Greek subjunctive marker na: temporal anchoring in the DP domain

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ABSTRACT. The goal of this paper¹ is to propose an account for those cases where the na marker is prohibited although expected according to the semantics of the verb. This shows that na marker and other markers of the same category are not always crucial for the anchoring of the perfective non-past (PNP) dependent verb form in plain Free Relative (FR) structures. Finally it shows it is possible for time reference to come from other domains in the structure besides the CP domain.

1 Necessary background

Before we present an analysis², it is necessary to provide some necessary background. The verb system in Greek employs three main morphological distinctions regarding the mood, the tense and the aspect in a binary mode, as follows:

(1) Mood distinction: ± imperative
(2) Tense distinction: ± past
(3) Aspect distinction: ± perfective

According to this distinction, we can have the following aspectual classes, for example. Example (a) is the imperfective non-past, (b) is the imperfective past, (c) is the perfective past, and (d) is the perfective non-past:

(4) a. Milao  b. Milusa  
speak.1sg  was speaking.1sg  
‘I speak.’  ‘I was speaking.’

c. Milīsa  d. Milīso  
Spoke.1sg  speak.1sg  
‘I spoke.’  ‘I speak.’

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² An extended version of this paper can be obtained by emailing the author.
The case that will engage us is (d), namely, perfective non-past (PNP). While all other verb forms can also occur alone in the structure, PNP has to combine with one of the markers of mood or tense that Greek employs. This set of markers includes na (subjunctive), an (conditional), as (optative) and tha (future). I will focus on na (subjunctive) and its conflict with plain Free Relative pronouns in (5).

2 Problems with the previous analyses

(5) O-pjos                (*na) milisi                tha       fiji
    The-who.interrog   SUBJ3  speak.3sg.PNP fut go.3sg.PNP
    ‘Whoever speaks will go out.’

Previous analyses seem to make the wrong prediction regarding the obligatory presence of the marker. If the marker is obligatory in the structure so it can denote the mood or contribute the utterance time, then why do we have an ungrammatical sentence in (5)? The example in (5) raises the following questions:

- What exactly does the PNP need and what exactly does the na marker provide to the PNP?
- What is the locus of the conflict between the plain FR and the na marker?
- Why the marker na is impossible in the structures with plain FR?

My proposal before we move in the main analysis is that the DP domain of the plain FR can also provide the temporal anchoring of the PNP dependent verb form. CP is not the only domain in the sentence providing this.

3 The analysis

Giannakidou (2007) argues that the PNP in Greek is a dependent verb form. This means that the verbal dependent introduces an open interval, which always needs a reference time to anchor its left boundary. Otherwise, we have ambiguous interpretation between the present and a future time. The left open boundary needs to be anchored by an antecedent. Particles like na (subjunctive), an (conditional), as (optative) and tha (future) provide this open interval. These particles introduce n time parameter (or, utterance time) independently since the PNP cannot introduce it. The utterance time then serves to anchor the left boundary of PNP, thus yielding a future time reading. For example:

\[ \text{SUBJ} = \text{subjunctive} \]

\(^3\) SUBJ = subjunctive
The ambiguous interpretation of the sentence (6) would be as follows (in the same vein of Giannakidou’s approach (2007) and following her formalism):

(7) a. The event of speaking happens at the utterance time
b. The event of speaking happens at a future time

(8) TP: \( \exists t \exists e [\text{speaking}(m,e) \land e \subseteq t \land t \in [t', \infty]] \)

\( \exists T': \lambda t \exists e [\text{speaking}(m,e) \land e \subseteq t \land t \in [t', \infty]] \)

\( T^0: \text{non past}: \text{speaking} \quad \text{AspectP}: \lambda t \exists e [\text{speaking}(m,e) \land e \subseteq t] \)

\( \exists \text{Asp'} \)

\( \text{Asp}^0: \text{Perfective} \quad \text{VP}: \lambda t \text{speaking}(m,e) \)

\( \lambda P \lambda t \lambda e [P(e) \land e \subseteq t] \)

I. \( t' \neq n^4 \): The \( t' \) it is not the utterance time

II. \( [[\text{non-past}]] = \lambda P_s, \lambda t P(t) \land t \in [t', \infty] \) (Giannakidou, 2007)

The problem with sentence in (6) is that we have two possible interpretations for the event of speaking: (a) utterance time and (b) in the future time. PNP provides us only the information of non-past. However, the \( t' \) does not overlap with the utterance time. We cannot locate when the time interval starts.

(9) Na milisi i Maria

SUBJ speaking.3sg.PNP the Maria
‘Maria should speak.’

\(^4 n = \text{utterance time}\)
Notice in this derivation that adding \textit{na} disambiguates the interpretation of the sentence. Now, the event of speaking starts at the time of utterance and stretches to infinity. Notice the following difference between the derivations in (8) and (10):

a. LF Derivation in (7) provides: \([t', \infty] = \) the event starts at a time, which is non-past (without further definitions)

b. LF Derivation in (9) provides: \([ n, \infty] = \) the event starts at the utterance time and stretches to infinity

The \textit{na} marker binds the left open boundary of the open interval that the PNP offers in the structure. The PNP is always dependent. Crucially \textit{na} is not necessary in the structures with a plain FR. I propose that a plain FR can offer the temporal anchoring of the PNP verb form. In contrast with the previous theories, the DP domain of the plain FR can provide the time reference that the PNP needs.

