will be computed first. Based on his claims, we assume that the exponence of the Root requires access to a non-local node, namely, Aspect$_{[\text{-PFV}]}$ (see the corresponding VI for $\sqrt{\text{EAT}}$ in 5a).

(16) $\sqrt{\text{SEE}} \leftrightarrow$ /vlep/ / ___ [-PFV]

Voice and *v* are silent in (15), allowing them to undergo Pruning, as shown with the delink symbol. Consequently, the Root can be conditioned by Aspect, as required by (16), as they become adjacent in the linear representation after Pruning of Voice and *v*. Now since Voice$_{[\text{NONACT}]}$ is pruned, a prediction of Paparounas's analysis is that Agr cannot be realized by *-ome* because the VI responsible for its insertion requires access to Voice$_{[\text{NONACT}]}$, as demonstrated in (17a), repeated from (10). Instead, the default *-o* should be used in NONACT.IPFV. However, this prediction does not hold true, as evidenced in the table above, where, as discussed already, *-ome* is used, *vlep-**ome***, not *-o*, **vlep-**o***, in NONACT.IPFV.[3]

(17) *VIs for Agr*

(a) [+AUTH,+PART,-PL] $\leftrightarrow$ /omun/ / [NONACT]$_{\text{Voice}}$ [+PST]$_{\text{T}}$___

[3] Paparounas (2024) claims that a different alternative might be that *vlep* is conditioned by finiteness rather than imperfective Aspect. Finiteness is standardly encoded in T in Greek. Under this alternative, the same issue arises: since the Root is conditioned by a head higher than Voice, Pruning of Voice must take place. In turn, this pruned Voice node should bleed the insertion of *-ome*.

(b) [+AUTH,+PART,-PL] ↔ /ome/ / [NONACT]$_{\text{Voice}}$

(c) [+AUTH,+PART,-PL] ↔ /a/ / [+PST]$_{\text{T}}$___

(d) [+AUTH,+PART,-PL] ↔ /o/

Since pruned Voice can condition the insertion of *-ome*, it follows that this class of verbs does not lend support to Paparounas's claim that a pruned node is incapable of conditioning another morphological rule. This conclusion is further reinforced by the allomorphy patterns we examine next with respect to verbalizers.

7.2 Challenge 2: Allomorphy

Our examination extends to the distribution of certain verbalizers, i.e. *-en* and *-an*. As shown in the table below, their distribution is sensitive to Aspect:

ACT		NONACT		
IMPFV	PFV	IMPFV	PFV	
θerm-en-o	θerm-an-o	θerm-en-ome	θerm-an-θ-o	'make/become warm'
rip-en-o	rip-an-o	rip-en-ome	rip-an-θ-o	'pollute'
lefk-en-o	lefk-an-o	lefk-en-ome	lefk-an-θ-o	'whiten'

Table 7: Greek verbalizaers

In particular, the verbalizers under consideration are *-en* and *-an*, and are used pervasively with different Greek verbs. These exponents are affixed to a Root and are exclusive to verbal uses; they do not appear in non-verbal formations like adjectives or result nouns, as evidenced in (18). This substantiates their categorization as verbalizers. Moreover, the root's capacity to exist independently without *-en* and *-an* confirms their treatment as verbalizing exponents (Spyropoulos et al. 2015, Panagiotidis et al. 2017).

(18) a. therm- os
$\sqrt{\text{WARM}}$ SG.MASC
'warm'

b. rip- os
$\sqrt{\text{POLLUTE}}$ SG.MASC
'pollution'

c. lefk- os
$\sqrt{\text{WHITE}}$ SG.MASC
'white'

As shown in the table above, the key determinant of the distribution of *-en* and *-an* is Aspect. Specifically, the verbalizer *-en* consistently appears when the verb has Aspect$_{[-\text{PFV}]}$, while *-an* occurs when the verb has Aspect$_{[+\text{PFV}]}$

(Revithiadou et al. 2019, Spyropoulos et al. 2023). The latter is also used in other environments, such as with process nouns, derived by these verbs, (19). Since it has a wider distribution, it makes sense to treat it as the elsewhere, (20b), whereas *-en* realizes an exponent conditioned by imperfective aspect, as shown in (20b).

(19) θerm/ rip/ lefk -an si
heat pollute white VBZ NOMZ
'heating/pollution/whitening'

