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ΓΙΑ ΤΗΝ ΕΛΛΗΝΙΚΗ
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 L'Harmattan

THE SYNTAX – PROSODY INTERFACE: VOS IN GREEK

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Το θέμα της προσωδίας στη σειρά των όρων της πρότασης έχει μελετηθεί μόνο από τη σκοπιά θεωριών για τη θέση του κεντρικού τόνου και της σχέσης του με την εστίαση (π.χ. Zubizarreta 1998¹). Οι μελέτες αυτές έχουν γίνει για διάφορες γλώσσες, αλλά όχι για τα Ελληνικά. Για τα Ελληνικά έχουν γίνει μελέτες πάνω στο ρυθμό και τον επιτονισμό (π.χ. Arvaniti 1994²; Botinis 1998³), αλλά χωρίς να λαμβάνεται υπόψη η συντακτική πλευρά. Σ' αυτή λοιπόν την εργασία ερευνούμε την προσωδία σε σχέση με τη σειρά των όρων (και συγκεκριμένα τη σειρά Ρήμα – Αντικείμενο – Υποκείμενο) χρησιμοποιώντας πειραματικά δεδομένα.

1. Introduction

Our goal is to examine the VOS order (e.g. *efaje tin turta o Janis*, ate-3sg the cake-acc the John-nom) from an experimental point of view and thus to investigate to what extent the claims made so far on a theoretical basis about this particular order (see Alexiadou 1997⁴, 1999⁵; Philippaki-Warburton 2001⁶; Haidou, 2000⁷; Georgiafentis

¹Maria-Luisa Zubizarreta, 1998, *Prosody, focus and word order*, Cambridge Mass., MIT Press.

²Amalia Arvaniti, 1994, Acoustic features of Greek rhythmic structure, *Journal of Phonetics* Vol. 22, p. 239-268.

³Antonis Botinis, 1998, Intonation in Greek. In D. Hirst & A. Di Cristo (eds), *Intonation systems. a survey of twenty languages*. Cambridge, CUP.

⁴Artemis Alexiadou, 1997, *Adverb placement: a case study in antisymmetric syntax*, Amsterdam, John Benjamins.

⁵Artemis Alexiadou, 1999, Greek word order patterns. In A. Alexiadou, G. Horrocks & M. Stavrou (eds), *Studies in Greek syntax*, Dordrecht, Kluwer Academic Publishers.

⁶Irene Philippaki-Warburton, 2001, Glossologiki theoría ke sintaksi tis Elinikis: pikilia sti sira ton oron ke i erminia tis. In *Proc.of the 4th*

2001⁸) can be supported or not by our experimental analysis. At the same time, we intend to direct our attention to the properties of the VOS order with respect to information structure. In particular, we are interested in finding out which constituent/s of the VOS order tend/s to be more frequently part of focus and thus new information.

This paper is organized as follows: First, we will briefly mention the theoretical claims made so far for the VOS order in Greek. Then, we will present the design of our experiment. Finally, we will present and discuss our findings.

2. The Verb-Object-Subject Order (VOS) in Greek

Alexiadou (1997, 1999) maintains that there is only one possible rendering of the VOS order, in which the subject is the most prominent constituent in the order (information focus). However, the other three aforementioned studies propose that the VOS order can have more than one prosodic renderings. In particular, Haidou (2000) claims that the VOS order involves focus not only on the subject but also on the object. Philippaki-Warbuton (2001) and Georgiafentis (2001) maintain that the VOS order can involve not only subject focus but also verb or/and object focus.

3. The Experiment

Subjects. First, a pilot study was conducted in which four subjects participated, two male and two female. The main study involved eleven subjects, six males and five females. All subjects were native speakers of Greek, and the age range was 24-28.

Materials & Procedure. In the pilot study, the subjects were given fourteen utterances displaying the six possible word orders of Greek (with or without clitics, thus twelve utterances -the VOS order was represented twice). It was finally these instances that were analyzed for the purposes of the present paper. The subjects were asked to read the utterances aloud and were recorded on MiniDisc. They were not

International Conference on Greek Linguistics, University of Cyprus, September 1999.

⁷Konstantina Haidou, 2000, Word order, DP-focusing and the PF interface: the case of Modern Greek, *SOAS Working Papers in Linguistics*, Vol. 10, p. 161-192.

