Little v as a categorizing verbal head: Evidence from Greek

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1. Introduction

#1 Topic: The systematic morphophonological manifestation of a categorizing head \( v \) as evidence for its independent existence in the morphosyntax of verbs.

#2 Case study: Greek provides concrete morphophonological evidence for the existence of a verbalizing head \( v \), distinct from Voice and Aspect.

#3 Facts:
- Greek possesses a series of verbalizing suffixes to derive verbs, e.g. \(-\text{ev}, -\text{iz}, -\text{en}\)

\[
(1) \text{pal-}\text{év-o} \quad < \quad \text{pál-i}
\]

\(\text{fight-VRB-NONPAST.1SG} \) ‘I fight’ \( \quad \text{fight}_f\)-\(\text{SG.NOM/ACC} \) ‘the fight’
A whole inflectional class, i.e. the so-called *Second Conjugation*, exhibits a distinct morphophonological behavior in that its members take a vocalic extension in certain forms (2c-d) and shift the stress away from the root in others (2c) ([Triantafylidis 1988][1941], Mackridge 1985, Joseph & Philippaki-Warburton 1986, Ralli 2005, Holton et al. 2012).

(2)  

<table>
<thead>
<tr>
<th>1st Conjugation</th>
<th>2nd Conjugation</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. γράф-ο ‘write-NONPAST.1SG’</td>
<td>c. αγάπ-ό ‘love-NONPAST.1SG’</td>
</tr>
<tr>
<td>γράφ-is ‘write-NONPAST.2SG’</td>
<td>αγάπ-ά-s ‘love-NONPAST.2SG’</td>
</tr>
<tr>
<td>b. γράφ-s-o ‘write-PFV-NONPAST.1SG’</td>
<td>d. αγάπ-ι-s-o ‘love-?-PFV-NONPAST.1SG’</td>
</tr>
<tr>
<td>γράφ-s-is ‘write-PFV-NONPAST.2SG’</td>
<td>αγάπ-ι-s-is ‘love-?-PFV-NONPAST.2SG’</td>
</tr>
</tbody>
</table>

The verbalizing suffixes are in complementary distribution with the inflectional pattern of 2nd Conjugation.
Claims:

#1| In 2nd Conjugation verbs, the special vocalic element that follows the verb root and post-root stress are the morphophonological effects of the exponence of a verbalizing head \( v \) by means of an abstract/empty vocalic element \(-\emptyset v\).

#2| The verbalizing suffixes \(-ev\), \(-en\), \(-on\), \(-iz\), \(-az\), etc. are also exponents of this verbalizing \( v \) head as allomorphs of \(-\emptyset v\).

#3| This \( v \) head is a simple categorizer, in the sense that (a) it combines with a category specific or an a-categorial root to derive a verb and (b) it is not related to transitivity and/or agentivity or to argument or event structure.
2. What is a verbalizer?


- Lexical categories are not the products of the combination of categorial features with roots in the lexicon.
- Roots are inserted bare in syntax, where they are assigned categories according to the syntactic environment in which they are inserted.
- Categorization is a syntactic process and the result of associating roots with certain categorizers, i.e. nominalizers n, verbalizers v, adjectivizers a.
- A categorizer may change the category of an already categorized element, which is inserted in its complement, e.g. the derivation of deverbal nouns (colonize → colonization).
Syntactic categorization*

✓ Lexical categories derive from fully-fledged syntactic structures made of at least a categorizer and a root.
✓ The content and the configuration of these structures determine the interpretation of the relevant categories:
  ⇒ The position and the status of the root within these structures (bare complement, directly merged with the categorizer, predicate, small clause, location or locatum, instrument, etc.).
  ⇒ The inner morphemes (low applicatives, low causativizers, particles, etc.) and internal argument(s).

Assumptions about the verbalizer v

✓ A categorizing head that ‘makes’ verbs out of (a) roots and root material or (b) nouns and adjectives, in the case of denominal and deadjectival verbs, respectively.
✓ v should be understood as the syntactic head that says “I am a verb” to syntax, morphology and semantics.
✓ v is a different head from Kratzer’s (1996) Voice, a causative-transitive or passive head that hosts the external argument, and may assign accusative case if transitive (as per Burzio’s Generalization).
✓ It has been proposed that v may come in different flavors: vDO, vBECOME, vRESULT, vFIENT, etc. (Folli & Harley 2005, 2007, Embick 2004a; cf. Ramchand 2008). For the purposes of this talk, we will not be concerned with this issue.
Evidence for the morpho(phono)logical manifestation of the categorizer v: Non-systematic

In most cases, only causative morphology and derivational suffixes forming denominal or deadjectival verbs are discussed as the exponents of v.


▶ Greek presents a case study for systematic morphophonological manifestation of v, which has pervasive effects on verbal inflection.
3. Greek verbal inflection: 2nd Conjugation and the morpho(phono)logy of the verbalizer ɔ

- Features of Greek verbal inflection:
  - voice: ±active
  - aspect: ±perfective
  - tense: ±past
  - subject agreement: 1sg, 2sg, 3sg, 1pl, 2pl, 3pl
  - mood: ±imperative

The basic verb forms illustrated by the 1sg form of the 1\textsuperscript{st} conjugation verb *iðrío* ‘I found, establish’:

(3) Active

<table>
<thead>
<tr>
<th></th>
<th>NON IMPERATIVE</th>
<th>IMPERATIVE</th>
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<tbody>
<tr>
<td></td>
<td>NON PAST</td>
<td>PAST</td>
</tr>
<tr>
<td>IMPERFECTIVE</td>
<td>iðrío</td>
<td>íðria</td>
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<tr>
<td>PERFECTIVE</td>
<td>iðríso</td>
<td>íðrisa</td>
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(4) Non Active

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<th>NON IMPERATIVE</th>
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<tbody>
<tr>
<td></td>
<td>NON PAST</td>
<td>PAST</td>
</tr>
<tr>
<td>IMPERFECTIVE</td>
<td>iðríome</td>
<td>íðriómun(a)</td>
</tr>
<tr>
<td>PERFECTIVE</td>
<td>iðrí0ó</td>
<td>íðrí0ika</td>
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</table>
The exponents of the inflectional features are suffixes that attach to the root

