Prosodic Phrasing and Focus in Greek declaratives

1. INTRODUCTION: There is no doubt that prosodic structure can be better understood only when intonational and phrasal phonology are studied together (cf. Hayes & Lahiri 1991, Ladd 1992, Gessenhoven & Rietveld 1992, among others). In this paper, we present an analysis of the phrasal structure of Greek declarative sentences based on evidence from phrasal rules and intonation. We first argue that there is a match between the domains within which rules of phrasal phonology operate and the prosodic constituents relevant for the distribution of intonational features. More importantly, we show that (narrow) focus overrides the basic phrasing algorithm and prosodically reorganizes the string. Our claims are strongly supported by the results of instrumental studies on Greek prosody and intonation. The analysis will be couched in the theoretical model of Optimality Theory (Prince & Smolensky 1993).

2. THE FACTS: According to Selkirk’s (1986, 1995) edge-based interface model, Greek phrases are constructed by right-aligning a maximal projection (XP) with a PPh boundary, as shown in (1). In declaratives, a L- typically signals the right edge of a PPh followed by a L% boundary tone. The nuclear pitch accent is a H* on the last stressed syllable and the pre-nuclear one is L*+H (Arvaniti & Baltazani 2000). Prosodic constituents above the prosodic word are also inferred through their blocking or triggering of postlexical phonological processes. s-degemenation (SD) and Nasal-Stop assimilation (NS), for instance, apply within PPhs. In (2), adjacent /s/ degenerate only when they belong to the same PPh. Similarly, in (3) NS affects neighboring obstruents of the same PPh. V-degemination (VD) and V-assimilation/deletion (VAD) also apply postlexically to resolve hiatus (Nespor & Vogel 1986). VD simplifies sequences of identical Vs, provided no stress clash arises, (4). VAD assimilates or deletes the first (unstressed) V. Our data are drawn from the south-eastern variety of Greek where front /i, e/ delete and back /a, o, u/ merge, (5). Both rules are blocked across IPs, (6). Baltazani (2002) correlates vowel duration and degree of assimilation: vowels straddling PPh boundaries assimilate/delete less because they are subject to phrase final lengthening. Examples like (7), where the /i/ in eleni is retained as a semivowel, concur that VAD is a gradient rule. In short, in Greek tonal and phrasal events are organized within the same layered domains (PPhs, IPs) offered by the Prosodic Hierarchy (Selkirk 1980, et seq).

3. FOCUS & REPHRASING: It is well-documented that the acoustics of focus is characterized by vowel lengthening and concomitant deaccentuation of the post-focal string (cf. Baltazani & Jun 1999 for Greek). The pivotal question is whether or not these properties are solely responsible for the blocking of sandhi in (8b). Baltazani (2002) sustains that VAD is favored in (8a), but not in (8b), because focused vowels are durationally enhanced whereas post-focal ones are deaccented and thus shortened (less length, more assimilation). The latter condition does not hold in (8b) that’s why VAD is disfavored (more length, less assimilation). Sandhi rules, however, strongly indicate that focus inserts a left IP boundary before the focused element: X Y→X [YFoc. The most compelling evidence comes from examples like (8c). Here, the NS rule clearly demonstrates that the verb katéstrepoan phrases with the subject only when perjustes is focused. A pause may also precede YFoc, signaling the presence of [IP].

4. FINAL THOUGHT: The conflicting directionality between default and focus phrasing presents an interesting case, esp. because, unlike Japanese (Beckman & Pierrehumbert 1986), phrasal stress in Greek is not left-dominant. Taking into consideration that left and right boundaries are inherently asymmetrical, a typological investigation between default and focus phrasing will definitely shed light in the nature of focus in general, and of phrasal boundaries, in particular. If left boundaries are typically associated with prominence (e.g trochee) and strength (e.g. resistance of proclitics to reduction), and right boundaries are linked to durational effects (e.g. iambic, phrase-final lengthening), then the way focus is cross-linguistically expressed may differ depending on the directionality of its phrasing.
Examples

1 phonological phase (PPh) formation
[i eléní]_{IP} [ayapá [to níko]]_{VP} 'Helen loves Nick' syntactic structure
[( ]_{PPP} ( ]_{PPP})_{IP} prosodic structure
L*+H L- L*+H H* L- L%

2 consonant degemination; domain: PPh
/o áximos satrápis sópase/ 'the ugly tyrant was silent'
[(o áximosatrápis)]_{PPP} (sópase)_{IP}

3 nasal-stop voicing; domain: PPh
/i stolés ton paljón pilótōn pulíθikan/ 'the uniforms of the old soldiers were sold'
[(i stolés tonmbalómmbilotōn)]_{PPP} (pulíθikan)_{PPH}_{IP}

4 vowel degemination within PPhs
a /ta γύρορα álōγα τρέξυν/ (ta γύροραλόγα)_{PPH} (τρέξυν)_{PPH}
'fast horses (a)/boys (b) are running'

BUT /ta ðínatá aγόρα τρέξυν/ *(ta ðínatáγόρα)_{PPH} (τρέξυν)_{PPH} stress clash
'the strong boys are running'

5 vowel assimilation/deletion within PPhs
a /i ártēmi kiniýúse ārkūdēs/ (i ártemi)_{PPH} (kiniýúsarκūdēs)_{PPH}
'Artemi was hunting bears'

b /i ómorfī elēni penθūse/ (i ómorfelēnī)_{PPH} (penθūse)_{PPH}
'Beautiful Helen was mourning'

c /ta γύρορα ēlāfja τρέξυν/ (ta γύρορελάφα)_{PPH} (τρέξυν)_{PPH}
'fast deers are running'

6 vowel degemination and assimilation/deletion; domain: intonational phrase (IP)
/i átaxtī elēni, allīja, arpāzi aklādōja/ 'naughty Helen, it's true, snatches pears'
[(i átaxtī elēni)]_{IP} [(alīθja)]_{IP} [(arpāzī aklādōja)]_{IP}
prosodic structure
[i átaxteleēnī] [alīθja] [arpāzaxklādja]
output

7 vowel assimilation/deletion across PPhs
/i átaxtī elēni arpāzi aklādōja/ 'naughty Helen snatches pears'
[(i átaxtī elēni)]_{PPH} [(arpāzī aklādōja)]_{PPP}_{IP}
prosodic structure
[i átaxtelēnī arpāzaxklādja]
output

8 focus
a [X_{Foc} Y] i ÓMORFelēni (see 5b), o ÁXIMOSatrapis (see 2), ta γύφοραγύρα (see 4b)
b [X Y_{Foc}] i ómorfī ELĒNĪ, o áximos SATRĀPIS, ta γύφορα AΓΟΡΑ

c /i bárman katéstropsan perjusės/ 'barmen destroyed fortunes'
[(i bárman)]_{IP} (katéstropsan)_{IP} (perjusės)_{Foc}
default phrasing
[(i bármankatéstropsamperjusės)]_{PPP}_{IP}
focus