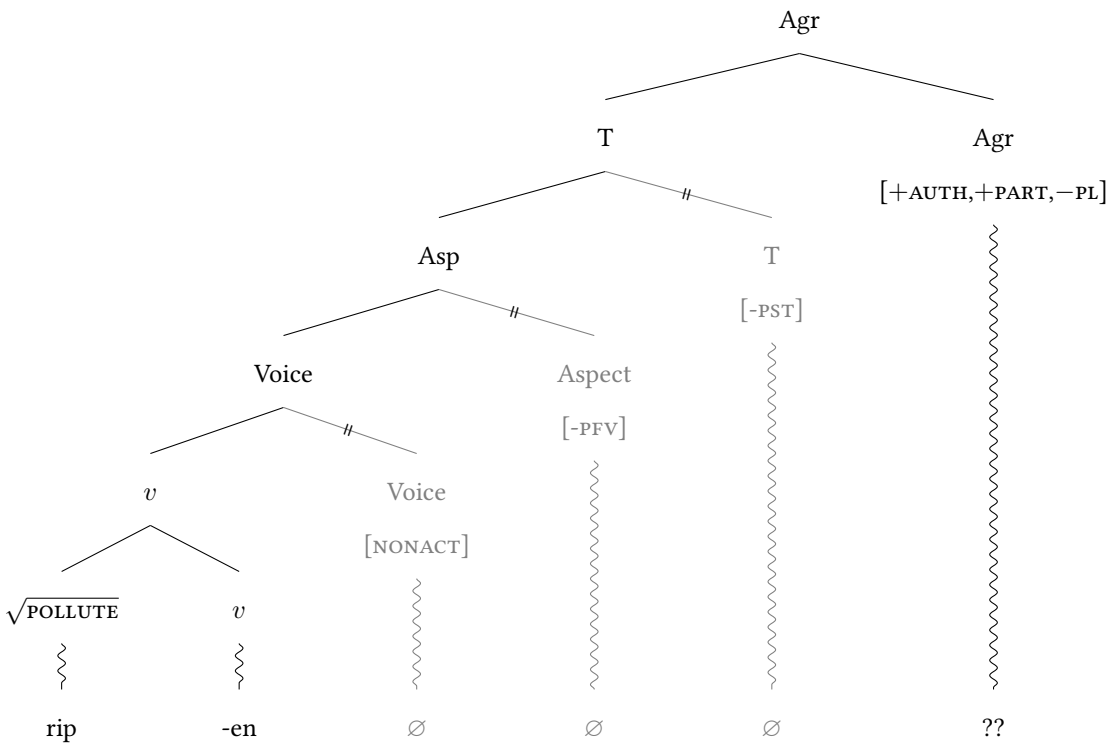
(20) *VIs for vs*

(a) $v \leftrightarrow$ /en/ / ___ $\text{Aspect}_{[-\text{PFV}]}$

(b) $v \leftrightarrow$ /an/

Paparounas (2024, 28) also treats *-en* as a verbalizer conditioned by aspect, as shown in (20a). Specifically, he observes that *-en*, when combined with a Root (e.g., 18), introduces causative semantics typically associated with *v*, concluding that *-en* functions as a verbalizer. In footnote 28, he further specifies that *-en* acts as a verbalizer conditioned by imperfective aspect, aligning with our proposed rule in (20a). However, he does not address how agreement insertion is computed for the large class of verbs with *-en*. As we show below, these verbs present significant challenges to his analysis. To see the challenge, it suffices to examine the second column of Table 7. Here we can observe that in contrast to verbs of Table 4, non-active agreement suffixes do not attach directly to the root. Instead, the verbalizer intervenes between the non-active morphology and the root. This observation suggests that the initial empirical claim by Paparounas regarding non-active agreement suffixes exclusively appearing with bare roots is correct only with some verbs. The issue that arises for Paparounas's analysis because of this becomes clearer in the corresponding tree structure where the verb *rip-en-ome* from Table 7 is examined:

(21)



The insertion mechanism operates from the Root outward, targeting the first functional node, here *v*. In this case, the VI in (20a) will be used. It requires access to a non-local node, namely Asp, with Voice acting as an intervening element. However, given that it is silent, Voice can undergo Pruning. Nevertheless, this predicts that pruned Voice$_{[\text{NONACT}]}$ should not be able to license the insertion of *-ome* or *-omun* as seen in (10a) and (10b) respectively, reiterated below as (22a) and (22b), since these VIs are conditioned by Voice$_{[\text{NONACT}]}$. The prediction, therefore, would be for the elsewhere form, *-o*, to be used with these verbs. However, this prediction fails to be borne out, as evidenced by the use of *-ome* in *rip-en-**ome***, while the form *rip-en-**o*** is excluded in non-active.[4]

(22) *VIs for Agr*

(a) [+AUTH,+PART,-PL] ↔ /omun/ / [NONACT]$_{\text{Voice}}$ [+PST]$_{\text{T}}$___

(b) [+AUTH,+PART,-PL] ↔ /ome/ / [NONACT]$_{\text{Voice}}$

(c) [+AUTH,+PART,-PL] ↔ /a/ / [+PST]$_{\text{T}}$___

[4] Even if alternative analyses were entertained, considering either *-en* to realize Aspect$_{[-\text{PFV}]}$ or part of a Root allomorph, i.e. *ripen-*, the use of *-ome* is not expected within this verb class, under Paparounas's analysis. Under the first alternative, *-ome* cannot be licensed because Asp, being overt, cannot undergo Pruning, and thus acts as an intervener between Voice and Agr, Voice>-en$_{\text{Asp}}$>T>Agr. Consequently, *-ome* cannot be licensed, contrary to fact, as Agr does not have access to Voice$_{[\text{NONACT}]}$. Under the second alternative, the Root allomorph requires access to Aspect, which in turn requires Pruning of Voice. However, this process presents the same challenge, as pruned Voice$_{[\text{NONACT}]}$ should bleed the insertion of *-ome*.