(5) a. iðrí-o √iðrí-NONPAST.1SG
    b. íðrí-a √iðrí-PAST.1SG
    c. iðrí-s-o √iðrí-PFV-NONPAST.1SG
    d. íðrí-s-a √iðrí-PFV-PAST.1SG
    e. iðrí-ome √iðrí-NONACT.NONPAST.1SG
    f. iðrí-ómun(a) √iðrí-IMPFV.NONACT.PAST.1SG
    g. iðrí-θ-ó √iðrí-PFV.NONACT-NONPAST.1SG
    h. iðrí-θ-ik-a √iðrí-PFV.NONACT-PFV.PAST-PAST.1SG
Three main inflectional classes (traditionally called *conjugations*), according to some distinct properties of the imperfective non-past forms:

- **1\textsuperscript{st} Conjugation (iðría)**: The stress falls on the root
- **2\textsuperscript{nd} Conjugation** (CLASS A: aγap-á-o ‘I love’, class B: poθó ‘I desire’): Non-root stress; bare non-past agreement suffixes, i.e. without the tense sensitive theme vowel
- **3\textsuperscript{rd} Conjugation** (akúo ‘I listen’, the so-called contracted verbs): Root stress, bare non-past agreement suffixes

(6) Active Tense-Agreement suffixes

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<thead>
<tr>
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<th>NON PAST</th>
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<th>PAST</th>
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<tbody>
<tr>
<td><strong>1\textsuperscript{st CONJUGATION}</strong></td>
<td>1SG -o</td>
<td>2\textsuperscript{nd} &amp; 3\textsuperscript{rd CONJUGATIONS}</td>
<td>2SG -s</td>
</tr>
<tr>
<td>1SG</td>
<td>-o</td>
<td></td>
<td>-a</td>
</tr>
<tr>
<td>2SG</td>
<td>-is</td>
<td></td>
<td>-es</td>
</tr>
<tr>
<td>3SG</td>
<td>-i</td>
<td></td>
<td>-e</td>
</tr>
<tr>
<td>1PL</td>
<td>-ume</td>
<td></td>
<td>-ame</td>
</tr>
<tr>
<td>2PL</td>
<td>-ete</td>
<td></td>
<td>-ate</td>
</tr>
<tr>
<td>3PL</td>
<td>-un(e)</td>
<td></td>
<td>-an(e)</td>
</tr>
</tbody>
</table>
A comparison between the 1st Conjugation non-past suffixes and the past suffixes reveals that they contain a vowel which is sensitive to tense. We assume that this is the exponent of a theme element attached to the T functional head at MS (cf. Oltra-Massuet 2000, Oltra Massuet & Arregi 2005, Embick 2010). 2nd and 3rd Conjugation suffixes do not contain such an element (= bare suffixes).
(7) Non-past Imperfective

<table>
<thead>
<tr>
<th></th>
<th>1&lt;sup&gt;ST&lt;/sup&gt; CONJUGATION</th>
<th>2&lt;sup&gt;ND&lt;/sup&gt; CONJUGATION</th>
<th>3&lt;sup&gt;RD&lt;/sup&gt; CONJUGATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1SG</td>
<td>iôri-o</td>
<td>ayap-á-o / ayap-ó</td>
<td>poθ-ó</td>
</tr>
<tr>
<td>2SG</td>
<td>iôri-is</td>
<td>ayap-á-s</td>
<td>poθ-i-s</td>
</tr>
<tr>
<td>3SG</td>
<td>iôri-i</td>
<td>ayap-á-i</td>
<td>poθ-i</td>
</tr>
<tr>
<td>1PL</td>
<td>iôri-ume</td>
<td>ayap-á-me / ayap-ú-me</td>
<td>poθ-ú-me</td>
</tr>
<tr>
<td>2PL</td>
<td>iôri-ete</td>
<td>ayap-á-te</td>
<td>poθ-í-te</td>
</tr>
<tr>
<td>3PL</td>
<td>iôri-un(e)</td>
<td>ayap-á-n(e) / ayap-ú-n(e)</td>
<td>poθ-ú-n(e)</td>
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</table>

(8) Past Imperfective

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<tr>
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<th>1&lt;sup&gt;ST&lt;/sup&gt; CONJUGATION</th>
<th>2&lt;sup&gt;ND&lt;/sup&gt; CONJUGATION</th>
<th>3&lt;sup&gt;RD&lt;/sup&gt; CONJUGATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1SG</td>
<td>iôri-a</td>
<td>ayap-ús-a</td>
<td>ayap-ay-a*</td>
</tr>
<tr>
<td>2SG</td>
<td>iôri-es</td>
<td>ayap-ús-es</td>
<td>ayap-ay-es*</td>
</tr>
<tr>
<td>3SG</td>
<td>iôri-e</td>
<td>ayap-ús-e</td>
<td>ayap-ay-e*</td>
</tr>
<tr>
<td>1PL</td>
<td>iôri-ame</td>
<td>ayap-ús-ame</td>
<td>ayap-ay-ame*</td>
</tr>
<tr>
<td>2PL</td>
<td>iôri-ate</td>
<td>ayap-ús-ate</td>
<td>ayap-ay-ate*</td>
</tr>
<tr>
<td>3PL</td>
<td>iôri-an / iôri-ane</td>
<td>ayap-ús-an(e) / ayap-ay-an* / ayap-ay-ane*</td>
<td>poθ-ús-an(e)</td>
</tr>
</tbody>
</table>

* Southern Greek only alternative formation

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(9) Non-past Perfective

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<tr>
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<tbody>
<tr>
<td></td>
<td>CLASS A</td>
<td>CLASS B</td>
<td></td>
</tr>
<tr>
<td>1SG</td>
<td>iðrí-s-o</td>
<td>ayáp-i-s-o</td>
<td>poθ-í-s-o</td>
</tr>
<tr>
<td>2SG</td>
<td>iðrí-s-is</td>
<td>ayáp-i-s-is</td>
<td>poθ-í-s-is</td>
</tr>
<tr>
<td>3SG</td>
<td>iðrí-s-i</td>
<td>ayáp-i-s-i</td>
<td>poθ-í-s-i</td>
</tr>
<tr>
<td>1PL</td>
<td>iðrí-s-ume</td>
<td>ayáp-i-s-ume</td>
<td>poθ-í-s-ume</td>
</tr>
<tr>
<td>2PL</td>
<td>iðrí-s-ete</td>
<td>ayáp-i-s-ete</td>
<td>poθ-í-s-ete</td>
</tr>
<tr>
<td>3PL</td>
<td>iðrí-s-un(e)</td>
<td>ayáp-i-s-un(e)</td>
<td>poθ-í-s-un(e)</td>
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(10) Past Perfective