⁸Michalis Georgiafentis, 2001, On the properties of the VOS order in Greek, *Reading Working Papers in Linguistics*, Vol. 5, p. 137-154.

allowed to see the utterances before the recording, so as to elicit a spontaneous reading.

The main study comprised two parts: a) Eight prompt questions designed to elicit the VOS order (the possibility was open so that other orders could also be elicited). The subjects were asked to read each question aloud and give the answer that first came to their mind, as long as it was a full sentence. b) Eight instances of the VOS order (four without clitics and four with clitics). The procedure followed was exactly the same as the one in the pilot data.

Analysis. By listening to an utterance we could get an idea of which of the three elements was focused. We then confirmed this by looking at pitch tracks of these utterances. The recordings were converted into wav files (sample rate 22,050 Hz, sample size 16-bit) and analysed using Praat (a system for doing phonetics⁹). We carried out a pitch analysis and determined the focused element by looking at the shape of the pitch tracks and taking into account the effect of declination ('t Hart *et al.*, 1990¹⁰).

4. The Results

Two are the main findings of our experiment, a direct and an indirect one. A) First, when a clitic is not present, some other constituent (i.e. the object, the verb or both), but not the subject, is the predominant candidate for receiving main prominence in the VOS order in Greek. Second, when a clitic is present, the predominant pattern for the cIVOS (*tin efaje tin turta o janis*) order is verb focus. Table 1 gives an overall picture of focus with respect to the VOS order with and without clitic.

ORDER	FOCUS					
	subject		other (object, verb or VP)		neutral	
VOS	9	17.6%	27	53%	15	29.4%
cIVOS	7	14.3%	41	83.7%	1	2%
TOTAL	16	16%	68	68%	16	16%

Table 1 The location of focus in VOS and cIVOS (subject vs. other)

⁹Praat was developed by Paul Boersma and David Weenink, Phonetic Sciences Dept., University of Amsterdam.

¹⁰Johan 't Hart, René Collier & Antonie Cohen, 1990, *A perceptual study of intonation. An experimental-phonetic approach to speech melody*, Cambridge, CUP.

B) The order used by the subjects in answering questions designed to elicit subject focus was not VOS, but rather SVO or OclVS.

	SVO		ScIVO		clVSO		OclVS		q1	
Q1 ¹¹	7	64%					4	36%		
Q2	9	82%					2	18%		
Q3	1	9%	2	18%	1	9%	4	37%	3	27%
Q4	6	55	2	18			3	27%		
Q5	4	36%					7	64		
ALL	27	49%	4	7%	1	2%	20	36%	3	6%

Table 2 Orders preferred to answer questions designed to elicit subject focus
 Our findings point to the conclusion that the VOS order is dispreferred for subject focusing in Greek. This is the reason why our subjects opted for the OclVS or the SVO order instead. What is more revealing is the fact that there was not a single occurrence of the VOS order as an answer to Q1. Our claim that the VOS order is dispreferred for subject focusing in Greek is further supported by the fact that even an echo question (Q.2) designed to elicit the VOS order was answered with the OclVS or the SVO order. A similar picture emerges from the questions that contain a clitic and are designed to elicit subject focus (Q3-Q5). Once again, the answers given did not involve any occurrence of the clVOS order.

5. Conclusion

In this paper we dealt with the role of prosody in word order variation in Greek. What we found is that the VOS order in Greek can have more than one intonation patterns. This outcome is in disagreement with Alexiadou (1997; 1999), who maintains that there is only one possible rendering of the VOS order, namely the one where the subject is the most prominent constituent. In particular, we observed that the VOS order can involve not only subject focus but also verb or/and object focus. Our experimental findings then agree with the claims of Philippaki-Warburton (2001), Haidou (2000) and Georgiagentis (2001). What is more interesting, though, is that we found that object or/and verb focus is not just an option but rather the predominant pattern for the VOS order in Greek. The same issue remains to be investigated with naturally occurring data.

¹¹ Q1= pjos djavazi to vivlio? Q2= djavazi to vivlio pjos? Q3= pjos to djavazi to vivlio? Q4= to djavazi to vivlio pjos? Q5= to vivlio pjos to diavazi?