(d) [+AUTH,+PART,-PL] ↔ /o/

We proceed with the next challenge, which, as we show arises with verbs that show Root suppletion.

7.3 Challenge 3: Suppletion with [+PFV] Aspect

This study further explores Root suppletion in Greek with particular emphasis on VIs in which a Root is conditioned by both $\text{Voice}_{[\text{NONACT}]}$ and $\text{Aspect}_{[+\text{PFV}]}$ simultaneously, just like in Paparounas's (5b), repeated below as (23):

(23) $\sqrt{\text{EAT}} \leftrightarrow$ /faɣo/ / ___ $[\text{NONACT}]_{\text{Voice}}$ $[+\text{PFV}]_{\text{Asp}}$

Even though Paparounas provides a tree structure where (5b) is inserted, he suggests that this VI might not be needed. Consequently, we shift our focus to a different class of verbs, where the exponence of a Root is more clearly determined by $\text{Voice}_{[\text{NONACT}]}$ and $\text{Aspect}_{[+\text{PFV}]}$. Upon careful examination, both the case originally studied by Paparounas and the one under our current investigation pose significant challenges to (2c), repeated below, which is a fundamental VI used by Paparounas to account for the most basic cases of the distribution of active and non-active endings in Table 4.

(24) $[+\text{PFV}]_{\text{Asp}} \leftrightarrow$/θ/ / $\text{NONACT}_{\text{Voice}}$ ___

To illustrate this class of verbs, consider the following table, which was based on facts first presented in Merchant (2015).

	NONPAST		PAST		
	IMPFV	PFV	IMPFV	PFV	
ACT	eɣir-o	eɣir-o	eɣir-a	eɣir-a	'erect'
	pro-val-o	pro-val-o	pro-e-val-a	pro-e-val-a	'project'
	pro-tin-o	pro-tin-o	pro-tin-a	pro-tin-a	'propose'
NONACT	eɣir-ome	eɣer-θ-o	eɣir-omun	eɣer-θ-ik-a	
	pro-val-ome	pro-vli-θ-o	pro-val-omun	pro-vli-θ-ik-a	
	pro-tin-ome	pro-ta-θ-o	pro-tin-omun	pro-ta-θ-ik-a	

Table 8: Greek suppletive verb stems

As shown in the table above, the Root forms *eɣir-, proval-*, and *protin-* are everywhere, except for NONACT.PFV, where a distinct form is used, namely *eɣer-*, *provli-*, and *prota-*. Following Paparounas (2024, fn.30)'s argument, verbs with similar distribution like *eɣir-* and *proval-* are assumed to realize cases of Root suppletion, rather than the result of readjustment rules.[5] In order to determine which form should be treated as the default, Paparounas argues that we

[5] If these forms were the outcome of readjustment rules, it would undermine the core argument of locality in Paparounas's analysis, as it would be unclear how to restrict their distribution in this analysis. However, we refrain from proposing such rules here, as Paparounas does not assume them in his analysis and instead leans toward treating these forms as instances of suppletion.

should identify the form with the wider distribution. It follows then that the Root forms *eɣir-, proval-, protin-*, which display the wider distribution, should be the default forms. This is supported by two additional considerations. First, in the particular case of *protin-*, the fact that this is the default stem is suggested by the fact that it is used in the formation of the adjectival participles formed with the *-menos* affix, (25).[6]

(25) protin- -o -menos
suggest TV ed
'suggested'

Secondly, whereas the distribution of *eɣer-, provli-, prota-* is clearly determined by both Voice and Aspect, there is no specification for PFV and NONACT, as in (26), that can adequately capture the distribution of *eɣir, proval, protin*; (26a) fails to account for their occurrence in −PFV, while +NONACT cannot explain their distribution in −NONACT. Similarly, (26b) and the subsequent combinations encounter the same issues. Conversely, their distribution aligns with the assumption that they are elsewhere forms, as formulated in (27b), whereas *eɣer-, provli-, prota-* are the result of the specific rule outlined in (27a).

(26) a. +PFV, +NONACT

b. +PFV, −NONACT

c. −PFV, +NONACT

d. +PFV, −NONACT

(27) (a) $\sqrt{\text{ERECT}} \leftrightarrow$ / eɣer/ / ___ $[\text{NONACT}]_{\text{Voice}}$ $[+\text{PFV}]_{\text{Asp}}$