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<tr>
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<td>1SG</td>
<td>iðrí-s-a</td>
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<td>2SG</td>
<td>iðrí-s-es</td>
<td>ayáp-i-s-es</td>
<td>póθ-i-s-es</td>
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</tr>
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<td>1PL</td>
<td>iðrí-s-ame</td>
<td>ayáp-i-s-ame</td>
<td>póθ-i-s-ame</td>
</tr>
<tr>
<td>2PL</td>
<td>iðrí-s-ate</td>
<td>ayáp-i-s-ate</td>
<td>póθ-i-s-ate</td>
</tr>
<tr>
<td>3PL</td>
<td>iðrí-s-an / iðrí-s-ane</td>
<td>ayáp-i-s-an / ayáp-i-s-ane</td>
<td>póθ-i-s-an / poθ-i-s-ane</td>
</tr>
</tbody>
</table>
Distinct properties of second conjugation

- Non-root stress in non-past imperfective forms.
- Bare non-past agreement suffixes in non-past imperfective forms.
- A vowel appears between the bare non-past agreement suffixes and the root in non-past imperfective forms, e.g. *ayap-á-o / ayap-ó*; this vowel is not the tense sensitive theme vowel we find in 1st conjugation ‘full’ agreement suffixes.
- A vowel appears as a vocalic extension of the root in perfective forms (normally */i/* with some lexically conditioned exceptions; see below), e.g., *ayap-í-s-o*.
- The past imperfective forms contain the formative *-us*, which attracts the stress and creates a stress pattern that obliterates the canonical APU stress pattern of past forms in Greek.

**Proposal:** The distinct properties of 2nd conjugation verbs listed above are related to each other.
More specifically:

- The vowel that appears between the root and the bare agreement suffixes in the non-past imperfective forms and the vocalic extension in the perfective forms manifest the same position in the morphosyntactic structure.
- Technically speaking, they are surface manifestations of an abstract vocalic element -\(\emptyset\)\(v\).
- This abstract vowel may be realized with a different vowel, depending on lexical and morphophonological conditions imposed by neighbouring elements, or it may be a silent, ghost-like element.
- The distinct stress patterns of 2\textsuperscript{nd} conjugation verbs are the effects of the interplay between the mode of surface manifestation of this abstract vowel and the rules that regulate stress-assignment in verbs in Greek.

\[\textbf{Hypothesis:}\] The \textbf{empty vocalic element} \(\emptyset\)\(v\) in 2\textsuperscript{nd} conjugation verbs is the morphological exponent of a categorizing verbal head \(v\), i.e. it is a \textbf{verbalizer}.

\begin{itemize}
  \item \textbf{Issue:} Is there any evidence for the existence of this \(v\) head in 1\textsuperscript{st} conjugation verbs?
  \item \textbf{Answer:} Yes, the suffixes which are traditionally described as derivational suffixes that derive verbs from nouns, adjectives and even adverbs.
\end{itemize}
4. Greek verbal derivational suffixes as exponents of \( \nu \)

**Observations:**

- Many Greek verbs contain a piece of morphology that unambiguously signals their stems as verbal.
- This piece of morphology exists in addition to the presence of Voice, Aspect, Tense and Agreement morphology.
- This morphology includes the so-called ‘verbal derivational suffixes’ (Triantafyllidis 1988[1941], Ralli 2005, Holton et al. 2012), which have been traditionally described as forming verbs from nouns, adjectives or adverbs: -ev, -iz, -(i)az, -on, -ar, -en.

These suffixes are verbalizers, i.e. morphological exponents of a \( \nu \) head. (Cf. Alexiadou & Anagnostopoulou 2004 et seq., Alexiadou et al. 2006, Embick 2000)
(11)  **-ev**

a. Root:  \( \sqrt{}pal \)-  
Noun:  pál-i  
Verb:  pal-év-o  

\[ \text{fight}^{\text{NOM/ACC.SG}} \quad \text{‘fight’} \]
\[ \text{fight}^{\text{VRB-NONPAST.1SG}} \quad \text{‘I fight’} \]

b. Root:  \( \sqrt{}ðiskol \)-  
Adjective:  ðískol-os  
Verb:  ðiskol-év-o  

\[ \text{difficult}^{\text{M.SG.NOM}} \quad \text{‘difficult’} \]
\[ \text{difficult}^{\text{VRB-NONPAST.1SG}} \quad \text{‘I make X / become difficult’} \]

c. Root:  \( \sqrt{}kont \)-  
Adverb:  kontá  
Verb:  kont-év-o  

\[ \text{near, close} \quad \text{‘near, close’} \]
\[ \text{near}^{\text{VRB-NONPAST.1SG}} \quad \text{‘I am close to X, I approach’} \]
(12)  -en

a. Root: √pliθ-
   Noun: pliθ-os       crowdₘ-NOM.SG      ‘crowd’
   Verb: pliθ-én-o    crowd-VRB-NONPAST.₁SG ‘I multiply / become more’

b. Root: √ksanθ-
   Adjective: ksanθ-ós       blond-ₘ.SG.NOM    ‘blond’
   Verb: ksanθ-én-o       blond-VRB-NONPAST.₁SG ‘I make X / become blond’

(13)  -ar

a. Root: √skits-
   Noun: skits-o       sketchₙ-NOM/ACC.SG ‘sketch, drawing’
   Verb: skits-ár-o    syllable-VRB-NONPAST.₁SG ‘I sketch I draw’

b. Derivations from non-native roots or material
   rilaks-ár-o ‘I relax’ (< relax), gugl-ár-o ‘I search something in Google’
(14) -on

a. Root: √klið-
   Noun: klið-í key_N-NOM/ACC.SG ‘key’
   Verb: klið-ón-o lock-VRB-NONPAST.1SG ‘I lock’

b. Root: √erim-
   Adjective: érim-os deserted-M.SG.NOM ‘deserted’
   Verb: erim-ón-o deserted-VRB-NONPAST.1SG ‘I make X / become deserted’

c. Root: √sim-
   Adverb: simá ‘near’
   Verb: sim-ón-o near-VRB-NONPAST.1SG ‘I come close’
(15) **-iz**

a. Root: \( \sqrt{\text{silav}} \)
   - Noun: silav-í syllable\(_f\)-NOM/ACC.SG ‘syllable’
   - Verb: silav-íz-o syllable-\textbf{VRB}-NONPAST.1SG ‘I spell, divide a word in syllables’

