

Prosodic structure effects on segmental phenomena in Modern Greek

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Research on the prosodic structure has well established that prosodic boundaries influence the production of segments surrounding the boundary (e.g. Fougeron 2001). The present study examined the effect of prosodic boundary strength on three segmental phenomena in Modern Greek, i.e. pre-boundary lengthening, stop voicing, and resolution of vowel hiatus.

Segmental phenomena, such as sandhi processes, have been traditionally regarded as cues to the prosodic structure. For example, Nespor & Vogel (1986) used the application of stop voicing in Modern Greek to postulate the existence of the *Clitic Group*. However, recent research in several languages has shown that (at least) vowel hiatus has a phonetically non-categorical output (e.g. Zsiga 1997), ranging from varying degrees of coarticulation to total deletion of one of the two vowels in hiatus. This finding has left researchers with the question of how to incorporate this phonetic gradience when identifying constituents of a prosodic structure.

The goal of this study was threefold: firstly, to investigate whether the phonetic output of two sandhi processes (stop voicing and resolution of vowel hiatus) is categorical or not; secondly, to examine the effect of the prosodic boundary on each process and on the pre-boundary durations; and finally, to evaluate the assumption that all three phenomena point to the same prosodic structure.

The results showed that both stop voicing and resolution of vowel hiatus had a *phonetically* gradient output within prosodic conditions; measurements of duration and amplitude for stop voicing ranged from voicelessness to full voicing. Similarly, for vowel hiatus, formant transitions ranged from full V1/V2 deletion to both vowels being present. However, the *prosodic boundary strength effect* across prosodic conditions differed for the two processes. It affected stop voicing categorically (i.e. voicing occurred in some conditions and not in others), while its effect on the resolution of vowel hiatus was gradient (i.e. deletion and coalescence occurred in all prosodic conditions). Regarding pre-boundary segmental durations, gradual lengthening of the pre-boundary segment occurred across conditions.

In this talk I will address the issue of whether the data on stop voicing and vowel hiatus could challenge traditional theories on prosodic domain identification (e.g. Nespor & Vogel 1986) in favour of a *gradience* analysis.

References

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