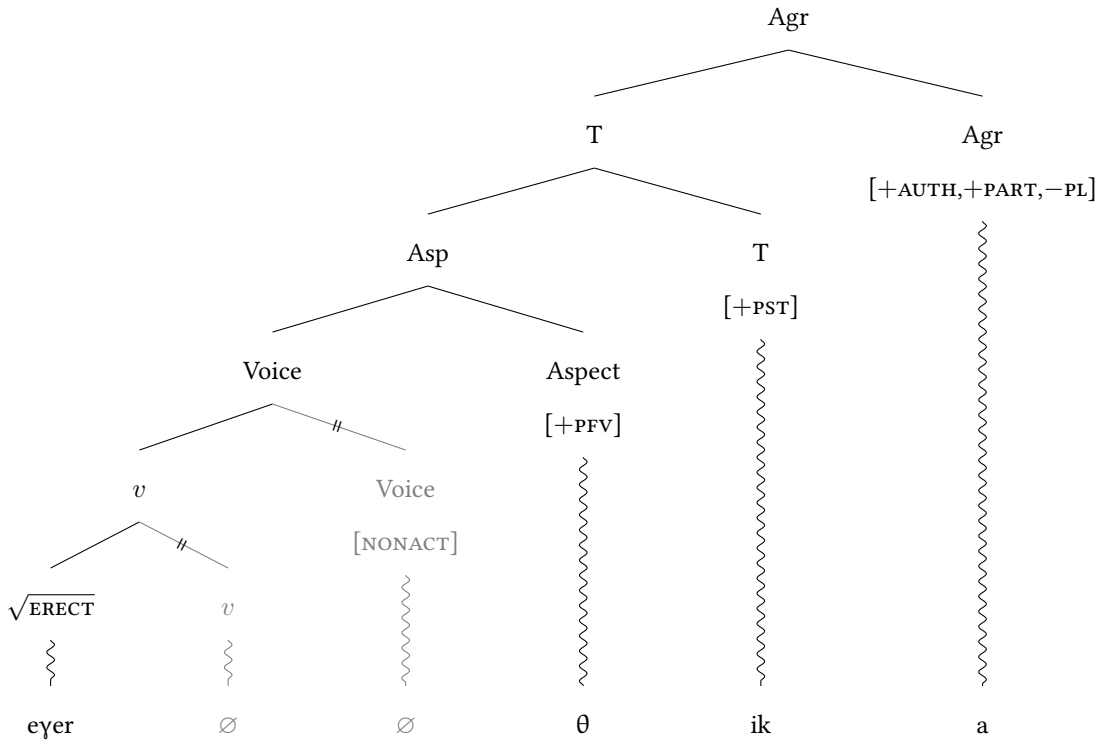
(b) $\sqrt{\text{ERECT}} \leftrightarrow$ / eɣir/

To elaborate on the problem that arises with this class of verbs in Paparounas's analysis (the same issue also arises with the verb of Table 10 that displays behavior analogous to the verbs of Table 8), let us consider how insertion would be computed under the tree structure in (28). Before proceeding, it is worth noting that (28) is identical to the tree structure proposed by Paparounas, as shown in (7). Therefore, the same issues we discuss apply to both structures. In the first step, the exponence of the Root is computed, and the most specific VI is determined to be (27a). However, this VI requires access to a non-local context, namely Voice and Aspect, triggering Pruning. Following Paparounas (2024), we take it that Pruning proceeds in a timely manner. First, Pruning of *v* is triggered, as indicated by the delink symbol. Consequently, the Root becomes adjacent to Voice. Subsequently, at a later stage, Voice is also Pruned, so that the Root can gain access to Aspect. Importantly, the prediction is that when the exponence of Aspect

[6] This stem is not used in the formation of the corresponding nouns however, which raises an overall question for Paparounas (2024) and independently on how the default is determined.

is computed, the default item *-s* of (29d), repeated below for convenience from (2), will be used. On the other hand, the more specific one, *-θ*, (29c), cannot be inserted due to the prior application of Pruning on Voice. Surprisingly, *eɣer-θ-ik-a* of Table 5 contradicts this prediction, as it suggests that *-θ* can be inserted despite the fact that Voice is pruned, and is thus, absent from the linear representation. Based on this challenge, we conclude that (29c) cannot be maintained. Thus, *-θ* cannot be taken to realize Aspect.

(28)