b. Root: \( \sqrt{\text{kaθar}} \)
   - Adjective: kaθar-ós clean-M.SG.NOM ‘deserted’
   - Verb: kaθar-íz-o clean-\textbf{VRB}-NONPAST.1SG ‘I clean, I become clean’

c. Root: \( \sqrt{\text{paramer}} \)
   - Adverb: parámera ‘aside’
   - Verb: paramer-íz-o aside-\textbf{VRB}-NONPAST.1SG ‘I set aside’

d. Sound-mimic verbs
(16)  -(i)az

a. Root: √trom-
   Noun: tróm-os  terror\textsubscript{M}-NOM.SG  ‘terror, fear’
   Verb: trom-áz-o  terror-\textit{VRB}-NONPAST.1SG  ‘I terrify / I become terrified’

b. Root: √etim-
   Adjective: étim-os  ready-M.SG.NOM  ‘deserted’
   Verb: etim-áz-o  ready-\textit{VRB}-NONPAST.1SG  ‘I prepare, I get X ready’

c. Root: √plisi-
   Adverb: plisión  ‘near’
   Verb: plisi-áz-o  near-\textit{VRB}-NONPAST.1SG  ‘I come close, I approach’

d. Root: √anev-
   Verb: anev-én-o  go up-IMPFV-NONPAST.1SG  ‘I come/climb/go up’
   Verb: anev-áz-o  go up-\textit{VRB}-NONPAST.1SG  ‘I lift’
Properties of these suffixes and consequently of the v head

#1 They coexist with and thus are independent of Voice, Aspect, Tense and Agreement morphology:

\[
\begin{align*}
(17) & \quad \text{a. } \text{ðiskol-év-o} & \sqrt{\text{ðiskol-VRB-NONPAST.1SG}} \\
& \quad \text{b. } \text{ðiskól-ev-a} & \sqrt{\text{ðiskol-VRB-PAST.1SG}} \\
& \quad \text{c. } \text{ðiskol-év-s-o} > \text{ðiskol-ép*-s-o} & \sqrt{\text{ðiskol-VRB-PFV-NONPAST.1SG}} \\
& \quad \text{d. } \text{ðiskól-ev-s-a} > \text{ðiskól-ep-s-a} & \sqrt{\text{ðiskol-VRB-PFV-PAST.1SG}} \\
& \quad \text{e. } \text{ðiskol-év-ome} & \sqrt{\text{ðiskol-VRB-NONACT.NONPAST.1SG}} \\
& \quad \text{f. } \text{ðiskol-ev-ómun(a)} & \sqrt{\text{ðiskol-VRB-IMPFV.NONACT.PAST.1SG}} \\
& \quad \text{g. } \text{ðiskol-ev-θ-ó} > \text{ðiskol-ef-t-ó} & \sqrt{\text{ðiskol-VRB-PFV.NONACT-NONPAST.1SG}} \\
& \quad \text{h. } \text{ðiskol-év-θ-ik-a} > \text{ðiskol-éf-t-ik-a} & \sqrt{\text{ðiskol-VRB-PFV.NONACT-PFV.PAST-PAST.1SG}}
\end{align*}
\]

*Due to manner dissimilation and voicing assimilation

#2 It is impossible to form verbs from the relevant roots without these suffixes.

#3 They are obligatory (typically the suffix -ar, but also -iz and -on) when coining new verbs, e.g. from non-native roots, sounds, etc.

#4 The verbs with these suffixes obligatorily follow the 1st Conjugation inflectional pattern.
Verbalizing suffixes are neutral with respect to Aktionsart / inner aspect:

(18)  -(i)az
   a. apusi-áz-o ‘be absent’: a state
       (Noun: apusía₉ ‘absence’)
   b. nist-áz-o ‘be / get sleepy’: a state or a change of state
       (Noun: nísta₉ ‘sleepiness’)
   c. isix-áz-o ‘be / become still or inert, relax’: a state or a change of state
       (Adjective: ísix-os/-i/-o ‘quiet’)

vs.

   d. sxoli-áz-o ‘I comment’: an activity
       (Noun: sxólio₉ ‘comment’)
   e. anev-áz-o ‘I lift’: an activity or an accomplishment
       (Verb: anev-én-o ‘I climb/come/go up’)

25 | Little v Workshop
Verbalizing suffixes do not encode transitivity (as we would expect if v and Voice were conflated) and they are not related to the existence of an external argument (Alexiadou & Anagnostopoulou 2004 et seq.). Transitivity is also not correlated with the choice of the verbalizing suffix.

Transitive (causative) – intransitive (anticausative/inchoative) alternations with the suffix and without passive morphology (see also Alexiadou & Anagnostopoulou 2004, Alexiadou et al. 2006)

(19) **-en:** farđéno ‘I make X / become wide or wider’ (Adjective: farđ-ís ‘wide’)
   a. **causative**
      i ěryátes fardoén-un to ḥrome
      the worker-PL.NOM wide-VRB-NONPAST.3PL the road-SG.ACC
      ‘The workers make the road wid(er).’
   b. **anticausative**
      o ḥrómos farđéni
      the road-SG.ACC wide-VRB-NONPAST.3SG
      ‘The road becomes wid(er).’
(20) **-on:** payóno ‘I freeze X, I become cold / frozen’ (Noun: páγ-os ‘iceₘ’)

a. **causative**

\[
\text{o níkos páγ-o*-s-e ta psárja} \\
\text{the Nikos-NOM ice-VRB-PFV-PAST.3SG the fish-PL.ACC}
\]

‘Nick froze the fish.’

*due to n-deletion before an s-initial suffix

b. **anticausative**

\[
\text{to neró páγ-o-s-e} \\
\text{the water-SG.NOM ice-VRB-PFV-PAST.3SG}
\]

‘The water became frozen’

(21) **-iz:** γjalízo ‘I shine, I polish’ (Noun: γjal-ι ‘glassₙ’)

a. **causative**

\[
\text{o fantáros γjal-íz-i tis bótes} \\
\text{the soldier-SG.NOM glass-VRB-NONPAST.3SG the boot-PL.ACC}
\]

‘The soldier is polishing the boots.’

b. **anticausative**

\[
\text{i bótes γjal-íz-un} \\
\text{the boot-PL.NOM glass-VRB-NONPAST.3PL}
\]

‘The boots are shining.’
(22) **-ev:** ḍiskolévo ‘I make X / become difficult’ (Adjective: ḍískol-os ‘difficult’)
   a. *causative*
      i kai̯iyítēs ḍiskól-ep-s-an tis eksetāsís
      the professor-PL.NOM difficult-VRB-PFV-PAST.3PL the exam-PL.ACC
      ‘The professors made the exams (more) difficult.’
   b. *anticausative*
      i eksetasis ḍiskól-ep-s-an fetos
      the exams-PL.NOM difficult-VRB-PFV-PAST.3PL this year
      ‘The exams became/were (more) difficult this year.’

