

INTONATION PATTERNS IN GREEK

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ABSTRACT

Prosodic contours are constant according to the syntactic function of the prosodic words; the two essential contours (affirmative and interrogative modalities) are dependent of the stressed syllable and the place of the stress in the inner constituent elements.

1. INTRODUCTION

The aim of this work is to present the relationships existing between intonation and syntax in Greek. Except for the three interrogative pronouns :

[τί] "what, which"
[τίς-ός, -ά, -ό] "who"
[πόσ-ος, -η, -ο] "how much, how many" (introducing a kind of wh-questions), Greek does not possess any particular morphological form for interrogative modality. In addition to that, the syntactic form of a statement remains unchanged in all modality transformations. Thus, only intonation account for the modality of the statement.

Ph. Martin [1] proposes the features of the contours for French as follows:

[± Long] : the length of the contour
[± Rising] : the direction of the fundamental frequency.
[± Ample] or
[± Restrained] : the amplitude of the melodic variation (large or restrained).

Three different kinds of contours can be found in Greek : final contour in a declarative sentence, final contour in an interrogative sentence, and prefinal intermediate

contours, denoted COa, COi and C (C1, C2, C3 etc) respectively. But, as was discovered [2], the final interrogative contour is to be sub-divided according to the place of the stressed syllable (oxytones and paroxytones words).

2. PROCEDURE

It has been proved that prosodic and syntactic structures are two autonomous systems but linked to each other. Semantics could also be added to them since it is not considered as an organized system with hierarchies and structures.

The corpus contains assertions and yes-no questions. Declarative sentences are completed with expansions on the right (e.g. SV -> SVO etc.). The questions have the same syntactic structure as the associated declarative sentences. The place of the stress and the number of syllables of each word had been taken into account as well.

The words chosen for the analysis, had the following acoustic structures :

oxytones : C1 V1 C2 V1

paroxytones : C1 V2 C2 V2

proparoxytones : V1 C1 V2 C3 V3

C1, C2 : unvoiced consonants
C3 : /r/

The sentences were read by Athenian speakers, in order to avoid regional varieties. F0, intensity and duration were measured on the oscillograms and computer processing permitted us to extract the pattern features.

3. RESULTS

Some preliminary results [2] shown that in Greek the final contours have the following features :

COa [- Rising
± Ample
+ Long]

COi paroxytones words
[- Rising
- Ample
+ Long]

COi oxytones words
[+ Rising
± Ample
+ Long]

The same corpus was used in this analysis, enriched with some supplementary sentences.

Two remarks could be made :

- a/ There are two rules governing the contours slopes, and
- b/ The penultimate stressed word plays a particular part in the questions.

a/ The contour slope rules.

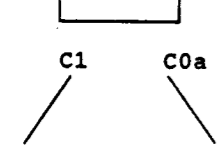
Just like in Italian (which is also a mobile stress language), the prosodic structure of an utterance is influenced by the final contour.

Rule 1 (for prosodic words belonging to the same level in the prosodic structure) : if the final contour is [- Rising], then the preceded contour is [+ Rising] and viceversa.

Example :

" the coat has fallen down "

[η κάπτα έπεσε]

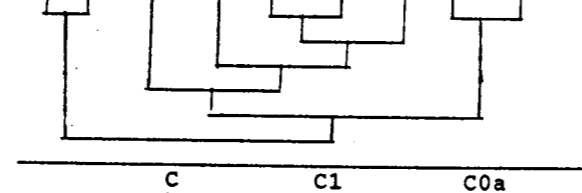


Rule 2 (for prosodic words located on different levels): if the final contour is [+ Rising] and the preceded contour (C1) is [+ Rising], then the contour on the left of C1 has to be [+ Rising] but [- Ample].

Example :

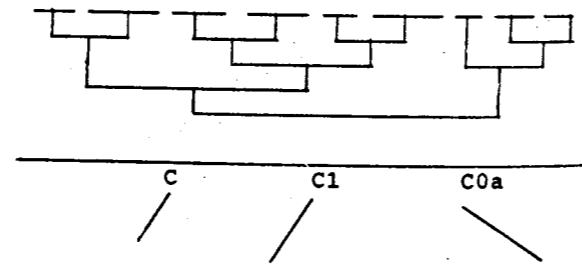
" the coat has fallen from his shoulders unto the grass "

[η κάπτα έπεσε από τους ώμους του στο χόρτο.]



" a night at the Athens Opera with Callas "

[μια βραδιά στην Όπερα της Αθήνας με την Κάλλας]



b/ The penultimate stressed words in a question.

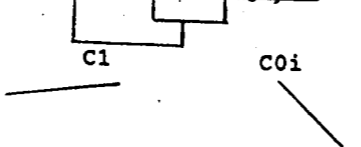
The observed behaviour of the final contour is exactly the opposite of what we were expecting. As a matter of fact, instead of having a final contour [+ Rising] we have a COi

[- Rising]
[+ Ample]
[+ Long]

Example :

" have you broken the sticks ? "

[έσπασες τις στέκες ;] ?



4. CONCLUSION

The goal of this paper was to present the intonation patterns of the two main modalities (affirmative and interrogative).

The results of the analysis provided evidence that the final contour exerts a strong influence on the preceded contours.

The case of the penultimate stressed words in a yes-no question is very interesting : as the COi falls, the C1 keeps a relative rising (according to the rule 1); the latter does not start from the same low frequency level, although it attains

the same high level, without being as inclined as the other C1 contours. This particular form of the final contour illustrates the interaction between the prosodic and the acoustic structure.

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[2] MALAVAKIS Th. "Συντακτικά και εκτονικά φαινόμενα" (Syntactic and intonative phenomena), Proceedings of the Vith Congress of Greek Linguistics, Thessaloniki, 41-56, 1985.