(29) *VIs for Voice and Asp*

(a) $[\text{NONACT}]_{\text{Voice}} \leftrightarrow \varnothing$

(b) $[\text{-PFV}]_{\text{Asp}} \leftrightarrow \varnothing$

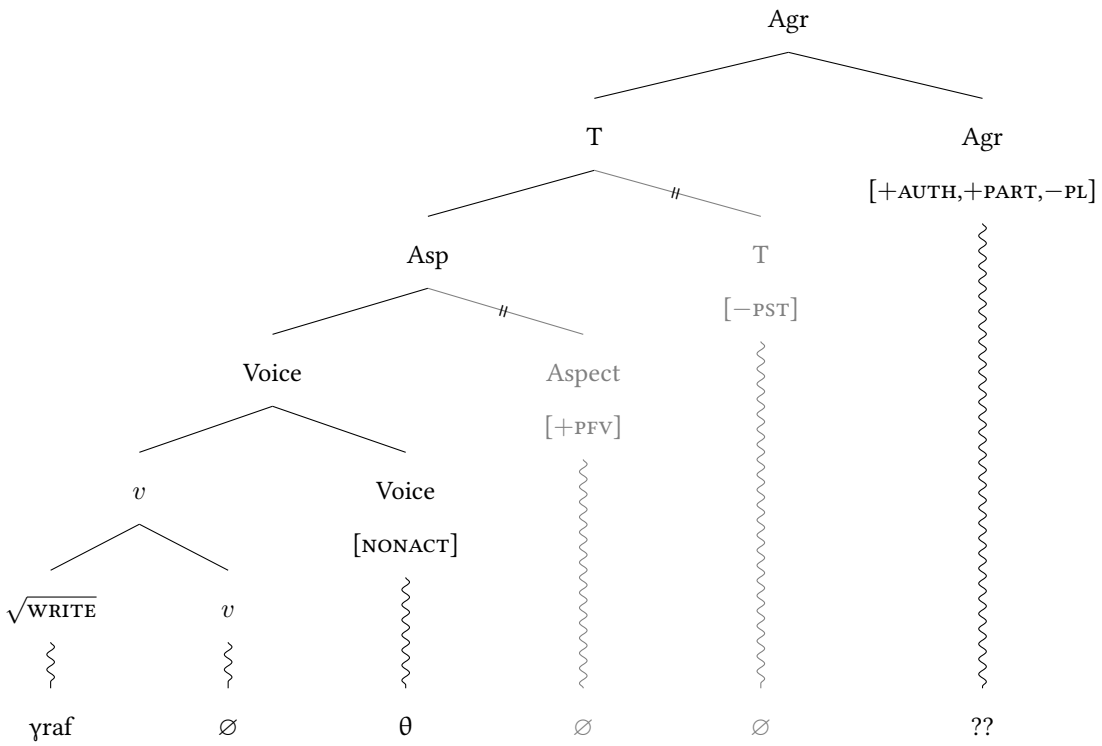
(c) $[+\text{PFV}]_{\text{Asp}} \leftrightarrow /\theta/ \ / \ \text{NONACT}_{\text{Voice}}$ ___

(d) $[+\text{PFV}]_{\text{Asp}} \leftrightarrow /s/$

Thus far, we have demonstrated that *-θ* cannot be regarded as the exponent of Aspect. Determining the exact nature of *-θ* exceeds the scope of the current paper. However, we will explore a hypothetical scenario where it serves as the exponent of Voice in the context of $\text{Aspect}_{[+\text{PFV}]}$, as this is the consensus in the previous literature (Rivero 1990; Merchant 2015; Spyropoulos and Revithiadou 2009; Manzini et al. 2016). Subsequently, we will assess how integrating into Paparounas's framework unfolds. Specifically, we will demonstrate that incorporating the idea of *-θ*

as the exponent of Voice into Paparounas's analysis yields erroneous predictions concerning the distribution of active and non-active endings in Greek, thereby highlighting the limitations of his analysis. In other words, Paparounas's analysis is built upon the specific assumption that *-θ* serves as the realization of Aspect. Having shown the inaccuracy of this assumption renders the remainder of Paparounas's analysis inconsistent with the facts from Greek non-active morphology. To illustrate, let us revisit the example of *ɣraf-θ-o* from Table 1, incorporating the idea that *-θ* is Voice. As demonstrated in the following tree structure, when computing the realization of Agr, the most specific VI is (31b), repeated below from (10). Specifically, this VI requires access to a non-local context, that is, Voice, thus triggering Pruning of Asp and T. The insertion of this VI leads to the prediction, however, that the non-active ending *-ome* will be used. This, however, contradicts the attested usage of the active ending, *ɣraf-θ-o* vs **ɣraf-θ-ome*, undermining Paparounas's analysis of this particular case study.

(30)



(31) *VIs for Agr*

(a) [+AUTH,+PART,-PL] ↔ /omun/ / [NONACT]$_{\text{Voice}}$ [+PST]$_{\text{T}}$___

(b) [+AUTH,+PART,-PL] ↔ /ome/ / [NONACT]$_{\text{Voice}}$

(c) [+AUTH,+PART,-PL] ↔ /a/ / [+PST]$_{\text{T}}$___

(d) [+AUTH,+PART,-PL] ↔ /o/

8 Interim Summary

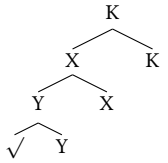
We have investigated several instances where Voice undergoes Pruning, namely, in cases of Root suppletion and verbalizer allomorphy. As per Paparounas's analysis, Pruning of Voice should prevent the insertion of the non-active ending -*ome*. However, our empirical findings challenge this prediction, as we observe the use of this ending despite Voice being pruned in the examined cases. Consequently, the Greek data do not lend support to Paparounas's claim that a pruned node is incapable of conditioning another morphological rule. However, it is untenable for Pruning to operate in a manner that selectively blocks the conditioning of certain rules while permitting others. Therefore, it seems more plausible to conclude that Paparounas's head-adjacency analysis falls short in explaining the morphology of the Greek verb, leaving open the question of if or where Pruning takes place, as well as whether or not it operates as last resort. At the same time, it is notable that while Paparounas's analysis is framed within head-adjacency, it introduces look-ahead issues that contradict the adjacency principles he advocates for.[7] Finally, Paparounas's overall analysis is shown to be inadequate due to the untenable treatment of -θ as Aspect, which undermines the intervention-based analysis of his case studies. In the following section, we prove that such a strict head-adjacency-based analysis is fundamentally flawed, irrespective of whether destructive operations or look-ahead mechanisms are considered.