(23) **-ar:** frikáro ‘I freak (X) out, I horrify / become horrified’
   a. *causative*
      aftí i katástasi me frik-ār-i
      this the situation-SG.NOM CL:1-SG.ACC freak-VRB-NONPAST.1SG
      ‘This situation freaks me out.’
   b. *anticausative*
      o nikos frik-ar-e
      the Nikos-NOM freak-VRB-PAST.3SG
      ‘Nikos freaked out.’
✓ Same suffix, different argument structures:

(24)  -(i)az

a. Transitive only, agentive
   steyázo  ‘I cover, I provide shelter’ (Noun: stéy-i ‘roof’)

b. Transitive only, psych
   xalvaðázo  ‘I covet’ (Noun: xalvá-s ‘halva’)

c. Ergative alternation
   aðjázo  ‘I (become) empty’ (Adjective: áðj-os/-a/-o ‘empty’)

d. Unergative
   piyázo  ‘I spring out’ (Noun: piy-í ‘spring’)

e. Unaccusative
   xломjázo  ‘I become pale’ (Adjective: xлом-ós/-i/-o ‘pale’)

29 | Little v Workshop
The choice of the verbalizing suffix is a morphological process: The actual form depends on the root it attaches to and not on the structure per se.

✓ Same suffix, different structures:

(25) -on

a. Denominal, root as possessed property
   pliγóno ‘I wound X’ (Noun: pliγ-i ‘wound$^{f}$’)

b. Denominal, root as instrument
   maxerόno ‘I stub X’ (Noun: maxér-i ‘knife$^{f}$’)

c. Denominal, root as resulting state
   payόno ‘I make X / become frozen’ (Noun: pάγ-os ‘ice$^{m}$’)

d. Deadjectival, root as resulting state
   erimόno ‘I make X / become deserted’ (Adj: érim-os/-i/-o ‘deserted’)

e. Deadverbial, root as location, resulting state
   simόno ‘I approach’ (Adverb: simá ‘near’)

30 | Little $v$ as a categorizing verbal head
Same structure, different suffix:

(26) Deadjectival, ergative alternation, root as resulting state:

a. **-on**
   erimóno  ‘I make X / become deserted’  (Adj: érim-os/-i/-o ‘deserted’)

b. **-en**
   vaθéno  ‘I make X / become deep’  (Adj: vaθ-ís/ja/-i ‘deep’)

c. **-(i)az**
   aďjázo  ‘I (become) empty’  (Adj: áď-os/-a/-o ‘empty’)

d. **-ev**
   óískolévo  ‘I make X / become difficult’  (Adj: óískol-os/-i/-o ‘difficult’)

e. **-iz**
   nostimízo  ‘I make X / become tasty’  (Adj: nóstim-os/-i/-o ‘tasty’)

✓
Greek verbal derivational suffixes are exponents of a verbalizing head \( v \).

Their properties provide evidence for the assumption that this head is distinct from Voice and it is not correlated, at least directly, with agentivity, transitivity and inner aspect / Aktionsart.
S. The Greek verbalizer: One syntactic head, many forms

Putting the facts together:

✓ Verbs with verbal derivational suffixes obligatorily follow the 1st conjugation pattern.
✓ 2nd conjugation verbs contain an empty vocalic element, which is responsible for some of the distinct properties of this conjugation (non-root stress, vocalic extensions, etc.).

⇒ The abstract vocalic slot and the verbal derivational suffixes compete for the same morphosyntactic position.
⇒ They are exponents of the verbalizing head v.
**Residue**: There is a small class of verbs with no verbalizing morphology:

<table>
<thead>
<tr>
<th>1st Conjugation</th>
<th>3rd Conjugation</th>
</tr>
</thead>
<tbody>
<tr>
<td>yráf-o ‘I write X’</td>
<td>ké-o ‘I burn (X)’</td>
</tr>
<tr>
<td>tréx-o ‘I run’</td>
<td>akú-o ‘I hear (X), I listen to X’</td>
</tr>
<tr>
<td>févy-o ‘I leave’</td>
<td>tró-o ‘I eat X’</td>
</tr>
</tbody>
</table>

- They belong to the 1st or to the 3rd conjugation.
- They are few in number, of relatively high frequency in use, exclusively of Ancient Greek stock and they form a closed-class.

- Two speculations:
  - Their roots are inherently verbal (a rather doubtful hypothesis)
  - Their roots contain a morphophonologically inert verbalizer, i.e. -∅
Summing up: The exponents of \( v \) in Greek

(28) a. \( v \leftrightarrow -\,\bar{v} \) / [second conjugation] 

b. \( v \leftrightarrow -(i)az \) / \{\sqrt{xlom}-, ...\} 
   -en / \{\sqrt{plat}-, ...\} 
   -ar / \{\sqrt{skits}-, ...\} 
   -iz / \{\sqrt{nostim}-, ...\} 
   -on / \{\sqrt{erim}-, ...\} 

c. \( v \leftrightarrow -\emptyset \) / elsewhere
6. The exponents of $v$ and the stress patterns in verb forms

- Non-past imperfective forms:
  - 1\textsuperscript{st} conjugation and 3\textsuperscript{rd} conjugation verbs exhibit root-stress.
  - 2\textsuperscript{nd} conjugation verbs exhibit non-root stress.
  - However, 1\textsuperscript{st} conjugation verbs with an overt verbalizer exhibit non-root stress: stress falls on the verbalizer.