Observe the following clauses. Notice the difference between the plain FR pronoun in (11) – (12) and the interrogative pronoun in (13) – (14). The plain FR consist of the definite article \textit{o} and the interrogative pronoun \textit{pjos} ( \textit{o} + \textit{pjos})

(11) \begin{align*}
\text{T}o: \text{non past: speak} & \\
\text{Asp}^0: \text{Perfective} & \\
\lambda P \lambda t \lambda e \ [P (e) \wedge e \subseteq t]
\end{align*}

\begin{align*}
\text{VP: } \lambda t \text{ speak (m, e)} & \\
\lambda P \lambda t \lambda e \ [P (e) \wedge e \subseteq t]
\end{align*}

\text{O-pjos} \quad \text{er\=yasti}

\text{The-who.interrog} \quad \text{work.3sg.PNP}

‘Whoever works’

(12) \begin{align*}
\text{O-pjos} & \\
\text{The-who.interrog} & \\
\text{SUBJ} & \\
\text{work.3sg.PNP}
\end{align*}

‘Whoever works’
When the definite article *o* is taken away from the plain FR *opjos*, the *na* marker can be present. In any other case *na* is prohibited. Taking this into consideration, I assume that the plain FR provides a reference time to anchor the open interval of the PNP. In other words, the DP and specifically the definite article is the locus of reference time. Nevertheless, two conditions need to be satisfied; first, the DP of the plain FR must denote a plural entity, and second, the DP of the plain FR must describe a series of separate events of the same kind. Both conditions are satisfied in the case of the plain FR. Giannakidou & Cheng (2006) argue that the definite article *o* acts like an iota operator creating plural entities containing all those individuals who have a particular property. In addition, the plurality is that one that occupies the time interval. In this vein, this interval is the whole duration of the event in which the unbounded open interval of the PNP verb form identifies a reference time.

Plural entities can affect the aspect of a verb (Kearns 2000). Plain FR in Greek denotes plural entities. Thus, they can have reference time and bind the open left boundary of the PNP verb form. I assume that the DP of the plain FR in Greek can indeed introduce time reference in the sentence by the terms we have established in the previous section. I propose the following internal structure of the DP for the plain FR in Greek following Giannakidou & Cheng (2006), who argue for a Free Choice Item analysis and Lecarme (1996) who argues for T-chains in the DP domain:

Derivation of (11):  
\[
\begin{align*}
\text{O-} & \text{pj}os & \text{erghasti} \\
\text{The} & \text{-who.interrog (FR)} & \text{work.3sg.PNP} \\
\text{Whoever works}
\end{align*}
\]

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The DP of the plain FR in Greek can introduce time reference. In contrast with all the previous theories that argue for tense occurring in CP we showed that time reference is also possible through a DP. The nT binds D temporally thus offering a point of reference for the PNP verb. The na marker is impossible in these constructions (FR) because the PNP needs only one temporal anchoring.

(16)

The DP domain (D head) and the CP domain (C head) will conflict in terms of reference of time (nT). Now, if we assume that na and tha have the same semantic contribution in the structure – they offer the n time- then tha also has an [nT]. However, we encounter perfectly grammatical structures that combine both a plain FR and tha but not a plain FR with na. Does this mean that our hypothesis fails to explain the incompatibility of the plain FR and na? Markers na and tha have the same semantic function. They contribute the n time. However, while they have this common property they do not overlap. I assume that the incompatibility of plain FRs with na is due to these properties of the marker. Na is both an assertive and a subordinating marker that is posited in C head. In contrast, tha is used only in assertions in T head.

Nevertheless, it is not always the case that plain FRs like opjos conflict with na. Especially when a FR is followed by the connective ke (= and). DP cannot spread the reference time that the definite article triggers so it can bind the open interval of PNP because of the mediating ke (= and). That is the reason that the

5 nT = utterance time
presence of na (subjunctive) or an (conditional) is considered crucial after ke. The sentences that follow prove our assumptions:

(16)  O-pjos  ke  na  erthi  dhe  me  niazi
The who.interrog (FR) and SUBJ come.3sg.PNP neg me care.1sg
‘Whoever comes, I do not care.’

(17)  *O-pjos  ke  erthi  dhe  me  niazi
The who.interrog (FR) and come.3sg.PNP neg me care.1sg
‘Whoever comes, I do not care.’

(18)  Milisan  o  Janis  ke  *(o)  Pavlos
Spoke.3pl the John and the Paul
‘John and Paul spoke.’

4 CONCLUSION

(1) We further affirm the main points of Giannakidou (2007): that Greek needs to introduce n externally to the verb as regards the PNP.

(2) We supplement her approach by showing that time reference for the PNP can also occur in the DP domain of the FR, and not only in the CP domain. Particle na is not crucial for the semantics of the plain FR. The PNP verb form can find its n-time not only in the CP domain but also in the DP.

(3) Complex FR with ke an ‘and if’ and ke na ‘and (subjunctive)’ is a different case. Without the possibility of determiner spreading, the DP cannot serve as a reference point for the PNP. This case forces the presence of one of the particles na (subjunctive) or an (conditional) after the connective ke ‘and’. The connective ke ‘and’ introduces an inference scale with concessive reading.

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