9 Killing strict head adjacency

In this section, we extend our analysis by demonstrating that even when considering alternative morphological decompositions and relaxing the constraint of destructive Pruning, strict head-adjacency-based frameworks encounter

[7] Under a head-adjacency-based analysis, Pruning can still apply, but only in specific contexts. In particular, we argue that Pruning can only take place when the phonological content of the intervening nodes between the licensor and the licensee has already been inserted. This condition holds true when the insertion of a higher node is computed, and its licensor is a lower node, but not *vice versa*. To further clarify, consider this tree structure:

(i)



Let us assume a scenario where the insertion of the highest node, K, in this structure, is computed. We also assume that phonological insertion proceeds from the Root outwards. Moreover, the most specific VI for this node requires access to the root, the intermediate nodes, X and Y, have undergone phonological insertion, and they both have a zero exponent. In this case, since the exponence of X and Y has already been computed and they are silent, they can undergo Pruning. This enables the licensing of K by the root, as after Pruning, the Root and K become adjacent. Now, consider the reverse scenario where the insertion of the Root is computed. Assume that the most specific VI requires access to the highest node, K, and the intermediate nodes have not undergone phonological insertion. In this case, Pruning cannot take place. This restriction arises because the insertion mechanism cannot recognize at the point of insertion of the Root whether the intermediate nodes will be realized overtly or not. As noted, several of the cases discussed in Paparounas (2024) face such a look-ahead issue.

insurmountable challenges. Consequently, our results unequivocally demonstrate the inadequacy of strict head-adjacency-based frameworks for capturing Greek morphological patterns. We begin by exploring alternative morphological decompositions. Focusing on the *–ome* ending, we consider a proposal by an anonymous reviewer. This alternative posits that *–ome* is conditioned not only by $\text{Voice}_{[\text{NONACT}]}$ and $\text{T}_{[\text{NONPAST}]}$, as suggested by Paparounas (2024), but also by $\text{Asp}_{[\text{-PFV}]}$. This modification accounts for the use of the active ending *-o* rather than *-ome* in the perfective *ɣraf-θ-o* without recourse to intervention (see table below sourced from Paparounas).

ACT.IPFV.NONPST	**ACT.PFV.NONPST**
ɣraf -o	ɣraf -s -o
√write AGR	√write ASP AGR
NACT.IPFV.NONPST	**NACT.PFV.NONPST**
ɣraf -ome	ɣraf -θ -o
√write AGR	√write ASP AGR
ACT.IPFV.PST	**ACT.PFV.PST**
e- ɣraf -a	e- ɣraf -s -a
TNS √write AGR	TNS √write ASP AGR
NONACT.IPFV.PST	**NONACT.PFV.PST**
ɣraf -omun	ɣraf -θ -ik a
√write AGR	√write ASP T AGR

Table 9: First-singular forms of *ɣraf-o* 'write'

Nevertheless, as the same reviewer notes, a strict head-adjacency-based analysis can still not be salvaged due to the cases illustrated by the paradigm below realized by the class of verbs illustrated in Table 8, repeated below as Table 10:

	NONPAST		PAST		
	IMPFV	PFV	IMPFV	PFV	
ACT	eɣir-o	eɣir-o	eɣir-a	eɣir-a	'erect'
	pro-val-o	pro-val-o	pro-e-val-a	pro-e-val-a	'project'
	pro-tin-o	pro-tin-o	pro-tin-a	pro-tin-a	'propose'
NONACT	eɣir-ome	eɣer-θ-o	eɣir-omun	eɣer-θ-ik-a	
	pro-val-ome	pro-vli-θ-o	pro-val-omun	pro-vli-θ-ik-a	
	pro-tin-ome	pro-ta-θ-o	pro-tin-omun	pro-ta-θ-ik-a	

Table 10: Greek suppletive verb stems

We focus on the verb *provalo* 'project.' Just like the rest of the verbs of this class, *provalo* has a Root allomorph, *vli-*, in the context of $\text{Voice}_{[\text{NONACT}]}$ and $\text{Asp}_{[+\text{PFV}]}$, and *val-* is elsewhere, (ii) the verb comprises the formative *-ik* that

appears in the Voice$_{[\text{NONACT}]}$ and Asp$_{[+\text{PFV}]}$.[8] Following Paparounas's reasoning, (i) and (ii) can be captured assuming the following VIs:

(32) (a) $\sqrt{\text{PROJECT}} \leftrightarrow$ /vli/ / ___ [NONACT]$_{\text{Voice}}$ [+PFV]$_{\text{Asp}}$