<table>
<thead>
<tr>
<th>(29)</th>
<th>1\textsuperscript{ST} CONJUGATION</th>
<th>2\textsuperscript{ND} CONJUGATION</th>
<th>3\textsuperscript{RD} CONJUGATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$v \leftrightarrow \emptyset$</td>
<td>$v \leftrightarrow -ev$</td>
<td>CLASS A</td>
</tr>
<tr>
<td>1SG</td>
<td>iðrí-o</td>
<td>pal-év-o</td>
<td>aɣap-á-o / aɣap-ó</td>
</tr>
<tr>
<td>2SG</td>
<td>iðrí-is</td>
<td>pal-év-is</td>
<td>aɣap-á-s</td>
</tr>
<tr>
<td>3SG</td>
<td>iðrí-i</td>
<td>pal-év-i</td>
<td>aɣap-á-i</td>
</tr>
<tr>
<td>1PL</td>
<td>iðrí-ume</td>
<td>pal-év-ume</td>
<td>aɣap-á-me / aɣap-ú-me</td>
</tr>
<tr>
<td>2PL</td>
<td>iðrí-ete</td>
<td>pal-év-ete</td>
<td>aɣap-á-te</td>
</tr>
<tr>
<td>3PL</td>
<td>iðrí-un(e)</td>
<td>pal-év-un(e)</td>
<td>aɣap-á-n(e) / aɣap-ú-n(e)</td>
</tr>
</tbody>
</table>
6.1. Stress assignment in Greek verb forms

- Greek is a language with lexically-encoded stress (Ralli & Touratzidis 1992, Revithiadou 1999, 2007). This means that vocabulary items (roots and affixes alike) are lexically specified to carry information regarding the position of stress.

✓ A root may be specified to carry stress on itself or impose stress on a neighbouring morpheme:

\[(30)\]
- a. kumbáros /kumbár-os/ best man_{m-SG.NOM}
- b. uranós /uran^os/ sky_{m-SG.NOM}

✓ A suffix may be accented or pre-accenting; If inflectional, it can reveal its inherent accentual preferences only when combined with accentless roots:

\[(31)\]
- a. anθrópu /anθrop^-u/ man_{m-SG.GEN}
- b. meγéθus /meγe^-us/ size_{n-SG.GEN}
- c. meγεθóν /meγeθ-ón/ size_{n-PL.GEN}
Otherwise, it loses stress to an accented root:

(32) a. kumbáru /kumbár-^u/
    b. uranú /uran^root-^sfxu/

Root accent prevails.

Unlike nouns, verbal roots are accentless (Revithiadou 1999) and quite often combine with pre-accenting or accented inflectional suffixes. Stress exhibits mobility in the verbal paradigm but not always in the nominal one:

(33) stress mobility in the verbal paradigm
    a. ďjaváž-o   PU read-NONPAST.1SG
    b. ďjávaz-a   APU read-PAST.1SG

(34) stress immobility in the nominal paradigm
    a. kumbáros   PU best man-SG.NOM
    b. kumbáru    PU best man-SG.GEN
V vs. N stress differences explained:

- Stress mobility in verb forms is due to the different accentual status of verbal inflections:

  ✓ Non-past inflections are all pre-accenting causing stress to surface on the final syllable of the element they attach to:

  (35) őjavázo, -is, -i... /őjavaz-^o, -^is, -^i/
      read-NONPAST.1SG, -NONPAST.2SG, -NONPAST.3SG

  ✓ APU stress is affiliated with the past either because past inflections have been (traditionally) argued to require stress to surface on the APU syllable (Warburton 1970, Babiniotis 1972, Ralli 2005) or because a stressed proclitic or prefixal element is present in the past form (see van Oostendorp 2007, 2012 and Spyropoulos & Revithiadou 2009, 2011, respectively).

  (36) őjavaz-a, -es, -e... /őjavaz-a, -es, -es/
      read-PAST.1SG, -PAST.2SG, -PAST.3SG
6.2. Deriving the differences between 1\textsuperscript{st} and 2\textsuperscript{nd} conjugation stress patterns

- Non-past agreement suffixes are pre-accenting: The stress falls on the last syllable of the element they attach to.
- This element consists of the root and the $v$.
  - When $v \Leftrightarrow -\emptyset$, the stress falls on the last syllable of the root

(37) $/\text{ðjavaz-∅-}^{-o}/$ read-$v$-NONPAST.1SG $\rightarrow$ ɵjavaz-o root stress

  - When $v \Leftrightarrow \{-ev, -on, -iz, -(i)az, -ar, -en\}$, stress falls on the verbalizing suffix

(38) $/\text{pal-ev-}^{-o}/$ fight-$v$-NONPAST.1SG $\rightarrow$ pal-év-o non-root stress

  - When $v \Leftrightarrow -\emptyset v$, stress falls on the element that materializes the empty vocalic slot

(39) $/\text{ayap-}^{-o}/$ love-$v$-NONPAST.1SG $\rightarrow$ aγap-á-o non-root stress

PU stress because non-past inflection is pre-accenting.
The distinct stress pattern of non-past imperfective forms of 2\textsuperscript{nd} conjugation verbs is not exceptional but the result of the exponence of their morphosyntactic structure, the stress properties of the relevant exponents and the rules that govern stress assignment in Greek verbs.
7. The surface manifestations of the exponent -\( v \)

7.1. Default: -\( v \) → \( /i/ \)

- It appears in perfective forms:

<table>
<thead>
<tr>
<th>(41)</th>
<th>ACTIVE</th>
<th>NON ACTIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CLASS A</td>
<td>CLASS B</td>
</tr>
<tr>
<td>PAST</td>
<td>aγap( i )-s-o</td>
<td>poθ( i )-s-o</td>
</tr>
<tr>
<td>NON PAST</td>
<td>aγάp( i )-s-a</td>
<td>pόθ( i )-s-a</td>
</tr>
</tbody>
</table>
It also pops up in deverbal nouns:

(42)   CLASS A

<table>
<thead>
<tr>
<th></th>
<th>root</th>
<th>perfective verb form</th>
<th>deverbal noun</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>xtip-</td>
<td>xtip-i-s-o</td>
<td>xtíp-i-ma</td>
</tr>
<tr>
<td></td>
<td>‘hit’</td>
<td>hit-v-PFV-NONPAST.1SG</td>
<td>‘hit, tolling’</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td>krat-</td>
<td>krat-i-s-o</td>
<td>krát-i-ma</td>
</tr>
<tr>
<td></td>
<td>‘hold’</td>
<td>hold-v-PFV-NONPAST.1SG</td>
<td>‘keeping, steadiness’</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>krát-i-si</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>‘arrest, booking’</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c.</td>
<td>kol-</td>
<td>kol-i-s-o</td>
<td>kól-i-ma</td>
</tr>
<tr>
<td></td>
<td>‘stick’</td>
<td>stick-v-PFV-NONPAST.1SG</td>
<td>‘sticking, obsession’</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>kse-kol-i-mós</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>‘cutting loose’</td>
</tr>
</tbody>
</table>
(43) **CLASS B**

