

**Modern Greek Tense in main and *va*-subordinated clauses: an LFG/XLE treatment**

In the framework of a Modern Greek (MG) LFG/XLE grammar that is being developed at ILSP/"Athena" RC, we implemented a novel analysis of the MG verbal tense system that models tense usage in main clauses and *va*-subordinated ones—the later are of frequent use and have challenging linguistic properties (Philippaki-Warburton et al. 1984, Holton et al. 1997). We drew on corpus data retrieved from the HNC (<http://hnc.ilsp.gr/>).

MG verbal tenses are formed both synthetically and analytically. Active analytic forms contain the auxiliary *έχω* (have). It is generally accepted (Κλαίρης et al. 2005, Μόζερ 2009) that verbal forms that support main clauses in MG encode two binary distinctions: (i) past vs. present (Table 1: Tr(additional) Anal(ysis),) and, (ii) telic (PE) and non-telic (IP) (Table 1: Telicity). This system of distinctions (i) does not accommodate three tenses that support main clauses (1)-(3) (ii) the verb forms Table 1: 1,4,5 are all characterized –PAST although the second two clearly denote the future (2) and, (iii) the verb forms Table 1: 2,3,7,8 are all marked as +PAST although their distributions are NOT identical as it is indicated by examples (1)-(3).

Table 1. Analysis of verbal tenses in Modern Greek

	<b>Greek Form</b>	<b>English Gloss</b>	<b>Tr. Anal.</b>	<b>TENSE</b>	<b>T_FR</b>	<b>Telicity</b>	<b>FUT</b>
1	παίζω	play/be playing	-PAST	-PAST	IDEN	IP	-
2	έπαιζα	was playing	+PAST	+PAST	IDEN	IP	-
3	έπαιξα	played	+PAST	+PAST	IDEN	PE	-
4	θα παίζω	will be playing	-PAST	-PAST	IDEN	IP	+
5	θα παίξω	will play	-PAST	-PAST	IDEN	PE	+
6	θα έπαιζα	would play	∅	+PAST	IDEN	IP	+
7	έχω παίξει	have played	+PAST	+PAST	NIDEN	PE	-
8	είχα παίξει	had played	+PAST	+PAST	NIDEN	PE	-
9	θα έχω παίξει	will have played	∅	-PAST	NIDEN	PE	+
10	θα είχα παίξει	would have played	∅	+PAST	NIDEN	PE	+

-Table 1: 6 does not co-occur with “already” as opposed to Table 1: 10.

(1) Εχθές θα έγραφε \*ήδη/θα είχε ήδη γράψει το γράμμα.

yesterday will write-3-sg-past \*already/ will have-3sg-past already write-Vinf the letter

“He would write the letter yesterday./He would have already written the letter yesterday.”

-Table 1: 9 co-occurs with “already” as opposed to Table 1: 5.

(2) Αύριο θα έχει ήδη παίξει σκάκι/\*θα παίξει ήδη σκάκι.

tomorrow will have-3-sg-present already play-Vinf chess/\*will play-3-sg-PE already chess

“Tomorrow s/he will have played chess already.”

-Only Table 1:10 (as opposed to Table 1: 2,3,7) denotes that some action would be completed at some point in the past

(3) Μέχρι χθες το μεσημέρι θα είχε παίξει/\*έπαιζε/\*έπαιξε/\*έχει παίξει αρκετά ώστε να έχει πα ηρεμήσει.

till yesterday the noon will have-3-sg-past play-Vinf enough so as to have-3-sg-present already calm-Vinf

“Up to yesterday noon s/he would have played enough to have calmed down.”