(b) $\sqrt{\text{PROJECT}} \leftrightarrow$ /val/

(33) PST $\leftrightarrow$ /ik/ / ___ [NONACT]$_{\text{Voice}}$ [+PFV]$_{\text{Asp}}$

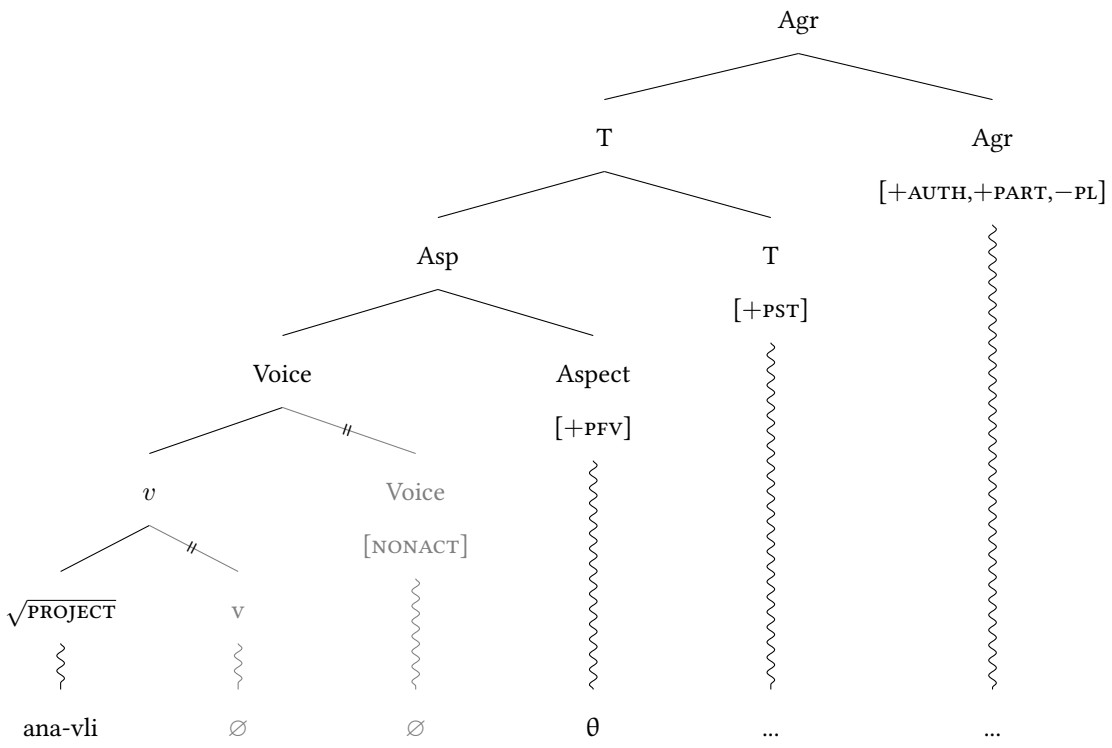
Immediate challenges arise from this approach. Considering -θ as the realization of Aspect$_{[+\text{PFV}]}$, as in the tree structure below, and assuming bottom-up insertion, *vli-* can be inserted; it is first conditioned by Voice. Subsequent Pruning of Voice enables *vli-* to be conditioned by Aspect$_{[+\text{PFV}]}$. However, this scenario precludes the licensing of *-ik* in T; this exponent requires Voice$_{[\text{NONACT}]}$ as a condition for insertion (see 33). Even if we disregard the destructive effect of Pruning, which would prevent the pruned Voice from conditioning another realization rule, *-ik*'s access to Voice is blocked by the overt realization of Asp$_{[+\text{PFV}]}$ by -θ, which intervenes between Tense and Voice.

[8] Paparounas (2024) limits his analysis of *-ik* to instances where it occurs with specific roots, such as *b-ik-a* 'entered,' *vr-ik-a* 'found.' He posits a single *-ik* VI for these cases and argues that it represents the realization of Tense, as exemplified in VI below.

(ii) PST $\leftrightarrow$ /ik/ / { $\sqrt{\text{FIND}}$, $\sqrt{\text{ENTER}}$, $\sqrt{\text{EXIT}}$ } ___

He claims that *-ik* exclusively appears adjacent to the root, disregarding numerous instances, as in the 'regular' cases like *γraf-θ-ik-a* 'be written' from Table 9, or as in *provli-θ-ik-a* from Table 10, where clearly it is not Root adjacent. These cases unequivocally demonstrate that *-ik* is not always directly attached to the root, thus challenging Paparounas's analysis. As an anonymous reviewer points out, one way to resolve this issue is to introduce an additional *-ik* exponent, as in (33). Although we find it unlikely that there exist two accidentally homophonous *-ik*s with the same lexical specification, we assume the hypothetical additional *-ik* in (33), to demonstrate the inadequacies of a head-adjacency-based approach.