<table>
<thead>
<tr>
<th>root</th>
<th>verb</th>
<th>deverbal noun</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. ċimiūry-</td>
<td>čimiūry-i-s-o</td>
<td>čimiūry-i-ma</td>
</tr>
<tr>
<td>‘create’</td>
<td>create-ν-PFV-NONPAST.1SG</td>
<td>‘creation’</td>
</tr>
<tr>
<td>b. aōik-</td>
<td>aōik-i-s-o</td>
<td>aōik-i-ma</td>
</tr>
<tr>
<td>‘unjust’</td>
<td>unjust-ν-PFV-NONPAST.1SG</td>
<td>‘offence’</td>
</tr>
<tr>
<td>c. θeór-</td>
<td>θeór-i-s-o</td>
<td>θeór-i-ma</td>
</tr>
<tr>
<td>‘consider’</td>
<td>consider-ν-PFV-NONPAST.1SG</td>
<td>‘theorem’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>θeór-i-si</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‘point of view’</td>
</tr>
</tbody>
</table>
It appears in non-active imperfective forms of the Class A verbs (and of the Class B verbs that may follow this pattern as a variant):

<table>
<thead>
<tr>
<th>(44)</th>
<th>NON PAST</th>
<th>PAST</th>
</tr>
</thead>
<tbody>
<tr>
<td>1SG</td>
<td>aɣap-i-eme → aɣap-j-éme</td>
<td>aɣap-i-omun(a) → aɣap-j-ómun(a)</td>
</tr>
<tr>
<td>2SG</td>
<td>aɣap-i-ese → aɣap-j-ése</td>
<td>aɣap-i-osun(a) → aɣap-j-ósun(a)</td>
</tr>
<tr>
<td>3SG</td>
<td>aɣap-i-ete → aɣap-j-éte</td>
<td>aɣap-i-otan(e) → aɣap-j-ótan(e)</td>
</tr>
<tr>
<td>1PL</td>
<td>aɣap-i-omaste → aɣap-j-ómaste</td>
<td>aɣap-i-omastan → aɣap-j-ómastan</td>
</tr>
<tr>
<td>2PL</td>
<td>aɣap-i-osaste/ → aɣap-j-ómsaste/ aɣap-i-este → aɣap-j-éstte</td>
<td>aɣap-i-osastan → aɣap-j-ósastan</td>
</tr>
<tr>
<td>3PL</td>
<td>aɣap-i-unde → aɣap-j-únde</td>
<td>aɣap-i-ondan / aɣap-i-ondusan → aɣap-j-óndan / aɣap-j-óndusan</td>
</tr>
</tbody>
</table>
**Important:** The -\(\text{v}v\) takes the value of /i/, which is subsequently subject to semivocalization due to the presence of a following vowel. As a result, its stress migrates to the vocalic peak of the syllable to which the surface [j] belongs to:

\[
\begin{array}{c}
* \\
\vdash | \\
\sigma \sigma \\
| | \\
V V \\
\end{array} \quad \rightarrow \quad \begin{array}{c}
* \\
\vdash | \\
\sigma \sigma \\
| | \\
V V \\
\end{array}
\]

/\text{a}\text{y}\ a\text{p}\text{i}\text{e}\text{m}\text{e}/ \quad \rightarrow \quad \text{a}\text{y}\ a\text{p}\text{i}\text{é}\text{m}\text{e} \quad \text{[a}\text{y}\ a\text{p}\text{j}\text{é}\text{m}\text{e}]}

Although stress should have been pronounced on /i/, it is forced to be realized/pronounced on neighbouring /e/ because /i/ loses its vocalic peak status.
7.2. Lexically defined specification

#1 Class A verbs specify the abstract vowel as /a/ in active imperfective non-past forms:

(46)

<table>
<thead>
<tr>
<th>Number</th>
<th>Base Form</th>
<th>Derived Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>1SG</td>
<td>ayap-ɣv-o</td>
<td>ayap-á-o</td>
</tr>
<tr>
<td>2SG</td>
<td>ayap-ɣv-s</td>
<td>ayap-á-s</td>
</tr>
<tr>
<td>3SG</td>
<td>ayap-ɣv-i</td>
<td>ayap-á-i</td>
</tr>
<tr>
<td>1PL</td>
<td>ayap-ɣv-me</td>
<td>ayap-á-me</td>
</tr>
<tr>
<td>2PL</td>
<td>ayap-ɣv-te</td>
<td>ayap-á-te</td>
</tr>
<tr>
<td>3PL</td>
<td>ayap-ɣv-n(e)</td>
<td>ayap-á-n(e)</td>
</tr>
</tbody>
</table>
The same vowel appears in the element -ay of the alternative past imperfective forms of southern Greece:

(47)

<table>
<thead>
<tr>
<th></th>
<th>Form 1</th>
<th>Form 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1SG</td>
<td>aɣáp-ɐv-y-a</td>
<td>→ aɣáp-aɣ-a</td>
</tr>
<tr>
<td>2SG</td>
<td>aɣáp-ɐv-y-es</td>
<td>→ aɣáp-aɣ-es</td>
</tr>
<tr>
<td>3SG</td>
<td>aɣáp-ɐv-y-e</td>
<td>→ aɣáp-aɣ-e</td>
</tr>
<tr>
<td>1PL</td>
<td>aɣap-ɐv-y-ame</td>
<td>→ aɣap-áɣ-ame</td>
</tr>
<tr>
<td>2PL</td>
<td>aɣap-ɐv-y-ate</td>
<td>→ aɣap-áɣ-ate</td>
</tr>
<tr>
<td>3PL</td>
<td>aɣap-ɐv-y-an /</td>
<td>→ aɣáp-aɣ-an /</td>
</tr>
<tr>
<td></td>
<td>aɣap-ɐv-y-ane</td>
<td>→ aɣap-aɣ-ane</td>
</tr>
</tbody>
</table>
-ay: -a + γ

γ = either an epenthetic consonant or a [-perfective] exponent. Cf. the 3rd conjugation pattern:

(48) Imperfective forms of *akú-o* ‘I listen to, I hear’

<table>
<thead>
<tr>
<th></th>
<th>ACTIVE</th>
<th>NON ACTIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>NON PAST</td>
<td>akú-o</td>
<td>akú-ɣ-ome</td>
</tr>
<tr>
<td>PAST</td>
<td>áku-ɣ-a</td>
<td>aku-ɣ-ómun(a)</td>
</tr>
</tbody>
</table>
Certain verbs require that 

