

## Stress as a Prefix in Modern Greek

Marc van Oostendorp  
Meertens Instituut, Amsterdam

Past tense forms of verbs in (Modern) Greek are characterised by having antepenultimate stress. This seemingly simple observation causes a number of serious problems for current theories of the phonology - morphology interface. We argue that these puzzles can be solved by assuming that the phonological exponence of the functional head ([Past]) Tense in Greek is a floating stress marker which syntactically precedes the stem.

**Background.** From recent literature on Greek lexical accent (Revithiadou 1999, to appear; Burzio & Tantalou 2006; Apoussidou 2006) we extract the following generalisations: (i) both roots and affixes may (but need not) be marked for stress; (ii) stress may be marked on the morpheme itself, or on the syllable immediately preceding or following it; (iii) if a root and an inflectional suffix have conflicting demands, the root wins; underlying stress on inflection thus only shows up if the root is unspecified (1).

**The problems.** However, the literature has so far been concerned with nominal stress only. If we turn our attention to the verbal domain, problems arise. In particular, all past tense forms have antepenultimate stress (2), which conflicts with (ii) and (iii). As for (ii), the stress does not fall on any suffix, nor on the last syllable of the root, but on the antepenultimate syllable of the whole word; if both root and suffix are monosyllabic, an ‘augment’ /e/- is added to host this antepenultimate stress (Philippaki-Warburton 1976). As for (iii), Tense is inflectional, so it should not be able to overrule any underlying stress on the roots; but it does.

**Proposal.** We propose that the phonological exponence of the functional head Past Tense in Greek is a stress marker only, i.e. an segmentally empty foot, which occurs in a functional head preceding the stem. (Like the future tense marker [θa], which also precedes the verb.) In agreement with syntactic work on Greek and other languages (Ouhalla 1991; Cinque 1999), we assume the shape of the template is as in (3); the structure in (3a.i) gives the underlying template for /ðen θa éyrafa/ and (3b.i) gives the underlying template for /ayórasa/. The verb moves to the position of agreement; this is how we get the structures in the ii-examples.

If TP is a phase (Alexiadou & Anagnostopoulou 2004), we need to spell out the structure below Mood, i.e. the verbal stems /yrafa/ and /ayorasa/ in combination with the Foot in the Tense head. In order to mirror the syntactic order, we prefix the Foot to the word; furthermore, the stress needs to be expressed, since it is the *only* exponence of Past Tense (different from suffixal nominal inflection). We can really prefix in forms like /yrafa/, pronouncing the empty head as a default /e/, but since Greek has a final three-syllable window for stress, this is not possible in /ayorasa/. For this reason, the Foot behaves like an infix comparable to *-um* in Tagalog (Prince & Smolensky 1993): it still stays as close to the left edge as it can, i.e. the left periphery of the  $3\sigma$  window. Notice that it is also not possible to spell out *two* syllables of the prefix Foot, since that would always result in a violation of the requirements of the  $3\sigma$  window (4).

**Extensions.** We discuss extensions of the model to deal with the difference between V-final particles (5a) and underlyingly Cs-final particles (5b), with certain compound verbs (6), and with the Past Continuous of verbs with a stressed theme vowel (7).

(1)		Unmarked suffix -/os/ (NOM. SG.)	Marked (preaccenting) suffix -/ǫ́u/ (GEN. SG.)
	Unmarked root (/anθrop/- ‘man’)	default stress [ánθropos]	suffix decides [anθrópu]
	Marked root (/klívan/- ‘kiln’)	root decides [klívanos]	root decides [klívanu]
	Marked root (/kubár/- ‘godfather’)	root decides [kubáros]	root decides [kubáru]
	Marked (postaccenting) root (/uranǫ́/- ‘sky’)	root decides [uranós]	root decides [uranú]

(2) *Partial (active imperfective) paradigm of /ɣraf-/ ‘to write’*

Present	Simple past
ɣráf-o	é-ɣraf-a
ɣráf-is	é-ɣraf-es
ɣráf-i	é-ɣraf-e
ɣráf-ume	ɣráf-ame
ɣráf-ete	ɣráf-ate
ɣráf-un(e)	ɣráf-ane / é-ɣraf-an

(3) Derivations for [ðen θa éyrafa] (‘I would not write’) and [ayórasa] (‘I bought’).

	Neg	Mood	(Past) Tense	Agr	Aspect	Root
a.i.	ðen	θa	Ft	a		ɣraf
a.ii.	ðen	θa	Ft	ɣraf-a		
b.i.			Ft	a	s	ayora
b.ii.			Ft	ayora-s-a		

(4) /kana/ → [ékana] \*[étekana]

(5) a. θa é-perna - θá perna, na é-perna - ná perna

b. ðen é-perne - \*ðén perne (\*ðé perne), as é-perne - \*ás perne

(6) /andi-ɣrafo/ ‘I copy’ → [andéyrapsa] ‘I copied’

(7) /ayapáo/ ‘I love’ → [ayapúsa] ‘I was loving’

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