In order to develop a grammar assigning a unique description to each MG tense, a multi-feature approach was adopted in the spirit of Reichenbach (1947) who introduces three abstract time points: Speech time (S), Event time (E), Reference time (R). We (i) define the feature TENSE that models the relation between S and R ( $S \leq R$ ) with values “+/-PAST” where +PAST models  $S \geq R$  and –PAST the other two options (ii) drawing on work by Poulson (2011), we define the feature Time Frame (T\_FR) that encodes the relation between R and E with values N(ot)IDEN(tical) if  $E \neq R$  and IDEN(tical) if  $E = R$  (iii) we distinguish between –PAST and FUT(URE) by introducing the feature FUTURE with values + if  $R < E$  and – otherwise. Only

the particle  $\theta\alpha$  has a positive value for FUTURE. Verbal types per se are underspecified for this feature (iv) we retained Telicity with values PE(rfective) and I(m)P(erfective) (Comrie 1976:3, Mozer 2009:61-69). The overall system of features is presented in Table 1.

In our implementation, we use a tagger for morphological analysis. Synthetic verb tense features are assigned by the tagger while tense the features of the analytic verbal forms have to be derived in the syntax. Auxiliaries are not specified for a PRED value (Frank et al., 1998) but they contribute the agreement, TENSE and T\_FR features. Telicity is specified by the main verb always. Verbs supporting main clauses are specified for all the four tense features. The main verb form Vinf ( $\pi\alpha\acute{\iota}\xi\omega$ , Table 1: 5) does not support a clause on its own, it is declinable for person and number and combines with  $\theta\alpha$  to support a main clause. On the other hand,  $\pi\alpha\acute{\iota}\xi\epsilon\iota$  (3-sg of  $\pi\alpha\acute{\iota}\xi\omega$ ) is indeclinable when it combines with the auxiliary  $\acute{\epsilon}\chi\omega$ . Rule (7) uses restriction to yield the forms (Table 1: 7-10).

(7) Vtns --> {PART: (^ PART\_FORM) = tha; V: ^=!  
 |PART: (^ PART\_FORM) = tha;  
 {AUX:(^ AUX\_FORM)= eixe (^ NUM\_PERS)=c 3SG ; Vinf: ^=! /PERS/NUM @(TENSE +)  
 |AUX:(^ AUX\_FORM)= exei (^ NUM\_PERS)=c 3SG ; Vinf: ^=! /PERS/NUM @(TENSE -)}  
 |{AUX:(^ AUX\_FORM)= eixe ; Vinf: ^=! /PERS/NUM @(TENSE +)  
 |AUX:(^ AUX\_FORM)= exei; Vinf: ^=! /PERS/NUM @(TENSE +)}  
 |PART: (^ PART\_FORM) = tha; Vinf: ^=! @(TENSE -)}.

Verbal forms in  $\nu\alpha$ -subordinated clauses are unanimously pronounced “untensed” (Holton et al.1997, Τζάρτζανος 1946) although the data (4)-(6) show that this is not exactly true. On the other hand, examples (4)-(6) are also cases of subject control (indicated only in (4) but it holds for (5) and (6) as well) and controlled complements are typically considered to be untensed:

(4) Δείχνω να τα καταφέρνω/\*καταφέρνεις.  
 show-1-sg-present to them manage-1-sg-present /\*manage-2-sg-present  
 ‘I seem to manage.’

(5) Δείχνω να τα έχω καταφέρει.  
 show-1-sg-present to them have-1-sg-present manage-Vinf  
 ‘I seem to have managed.’

(6) Έδειχνα να τα είχα καταφέρει.  
 show-1-sg-past to them have-1-sg-past manage-Vinf  
 ‘I seemed to have managed.’

Our approach neatly captures (4)-(6); verbs in the  $\nu\alpha$ -subordinated clauses are not specified for TENSE whose value is controlled by the main verb but, where it applies, they are specified for T\_FR and Telicity. No minimally different lexical entries are needed; the TENSE feature is removed when the  $\nu\alpha$ -complement is formed (8). We have used restriction to implement this analysis.

(8) VPcomp → COMPL: ^=! (! COMPL\_FORM) =c na ; VP : ^=! \TENSE.

Last but not least, according to their lexical semantics (emotives, verbs of thought, etc), the main verbs impose various requirements on the tense features of the subordinated clause, for instance specific Telicity values, no T\_FR values etc. These requirements are encoded with the lexicon templates that define the main verbs.

## References

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