-\text{v}\) surface as /e/ or /a/ instead of /i/ in perfective forms:

(49) \textit{forág} ‘I wear, I put on’ (Class A)

<table>
<thead>
<tr>
<th></th>
<th>NON PAST</th>
<th>PAST</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMPERFECTIVE</td>
<td>for-á-o</td>
<td>for-ú-s-a / fór-ay-a</td>
</tr>
<tr>
<td>PERFECTIVE</td>
<td>for-é-s-o</td>
<td>fór-e-s-a</td>
</tr>
</tbody>
</table>

(50) \textit{aferág} ‘I remove, I subtract’ (Class B)

<table>
<thead>
<tr>
<th></th>
<th>NON PAST</th>
<th>PAST</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMPERFECTIVE</td>
<td>afer-ó</td>
<td>afer-ú-s-a</td>
</tr>
<tr>
<td>PERFECTIVE</td>
<td>afer-é-s-o</td>
<td>afér-e-s-a</td>
</tr>
</tbody>
</table>

(51) \textit{antanalágo} ‘I reflect’ (Class A)

<table>
<thead>
<tr>
<th></th>
<th>NON PAST</th>
<th>PAST</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMPERFECTIVE</td>
<td>antanalá-á-o</td>
<td>antanalá-ú-s-a</td>
</tr>
<tr>
<td>PERFECTIVE</td>
<td>antanalá-á-s-o</td>
<td>antanalá-a-s-a</td>
</tr>
</tbody>
</table>
The same vowel appears in deverbal nouns:

(52) \( \text{verb} \quad \text{deverbal noun} \)

\begin{itemize}
  \item a. foráo \quad ‘I wear, I put on’ \quad fór-e-\text{ma} \quad ‘dress’
  \item b. aferó \quad ‘I remove, I subtract’ \quad afér-e-\text{si} \quad ‘removal, subtraction’
  \item c. antanakláo \quad ‘I reflect’ \quad antanákl-a-\text{si} ‘reflection’
\end{itemize}
7.3. Specification conditioned by the morphophonological context

- The empty vocalic element surfaces as /u/ immediately before the 1PL and 3PL non-past suffixes:

<table>
<thead>
<tr>
<th>(53)</th>
<th>CLASS A</th>
<th>CLASS B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1PL</td>
<td>ayap-\text{-v-}me \rightarrow ayap-á-me / ayap-ú-me</td>
<td>poθ-\text{-v-}me \rightarrow poθ-ú-me</td>
</tr>
<tr>
<td>3PL</td>
<td>ayap-\text{-v-}n(e) \rightarrow ayap-á-n(e) / ayap-ú-n(e)</td>
<td>poθ-\text{-v-}ne \rightarrow poθ-ú-ne</td>
</tr>
</tbody>
</table>
7.4. Failure to materialize

#1 Due to morphophonological restrictions, class A verbs like $aγap-á-o \sim aγap-ó$ (see also Ralli 2003), do not have to realize their V-element, thus forcing the suffix-inflicted stress to be pronounced on the suffix itself (55). Rightward shift in this case is due to the trochaic nature of Greek stress (Halle & Vergnaud 1987).

(54) * -\(\Box\)V is segmentally realized; PU stress

\[
\begin{array}{cc}
\sigma & \sigma \\
\hline
\end{array}
\]

/aγap-\(\Box\)V-\(^o\)/

(55) * -\(\Box\)V is not segmentally realized; U stress

\[
\begin{array}{cc}
\vdash & \sigma \\
\hline
\sigma & \sigma \\
\end{array}
\]

/aγap-\(\Box\)V-\(^o\)/ [aγapó]

Due to an OCP restriction, when the materialization of the -\( v \) would create a sequence of two identical vowels, e.g. \( i-i \):

(56)

\[
\begin{array}{c}
\vspace{0.5cm}
\frac{}{\sigma \sigma} \rightarrow \frac{}{\sigma \sigma}
\end{array}
\]

a. / po\( \theta - v \)-i /

b. po\( \theta - v \)-i

[po\( \theta \i \)] / *[po\( \theta \i \i \)]
Before the imperfective past formative /-us/. In this case the APU stress — typically associated with the Greek past (van Oostendorp 2012, Spyropoulos & Revithiadou 2009, 2011) migrates to the /-us/ formative along the lines of the pronunciation requirements described above:

\[(\text{57})\]

\[
\begin{array}{c}
\sigma \quad \rightarrow \\
\sigma \quad \sigma \\
\text{a. a} \text{yap-} \underline{\text{v}} \text{-us-a/} \\
\text{b. a} \text{yap-} \underline{\text{v}} \text{-us-a [a} \text{yapúsa]}
\end{array}
\]
7.6. Summing up the manifestations of \( \text{v} \)

\[-\text{v} \rightarrow /a/ \ / [\text{Class A}] \quad [\text{+-perfective, (-past)}] \]
\[\quad / \{\sqrt{\text{antanakl}-}, \ldots \} \quad [+\text{perfective}] \]

\[-\text{v} \rightarrow /e/ \ / \{\sqrt{\text{for}-}, \sqrt{\text{afer}-}, \ldots \} \quad [+\text{perfective}] \]

\[-\text{v} \rightarrow /u/ \ / \{\sqrt{\text{for}-}, \sqrt{\text{afer}-}, \ldots \} \quad [+\text{perfective}] \]

\[-\text{v} \rightarrow /u/ \ / \{\sqrt{\text{for}-}, \sqrt{\text{afer}-}, \ldots \} \quad [+\text{perfective}] \]

\[-\text{v} \rightarrow /i/ \ / \text{elsewhere} \]
8. Conclusions

- We have shown that:
  - Greek exhibits systematic verbalizing morphology.
  - The case study at hand extends our understanding of categorization and its modes of manifestation.

- We offered an analysis that is consistent with the view that categorization is a syntactic process and, more importantly, accommodates the morphophonological and, especially, stress properties of verbs and deverbal nouns, as a result of their mode of derivation, and not by employing rules of allomorphy in the lexicon.

- We further established that stress is yet in another way morphology-oriented in Greek: it is regulated by the exponence of the verbalizing head $v$. 
Thank you for your attention.
References

Babiniotis, Georgios. 1972. *Το Ρήμα της Ελληνικής* [The Verb in Greek]. Athens.


Marantz, Alec. 2000. Words. Ms., MIT.


Marantz, Alec. 2006. Phases and words. Ms., NYU.