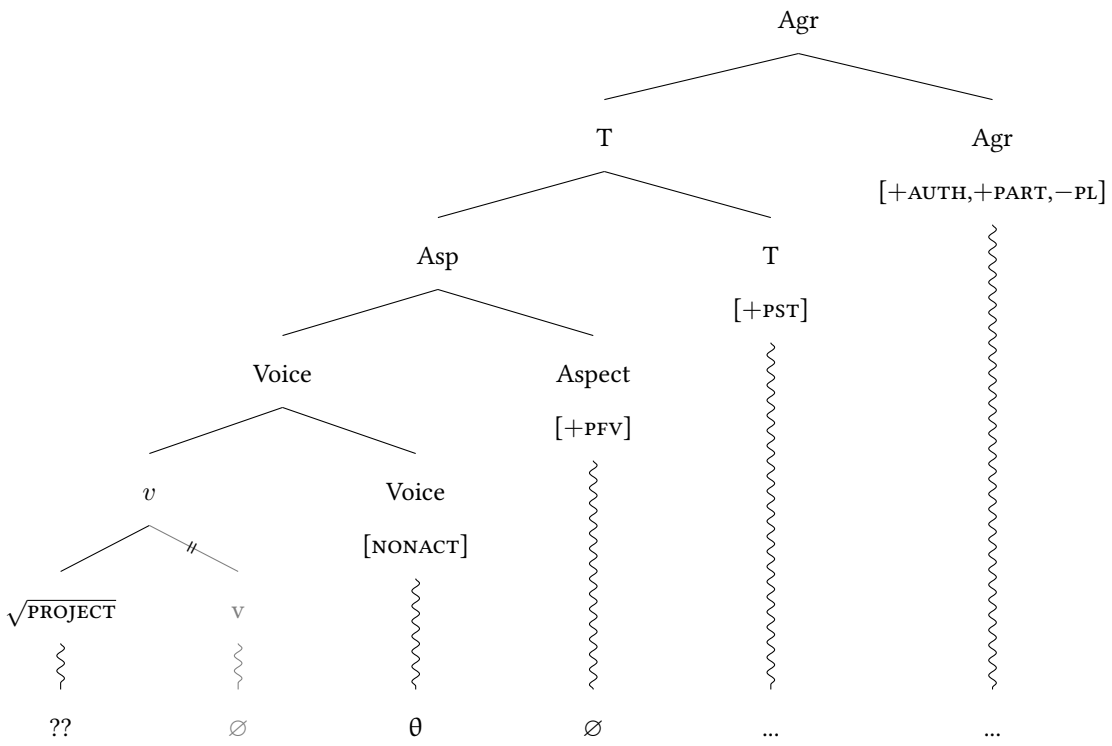
(34)



These issues persist even if we consider -*θ* as the realization of Voice$_{[\text{NONACT}]}$, as this scenario inevitably leads to problems with *vli-*. In particular, as shown below, *vli-* cannot be licensed, as there is no way for it to be conditioned by Aspect$_{[+\text{PFV}]}$ (see 32a) across the -*θ* overtly exponing Voice$_{[\text{NONACT}]}$.[9]

[9] An anonymous reviewer points out that the alternatives presented here may be able to survive if one assumes certain post-syntactic operations. In particular, if Voice undergoes Fusion with Aspect (see Christopoulos and Petrosino 2018, Revithiadou et al. 2019 i.a.), and takes place before VI, then the intervention of -*θ* could be circumvented. Short of such operations, however, both alternatives are bound to fail.

(35)



So, whether or not we allow Pruning to look ahead and be non-destructive, and regardless of whether we analyze *-θ* as Voice or Asp, a head adjacency–based analysis is doomed to failure.

10 Conclusion

We conducted a thorough examination of multiple case studies exploring morphological alternations licensed by various values of Aspect and/or Voice. Our findings led us to challenge fundamental claims made by Paparounas (2024). For instance, our analysis exposed shortcomings in Paparounas's argument regarding Pruning. For instance, as per Paparounas's analysis, a pruned Voice node should prevent the insertion of the non-active ending *-ome*. However, our empirical findings challenge this prediction, as we observe the insertion of this ending despite Voice being pruned in the examined cases. Consequently, the Greek data do not lend support to Paparounas's claim that a pruned node is incapable of conditioning another morphological rule. However, it is untenable for Pruning to operate in a manner that selectively blocks the conditioning of certain rules while permitting others. In light of these deficiencies, none of Paparounas's conclusions regarding Pruning—namely, its purported destructiveness, its application as a last resort in accessing non-local heads, or its timely execution—can be sustained. Thus, it becomes evident that Paparounas's analysis falls short in elucidating the intricacies of Greek verb morphology, necessitating further inquiry into the mechanisms at play. Based on Moskal and Smith (2016), we also demonstrated that in

several cases examined by Paparounas, his analysis encounters a significant look-ahead issue. Finally, our findings indicate that the head-adjacency-based approach is inherently problematic for analyzing Greek verbal morphology. In particular, even disregarding the issues of destructivity and look-ahead, a head-adjacency-based analysis remains inadequate.

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